

**"Reliable screw threads" is
YAMAWA'S theme.**

2013-2014



Think threads with

YAMAWA

On the occasion of publishing new Yamawa General Catalogue

Yamawa categorizes our innovation history into 3 stages, namely original foundation of 1923, second being after-the-war (1945) period and now, third one. On the occasion of each foundation & reflecting the original foundation spirit, we renewed our innovation mind and have been answering the market needs which are developing day by day. We aim to contribute to the technology of globally developing industries, from JAPAN with the most modern supplier country of industrial goods in the world. As a specialist & by using the newest manufacturing technology, Yamawa has been manufacturing high quality and high performance TAPs, DIES and CENTER DRILLS, and wants to be a reliable supplier. Yamawa is also paying special attention to our environment while efficiently using the limited natural resources. Based on our company philosophy "Reliable Screw Threads", we keep on making our PROPOSALS related to TAPPING to the market. Yamawa has just built up new product system to meet with flexibility of the market demand and is going to more fulfill our support system in the market. Any of your contact, that is, questions, requests and others, is always welcome.

YAMAWA Manufacturing Co., Ltd.
President **Yoshio Watanabe**

Company Background (Company Outline)

November 1923 : Founded by Jokichi Watanabe in Shibuya-ku, Tokyo.
 December 1937 : Company incorporated.
 May 1945 : Factory established in Yonezawa City in Yamagata prefecture.
 January 1953 : Spun off Yonezawa Factory into a separate company as YAMAWA TAP Co., Ltd.
 June 1955 : All products certified to Japanese Industrial Standard (JIS) categories.
 October 1956 : Awarded by the Department of Trade and Industry for superiority in industrial standardization.
 October 1963 : Awarded by the Institute of Industrial Technology for superiority in industrial standardization.
 April 1964 : Newly constructed Fukushima Factory began operation.
 November 1973 : Awarded from the Department of Trade and Industry as superiority in industrial standardization.
 October 1983 : Established YAMAWA ENGINEERING Co., Ltd.
 December 1984 : New machine tool manufacturing shop constructed inside the Fukushima Factory.
 October 1986 : Newly completed Aizu Factory began operation.
 July 1989 : Newly constructed Taiwan Factory opened.
 April 1991 : Spun off Fukushima Factory and Aizu Factory into a separate company, YAMAWA PRECISION Co., Ltd.
 November 1995 : Established TC (Total Cutting) CENTER Co., Ltd.
 June 1996 : YAMAWA TAP Co., Ltd. obtained ISO 9001 certification
 July 2000 : YAMAWA PRECISION Co., Ltd. in Aizu Factory obtained ISO 9001 certification.
 October 2000 : YAMAWA PRECISION Co., Ltd. in Fukushima Factory also obtained ISO 9001 certification.
 August 2001 : Established YAMAWA TC CENTER Co., Ltd from TC CENTER.
 October 2002 : Obtained ISO14001 certification in YAMAWA PRECISION Co., Ltd. at Fukushima Factory.
 December 2002 : Obtained ISO14001 certification in YAMAWA PRECISION Co., Ltd. at Aizu Factory.

January 2003 : Obtained ISO14001 certification in YAMAWA TAP Co.,Ltd
 October 2003 : Obtained ISO14001 certification in YAMAWA Mfg. Co.,Ltd
 April 2006 : Obtained ISO14001 certification in TAIWAN YAMAWA Co.,Ltd
 October 2006 : Spun off Export Dept. into a separate company, YAMAWA INTERNATIONAL Co., Ltd
 January 2007 : Spun off Taiwan Sales Dept into a separate company, YAMAWA ASIA Co., Ltd.
 May 2007 : Obtained ISO14001 certification in YAMAWA ASIA Co.,Ltd.
 March 2008 : Newly constructed Tsutsumi Factory of Yamawa Mfg began operation.
 September 2008 : Obtained ISO14001 certification in YAMAWA ENGINEERING Co.,Ltd.
 YAMAWA TC CENTER Co.,Ltd and YAMAWA INTERNATIONAL Co.,Ltd.
 June 2011 : Obtained ISO14001 and ISO9001 certification in YAMAWA Tsutsumi Factory.
 February 2012 : Obtained ISO9001 certification in TAIWAN YAMAWA and YAMAWA ASIA
 October 2012 : Obtained ISO9001 certification in YAMAWA Mfg. Co., Ltd.

ISO 9001/14001 certification



Origin of corporate name, "YA" "MA" "WA".

Mr. Jokichi Watanabe, the founder of the company, decided to use shop name "YA" "MA" "WA", which he had been using in his family business instead of using his personal name. And he gave to his company the name "YA" "MA" "WA" by employing lucky words and the same connotation "YAMAWA" from ancient Japanese characters, MANYOGANA. The meaning of YAMAWA is "Greater prosperity, More united". In this word, he put a wish "as the company becomes prosperous, the harmony among employees becomes more precious".

<http://www.yamawa.com/en>

YAMAWA Manufacturing Co., Ltd.



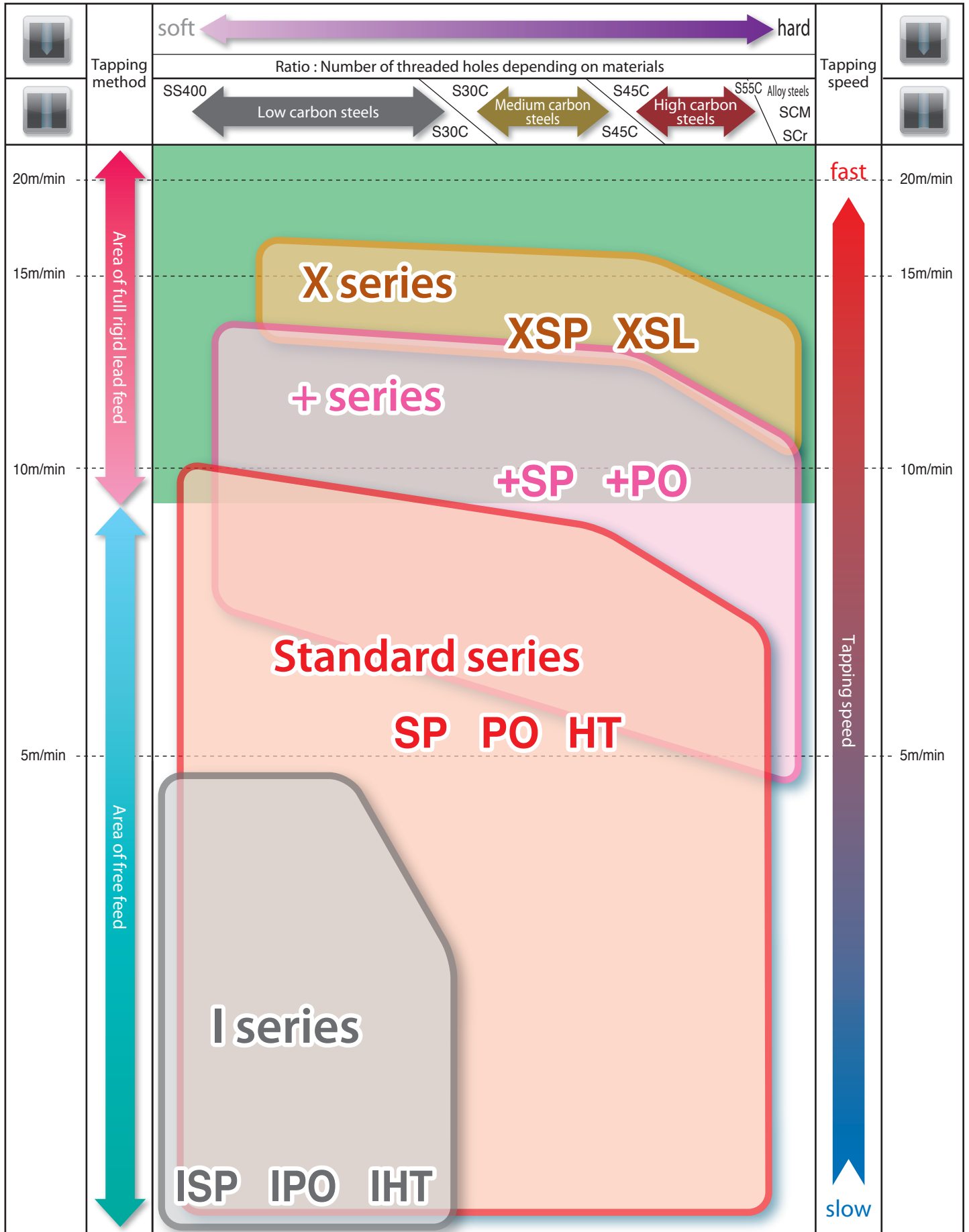
GENERAL CATALOGUE

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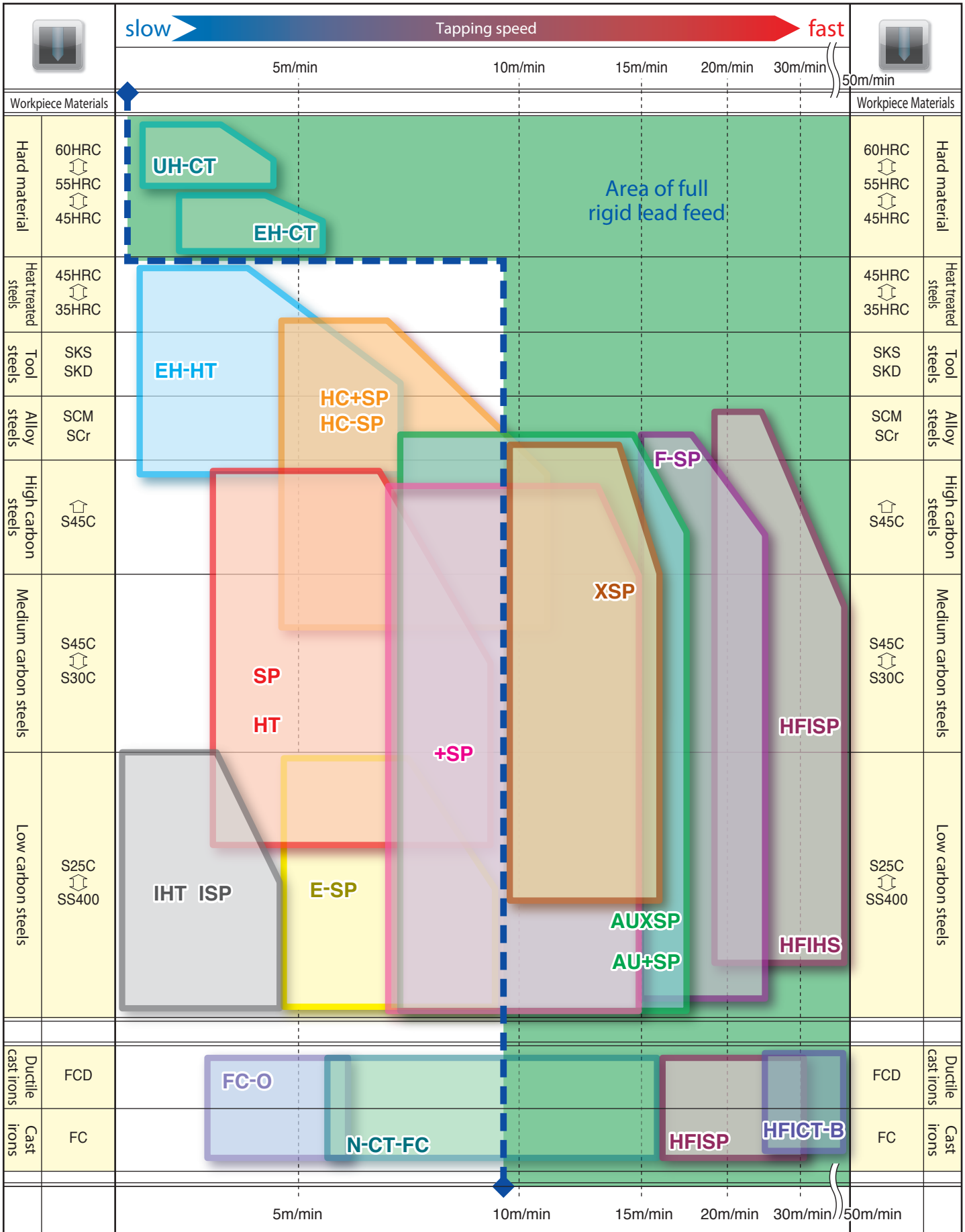
Basic concept of new product system for various steels

Product System



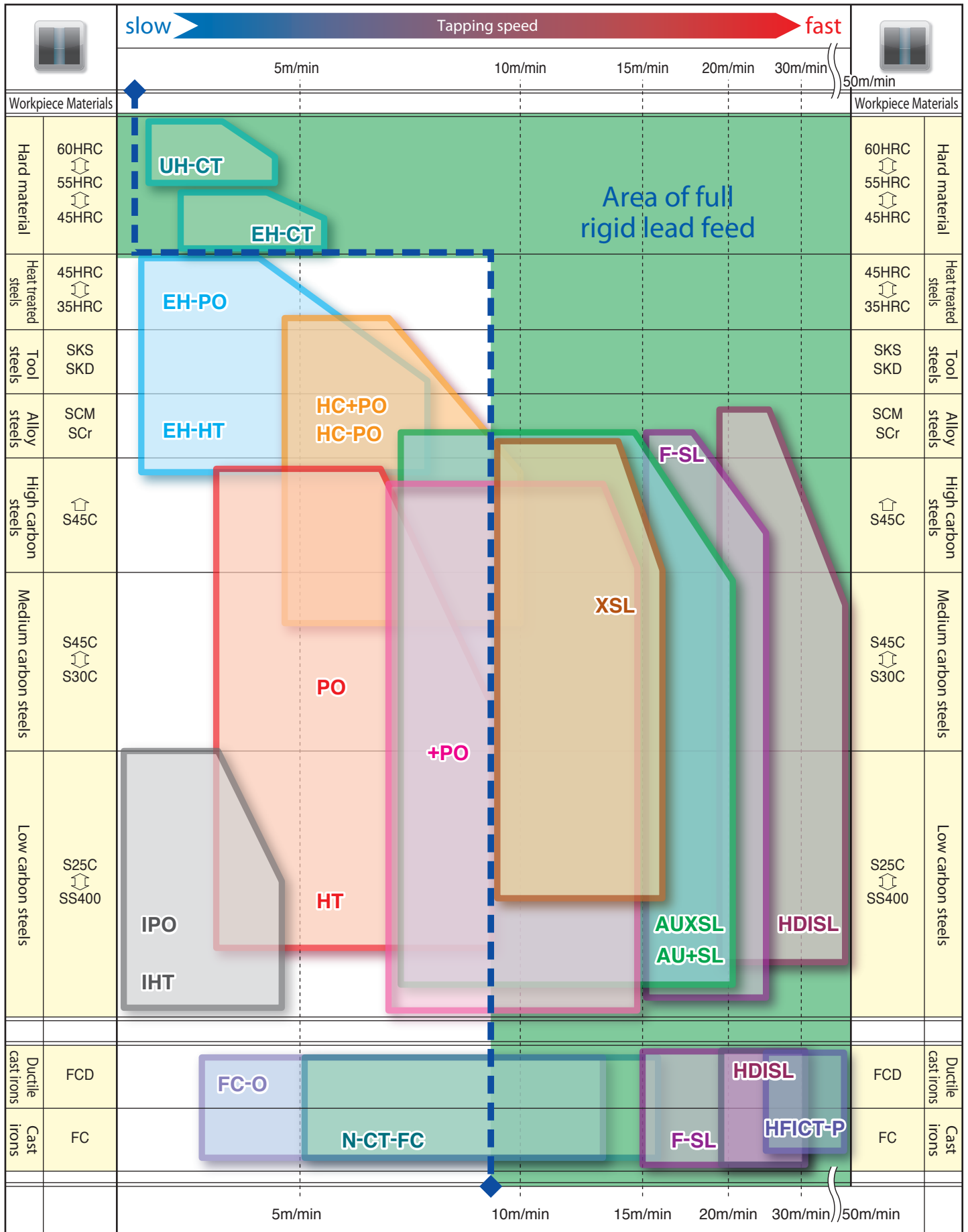
An image telling possible applications

New System table of taps for steels, blind hole use



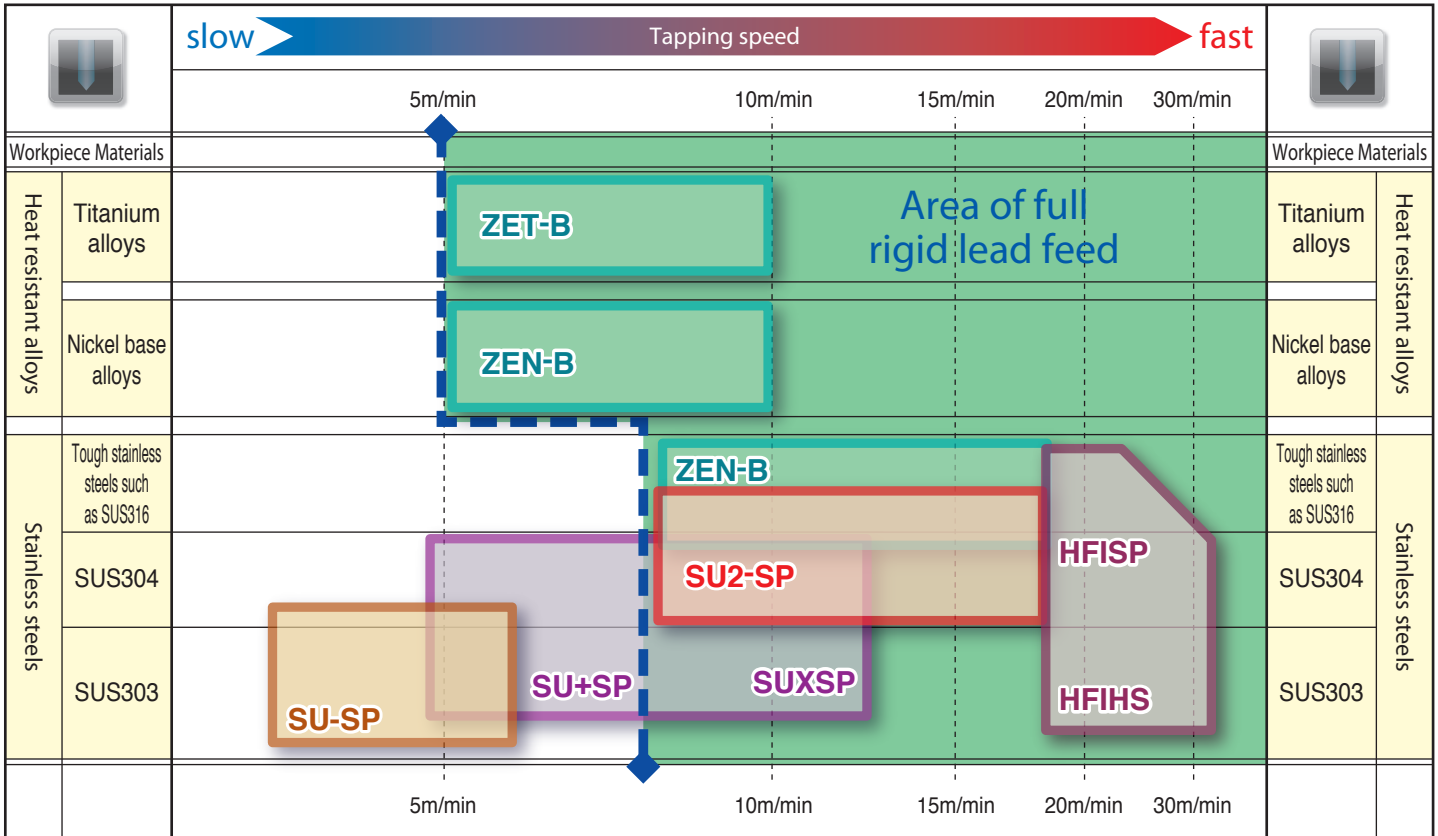
An image telling possible applications

New System table of taps for steels, through hole use



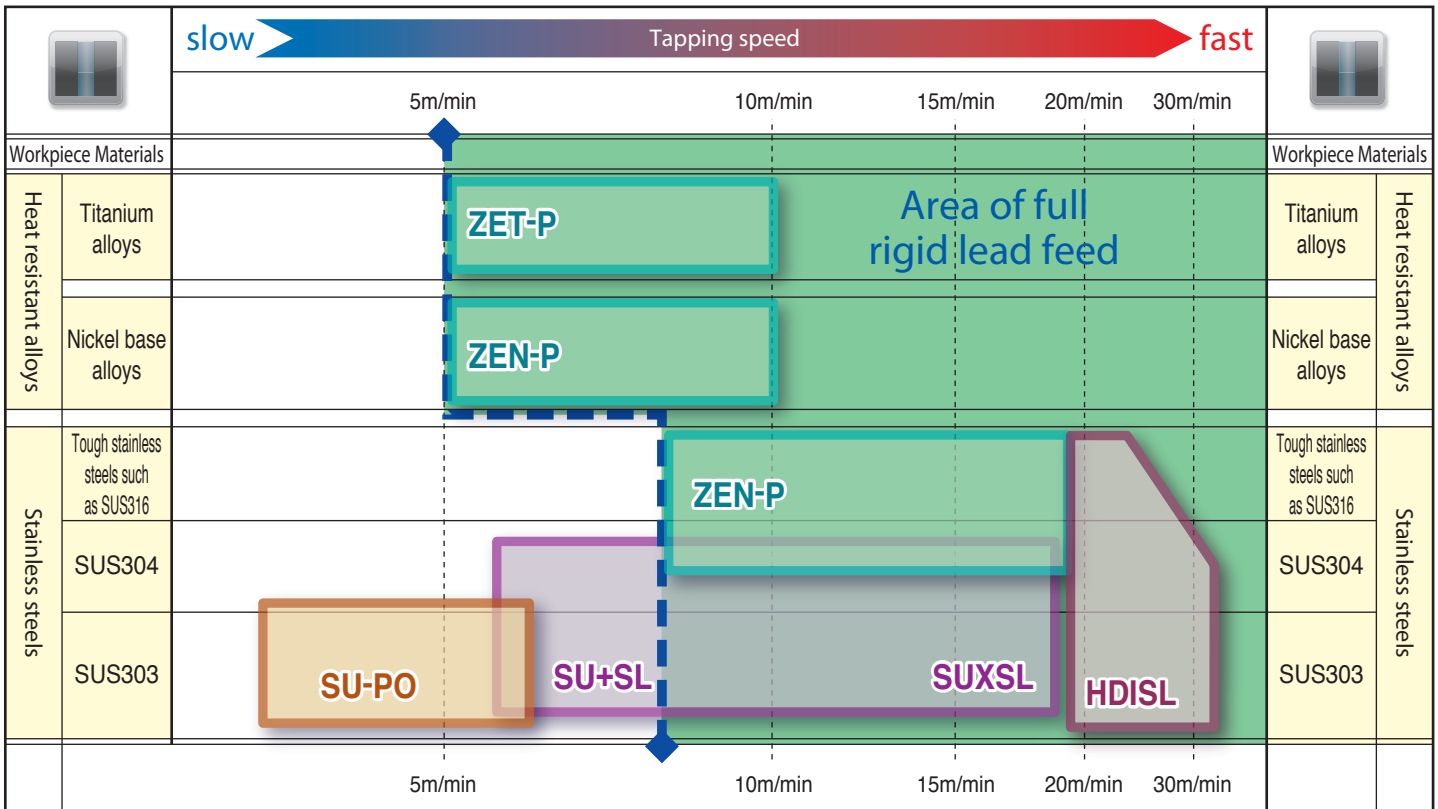
An image telling possible applications

New System table of taps for stainless steels, blind hole use



An image telling possible applications

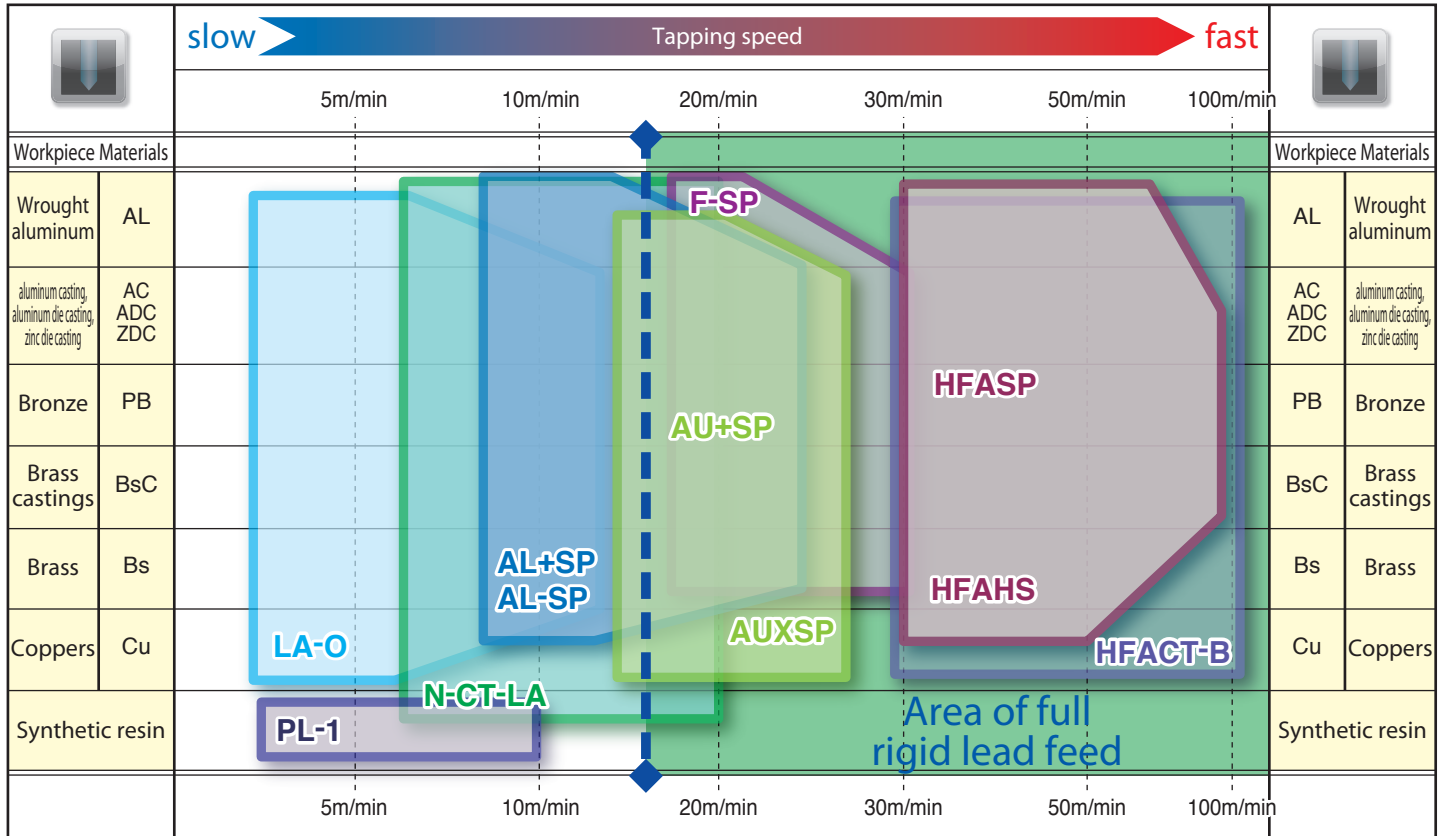
New System table of taps for stainless steels, through hole use



An image telling possible applications

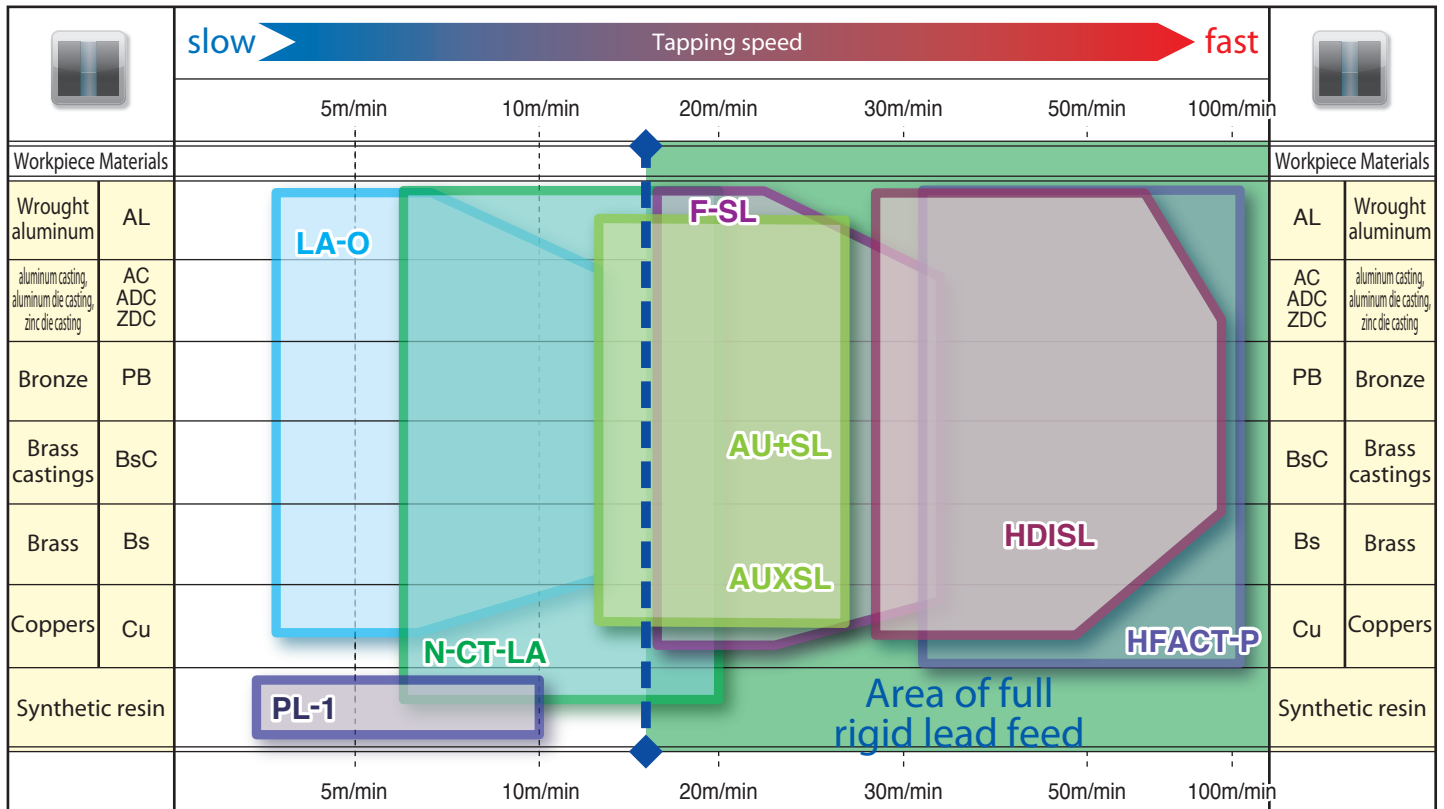
New System table of taps for non-ferrous materials, blind hole use

Product System



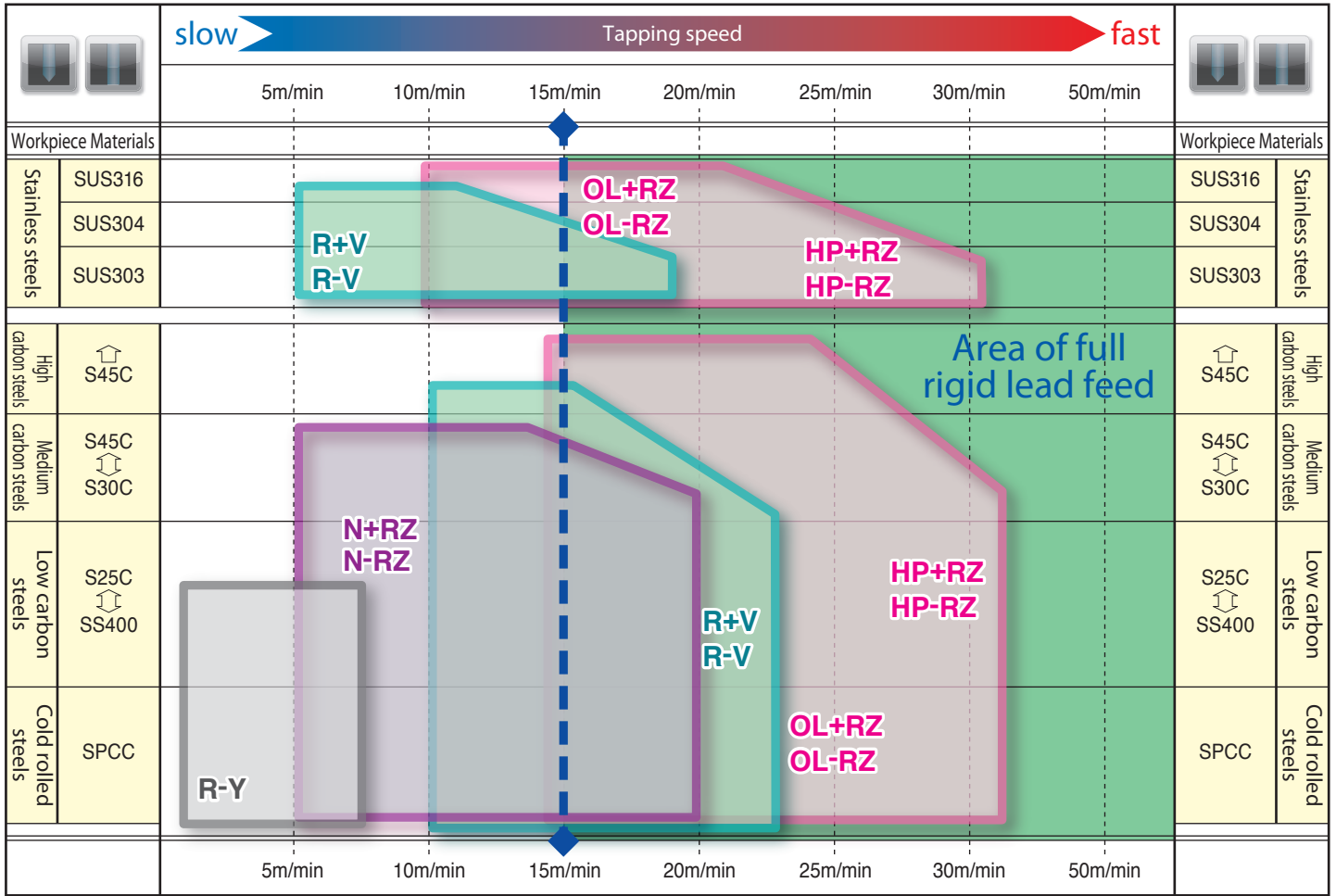
An image telling possible applications

New System table of taps for non-ferrous materials, through hole use



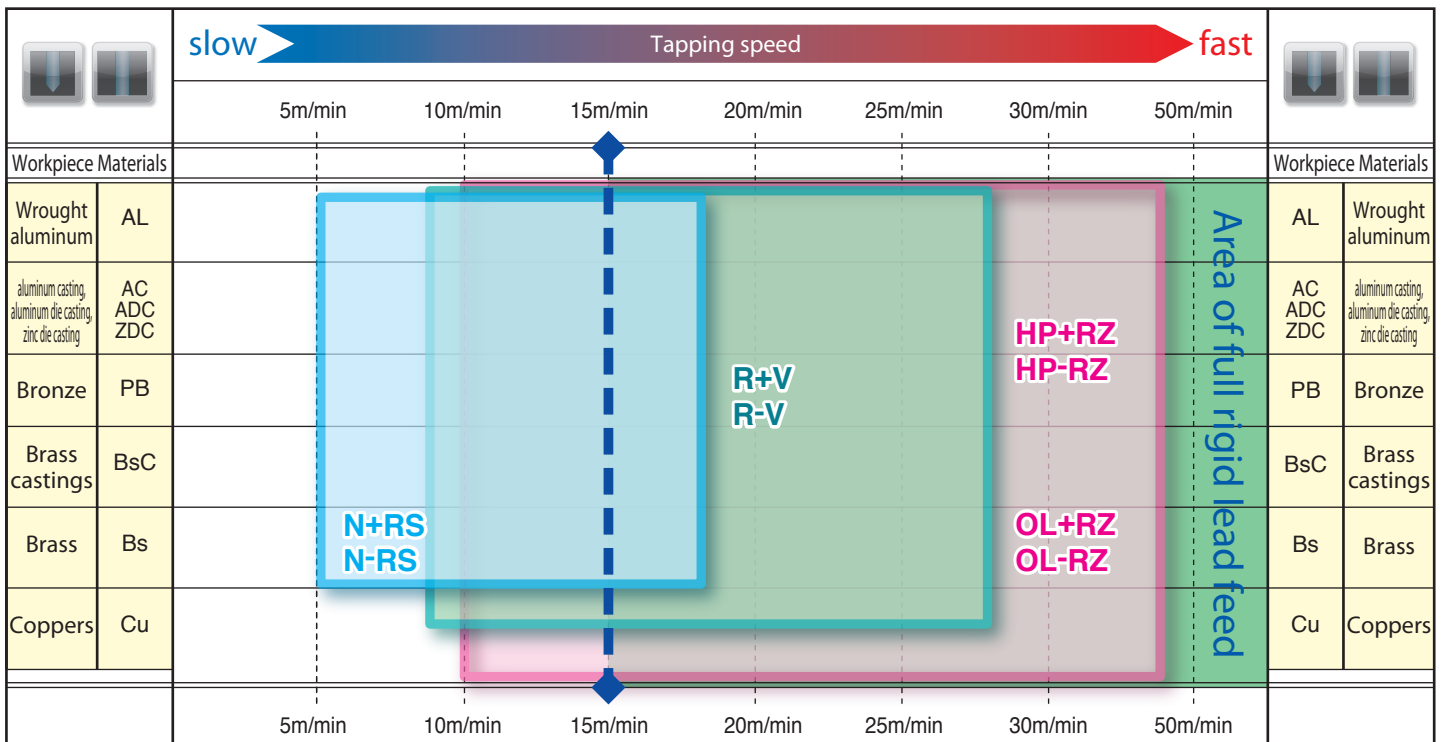
An image telling possible applications

New System table of roll taps for steels



An image telling possible applications



New System table of roll taps for non-ferrous materials

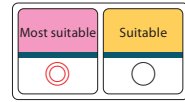


An image telling possible applications

Selection chart of taps

Selection chart of taps

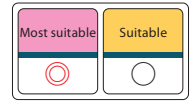
Taps		Symbol	Surface treatment	Drill hole shape		Feed function		Tapping direction		Page no.							
				 For blind hole	 For through hole	Synchronized feed Holder Fixing	Non-synchronized feed Holder Floating	Vertical direction	Horizontal direction	Metric	Unified	Whitworth					
Classification	Application																
Spiral Fluted Taps(for blind hole)	full rigid	X Series	Standard	XSP								SP-22					
			TiN coating	AUXSP	TIN								SP-30				
			For stainless steels	SUXSP	OX								SP-48				
		High speed tapping	Standard	F-SP	TIN							SP-71					
		Long shank	Long shank	LS-F-SP	TIN							SP-72					
		Ultra fast tapping	Horizontal tapping to steel	HFISP	TiCN							SP-73					
			Vertical tapping to steel	HFHIS	TiCN							SP-73					
			Horizontal tapping to aluminum	HFASP	TiCN							SP-74					
			Vertical tapping to aluminum	HFAHS	TiCN							SP-74					
		Dry tapping	For steel	HDISP	TiCN							SP-75					
			For aluminum	HDASP	TiCN							SP-75					
		Stainless steels	For hard-to-machine-materials	SU2-SP	OX							SP-48					
		Titanium alloys	Ti-6Al-4V	ZET-B	NI							SP-67					
		Nickel base alloys	Inconel & Hastelloy	ZEN-B	OX							SP-68					
		Spiral Fluted Taps(for through hole)	full rigid	Y Series	SP-Y								SP-1				
				I Series	ISP	OX								SP-1			
				General purpose	Standard	SP(N-SP)								SP-2	SP-15	SP-18	
						+SP(N+SP)									SP-21		
						Left hand thread	SP(LH)(N-SP(LH))								SP-26	SP-28	SP-28
						Universal	U-SP								SP-59		
						OX	SP-OX(N-SP-OX)	OX							SP-23		
						+SP-OX(N+SP-OX)	OX							SP-25			
					Coating	AU+SP	TIN							SP-29			
						SP-V(N-SP-V)	TIN							SP-29			
				Long shank	Standard	LS-SP(LS-N-SP)								SP-30	SP-36	SP-38	
						TiN coating	LS-SP-V(LS-N-SP-V)	TIN							SP-40		
					Left hand thread	LS-SP(LH)(LS-N-SP(LH))								SP-39			
	Soft structural steels			Low carbon steel	E-SP	OX							SP-55				
					Standard	SU-SP	OX							SP-41	SP-46	SP-47	
					For deep hole use	SU-S-SP	OX							SP-50			
	Stainless steels			Long shank for deep hole	LS-SU-S-SP	OX							SP-51				
				High carbon steels	Standard	HC-SP								SP-56		SP-58	
						OX	HC-SP-OX	OX						SP-56			
						HC+SP-OX	OX							SP-59			
	Aluminum alloys			ADC, AC etc.	AL-SP	NI							SP-60				
						AL+SP	NI						SP-60				
	For deep hole use			Standard	S-SP	OX							SP-52				
					Long shank with neck	LS-SP-K								SP-41			
				Hard-to-machine materials	powder HSS	PM-SP								SP-69			
						powder HSS, long shank	LS-PM-SP								SP-70		
		For horizontal tapping	Standard(LOSP)	LO-SP								SP-64					
				Long shank	LS-LO-SP								SP-65				
		with internal coolant hole	Standard	MC-SP								SP-66					
		For helical coil wire screw thread inserts	Standard	STI-SP	NI							SP-62					
				Carbide	N-CT-SP								CT-8				
Spiral Fluted Taps (for through hole)		full rigid	Standard for through hole	XSL								SL-1					
	X Series		SUXSL	OX								SL-3					
			Coating, for through hole	AUXSL	TIN								SL-2				
	High speed tapping		Spiral fluted taps for through hole	F-SL	TIN								SL-4				
			Long shank spiral fluted taps for through hole	LS-F-SL	TIN								SL-5				
	Ultra fast tapping		For steel(for through hole)	HDISL	TiCN							SL-6					
	Titanium alloys		Ti-6Al-4V	ZET-P	NI							SL-3					
	General purpose		Coating	AU+SL	TIN								SL-1				
			Stainless steels	Standard	SU+SL	OX							SL-2				
	Spiral Pointed Taps		full rigid	Nickel base alloys	Inconel & Hastelloy	ZEN-P	NX						PO-46				
				General purpose	Y Series	PO-Y									PO-1		
						I Series	IPO	OX							PO-1		
						Standard	PO(N-PO)								PO-2	PO-11	PO-13
					+PO(N+PO)								PO-15				
		Left hand thread			PO(LH)(N-PO(LH))								PO-19	PO-20	PO-21		
				OX	PO-OX(N-PO-OX)	OX							PO-17				
					+PO-OX(N+PO-OX)	OX							PO-18				
				Coating	PO-V(N-PO-V)	TIN							PO-22				
Long shank		Standard		LS-PO(LS-N-PO)									PO-23	PO-28	PO-30		
				TiN coating	LS-PO-V(LS-N-PO-V)	TIN							PO-31				
Stainless steels		Standard		SU-PO	OX								PO-32	PO-36	PO-37		
				Long shank for deep hole	LS-SU-S-PO	OX							PO-32				
High carbon steels	Standard	HC-PO									PO-41						
			HC+PO								PO-41						
For deep hole use	Standard	S-PO	OX								PO-39						
		Long shank with neck	LS-PO-K								PO-32						
Hard-to-machine materials	cobalt HSS	EH-PO									PO-45						
	powder HSS	PM-PO									PO-47						
	powder HSS, long shank	LS-PM-PO									PO-48						
with internal coolant hole	Standard	MC-PO									PO-44						
	For helical coil wire screw thread inserts	Standard	N-PO STI								PO-43						
	Carbide	Standard	N-CT-PO								CT-8						
Straight Fluted Taps	full rigid	Cast Irons(blind hole)	HFICT-B	TiAlN							CT-12						
		Cemented carbide taps for ultra fast tapping	Aluminum alloys(blind hole)	HFACT-B	TiAlN							CT-11					
			Cast irons(for through hole)	HFICT-P	TiAlN							CT-12					
			Aluminum alloys(for through hole)	HFACT-P	TiAlN							CT-11					
			with internal coolant hole	Aluminum alloys, carbide	MC-AD-CT	TiAlN						CT-9					
		General purpose	Y Series	HT-Y									HT-2				
				I Series	IHT	OX							HT-1				
	Standard		HT								HT-2	HT-31					
	Left hand cut		HT(LH)								HT-40						



Symbol	Thermoplastic resin	Thermosetting plastic	Nickel base alloys	Titanium alloys	Zinc alloy die castings	Magnesium alloy die castings	Aluminum alloy castings	Wrought aluminum	Bronze	Brass castings	Brass	Copper	Ductile cast irons	Cast irons	Cast steels	Tool steels	Stainless steels (SUS)	Heat treated steel					Alloy steels	High carbon steels	Medium carbon steels	Low carbon steels
																		25~35 HRC	35~45 HRC	45~55 HRC	50~63 HRC	SUS				
XSP																										
AUXSP																										
SUXSP																										
F-SP																										
LS-F-SP																										
HFI5P																										
HFIHS																										
HFASP																										
HFAHS																										
HDISP																										
HDASP																										
SU2-SP																										
ZET-B																										
ZEN-B																										
SP-Y																										
ISP																										
SP(N-SP N+SP)																										
+SP-OX																										
SP(LH)																										
U-SP																										
SP(OX)																										
+SP-OX(N+SP-OX)																										
AU+SP																										
SP-V																										
LS-SP																										
LS-SP-V																										
LS-SP(LH)																										
E-SP																										
SU-SP																										
SU+SP																										
SU-S-SP																										
LS-SU-S-SP																										
HC-SP																										
HC+SP																										
HC-SP-OX																										
HC+SP-OX																										
AL-SP																										
AL+SP																										
S-SP																										
LS-SP-K																										
PM-SP																										
LS-PM-SP																										
LO-SP																										
LS-LO-SP																										
MC-SP																										
STI-SP																										
N-CT-SP																										
XSL																										
SUXSL																										
AUXSL																										
F-SL																										
LS-F-SL																										
HDISL																										
ZET-P																										
AU+SL																										
SU+SL																										
ZEN-P																										
PO-Y																										
IPO																										
PO(N-PO N+PO)																										
+PO																										
PO(LH)																										
PO(OX)																										
+PO-OX(N+PO-OX)																										
PO-V																										
LS-PO																										
LS-PO-V																										
SU-PO																										
SU+PO																										
LS-SU-S-PO																										
HC-PO																										
HC+PO																										
S-PO																										
LS-PO-K																										
EH-PO																										
PM-PO																										
LS-PM-PO																										
MC-PO																										
N-PO STI																										
N-CT-PO																										
HFICT-B																										
HFACT-B																										
HFICT-P																										
HFACT-P																										
MC-AD-CT																										
HT-Y																										
IHT																										
HT																										
HT(LH)																										

Selection chart of taps

Taps			Symbol	Surface treatment	Drill hole shape		Feed function		Tapping direction		Page no.				
Classification	Application				For blind hole	For through hole	Holder		Vertical direction	Horizontal direction	Metric	Unified	Whitworth		
							Synchronized feed	Non-synchronized feed							
					Fixing	Floating									
Straight Fluted Taps	Long shank	Standard	LS-HT		○	○	○	○	○	○	HT-47	HT-62			
		Left hand thread	LS-HT(LH)		○	○	○	○	○	○	○	HT-65			
		TiN coating	LS-HT-V	TIN	○	○	○	○	○	○	○	HT-68			
	Stainless steels	Standard	SU-HT		○	○	○	○	○	○	○	HT-70	HT-74	HT-75	
		Hard-to-machine materials	Standard	EH-HT		○	○	○	○	○	○	HT-93			
	Die casting	Standard	LA-O		○	○	○	○	○	○	○	HT-80			
		AXE	AXE-HT	TIN	○	○	○	○	○	○	○	HT-83			
		Carbide	N-CT-LA		○	○	○	○	○	○	○	CT-1			
	Cast irons	Long shank, carbide	LS-N-CT		○	○	○	○	○	○	○	CT-7			
		Standard	FC-O	NI	○	○	○	○	○	○	○	HT-77			
		Carbide	N-CT-FC		○	○	○	○	○	○	○	CT-3	CT-6		
	Plastics	Standard	PL-1	NI	○	○	○	○	○	○	HT-89				
	Short chamfer	1 pitch chamfer	MG-HT		○	○	○	○	○	○	HT-84				
	with internal coolant hole	Standard	MC-HT		○	○	○	○	○	○	HT-90				
	For helical coil wire screw thread inserts	Standard	STI-HT		○	○	○	○	○	○	HT-85	HT-87			
	Carbide	N-CT-STI		○	○	○	○	○	○	○	CT-9				
High hardness steels	45~55HRC	EH-CT	TiAlN	○	○	○	○	○	○	○	CT-10				
Ultra hard material	55~63HRC	UH-CT	TiAlN	○	○	○	○	○	○	○	CT-10				
Roll Taps	General purpose	Y Series	R-Y		○	○	○	○	○	○	RO-1				
		Non-ferrous materials	N+RS/N-RS	NI	○	○	○	○	○	○	○	RO-11	RO-19		
		Steels	N+RZ/N-RZ	OX	○	○	○	○	○	○	○	RO-1			
		Tin coating	R+V/R-V	TIN	○	○	○	○	○	○	○	RO-24			
	Long shank	Non-ferrous materials	LS-N-RS	NI	○	○	○	○	○	○	○	RO-21			
		Steels	LS-N-RZ	OX	○	○	○	○	○	○	○	RO-9			
	High performance	Dry tapping	OL+RZ/OL-RZ	TiCN	○	○	○	○	○	○	○	RO-27	RO-28		
		High performance	HP+RZ/HP-RZ	TiCN	○	○	○	○	○	○	○	RO-30	RO-33		
	Torqueless	Short chamfer	SC-TL-RZ	TiCN	○	○	○	○	○	○	○	RO-35			
	For helical coil wire screw thread inserts	Standard	N-RS-STI		○	○	○	○	○	○	○	RO-23			
Pipe Taps	Taper thread type	ISO standard	Rc		○	○	○	○	○	○	Pipe-1				
		Standard	PT		○	○	○	○	○	○	○	Pipe-1			
	Long taper thread type	X Series	PT-X		○	○	○	○	○	○	○	Pipe-2			
		Left hand thread	PT(LH)		○	○	○	○	○	○	○	Pipe-2			
		Long shank	LS-PT		○	○	○	○	○	○	○	Pipe-4			
		Low carbon steels	LC-PT	OX	○	○	○	○	○	○	○	Pipe-10			
		Stainless steels	SU-PT	OX	○	○	○	○	○	○	○	Pipe-11			
		Cast irons	FC-PT	NI	○	○	○	○	○	○	○	Pipe-13			
		Carbide	CT-PT		○	○	○	○	○	○	○	Pipe-14			
	Short taper thread type	Standard	S-PT		○	○	○	○	○	○	○	Pipe-3			
		Left hand thread	S-PT(LH)		○	○	○	○	○	○	○	Pipe-3			
		Long shank	LS-S-PT		○	○	○	○	○	○	○	Pipe-4			
		Low carbon steels	LC-S-PT	OX	○	○	○	○	○	○	○	Pipe-10			
		Stainless steels	SU-S-PT	OX	○	○	○	○	○	○	○	Pipe-11			
		Cast irons	FC-S-PT	NI	○	○	○	○	○	○	○	Pipe-13			
	Parallel thread type	Carbide	CT-S-PT		○	○	○	○	○	○	○	Pipe-14			
		ISO standard	Rp		○	○	○	○	○	○	○	Pipe-15			
		Standard	PS		○	○	○	○	○	○	○	Pipe-15			
		Left hand thread	PS(LH)		○	○	○	○	○	○	○	Pipe-16			
		Long shank	LS-PS		○	○	○	○	○	○	○	Pipe-17			
		Carbide	CT-PS		○	○	○	○	○	○	○	Pipe-18			
		ISO standard	G		○	○	○	○	○	○	○	Pipe-19			
		Standard	PF		○	○	○	○	○	○	○	Pipe-19			
	Parallel thread type	Left hand thread	PF(LH)		○	○	○	○	○	○	○	Pipe-20			
		Long shank	LS-PF		○	○	○	○	○	○	○	Pipe-21			
		Stainless steels	SU-PF	OX	○	○	○	○	○	○	○	Pipe-22			
		Cast irons	FC-PF	NI	○	○	○	○	○	○	○	Pipe-23			
		Carbide	CT-PF		○	○	○	○	○	○	○	Pipe-23			
					○	○	○	○	○	○	Pipe-5				
Spiral Fluted Pipe Taps	Long taper thread type	Long thread type	SP-PT		○	○	○	○	○	○	Pipe-5				
		Long shank	LS-SP-PT		○	○	○	○	○	○	○	Pipe-7			
		Stainless steels	SU-SP-PT	OX	○	○	○	○	○	○	○	Pipe-12			
	Short taper thread type	X Series	SP-PT-X		○	○	○	○	○	○	○	Pipe-6			
		Short thread type	SP-S-PT		○	○	○	○	○	○	○	Pipe-6			
		Long shank	LS-SP-S-PT		○	○	○	○	○	○	○	Pipe-7			
	Parallel thread type	Stainless steels	SU-SP-S-PT	OX	○	○	○	○	○	○	○	Pipe-12			
		Standard	SP-PS		○	○	○	○	○	○	○	Pipe-17			
		Long shank	LS-SP-PS		○	○	○	○	○	○	○	Pipe-18			
		Standard	SP-PF		○	○	○	○	○	○	○	Pipe-21			
Interrupted Taps for pipe threads	Long taper thread type	Long thread type	INT-PT	OX	○	○	○	○	○	○	Pipe-8				
		Long shank	LS-INT-PT	OX	○	○	○	○	○	○	○	Pipe-9			
		Short thread type	INT-S-PT	OX	○	○	○	○	○	○	○	Pipe-8			
	Taps for American pipe threads	Long taper thread type	Long shank	LS-INT-S-PT	OX	○	○	○	○	○	○	Pipe-9			
			Standard	NPT		○	○	○	○	○	○	○	Pipe-24		
			Long shank	LS-NPT		○	○	○	○	○	○	○	Pipe-25		
		Short taper thread type	Spiral fluted taps	SP-NPT		○	○	○	○	○	○	○	Pipe-25		
			Interrupted tap	INT-NPT	OX	○	○	○	○	○	○	○	Pipe-26		
			Standard	S-NPT(Short Thread Type)		○	○	○	○	○	○	○	Pipe-24		
		Taper for dry seal thread type	Long shank	LS-SP-S-NPT		○	○	○	○	○	○	○	Pipe-26		
Interrupted tap			INT-S-NPT	OX	○	○	○	○	○	○	○	Pipe-27			
Standard			NPTF		○	○	○	○	○	○	○	Pipe-27			
Parallel thread type		Long shank	LS-NPTF		○	○	○	○	○	○	○	Pipe-28			
	Standard	NPS		○	○	○	○	○	○	○	Pipe-28				
Others	Thread milling cutters	MC-HLC	TIN	○	○	○	○	○	○	○	MC-3				
	Cemented carbide thread milling cutters	MC-CSLC	TiAlN	○	○	○	○	○	○	○	MC-1				



Low carbon steels	Medium carbon steels	High carbon steels	Alloy steels	Heat treated steel					Stainless steels	Tool steels	Cast steels	Cast irons	Ductile cast irons	Copper	Brass	Brass castings	Bronze	Wrought aluminum	Aluminum alloy castings	Magnesium alloy/die castings	Zinc alloy die castings	Titanium alloys	Nickel base alloys	Thermosetting plastic	Thermoplastic resin	Symbol
				25~35 HRC	35~45 HRC	45~55 HRC	50~63 HRC	SUS																		
																									LS-HT	
																									LS-HT(LH)	
																									LS-HT-V	
																									SU-HT	
																									EH-HT	
																									LA-O	
																									AXE-HT	
																									N-CT-LA	
																									LS-N-CT	
																									FC-O	
																									N-CT-FC	
																									PL-1	
																									MG-HT	
																									MC-HT	
																									STI-HT	
																									N-CT-STI	
																									EH-CT	
																									UH-CT	
																									R-Y	
																									N+RS/N-RS	
																									N+RZ/N-RZ	
																									R+V/R-V	
																									LS-N-RS	
																									LS-N-RZ	
																									OL+RZ/OL-RZ	
																									HP+RZ/HP-RZ	
																									SC-TL-RZ	
																									N-RS-STI	
																									Rc	
																									PT	
																									PT-X	
																									PT(LH)	
																									LS-PT	
																									LC-PT	
																									SU-PT	
																									FC-PT	
																									CT-PT	
																									S-PT	
																									S-PT(LH)	
																									LS-S-PT	
																									LC-S-PT	
																									SU-S-PT	
																									FC-S-PT	
																									CT-S-PT	
																									Rp	
																									PS	
																									PS(LH)	
																									LS-PS	
																									CT-PS	
																									G	
																									PF	
																									PF(LH)	
																									LS-PF	
																									SU-PF	
																									FC-PF	
																									CT-PF	
																									SP-PT	
																									SP-PT-X	
																									LS-SP-PT	
																									SU-SP-PT	
																									SP-S-PT	
																									LS-SP-S-PT	
																									SU-SP-S-PT	
																									SP-PS	
																									LS-SP-PS	
																									SP-PF	
																									LS-SP-PF	
																									INT-PT	
																									LS-INT-PT	
																									INT-S-PT	
																									LS-INT-S-PT	
																									NPT	
																									LS-NPT	
																									SP-NPT	
																									INT-NPT	
																									S-NPT(Short Thread Type)	
																									LS-SP-S-NPT	
																									INT-S-NPT	
																									NPTF	
																									LS-NPTF	
																									NPS	
																									NPSF	
																									MC-HLC	
																									MC-CSLC	



READ carefully before using our products.

WARNING

- Tools may shatter if broken. The **wearing of eye protection is strongly advised** in the vicinity of their use.
- The **correct using conditions and handling** of our tools **are essential** in securing maximum useful tool life and hazard free operation.
- Chips may fly about or wind around machine spindle during operation, care should be taken to **prevent injuring** when treating them.
- Cutting tools have sharp edges and care must be taken when handling to avoid cuts/lacerations to unprotected hands.
- The **wearing of gloves is forbidden** as the gloves may entangle with turning tools.
- Tools may hurt the user's feet when falling off. The **safety shoes should be put on** at all time.
- While fitting the tools to machine spindles and/or sleeves, care should be taken to avoid subjecting them to shock or impact.
- Check that the **workpieces are properly seated and securely held** in the chuck before switching on machine power.
- Do not use a tool whose **cutting edges are worn-out or chipped severely**.
- Tools may generate **extreme heat** during use. **Fire protection** is strongly recommended.

Standardized quantity symbols for cutting tools and tool dimensions

Quantity symbols applied to cutting tool catalogues and others varied depending on the manufacturers. This has confused customers understanding. To increase customers' convenience by using same symbols, JSCTA and JCTMA standardized the quantity symbols. YAMAWA adopts the newly specified standardized quantity symbols in its catalogues.

Overall length	Thead length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Product

Reborn

According to

Demand

YAMAWA proposes third option in addition to standard products and special products.



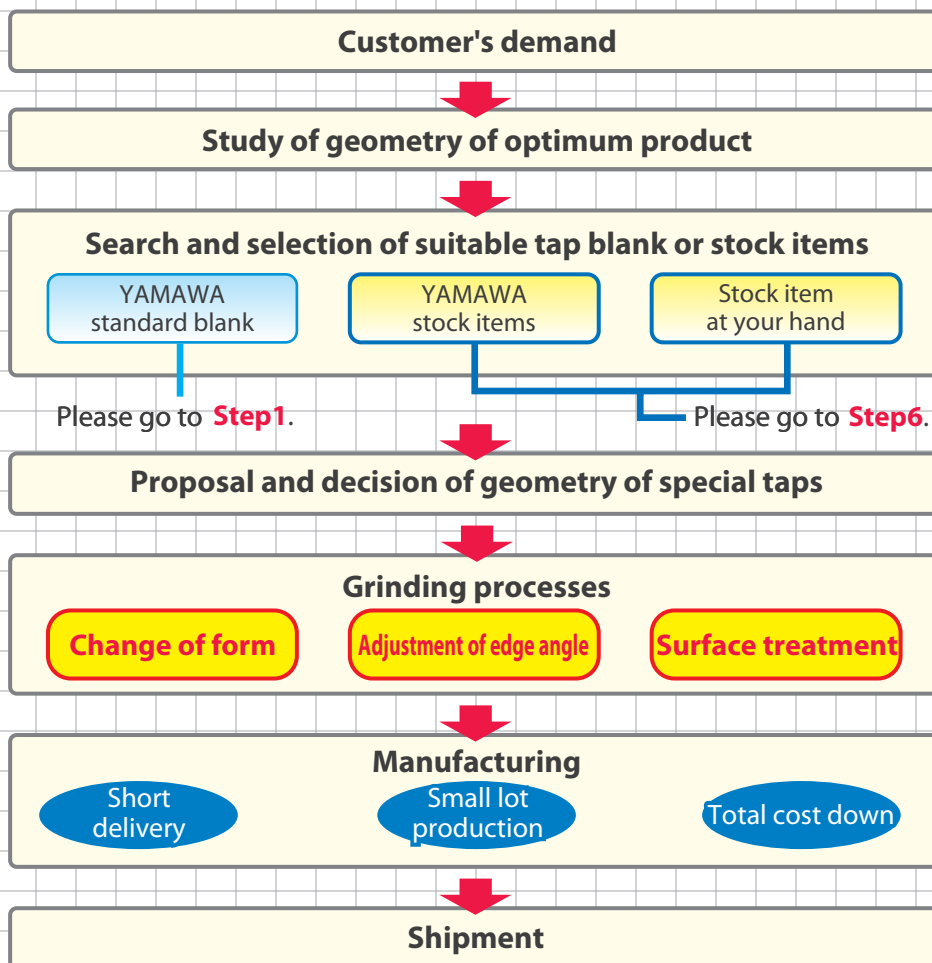
Product
Reborn
According to
Demand

Solution tool

PRAD system

PRAD system is YAMAWA's innovative production system in order to respond flexibly to today's diversifying users' needs, such as requests of short delivery and small lot production. You can get a lot of benefit by using YAMAWA standard tap blanks through PRAD system.

Flow chart of PRAD system





PRAD system is YAMAWA's innovative production system in order to respond flexibly to today's diversifying users' needs, such as requests of short delivery and small lot production.

Process from standard blank selected by customers to delivery of special taps

Step 1 Search of size table of available standard blanks

If you have decided tentatively geometry of special tap, please search "the size table of available standard blanks" and confirm if this special tap is in the production range or can change into the tap blank in the range.

※Followings are steps of a procedure for the sample case on the right hand.

Confirmation	Size	Hand of thread	Category of taps	
Requested special tap	M12x0.5	Left hand thread	SP with 15°helix	F-SL
Search from "the table for applicable standard tap blanks".	listed in the table Available	Right-hand thread Left-hand thread Available	Available	Available

- * Corresponding pitches meet with the pitches of other kinds.
- * Concerning Hand of threads, both right and left are applicable in the same blank.
- * Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.

main size designation and specification				
① Metric	② Unified	③ Whitworth	④ STI (Metric)	⑤ STI (Unified)
M12x1.75	7/16-14UNC	W7/16-14	STL_M10x1.5	STL-3/8-16UNC
M12x1.5	7/16-16UN		STL_M10x1.25	
M12x1.25	7/16-20UNF		STL_M10x1	
M12x1	7/16-28UNEF			
M12x0.75	7/16-32UN			
M12x0.5				

Complete search and study

YAMAWA staff supports you if you can not search.
Please go to Step3.

Step 2 Geometry and quotation of special taps

- Please be settled geometry of special taps referring to following technical info of this catalog.
- After geometry is settled, please request Yamawa for quotation with a remark "Use standard blank+PRAD system."
- YAMAWA quotes price promptly considering "Short delivery", "Small lot production" and "Total cost down"

[Main Technical information]

Tap type	Product contents-1~8	Materials used for Cutting Tools	Technical information-79~80
System table of taps	Contents-2~7	Classes of internal threads and taps	Technical information-13~17
Selection Chart of Taps	Contents-8~11	Surface Treatment	Technical information-32~34
Flutes	Technical information-2	Thread Series	Technical information-58~59

Please contact YAMAWA staff.
Please go to Step7.

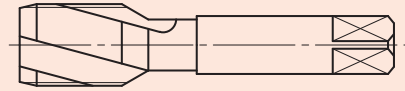


What is standard blank?



- Blank is generic designation of semi-finished product before forming a tap.
- Standard blank is blank for manufacturing standard tap.
- Special taps will be completed only after the process of edging (on flute, thread and chamfer), by using the blanks which are already heat treated and shank ground.

Example of special geometry of tap requested by customer



- Fast tap, F-SL, for M12×0.5 LH
- Material : HSS-P Surface treatment : TiCN
- Overall length : 55mm Thread length : 15mm Shank dia : ϕ 8.5
- No. of flutes : 3 No. of chamfer : 5threads
- Qty. to produce : 20pcs Requested delivery : Urgently

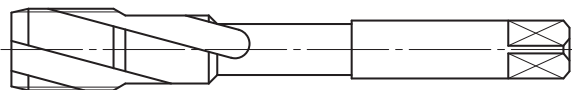
Shank dia	Size of square	Length of square	Overall length	Material	Thread length	Surface treatment
ϕ 8.5	□6.5	9	55	HSS-P	15	TiCN
Available	Available	Available	Check if std OAL(82mm long) is acceptable.	HSS-P material of std. OAL is available	Std. THL(26mm) will be modified to 15mm by grinding	Available

main size designation and specification						Overall length of standard type and long type, and corresponding Materials					max. thread length	TYPE
l	l_n	l_s (reference)	D_s	K	l_k	Length of standard type : L		Length of long type : L				
26	40	42	8.5	6.5	9	82	-	100	120	150	26	e
14												f
12												

Judgment

- OAL : modified from 55 to 82
- Other specifications : unchanged

Geometry of special tap after the study result



- Fast tap, F-SL, for M12×0.5 LH
- Material : HSS-P Surface treatment : TiCN Tap Class : P3
- Overall length : **82mm** Thread length : 15mm Shank dia : ϕ 8.5
- No. of flutes : 3 No. of chamfer : 5threads
- Qty. to produce : **20pcs are ok** Requested delivery : **can respond to the short delivery**



YAMAWA Staff proposes optimum products if step1 and step2 cannot be used, or listed size is not available.

Step 3 Several info related to special tap requested from customer

- Category of internal thread and dimension
- Name of work material and hardness
- Machine
- Other info

Please contact us after filling the inquiry sheet for special tap

※Please print out Inquiry sheet **PRAD-17** and use for special tap

After confirmation of several info, please go to **Step4**.

Step 4 Selection of suitable tap blank or stock items by YAMAWA staff

YAMAWA
Standard blank

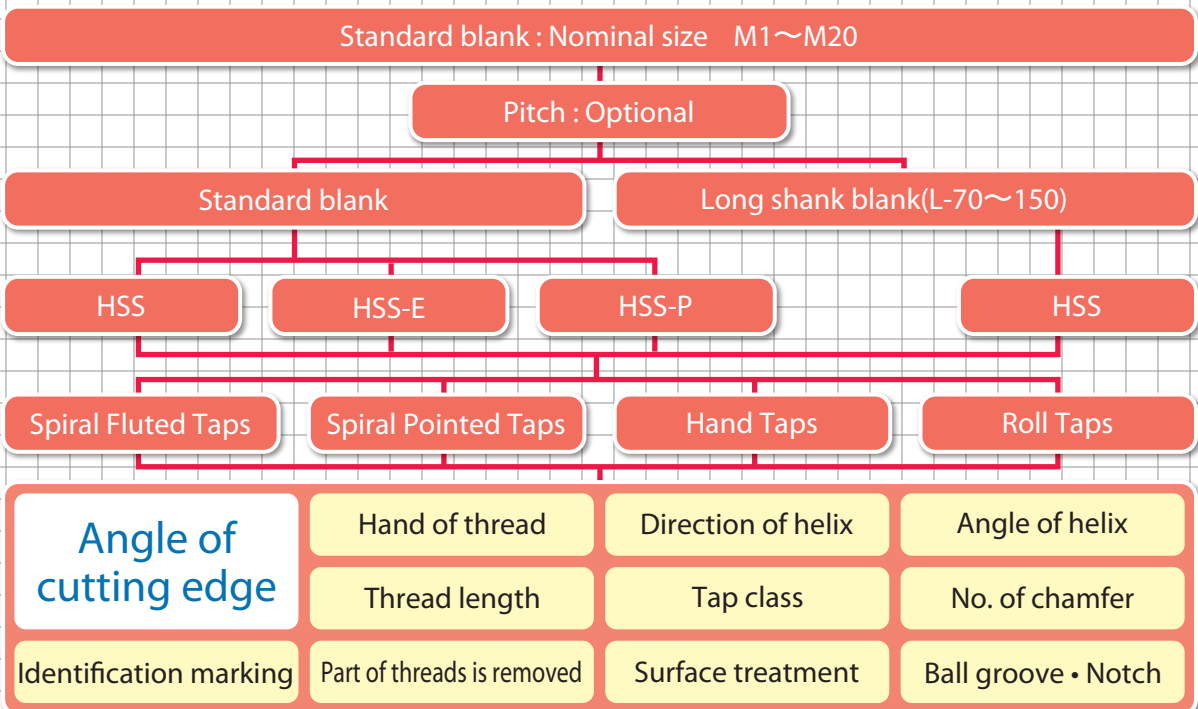
YAMAWA
Stock items

Stock item at
your hand

Please go to **Step5** in the case of use of standard blank.

Please go to **Step6** in the case of modification process.

Step 5 Flow chart of standard blank by YAMAWA staff



Please go to **Step7** after confirming specification from std blanks.



Solution tool

PRAD system

Step 6 PRAD system Modification process

Optimum design of each part

Flute part, Thread part,
Shank part, Chamfer part,
Others

Special modification

- Heel cut
- Oil hole
- Guide of the tap
- Others

Surface treatment

OX(Oxidation) · NI(Nitriding)
Nitride-Oxide
TiCN · CrN



Base of tap

OX



Part of threads is removed



TiN



Heel cut



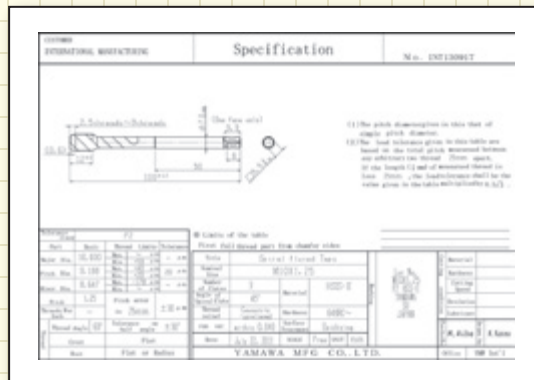
Guide of the tap

Example of PRAD system modification process



Please go to **Step7** after settling modification process.

Step 7 Proposal of dimension by temporary drawing and quotation



Please go to **Step8** after confirming specification on temporary drawing.

Step 8 Production support

Short delivery

Small lot production

Total cost down

Shipment



Specification corresponding with standard blanks(for Japanese market)

Material Symbols

HSS : ○

HSS-E : ●

HSS-P : ◎

main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	④ STI (metric)	⑤ STI (unified)
M1x0.25					
M1x0.2					
M1.2x0.25					
M1.2x0.2					
M1.4x0.3					
M1.4x0.2					
M1.6x0.35	No.0-80UNF	W1/16-60	SM1/16-80		
M1.6x0.2					
M1.7x0.35					
M1.7x0.2					
M1.8x0.35					
M1.8x0.2					
M2x0.4	No.1-64UNC No.1-72UNF		SM5/64-64		
M2x0.25					
M2.2x0.45	No.2-56UNC No.2-64UNF				
M2.2x0.25					
M2.3x0.4					
M2.3x0.25					
M2.5x0.45		W3/32-48	SM3/32-56		
M2.5x0.35					
M2.6x0.45	No.3-48UNC No.3-56UNF				
M2.6x0.35					
M3x0.5	No.4-40UNC No.4-48UNF			STI_M2.2x0.45	STI_No.2-56UNC
M3x0.35					
M3x0.6					
M3.5x0.6	No.5-40UNF No.5-44UNF No.6-32UNC No.6-40UNF	W1/8-40	SM1/8-40 SM1/8-44		
				STI_M2.5x0.45 STI_M2.6x0.45	
M3.5x0.35					
M4x0.7		W5/32-32	SM9/64-40		STI_No.4-40UNC STI_No.5-40UNF
M4x0.75					
M4x0.5				STI_M3x0.5	
M4.5x0.75	No.8-32UNC No.8-36UNF		SM11/64-40		STI_No.6-40UNF
M4.5x0.5				STI_M3.5x0.6	
M5x0.8	No.10-24UNC No.10-32UNF	W3/16-24	SM3/16-28 SM3/16-32 SM3/16-40	STI_M4x0.7	STI_No.6-32UNC
M5x0.75					
M5x0.9					
M5x0.5					

* Corresponding pitches meet with the pitches of other kinds.

* Concerning Hand of threads, both right and left are applicable in the same blank.

* Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.



Solution tool

PRAD system

main size designation and specification						Overall length of standard type and long type, and corresponding Materials					max. thread length	TYPE	
ℓ	ℓ_n	ℓ_s (reference)	D_s	K	ℓ_k	Length of standard type : L		Length of long type : L					
4.5 3.6	-	(24)	3	2.5	5	36 ○○		-	-	-	-	4.5	a
4.5 3.6	-	(24)	3	2.5	5	36 ○○		-	-	-	-	4.5	a
5.4 3.6	-	(24)	3	2.5	5	36 ○○		-	-	-	-	5.4	a
6.3 3.6	-	(24)	3	2.5	5	36 ○○		-	-	-	-	6.3	b
6.3 3.6	-	(24)	3	2.5	5	36 ○○		-	-	-	-	6.3	b
6.3 3.6	-	(27)	3	2.5	5	42 ○		-	-	-	-	6.3	b
7.2 4.5	12	(27)	3	2.5	5	42 ○○		-	-	-	-	7.2	^c b(ROLL)
8.1 4.5	12	(27)	3	2.5	5	42 ○○		-	-	-	-	8.1	^c b(ROLL)
7.2 4.5	12	(27)	3	2.5	5	42 ○○		-	-	-	-	7.2	^c b(ROLL)
8.1 6.3	14	(29)	3	2.5	5	46 ○○		-	-	-	-	8.1	c
8.1 6.3	14	(29)	3	2.5	5	46 ○○		-	-	-	-	8.1	c
9 6.5 9	14	26	4	3.2	6	46 ○●○		70 ○	100 ○	120 ○	150 ○	9	c
11 6.8 6.5	16	29	5	4	7	52 ○●○		-	-	-	-	11	c
11 9 7.5	17	29	5	4	7	52 ○●○		70 ○	100 ○	120 ○	150 ○	11	c
13 9	21	33	5.5	4.5	7	60 ○●○		70 ○	100 ○	120 ○	150 ○	13	c
13 9	22	33	5.5	4.5	7	60 ○●○		70 ○	100 ○	120 ○	150 ○	13	c



Specification corresponding with standard blanks(for Japanese market)

Material Symbols

HSS : ○

HSS-E : ●

HSS-P : ◎

main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	④ STI (metric)	⑤ STI (unified)
M5.5×0.5					
M6×1	No.12-24UNC No.12-28UNF	W7/32-24	SM15/64-28 SM7/32-32	STI_M4.5×0.75 STI_M5×0.8	STI_No.8-32UNC STI_No.10-24UNC STI_No.10-32UNF
M6×0.75					STI_No.8-36UNF
M6×0.5					
	1/4-20UNC 1/4-28UNF	W1/4-20	SM1/4-24 SM1/4-28 SM1/4-40		
M7×1					STI_No.12-24UNC STI_No.12-28UNF
M7×0.75				STI_M6×0.75	
M7×0.5					
M8×1.25	5/16-18UNC 5/16-20UN	W5/16-18			STI_1/4-20UNC
M8×1	5/16-24UNF 5/16-28UN			STI_M6×1	STI_1/4-28UNF
M8×0.75	5/16-32UNEF				
M8×0.5					
M9×1.25					
M9×1					
M9×0.75					
M9×0.5					
M10×1.5	3/8-16UNC	W3/8-16			STI_5/16-18UNC
M10×1.25	3/8-20UN			STI_M8×1.25	
M10×1	3/8-24UNF 3/8-28UN			STI_M8×1	STI_5/16-24UNF
M10×0.75	3/8-32UNEF				
M10×0.5					
M11×1.5					
M11×1.25				STI_M9×1.25	
M11×1				STI_M9×1	STI_3/8-24UNF
M11×0.75					
M11×0.5					
M12×1.75	7/16-14UNC	W7/16-14			
M12×1.5	7/16-16UN			STI_M10×1.5	STI_3/8-16UNC
M12×1.25	7/16-20UNF			STI_M10×1.25	
M12×1	7/16-28UNEF			STI_M10×1	
M12×0.75	7/16-32UN				
M12×0.5					
M13×1.75	1/2-13UNC	W1/2-12			
M13×1.5	1/2-16UN			STI_M11×1.5	
M13×1.25	1/2-20UNF			STI_M11×1.25	STI_7/16-20UNF
M13×1	1/2-28UNEF				
M13×0.75	1/2-32UN				
M13×0.5					
M14×2					

* Corresponding pitches meet with the pitches of other kinds.

* Concerning Hand of threads, both right and left are applicable in the same blank.

* Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.



Solution tool

PRAD system

main size designation and specification						Overall length of standard type and long type, and corresponding Materials					max. thread length	TYPE	
l	l_n	l_s (reference)	D_s	K	l_k	Length of standard type : L		Length of long type : L					
9	26	33	6	4.5	7	62 ○●◎		-	100 ○	120 ○	150 ○	15	c
15	26	33	6	4.5	7	62 ○●◎		-	100 ○	120 ○	150 ○	15	c
9.5													
9													
15	26	33	6	4.5	7	62 ○		-	-	-	-	15	c
8.6													
19	34	36	6.2	5	8	70 ○●◎		-	-	-	-	19	e
10													f
19	34	36	6.2	5	8	70 ○●◎		-	100 ○	120 ○	150 ○	19	e
10													f
23	37	38	7	5.5	8	75 ○●◎		-	-	-	-	23	e
13													f
11													
23	37	38	7	5.5	8	75 ○●◎		-	100 ○	120 ○	150 ○	23	e
13													f
11													
26	40	42	8.5	6.5	9	82 ○●◎		-	-	-	-	26	e
14													f
12													
26	40	42	8.5	6.5	9	82 ○●◎		-	100 ○	120 ○	150 ○	26	e
14													f
12													
26	43	45	10.5	8	11	88 ○		-	-	-	-	26	e
14													f
12													
26	43	45	10.5	8	11	88 ○		-	-	-	-	26	e
14													f
12													

Specification corresponding with standard blanks(for Japanese market)

Material Symbols

HSS : ○

HSS-E : ●

HSS-P : ◎

main size designation and specification					
① metric	② unified	③ whitworth	④ sewing screw	④ STI (metric)	⑤ STI (unified)
M14×1.5 M14×1.25 M14×1				STI_M12×1.5 STI_M12×1.25 STI_M12×1	STI_7/16-14UNC
M14×0.75 M14×0.5					
M15×2	9/16-12UNC	W9/16-12		STI_M12×1.75 STI_M13×1.5	STI_1/2-20UNF
M15×1.5	9/16-16UN 9/16-18UNF				
M15×1.25	9/16-20UN 9/16-24UNEF				
M15×1	9/16-28UN				
M15×0.75	9/16-32UN				
M15×0.5					
M16×2	5/8-11UNC 5/8-12UN	W5/8-11		STI_M13×1.75 STI_M14×1.5	STI_1/2-13UNC
M16×1.5	5/8-16UN 5/8-18UNF				
M16×1.25	5/8-20UN 5/8-24UNEF			STI_M14×1.25	
M16×1	5/8-28UN				
M16×0.75	5/8-32UN				
M16×0.5					
M17×1.5				STI_M14×2	STI_9/16-18UNF
M17×1					
M17×0.5					
M18×2.5				STI_M16×1.5	STI_9/16-12UNC
M18×2					
M18×1.5					STI_5/8-18UNF
M18×1.25					
M18×1				STI_M16×1	
M18×0.75					
M18×0.5					
M19×2.5	3/4-10UNC	W3/4-10		STI_M16×2	STI_5/8-11UNC
M19×2	3/4-12UN 3/4-16UNF				
M19×1.5	3/4-20UNEF				
M19×1	3/4-28UN 3/4-32UN				
M20×2.5				STI_M18×1.5	
M20×2					
M20×1.5					
M20×1.25					
M20×1					

* Corresponding pitches meet with the pitches of other kinds.

* Concerning Hand of threads, both right and left are applicable in the same blank.

* Concerning the kind of taps, SP, PO, HT, ROLL are applicable in the same blank.



Solution tool

PRAD system

main size designation and specification						Overall length of standard type and long type, and corresponding Materials					max. thread length	TYPE	
l	l_n	l_s (reference)	D_s	K	l_k	Length of standard type : L		Length of long type : L					
26	43	45	10.5	8	11	88	○	-	-	-	-	26	e
15													f
12													
26	47	48	12.5	10	13	95	○	-	-	-	-	26	e
15													f
13													
26	47	48	12.5	10	13	95	○	-	-	-	-	26	e
15													f
13													
33	49	51	14	11	14	100	○	-	-	-	-	33	e
18													f
13													
33	49	51	14	11	14	100	○	-	-	-	-	33	e
18													
16													f
13													
33	55	50	15	12	15	105	○	-	-	-	-	33	e
18													f
33	55	50	15	12	15	105	○	-	-	-	-	33	e
18													f

Specification of corresponding standard blanks(for European market)

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
	Size	L	ℓ	ℓ _n	D	K		ℓ _k	HSS	HSS-E	SKH56	HSS-P	Cutting	
M3	56	6.5	18	4	※	※	※		●			ISO3	G7	SP,PO,HT,ROLL
M4	63	9	21	6	※	※	※		●			ISO3	G7	SP,PO,HT,ROLL
M5	70	10.5	25	6	※	※	※		●			ISO3	G7	SP,PO,HT,ROLL
M6	80	15	30	6	4.9	8	g		●			ISO2X	-	SP,PO,HT
M8	90	19	35	8	6.2	9	g		●			ISO3	G7	SP,PO,HT,ROLL
M10	100	23	39	10	8	11	g		●			ISO3	G7	SP,PO,HT,ROLL
M12	110	26	45	12	9	12	g		●			ISO3	G9	SP,PO,HT,ROLL

Note* Square can be added.

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
	Size	L	ℓ	ℓ _n	D	K		ℓ _k	HSS	HSS-E	SKH56	HSS-P	Cutting	
M1.4	40	7	-	2.5	2.1	5	DIN371		●			ISO3	G5	SP,PO,HT,ROLL
M1.6	40	8	-	2.5	2.1	5			●			ISO3	G5	SP,PO,HT,ROLL
M2	45	8	-	2.8	2.1	5			●	●	●	ISO3	G5	SP,PO,HT,ROLL
M2.5	50	9	-	2.8	2.1	5			●		●	ISO3	G6	SP,PO,HT,ROLL
M3	56	11	18	3.5	2.7	6			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M4	63	13	21	4.5	3.4	6			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M5	70	16	25	6	4.9	8			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M6	80	19	30	6	4.9	8			●	●	●	ISO2X	-	SP,PO,HT
M7	80	19	30	7	5.5	8			●			ISO3	G11	SP,PO,HT,ROLL
M8	90	22	35	8	6.2	9			●	●	●	ISO3	G7	SP,PO,HT,ROLL
M10	100	24	39	10	8	11		●	●	●	ISO3	G7	SP,PO,HT,ROLL	

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
	Size	L	ℓ	ℓ _n	D	K		ℓ _k	HSS	HSS-E	SKH56	HSS-P	Cutting	
M3	56	11	-	2.2	-	-	DIN376		●			ISO3	G7	SP,PO,HT,ROLL
M4	63	13	-	2.8	2.1	5			●			ISO3	G7	SP,PO,HT,ROLL
M5	70	16	-	3.5	2.7	6			●			ISO3	G7	SP,PO,HT,ROLL
M6	80	19	-	4.5	3.4	6			●			ISO2X	-	SP,PO,HT
M8	90	22	-	6	4.9	8			●			ISO3	G7	SP,PO,HT,ROLL
M10	100	24	-	7	5.5	8			●			ISO3	G7	SP,PO,HT,ROLL
M12	110	29	-	9	7	10			●		●	ISO3	G9	SP,PO,HT,ROLL
M14	110	30	-	11	9	12			●		●	ISO3	G9	SP,PO,HT,ROLL
M16	110	32	-	12	9	12			●		●	ISO3	G9	SP,PO,HT,ROLL
M20	140	34	-	16	12	15			●		●	ISO3	G13	SP,PO,HT,ROLL

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
	Size	L	ℓ	ℓ _n	D	K		ℓ _k	HSS	HSS-E	SKH56	HSS-P	Cutting	
M8x1	90	22	-	6	4.9	8	DIN374		●			ISO3	G7	SP,PO,HT,ROLL
M10x1	90	20	-	7	5.5	8			●			ISO3	G8	SP,PO,HT,ROLL
M12x1.5	100	22	-	9	7	10			●			ISO3	G10	SP,PO,HT,ROLL
M14x1.5	100	22	-	11	9	12			●			ISO3	G10	SP,PO,HT,ROLL
M16x1.5	100	22	-	12	9	12						ISO3	G10	SP,PO,HT,ROLL

unit : mm

YAMAWA standard	Applicable dimension						TYPE	Material				Applicable class		Corresponding products
	Size	L	ℓ	ℓ _n	D	K		ℓ _k	HSS	HSS-E	SKH56	HSS-P	Cutting	
G1/8	90	20	-	7	5.5	8	DIN5156		●			-	-	SP,PO,HT
G1/4	100	22	-	11	9	12			●			-	-	SP,PO,HT
G3/8	100	22	-	12	9	12			●			-	-	SP,PO,HT
G1/2	125	25	-	16	12	15			●			-	-	SP,PO,HT

Specification of corresponding standard blanks(for American market)

unit : mm

YAMAWA standard	Applicable dimension							TYPE	Material				Applicable class		Corresponding products
	L	ℓ	ℓ _n	ℓ _s (Reference)	D	K	ℓ _k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
No.4	47.6	8.5	14.3	28	3.58	2.79	4.7	c		●		●	GH8	G5	SP,PO,HT,ROLL
No.5	49.2	9.5	15.9	29	3.58	2.79	4.7	c		●			GH8	G8	SP,PO,HT,ROLL
No.6	50.8	10.5	17.5	29	3.58	2.79	4.7	c		●		●	GH6	G3	SP,PO,HT,ROLL
No.8	54	11.5	19.1	31	4.26	3.32	6.3	c		●		●	GH6	G3	SP,PO,HT,ROLL
No.10	60.3	13.5	22.2	33	4.92	3.86	6.3	c		●		●	GH6	G4	SP,PO,HT,ROLL
No.12	60.3	14.5	23.8	31	5.58	4.19	7.1	c		●			GH6	-	SP,PO,HT
U1/4	63.5	15	25.4	32	6.47	4.85	7.9	c		●		●	GH6	G4:20UNC G6:28UNF	SP,PO,HT,ROLL
U5/16	69.1	17	28.6	32	8.07	6.04	9.5	c		●		●	GH9	G8	SP,PO,HT,ROLL
U3/8	74.6	19	31.8	33	9.67	7.26	11.1	c		●		●	GH6	- G7:24UNF	SP,PO,HT,ROLL
U7/16	80.2	22	-	-	8.2	6.14	10.3	e		●			GH6	- G6:20UNF	SP,PO,HT,ROLL
U1/2	85.7	25	-	-	9.32	6.98	11.1	e		●			GH9	- G7:20UNF	SP,PO,HT,ROLL
M3	49.2	9.5	15.9	29	3.58	2.79	4.7	c		●				D10	SP,PO,HT,ROLL
M4	54	11.5	19.1	30	4.26	3.32	6.3	c		●				D11	SP,PO,HT,ROLL
M5	60.3	13.5	22.2	34	4.92	3.86	6.3	c		●				D7	SP,PO,HT,ROLL
M6	63.5	15	25.4	32	6.47	4.85	7.9	c		●		●		D8	SP,PO,HT,ROLL
M8	69.1	17	28.6	34	8.07	6.04	9.5	c		●			D8	-	SP,PO,HT
M10	74.6	19	-	36	9.67	7.26	11.1	e		●			D9	-	SP,PO,HT
M12	85.7	25	-	-	9.32	6.98	11.1	e		●			D9	-	SP,PO,HT

Specification of corresponding standard blanks(for American market)

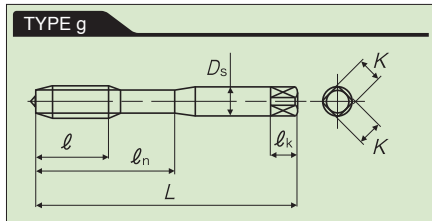
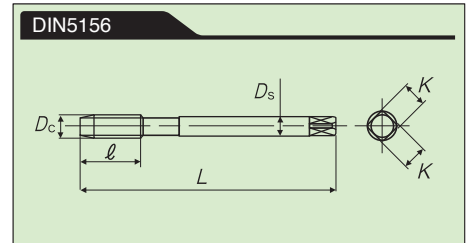
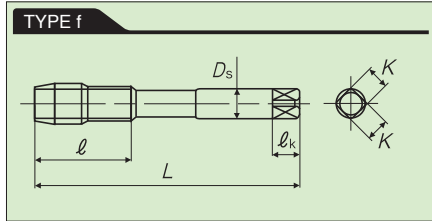
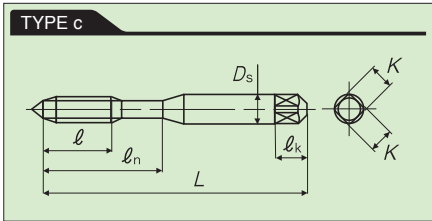
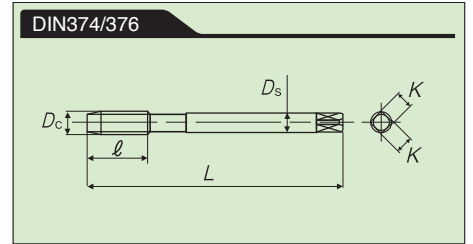
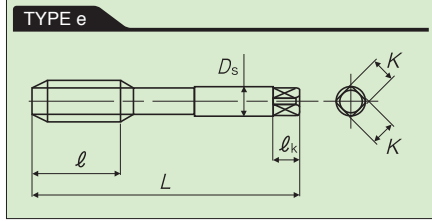
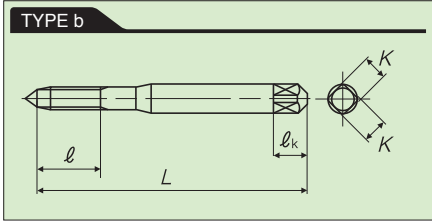
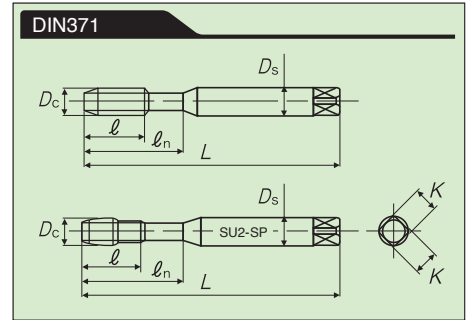
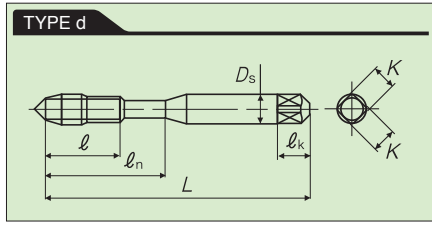
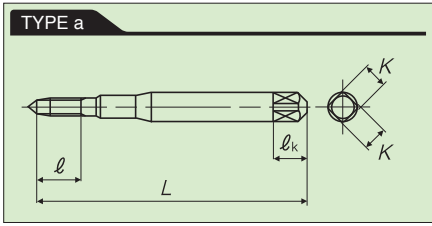
Overall length : DIN, Shank dia. : ANSI

unit : mm

YAMAWA standard	Applicable dimension							TYPE	Material				Applicable class		Corresponding products
	L	ℓ	ℓ _n	ℓ _s (Reference)	D	K	ℓ _k		HSS	HSS-E	SKH56	HSS-P	Cutting	Forming	
No.0	45	6	8.2	29	3.58	2.79	4.7	b		●			GH9	G8	SP,PO,HT,ROLL
No.2	45	8	10.7	29	3.58	2.79	4.7	b		●			GH8	G6	SP,PO,HT,ROLL
No.4	56	9	18	32	3.58	2.79	4.7	c		●		●	GH8	G5	SP,PO,HT,ROLL
No.5	56	11	18	34	3.58	2.79	4.7	c		●			GH8	G8	SP,PO,HT,ROLL
No.6	56	11	19	34	3.58	2.79	4.7	c		●		●	GH6	G3	SP,PO,HT,ROLL
No.8	63	13	21	39	4.26	3.32	6.3	c		●		●	GH9	G7	SP,PO,HT,ROLL
No.10	70	14	24	42	4.92	3.86	6.3	c		●		●	GH7	G7	SP,PO,HT,ROLL
No.12	80	15	25	49	5.58	4.19	7.1	c		●			GH6	-	SP,PO,HT,ROLL
U1/4	80	15	30	43	6.47	4.85	7.9	c		●		●	GH6	G4	SP,PO,HT,ROLL
U5/16	90	19	35	46	8.07	6.04	9.5	DIN371		●		●	GH9	G8	SP,PO,HT,ROLL
U3/8	100	23	39	51	9.67	7.26	11.1	DIN371		●		●	GH6	24UNF G7	SP,PO,HT,ROLL
U7/16	100	23	49	51	8.2	6.14	10.3	e		●			GH6	20UNF G6	SP,PO,HT,ROLL
U1/2	110	26	54	56	9.32	6.98	11.1	e		●			GH9	20UNF G7	SP,PO,HT,ROLL
M3	56	11	18	34	3.58	2.79	4.7	c		●			D12	D12	SP,PO,HT,ROLL
M4	63	13	21	39	4.26	3.32	6.3	c		●			D12	D12	SP,PO,HT,ROLL
M5	80	15	25	49	5.58	4.19	7.1	c		●			D12	D12	SP,PO,HT,ROLL
M6	80	15	30	43	6.47	4.85	7.9	c		●		●	D11	D11	SP,PO,HT,ROLL
M8	90	19	35	46	8.07	6.04	9.5	DIN371		●			D7	-	SP,PO,HT,ROLL
M10	100	23	49	51	8.2	6.14	10.3	e		●			D12	D12	SP,PO,HT,ROLL
M12	110	26	54	56	9.32	6.98	11.1	e		●			D11	D11	SP,PO,HT,ROLL



Table for tap dimensions and type

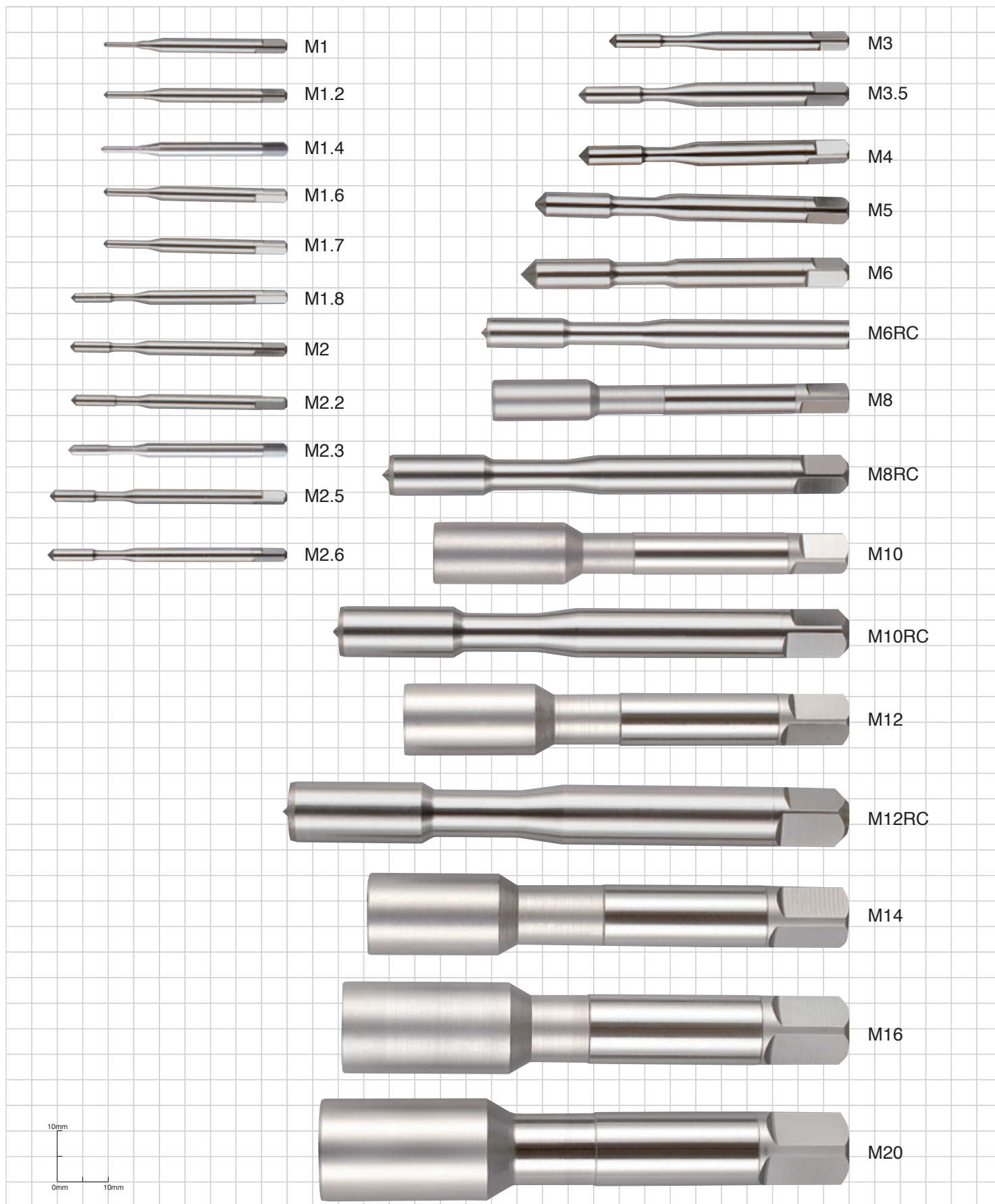




Solution tool

PRAD system

YAMAWA Standard blank Line UP



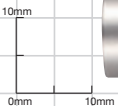
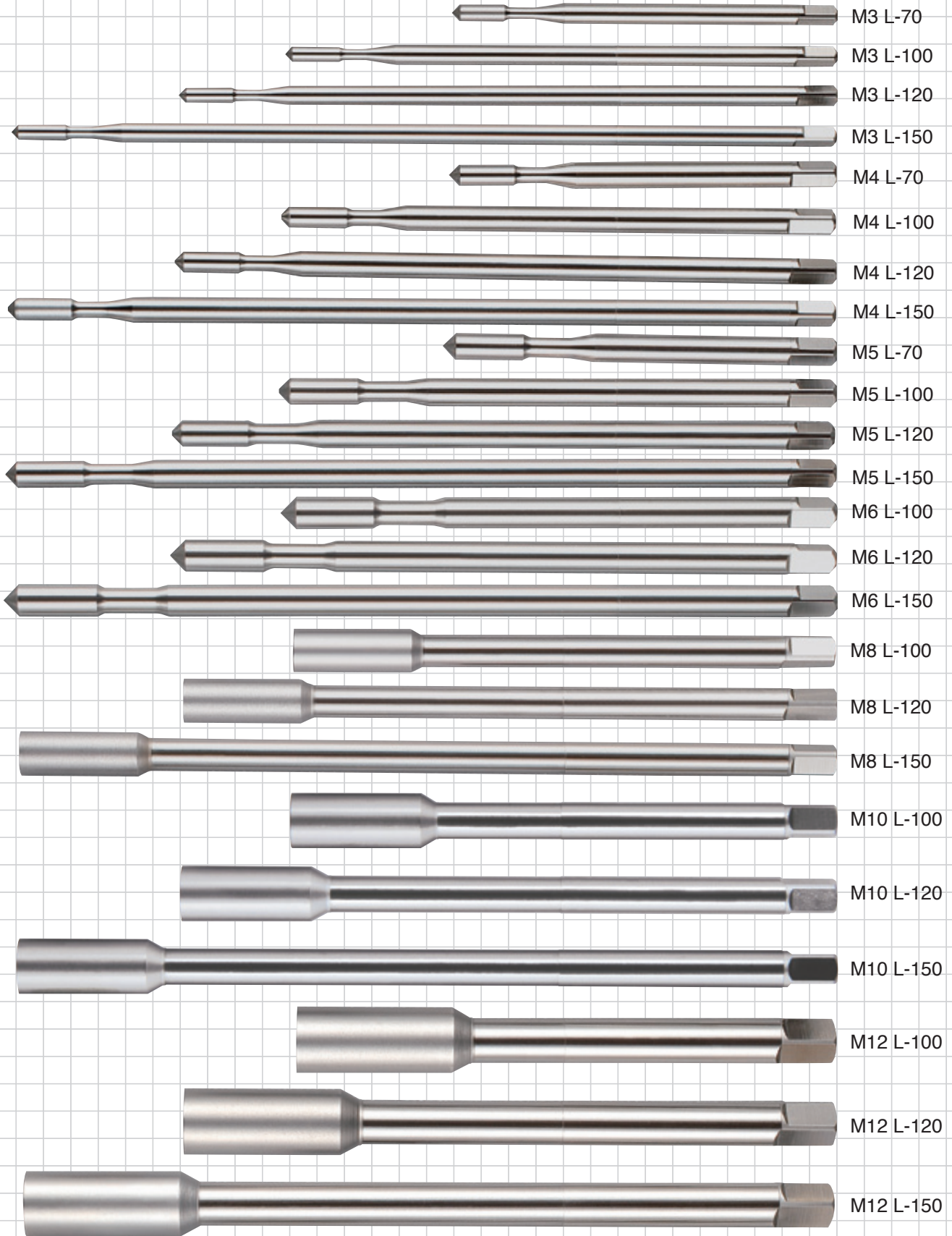
PRAD SYSTEM



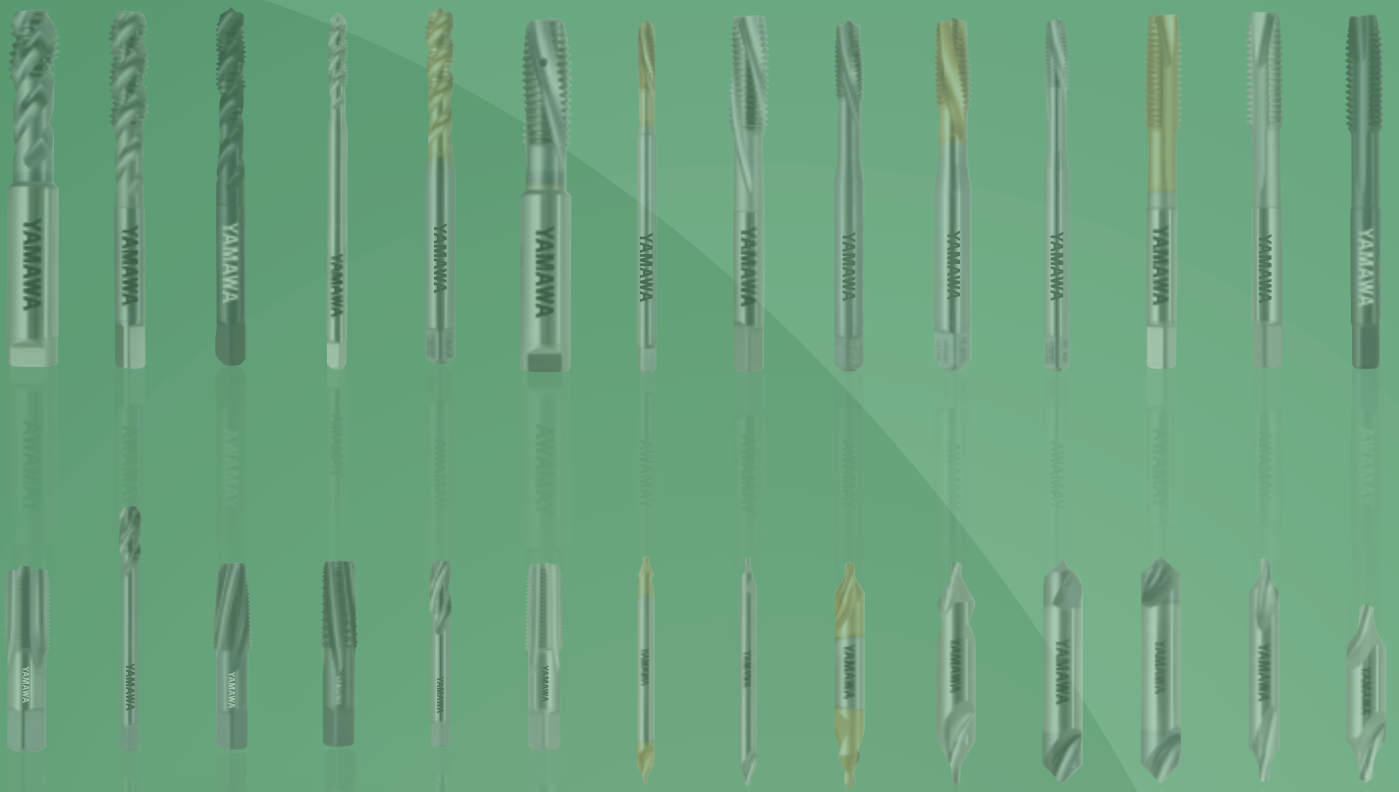
Solution tool

PRAD system

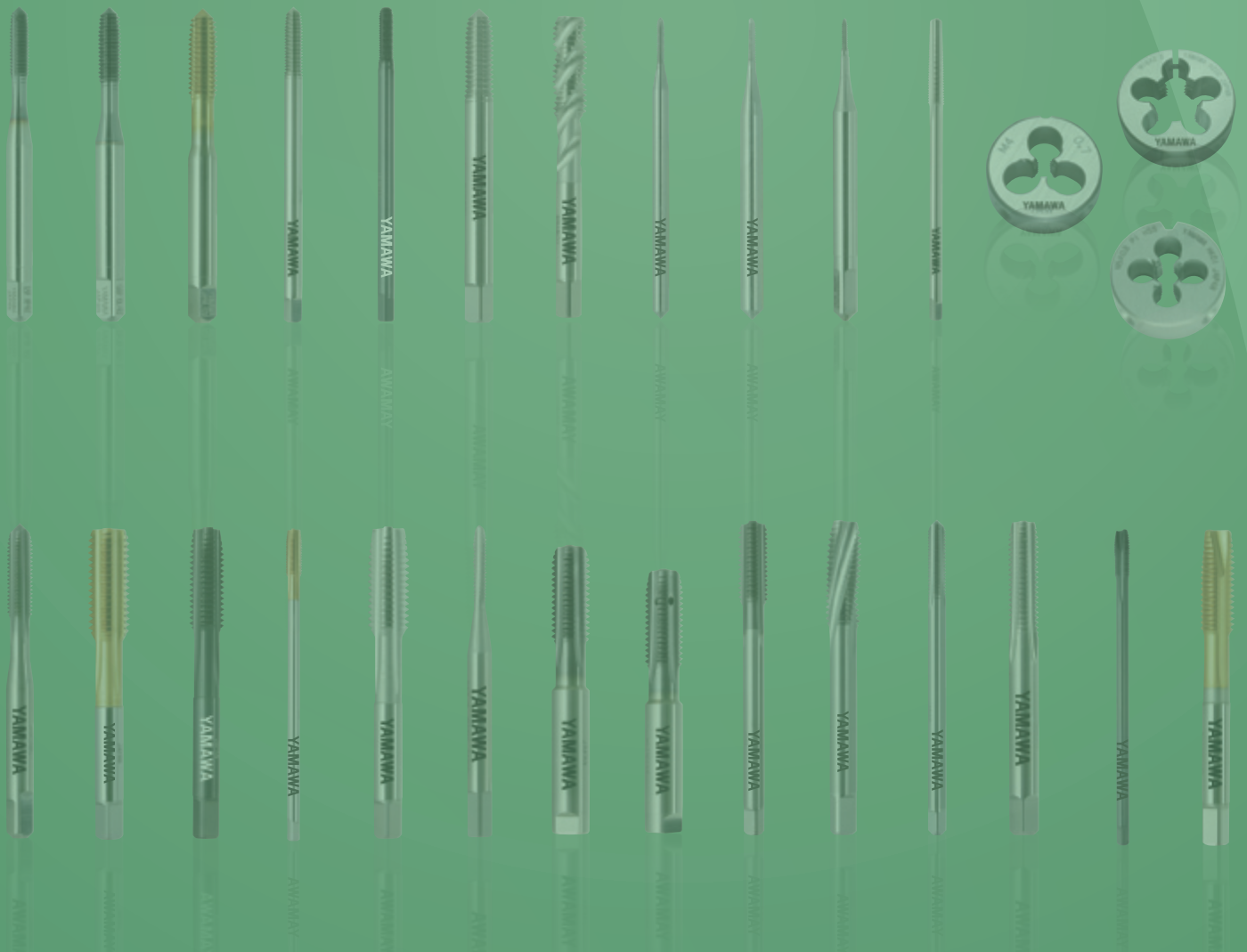
YAMAWA Standard Longshank blank Line UP





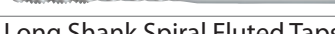















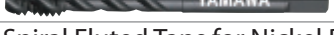
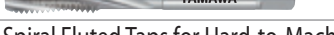
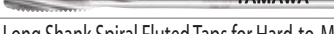






PRAD SYSTEM



YAMAWA product line-ups



Spiral Fluted Taps (for blind hole)		
ISP	 YAMAWA	SP-1
I Series Spiral Fluted Taps for General Purpose		
SP-Y	 YAMAWA	SP-1
Spiral Fluted Taps for Thin Soft Structural Steel Sheets		
SP(N-SP)	 YAMAWA	SP-2
Spiral Fluted Taps		
+SP(N+SP)	 YAMAWA	SP-21
Plus Series Spiral Fluted Taps		
XSP	 YAMAWA	SP-22
X Series Spiral Fluted Taps		
SP-OX(N-SP-OX)	 YAMAWA	SP-23
Spiral Fluted Taps, Oxided		
+SP-OX (N+SP-OX)	 YAMAWA	SP-25
Plus Series Spiral Fluted Taps, Oxided		
SP(LH) (N-SP(LH))	 YAMAWA	SP-26
Spiral Fluted Taps for Left Hand Threads		
SP-V (N-SP-V)	 YAMAWA	SP-29
Spiral Fluted Taps, TiN coated		
AU+SP	 YAMAWA	SP-29
Plus Series Spiral Fluted Taps, TiN coated		
AUXSP	 YAMAWA	SP-30
X Series Spiral Fluted Taps, TiN coated		
LS-SP (LS-N-SP)	 YAMAWA	SP-30
Long Shank Spiral Fluted Taps		
LS-SP(LH) (LS-N-SP(LH))	 YAMAWA	SP-39
Long Shank Spiral Fluted Taps for Left Hand Threads		
LS-SP-V (LS-N-SP-V)	 YAMAWA	SP-40
Long Shank Spiral Fluted Taps, TiN coated		
LS-SP-K	 YAMAWA	SP-41
Long Shank Spiral Fluted Taps with Neck		
SU+SP SU-SP	 YAMAWA	SP-41
Spiral Fluted Taps for Stainless Steels		
SUXSP	 YAMAWA	SP-48
X Series Spiral Fluted Taps for Stainless Steels		
SU2-SP	 YAMAWA	SP-48
Spiral Fluted Taps for Tough Stainless Steels		
SU-S-SP	 YAMAWA	SP-50
Spiral Fluted Taps for Stainless Steels, Deep Hole Use		
LS-SU-S-SP	 YAMAWA	SP-51
Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use		

Spiral Fluted Taps (for blind hole)		
S-SP	 YAMAWA	SP-52
Spiral Fluted Taps, Deep Hole Use		
E-SP	 YAMAWA	SP-55
Spiral Fluted Taps for Soft Structural Steels		
HC+SP HC-SP	 YAMAWA	SP-56
Spiral Fluted Taps for High Carbon Steels		
HC+SP-OX HC-SP-OX	 YAMAWA	SP-59
Spiral Fluted Taps for High Carbon Steels, Oxided		
U-SP	 YAMAWA	SP-59
Universal Spiral Fluted Taps		
AL+SP AL-SP	 YAMAWA	SP-60
Spiral Fluted Taps for Aluminum Die Castings		
STI-SP	 YAMAWA	SP-62
Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts		
LO-SP	 YAMAWA	SP-64
Low Spiral Fluted Taps		
LS-LO-SP	 YAMAWA	SP-65
Long Shank Low Spiral Fluted Taps		
MC-SP	 YAMAWA	SP-66
Spiral Fluted Taps with Internal Coolant		
ZET-B	 YAMAWA	SP-67
Spiral Fluted Taps for Titanium Alloys		
ZEN-B	 YAMAWA	SP-68
Spiral Fluted Taps for Nickel Base Alloys		
PM-SP	 YAMAWA	SP-69
Spiral Fluted Taps for Hard-to-Machine Materials		
LS-PM-SP	 YAMAWA	SP-70
Long Shank Spiral Fluted Taps for Hard-to-Machine Materials		
F-SP	 YAMAWA	SP-71
Spiral Fluted Taps for High Speed Tapping		
LS-F-SP	 YAMAWA	SP-72
Long Shank Spiral Fluted Taps for High Speed Tapping		
HFIHS	 YAMAWA	SP-73
Taps for Ultra Fast Tapping, Vertical Use, for Steels		
HFISP	 YAMAWA	SP-73
Taps for Ultra Fast Tapping, Horizontal Use, for Steels		
HFAHS	 YAMAWA	SP-74
Taps for Ultra Fast Tapping, Vertical Use, for Aluminum Castings/Die Castings		
HFASP	 YAMAWA	SP-74
Taps for Ultra Fast Tapping, Horizontal Use, for Aluminum Castings/Die Castings		

Spiral Fluted Taps (for blind hole)

HDISP		SP-75
Taps for Dry Tapping, Blind Hole Use, for Steels		

HDASP		SP-75
Taps for Dry Tapping for Aluminum Castings/Die Castings		

Spiral Fluted Taps (for through hole)

XSL		SL-1
X Series Spiral Fluted Taps, Through Hole Use		

AU+SL		SL-1
Spiral Fluted Taps, TiN coated, Through Hole Use		

AUXSL		SL-2
X Series Spiral Fluted Taps, TiN coated, Through Hole Use		

SU+SL		SL-2
Spiral Fluted Taps for Stainless Steel, Through Hole Use		

SUXSL		SL-3
X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use		

ZET-P		SL-3
Spiral Fluted Taps for Titanium Alloys, Through Hole Use		

F-SL		SL-4
Spiral Fluted Taps for High Speed Tapping, Through Hole Use		

LS-F-SL		SL-5
Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use		

HDISL		SL-6
Taps for Dry Tapping, Through Hole Use, for Steels		

Spiral Pointed Taps

IPO		PO-1
I Series Spiral Pointed Taps		

PO-Y		PO-1
Y Series Spiral Pointed Taps		

PO(N-PO)		PO-2
Spiral Pointed Taps		

+PO(N+PO)		PO-15
Plus Series Spiral Pointed Taps		

PO-OX (N-PO-OX)		PO-17
Spiral Pointed Taps, Oxided		

+PO-OX (N+PO-OX)		PO-18
Plus Series Spiral Pointed Taps, Oxided		

PO(LH) (N-PO(LH))		PO-19
Spiral Pointed Taps for Left Hand Threads		

Spiral Pointed Taps


PO-V (N-PO-V)		PO-22
Spiral Pointed Taps, TiN coated		

LS-PO (LS-N-PO)		PO-23
Long Shank Spiral Pointed Taps		

LS-PO-V (LS-N-PO-V)		PO-31
Long Shank Spiral Pointed Taps, TiN coated		

LS-PO-K		PO-32
Long Shank Spiral Pointed Taps with Neck		

SU+PO SU-PO		PO-32
Spiral Pointed Taps for Stainless Steels		

LS-SU-S-PO		PO-38
Long Shank Spiral Pointed Taps for Stainless Steels, for Deep Hole Use		

S-PO		PO-39
Spiral Pointed Taps, for Deep Hole Use		

HC+PO HC-PO		PO-41
Spiral Pointed Taps for High Carbon Steels		

PO STI (N-PO STI)		PO-43
Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts		

MC-PO		PO-44
Spiral Pointed Taps with Internal Coolant		

EH-PO		PO-45
Spiral Pointed Taps for Hard-to-Machine Materials		

ZEN-P		PO-46
Spiral Pointed Taps for Nickel Base Alloys		













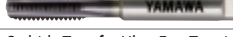
PM-PO		PO-47
Spiral Pointed Taps for Hard-to-Machine Materials		

LS-PM-PO		PO-48
Long Shank Spiral Pointed Taps for Hard-to-Machine Materials		









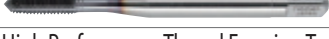
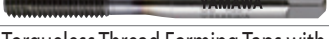
Hand Taps

IHT		HT-1
	I Series Hand Taps	
HT-Y		HT-2
	Hand Taps for Thin Soft Structural Steel Sheets	
HT		HT-2
	Hand Taps	
HT(LH)		HT-40
	Hand Taps for Left Hand Threads	
LS-HT		HT-47
	Long Shank Hand Taps	
LS-HT(LH)		HT-65
	Long Shank Hand Taps for Left Hand Threads	
LS-HT-V		HT-68
	Long Shank Hand Taps, TiN coated	
SU-HT		HT-70
	Hand Taps for Stainless Steels	
FC-O		HT-77
	Hand Taps for Cast Irons	
LA-O		HT-80
	Hand Taps for Die Cast Materials	
AXE-HT		HT-83
	AXE Type Hand Taps	
MG-HT		HT-84
	Hand Taps with Short Chamfer	
STI-HT		HT-85
	Hand Taps for Helical Coil Wire Screw Thread Inserts	
PL-1		HT-89
	Hand Taps for Plastics	
MC-HT		HT-90
	Long Shank Hand Taps with Internal Coolant	
EH-HT		HT-93
	Hand Taps for Hard-to-Machine Materials	




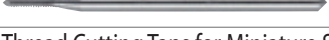
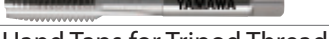

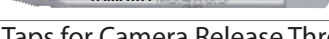


Cemented Carbide Taps

N-CT LA		CT-1
	Cemented Carbide Taps for Light Alloys	
N-CT FC		CT-3
	Cemented Carbide Taps for Cast Irons	
LS-N-CT		CT-7
	Long Shank Cemented Carbide Taps	
N-CT-SP		CT-8
	Cemented Carbide Spiral Fluted Taps	
N-CT-PO		CT-8
	Cemented Carbide Spiral Pointed Taps	
MC-AD-CT		CT-9
	Cemented Carbide Taps with Internal Coolant	
N-CT STI		CT-9
	Cemented Carbide Taps for Helical Coil Wire Screw Thread Inserts	
EH-CT		CT-10
	Cemented Carbide Taps for Hard Materials	
UH-CT		CT-10
	Cemented Carbide Taps for Ultra Hard Materials	
HFACT-P		CT-11
	Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Aluminum Castings/Die Castings	
HFACT-B		CT-11
	Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Aluminum Castings/Die Castings	
HFICT-P		CT-12
	Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Cast Irons	
HFICT-B		CT-12
	Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Cast Irons	



Roll Taps

R-Y		RO-1
Thread Forming Taps for Thin Soft Structural Steel Sheets		
N+RZ N-RZ		RO-1
Thread Forming Taps for Steels		
LS-N-RZ		RO-9
Long Shank Thread Forming Taps for Steels		
N+RS N-RS		RO-11
Thread Forming Taps for Non-Ferrous Materials		
LS-N-RS		RO-21
Long Shank Thread Forming Taps for Non-Ferrous Materials		
N-RS STI		RO-23
Thread Forming Taps for Helical Coil Wire Thread Inserts for Non-Ferrous Materials		
R+V R-V		RO-24
Thread Forming Taps, TiN coated		
OL+RZ OL-RZ		RO-27
Thread Forming Taps for Dry Tapping, TiCN coated		
HP+RZ HP-RZ		RO-30
High Performance Thread Forming Taps, TiCN coated		
SC-TL-RZ		RO-35
Torqueless Thread Forming Taps with Short Chamfer		









Taps for special threads/Simple measuring tools

NT		etc-1
Nut Taps		
MS+RS MS-RS		etc-2
Thread Forming Taps for Miniature Screw Threads		
MS-TF		etc-2
Thread Cutting & Forming Taps for Miniature Screw Threads		
MS+TR MS-TR		etc-3
Thread Cutting Taps for Miniature Screw Threads		
HT		etc-3
Hand Taps for Tripod Threads		
SP(N-SP)		etc-4
Spiral Fluted Taps for Tripod Threads		
HT		etc-4
Taps for Camera Release Threads		
HT		etc-5
Hand Taps for Tire Valve Threads		
HT		etc-5
Hand Taps for Bicycle Tire Valve Threads		







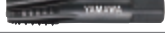

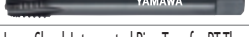

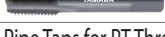
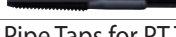
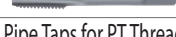

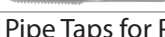



Taps for special threads/Simple measuring tools

HT		etc-6
Hand Taps for Steel Conduit Threads		
HT		etc-6
Hand Taps for Thick Steel Conduit Threads		
CPC-S		etc-7
Check Pins for Bored Hole in Cutting (Straight Type)		
CPC-T		etc-8
Check Pins for Bored Holes in Cutting (Taper Type)		
R-Y		etc-9
Check Pins for Bored Holes for R-Y		
SMT		etc-9
Simple Thread Measuring Tools		
SMTD		etc-10
Simple Thread Measuring Tools, Tandem Type		





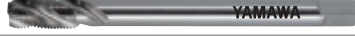
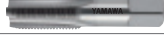





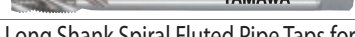

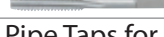






Pipe Taps

Rc		Pipe-1
Pipe Taps for Rc Threads		
PT		Pipe-1
Pipe Taps for PT Threads		
PT(LH)		Pipe-2
Pipe Taps for PT Left Hand Threads		
PT-X		Pipe-2
X Series Pipe Taps for PT Threads Short (lg) Type		
S-PT		Pipe-3
Pipe Taps for PT Threads Short (lg) Type		
S-PT(LH)		Pipe-3
Pipe Taps for PT Left Hand Threads Short (lg) Type		
LS-PT		Pipe-4
Long Shank Pipe Taps for PT Threads		
LS-S-PT		Pipe-4
Long Shank Pipe Taps for PT Threads Short (lg) Type		







Pipe Taps

SP-PT		Pipe-5
Spiral Fluted Pipe Taps for PT Threads		
SP-S-PT		Pipe-6
Spiral Fluted Pipe Taps for PT Threads Short (lg) Type		
SP-PT-X		Pipe-6
X Series Spiral Fluted Pipe Taps of PT Threads Short (lg) Type		
LS-SP-PT		Pipe-7
Long Shank Spiral Fluted Pipe Taps for PT Threads		
LS-SP-S-PT		Pipe-7
Long Shank Spiral Fluted Pipe Taps for PT Threads Short (lg) Type		
INT-PT		Pipe-8
Interrupted Pipe Taps for PT threads for Ductile Materials		
INT-S-PT		Pipe-8
Interrupted Pipe Taps for PT Threads Short (lg) Type for Ductile Materials		
LS-INT-PT		Pipe-9
Long Shank Interrupted Pipe Taps for PT Threads for Ductile Materials		
LS-INT-S-PT		Pipe-9
Long Shank Interrupted Pipe Taps for PT Threads Short (lg) Type for Ductile Materials		
LC-PT		Pipe-10
Pipe Taps for PT Threads for Low Carbon Steels		
LC-S-PT		Pipe-10
Pipe Taps for PT Threads Short (lg) for Low Carbon Steels		
SU-PT		Pipe-11
Pipe Taps for PT Threads for Stainless Steels		
SU-S-PT		Pipe-11
Pipe Taps for PT Threads Short (lg) Type for Stainless Steels		
SU-SP-PT		Pipe-12
Spiral Fluted Pipe Taps for PT Threads for Stainless Steels		
SU-SP-S-PT		Pipe-12
Spiral Fluted Pipe Taps for PT Threads Short (lg) Type for Stainless Steels		
FC-PT		Pipe-13
Pipe Taps for PT Threads for Cast Irons		
FC-S-PT		Pipe-13
Pipe Taps for PT Threads Short (lg) Type for Cast Irons		
CT-PT		Pipe-14
Cemented Carbide Pipe Taps for PT Threads		
CT-S-PT		Pipe-14
Cemented Carbide Pipe Taps for PT Threads Short (lg) Type		
Rp		Pipe-15
Pipe Taps for Rp Threads		

Pipe Taps

PS		Pipe-15
Pipe Taps for PS Threads		
PS(LH)		Pipe-16
Pipe Taps for PS Left Hand Threads		
LS-PS		Pipe-17
Long Shank Pipe Taps for PS Threads		
SP-PS		Pipe-17
Spiral Fluted Taps for PS Threads		
LS-SP-PS		Pipe-18
Long Shank Spiral Fluted Pipe Taps for PS Threads		
CT-PS		Pipe-18
Cemented Carbide Pipe Taps for PS Threads		
G		Pipe-19
Pipe Taps for G Threads		
PF		Pipe-19
Pipe Taps for PF Threads		
PF(LH)		Pipe-20
Pipe Taps for PF Left Hand Threads		
LS-PF		Pipe-21
Long Shank Pipe Taps for PF Threads		
SP-PF		Pipe-21
Spiral Fluted Pipe Taps for PF Threads		
LS-SP-PF		Pipe-22
Long Shank Spiral Fluted Pipe Taps for PF Threads		
SU-PF		Pipe-22
Pipe Taps for PF Threads for Stainless Steels		
FC-PF		Pipe-23
Pipe Taps for PF Threads for Cast Irons		
CT-PF		Pipe-23
Cemented Carbide Pipe Taps for PF Threads		
NPT		Pipe-24
Pipe Taps for NPT Threads		
S-NPT		Pipe-24
Pipe Taps for NPT Threads Short Type		
LS-NPT		Pipe-25
Long Shank Pipe Taps for NPT Threads		
SP-NPT		Pipe-25
Spiral Fluted Taps for NPT Threads		
LS-SP-S-NPT		Pipe-26
Long Shank Spiral Fluted Pipe Taps for NPT Threads Short Type		































Pipe Taps

INT-NPT		Pipe-26
Interrupted Pipe Taps for NPT Threads		
INT-S-NPT		Pipe-27
Interrupted Pipe Taps for NPT Threads Short Type		
NPTF		Pipe-27
Pipe Taps for NPTF Dryseal Threads		
LS-NPTF		Pipe-28
Long Shank Pipe Taps for NPTF Dryseal Threads		
NPS		Pipe-28
Pipe Taps for NPS Threads		
NPSF		Pipe-29
Pipe Taps for NPSF Dryseal Threads		

















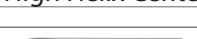
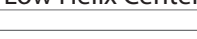
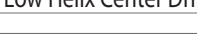
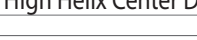
Helical Thread Mills

MC-CSLC		MC-1
Cemented Carbide MC Helical Thread Mills		
MC-HLC		MC-3
MC Helical Thread Mills		

















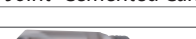
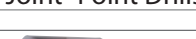
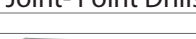
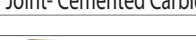
Dies

SD-Y		Solid Dies	Di-1
AR-D		Adjustable Dies	Di-1
AR-D(LH)		Adjustable Dies for Left Hand Threads	Di-7
AD-S ST		Solid Dies for Auto Lathe for Steels	Di-9
AD-S BR		Solid Dies for Auto Lathe for Brass	Di-11
AR-D HSS		HSS Adjustable Dies	Di-12
AR-D HSS(LH)		HSS Adjustable Dies for Left Hand Threads	Di-14
HS-D		HSS Dies for Hard-to-Machine Materials	Di-14
MS-RS-D RS-D		Rolling Dies	Di-16
N-RSD		New Rolling Dies	Di-17
SP-D		Spiral Fluted Dies	Di-17
PO-D		Spiral Pointed Dies	Di-17
SR-D PT		Solid Dies for PT Threads	Di-18
SR-D PT HSS		HSS Solid Dies for PT Threads	Di-18
SR-D PT(LH)		Solid Dies for PT Left Hand Threads	Di-18
AR-D PT		Adjustable Dies for PT Threads	Di-19
AR-D PT HSS		HSS Adjustable Dies for PT Threads	Di-19
AR-D PT(LH)		Adjustable Dies for PT Left Hand Threads	Di-19
AR-D PS		Adjustable Dies for PS Threads	Di-20
AR-D PS(LH)		Adjustable Dies for PS Left Hand Threads	Di-20
AR-D PF		Adjustable Dies for PF Threads	Di-20
AR-D PF HSS		HSS Adjustable Dies for PF Threads	Di-21
AR-D PF(LH)		Adjustable Dies for PF Left Hand Threads	Di-21
SR-D NPT		Solid Dies for NPT Threads	Di-21
AR-D NPT		Adjustable Dies for NPT Threads	Di-22
SR-D NPTF		Solid Dies for NPTF Dryseal Threads	Di-22
AR-D NPTF		Adjustable Dies for NPTF Dryseal Threads	Di-22
AR-D NPSM		Adjustable Dies for NPSM Threads	Di-23
RD-DH		Die Holders for Solid Dies	Di-23
RD-DC		Die Collets for Die Holders	Di-23





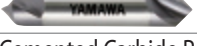

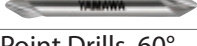
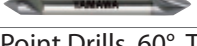
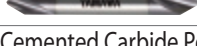






Center Drills • Centering Tools

CESA		CE-1
	High Helix Center Drills-JIS Type A 60°	
CE-S		CE-1
	High Helix Center Drills-Type A 60°	
CE-S(I)		CE-1
	High Helix Center Drills-Type A 60°, (Old JIS Type 1)	
CD-S		CE-2
	Low Helix Center Drills-Type A 60°	
CD-S(I)		CE-2
	Low Helix Center Drills-Type A 60°, (Old JIS Type 1)	
CD-S(LH)		CE-2
	Low Helix Center Drills-Type A 60°, Left Hand Cut	
CE-S-V		CE-3
	High Helix Center Drills-Type A 60°, TiN coated	
CE-S-V(I)		CE-3
	High Helix Center Drills-Type A 60° TiN coated, (Old JIS Type 1)	
C-CD-S		CE-3
	Cemented Carbide Center Drills-Type A 60°	
CE-SL		CE-4
	Long Shank High Helix Center Drills-Type A 60°	
CD-SL		CE-4
	Long Shank Low Helix Center Drills-Type A 60°	
CE-SL-V		CE-5
	Long Shank High Helix Center Drills-Type A 60°, TiN coated	
CD-SL-V		CE-5
	Long Shank Low Helix Center Drills-Type A 60°, TiN coated	
C-CD-SL		CE-5
	Long Shank Cemented Carbide Center Drills-Type A 60°	
CEQA		CE-6
	High Helix Center Drills-JIS Type A 90°	
CE-Q		CE-6
	High Helix Center Drills-Type A 90°	
CD-Q		CE-6
	Low Helix Center Drills-Type A 90°	
CD-Q(LH)		CE-7
	Low Helix Center Drills-Type A 90°, Left Hand Cut	
CE-Q-V		CE-7
	High Helix Center Drills-Type A 90°, TiN coated	
CD-Q-V		CE-7
	Low Helix Center Drills-Type A 90°, TiN coated	

Center Drills • Centering Tools

C-CD-Q		CE-8
	Cemented Carbide Center Drills-Type A 90°	
CE-QL		CE-8
	Long Shank High Helix Center Drills-Type A 90°	
CE-QL-V		CE-8
	Long Shank High Helix Center Drills-Type A 90°, TiN coated	
C-CD-QL		CE-9
	Long Shank Cemented Carbide Center Drills-Type A 90°	
CEIR		CE-9
	High Helix Center Drills-JIS Type R	
CD-R		CE-9
	Low Helix Center Drills-Type R	
CESB		CE-10
	High Helix Center Drills-JIS Type B 60°	
CE-S(II)		CE-10
	High Helix Center Drills-Type B 60°, (Old JIS Type 2)	
CD-S(II)		CE-10
	Low Helix Center Drills-Type B 60°, (Old JIS Type 2)	
CESC		CE-11
	High Helix Center Drills-JIS Type C 60°	
JO-CES		CE-11
	Joint- High Helix Center Drills, Type A 60°	
JO-CESV		CE-11
	Joint- High Helix Center Drills, Type A 60°, TiN coated	
JO-CDS		CE-12
	Joint- Low Helix Center Drills, Type A 60°	
JO-CDSV		CE-12
	Joint- Low Helix Center Drills, Type A 60°, TiN coated	
JO-CDS		CE-12
	Joint- Low Helix Center Drills, Type B 60°, (Old JIS Type 2)	
JO-C-CDS		CE-12
	Joint- Cemented Carbide Center Drills -Type A 60°	
JO-PEQ		CE-13
	Joint- Point Drills, 90°	
JO-PEQV		CE-13
	Joint- Point Drills, 90°, TiCN coated	
JO-C-PEQV		CE-13
	Joint- Cemented Carbide Point Drills, 90°, TiAlN coated	
JO-NCSDV		CE-13
	Joint- Starting Drills, 90°, TiN coated	

Center Drills • Centering Tools

JO-CSQM		CE-14
Joint- Countersinks, 90°, Drilling Machine Use		
HOLDER		CE-14
Holders for Joint Tools		
PE-Q		CE-15
Point Drills, 90°		
PE-Q-V		CE-15
Point Drills, 90°, TiCN Coated		
C-PE-Q-V		CE-15
Cemented Carbide Point Drills, 90°, TiAlN coated		
PE-QL-V		CE-16
Long Shank Point Drills, 90°, TiCN coated		
PE-S		CE-16
Point Drills, 60°		
PE-S-V		CE-16
Point Drills, 60°, TiCN coated		
C-PE-S-V		CE-17
Cemented Carbide Point Drills, 60°, TiAlN coated		
PE-SL-V		CE-17
Long Shank Point Drills, 60°, TiCN coated		
NC-SD-V		CE-17
NC Starting Drills for Beveling (90°)		
NC-SD		CE-18
NC Starting Drills for Positioning (125°)		
CS-Q		CE-18
Countersinks 90°, Single Point Type, Machining Center Use		
CS-QM		CE-18
Countersinks (90°), Multi Point Type, Drilling Machine Use		
CS-G		CE-19
Submarine Gate Cutter, 20°, 30°		

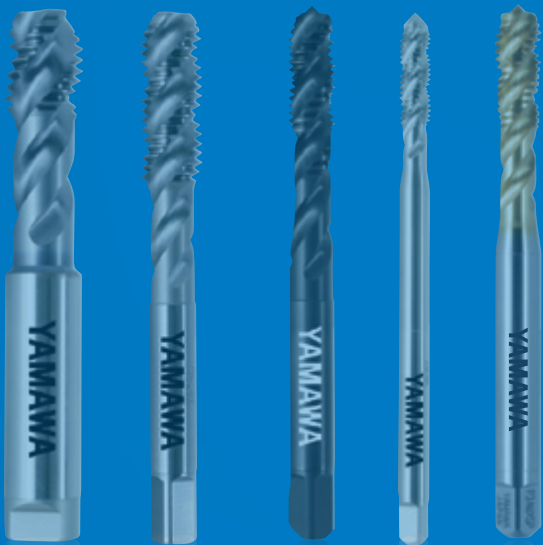
Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Spiral Fluted Tap Series for blind hole



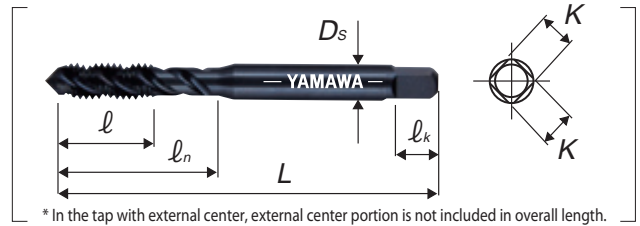
ISP	SP-1	U-SP	SP-59
SP-Y	SP-1	AL+SP/AL-SP	SP-60
SP(N-SP)	SP-2	STI-SP	SP-62
+SP(N+SP)	SP-21	LO-SP	SP-64
XSP	SP-22	LS-LO-SP	SP-65
SP-OX(N-SP-OX)	SP-23	MC-SP	SP-66
+SP-OX(N+SP-OX)	SP-25	ZET-B	SP-67
SP(LH)(N-SP(LH))	SP-26	ZEN-B	SP-68
SP-V(N-SP-V)	SP-29	PM-SP	SP-69
AU+SP	SP-29	LS-PM-SP	SP-70
AUXSP	SP-30	F-SP	SP-71
LS-SP(LS-N-SP)	SP-30	LS-F-SP	SP-72
LS-SP(LH)(LS-N-SP(LH))	SP-39	HFIHS	SP-73
LS-SP-V(LS-N-SP-V)	SP-40	HFISP	SP-73
LS-SP-K	SP-41	HFAHS	SP-74
SU+SP/SU-SP	SP-41	HFASP	SP-74
SUXSP	SP-48	HDISP	SP-75
SU2-SP	SP-48	HDASP	SP-75
SU-S-SP	SP-50		
LS-SU-S-SP	SP-51		
S-SP	SP-52		
E-SP	SP-55		
HC+SP/HC-SP	SP-56		
HC+SP-OX/HC-SP-OX	SP-59		

ISP

I Series Spiral Fluted Taps for General Purpose



Segment : 1C



Suitable for low speed tapping of steels. For manual operation, drilling machine use. Oxided to be suitable for SPC and soft steels.

Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads											
M3×0.5	◎	SI73.0G	2.5P	46	9	14	4	3.2	6	3	c
M4×0.7	◎	SI74.0I	2.5P	52	11	17	5	4	7	3	c
M5×0.8	◎	SI75.0K	2.5P	60	13	22	5.5	4.5	7	3	c
M6×1	◎	SI76.0M	2.5P	62	15	26	6	4.5	7	3	c
M8×1.25	◎	SI78.0N	2.5P	70	19	-	6.2	5	8	3	e
M10×1.5	◎	SI7010O	2.5P	75	23	-	7	5.5	8	3	e

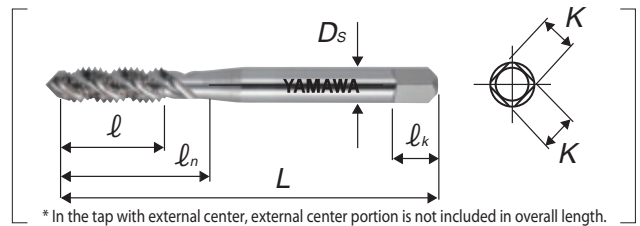
The products having *mark in the stock column will be available as long as they last.

SP-Y

Spiral Fluted Taps for Thin Soft Structural Steel Sheets



Segment : 1C



SP-Y are available while supplies last

For manual operation, drilling machine use. Suitable for low speed tapping of steels.

Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads											
M3×0.5	○*	SY3.0G	2.5P	46	10	18	4	3.2	6	3	c
M4×0.7	○*	SY4.0I	2.5P	52	12	20	5	4	7	3	c
M5×0.8	○*	SY5.0K	2.5P	60	14	22	5.5	4.5	7	3	c
M6×1	○*	SY6.0M	2.5P	62	17	24	6	4.5	7	3	c
M8×1.25	○*	SY8.0N	2.5P	70	19	-	6.2	5	8	3	e
M10×1.5	○*	SY010O	2.5P	75	21	-	7	5.5	8	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP)

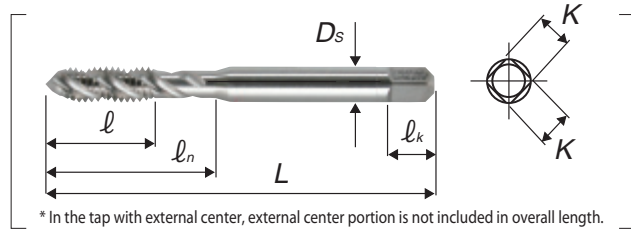
Spiral Fluted Taps



N-SP is available as long as it lasts. SP takes the place of N-SP.

Oversize

Segment : 1C



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1×0.25	○*	SNP1.0B	2.5P	P1	32	5.5	-	3	2.5	5	2	p
	△*	SNP1.0B1	1.5P									
M1.1×0.25	△*	SNP1.1B	2.5P	P1	32	5.5	-	3	2.5	5	2	p
M1.2×0.25	○	SPP1.2B	2.5P	P1	36	4.5	-	3	2.5	5	2	a
	○*	SNP1.2B										p
	△	SPP1.2B1	1.5P									a
	△*	SNMP1.2B1	1.5P									p
	△*	SNP1.2B1										p
	◎	SPP1.4C	2.5P									a
◎*	SNP1.4C	p										
M1.4×0.3	△	SPP1.4C1	1.5P	P1	36	5.4	-	3	2.5	5	2	a
	△*	SNMP1.4C1										p
	△*	SNP1.4C1	1.5P									p
	△*	SNP1.4C1										p
M1.6×0.35	◎	SPP1.6D	2.5P	P1	36	6.3	-	3	2.5	5	2	b
	◎*	SNP1.6D										p
	○	SPP1.6D1	1.5P									b
	○*	SNMP1.6D1										p
	○*	SNP1.6D1	1.5P									p
	○*	SNP1.6D1										p
M1.7×0.35	◎	SPP1.7D	2.5P	P1	36	6.3	-	3	2.5	5	2	b
	◎*	SNP1.7D										p
	△	SPP1.7D1	1.5P									b
	△*	SNMP1.7D1										p
	△*	SNP1.7D1	1.5P									p
	○	SPQ1.7D										2.5P
	○*	SNQ1.7D	p									
	△	SPR1.7D	2.5P									b
	△*	SNR1.7D										p
M1.8×0.35	△	SPP1.8D	2.5P	P1	42	6.3	-	3	2.5	5	2	b
	△*	SNP1.8D										p
	△	SPP1.8D1	1.5P									b
	△*	SNMP1.8D1										p
M2×0.4	◎	SPP2.0E	2.5P	P1	42	7.2	12	3	2.5	5	2	c
	◎*	SNP2.0E				9.5	15					
	○	SPP2.0E1	1.5P			7.2	12					

The products having *mark in the stock column will be available as long as they last.

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type		
M2×0.4	○*	SNMP2.0E1	1.5P	P1	42	7.2	12	3	2.5	5	2	c		
	○*	SNP2.0E1				9.5	15							
	○	SPQ2.0E	2.5P	P2		7.2	12							
	○*	SNQ2.0E				9.5	15							
	◎	SPR2.0E				7.2	12							
	◎*	SNR2.0E				9.5	15							
	△	SPS2.0E				7.2	12							
	△*	SNS2.0E				9.5	15							
M2×0.25	○	SPP2.0B	2.5P	P1	42	4.5	12	3	2.5	5	2	c		
	○*	SNMP2.0B			7	15								
	○*	SNP2.0B			7	15								
M2.2×0.45	○	SPP2.2F	2.5P	P1	42	8.1	12	3	2.5	5	2	c		
	○*	SNP2.2F				9.5	15							
	△	SPR2.2F		P3		8.1	12							
	△*	SNR2.2F				9.5	15							
M2.3×0.4	○	SPP2.3E	2.5P	P1	42	7.2	12	3	2.5	5	2	c		
	○*	SNP2.3E				9.5	15							
	△	SPP2.3E1	1.5P			7.2	12							
	△*	SNMP2.3E1				9.5	15							
	△*	SNP2.3E1	2.5P			P2	7.2						12	
	△	SPQ2.3E					9.5						15	
	△*	SNQ2.3E					7.2						12	
	△*	SNR2.3E					9.5						15	
	△	SPS2.3E	P4			7.2	12							
	△*	SNS2.3E				9.5	15							
M2.3×0.25	△	SPP2.3B	2.5P	P1	42	4.5	12	3	2.5	5	2	c		
	△*	SNMP2.3B												
M2.5×0.45	◎	SPP2.5F	2.5P	P1	46	8.1	14	3	2.5	5	2	c		
	◎*	SNP2.5F				44	9.5						16	
	△	SPP2.5F1	1.5P			46	8.1						14	
	△*	SNMP2.5F1				44	9.5						16	
	△*	SNP2.5F1	2.5P			P2	46						8.1	14
	○	SPQ2.5F					44						9.5	16
	○*	SNQ2.5F					46						8.1	14
	○	SPR2.5F					44						9.5	16
	○*	SNR2.5F	P3			46	8.1						14	
	○	SPS2.5F				44	9.5						16	
○*	SNS2.5F	46		8.1	14									
○*	SNP2.5D	2.5P	P4	44	9.5	16								
○	SPP2.5D			46	6.3	14	3	2.5	5	2	c			
○*	SNMP2.5D													
○*	SNP2.5D													

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type					
M2.6×0.45	◎	SPP2.6F	2.5P	P1	46	8.1	14	3	2.5	5	2	c					
	◎*	SNP2.6F			44	9.5	16										
	△	SPP2.6F1	1.5P		46	8.1	14										
	△*	SNMP2.6F1			44	9.5	16										
	△*	SNP2.6F1	2.5P		P2	46	8.1						14				
	○	SPQ2.6F			44	9.5	16										
	○*	SNQ2.6F			P3	46	8.1						14				
	○	SPR2.6F			44	9.5	16										
	○*	SNR2.6F			P4	46	8.1						14				
	△	SPS2.6F			44	9.5	16										
△*	SNS2.6F	44		9.5	16												
M2.6×0.35	△	SPP2.6D		2.5P	P1	46	6.3	14	3	2.5	5	2	c				
	△*	SNMP2.6D	44			8	16										
	△*	SNP2.6D	44			8	16										
M3×0.5	◎	SPP3.0G	2.5P	P1	46	9	14	4	3.2	6	3	c					
	○	SPP3.0G1	1.5P														
	○*	SNMP3.0G1															
	○*	SNP3.0G1	P2														
	○	SPQ3.0G	2.5P										P3				
	○	SPR3.0G											P4				
○	SPS3.0G	9	14														
3M0.6	△	SPP3.0H	2.5P	P1	46	9	14	4	3.2	6	3	c					
	△*	SNP3.0H				11	18										
M3×0.35	○	SPP3.0D	2.5P	P1	46	6.5	14	4	3.2	6	3	c					
	○*	SNMP3.0D				9.5	18										
	○*	SNP3.0D															
M3.5×0.6	○	SPP3.5H	2.5P	P1	52	11	16	5	4	7	3	c					
	○*	SNP3.5H				48	13						20				
	△	SPP3.5H1	1.5P			52	11						16	5	4	7	
	△*	SNMP3.5H1				48	13						20				
	△*	SNP3.5H1	2.5P			P2	52						11	16	5	4	7
	△	SPQ3.5H				48	13						20				
	△*	SNQ3.5H				P3	52						11	16			
	△	SPR3.5H				48	13						20				
	△*	SNR3.5H				P4	52						11	16			
	△	SPS3.5H				48	13						20				
△*	SNS3.5H	48		13	20												
M3.5×0.35	△	SPP3.5D		2.5P	P1	52	6.5	16	5	4	7	3	c				
	△*	SNMP3.5D	48				9.5	20						4	3.2	6	
	△*	SNP3.5D															
M4×0.7	◎	SPQ4.0I	2.5P	P2	52	11	17	5	4	7	3	c					
	○	SPQ4.0I1	1.5P														

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type				
M4×0.7	○*	SNMQ4.0I1	1.5P	P2	52	11	17	5	4	7	3	c				
	○*	SNQ4.0I1				13	20									
	○	SPR4.0I	2.5P	P3		11	17									
	○	SPS4.0I				P4										
4M0.75	○	SPQ4.0J	2.5P	P2	52	11	17	5	4	7	3	c				
	○*	SNQ4.0J				13	20									
M4×0.5	○	SPP4.0G	2.5P	P1	52	9	17	5	4	7	3	c				
	○*	SNMP4.0G				13	20									
	○*	SNP4.0G														
M4.5×0.75	△	SPQ4.5J	2.5P	P2	60	13	21	5.5	4.5	7	3	c				
	△*	SNQ4.5J			55			5	4							
M4.5×0.5	△	SPP4.5G	2.5P	P1	60	9	21	5.5	4.5	7	3	c				
	△*	SNMP4.5G											55	13	5	4
	△*	SNP4.5G														
M5×0.8	◎	SPQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	c				
	○	SPQ5.0K1														
	○*	SNMQ5.0K1	1.5P										16	25		
	○*	SNQ5.0K1														
	○	SPR5.0K	2.5P										P3	13	22	
○	SPS5.0K	P4														
5M0.9	△	SPQ5.0L	2.5P	P2	60	13	22	5.5	4.5	7	3	c				
	△*	SNQ5.0L				16	25									
M5×0.75	△	SPQ5.0J	2.5P	P2	60	13	22	5.5	4.5	7	3	c				
	△*	SNQ5.0J				16	25									
M5×0.5	○	SPP5.0G	2.5P	P1	60	9	22	5.5	4.5	7	3	c				
	○*	SNMP5.0G											55	13	25	
	○*	SNP5.0G														
M5.5×0.9	△	SPQ5.5L	2.5P	P2	62	15	26	6	4.5	7	3	c				
	△*	SNQ5.5L			60	16	25	5.5								
M5.5×0.5	△	SPP5.5G	2.5P	P1	62	9	26	6	4.5	7	3	c				
	△*	SNMP5.5G											55	13	25	5.5
	△*	SNP5.5G														
M6×1	◎	SPQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	c				
	○	SPQ6.0M-T											19	28		
	○*	SNQ6.0M-T														
	○	SPQ6.0M1	1.5P										15	26		
	○*	SNMQ6.0M1														
	○*	SNQ6.0M1	2.5P										P3	15	26	
	○	SPR6.0M														P4
○	SPS6.0M															
M6×0.75	○	SPQ6.0J	2.5P	P2	62	15	26	6	4.5	7	3	c				
	○*	SNMQ6.0J														

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M6×0.75	○*	SNQ6.0J	2.5P	P2	62	19	28	6	4.5	7	3	c	
	△	SPR6.0J		P3		15	26						
	△*	SNMR6.0J				19	28						
	△*	SNR6.0J											
M6×0.5	○	SPP6.0G	2.5P	P1	62	9	26	6	4.5	7	3	c	
	○*	SNMP6.0G				13	25						
	○*	SNP6.0G		P2	62	9	26						
	△	SPQ6.0G			55	13	25						
	△*	SNQ6.0G			62	9	26						
	△	SPR6.0G		P3	55	13	25						
	△*	SNR6.0G			62	9	26						
M7×1	○	SPQ7.0M	2.5P	P2	70	19	-	6.2	5	8	3	e	
	○*	SNQ7.0M											65
	△	SPR7.0M		P3	70								
	△*	SNR7.0M			65								
	△	SPS7.0M			70								
	△*	SNS7.0M		P4	65								
M7×0.75	○	SPQ7.0J	2.5P	P2	70	19	-	6.2	5	8	3	e	
	○*	SNQ7.0J											65
M7×0.5	△	SPQ7.0G	2.5P	P2	70	10	-	6.2	5	8	3	e	
	△*	SNQ7.0G											55
M8×1.25	◎	SPQ8.0N	2.5P	P2	70	19	-	6.2	5	8	3	e	
	◎*	SNQ8.0N				22							
	○	SPQ8.0N1	1.5P	19									
	○*	SNQ8.0N1		22									
	○	SPR8.0N	2.5P	P3		19							
	○*	SNR8.0N				22							
	○	SPS8.0N		P4		19							
	○*	SNS8.0N				22							
M8×1	○	SPQ8.0M	2.5P	P2	70	19	-	6.2	5	8	3	e	
	○*	SNQ8.0M				22							
	△	SPQ8.0M1	1.5P	19									
	△*	SNQ8.0M1		22									
	△	SPR8.0M	2.5P	P3		19							
	△*	SNR8.0M				22							
	△	SPS8.0M		P4		19							
	△*	SNS8.0M				22							
M8×0.75	○	SPQ8.0J	2.5P	P2	70	19	-	6.2	5	8	3	e	
	○*	SNQ8.0J				22							
	△	SPR8.0J		P3		19							
	△*	SNR8.0J				22							
M8×0.5	○	SPQ8.0G	2.5P	P2	70	10	-	6.2	5	8	3	e	

The products having *mark in the stock column will be available as long as they last.

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M8x0.5	○*	SNQ8.0G	2.5P	P2	55	13	-	6.2	5	8	3	e
	△	SPQ9.0N				75						
M9x1.25	△*	SNQ9.0N	2.5P	P2	72	22	-	7	5.5	8	3	e
	○	SPQ9.0M				75						
M9x1	○*	SNQ9.0M	2.5P	P2	72	22	-	7	5.5	8	3	e
	○	SPQ9.0J				75						
M9x0.75	○*	SNQ9.0J	2.5P	P2	72	22	-	7	5.5	8	3	e
	△	SPQ9.0G				75						
M9x0.5	△*	SNQ9.0G	2.5P	P2	55	13	-	7	5.5	8	3	e
	◎	SPQ0100				2.5P						
M10x1.5	◎*	SNQ0100	1.5P	P2	75		24	-	7	5.5	8	3
	○	SPQ01001				23						
	○*	SNQ01001	2.5P	P3	75	24	-	7	5.5	8	3	e
	○	SPR0100				23						
	○*	SNR0100	2.5P	P4	75	24	-	7	5.5	8	3	e
	○	SPS0100				23						
	○*	SNS0100	2.5P	P2	75	24	-	7	5.5	8	3	e
	◎	SPQ010N				23						
M10x1.25	◎*	SNQ010N	1.5P	P2	75	24	-	7	5.5	8	3	e
	△	SPQ010N1				23						
	△*	SNQ010N1	2.5P	P3	75	24	-	7	5.5	8	3	e
	○	SPR010N				23						
	○*	SNR010N	2.5P	P4	75	24	-	7	5.5	8	3	e
	○	SPS010N				23						
	○*	SNS010N	2.5P	P2	75	24	-	7	5.5	8	3	e
	○	SPQ010M				23						
M10x1	○*	SNQ010M	1.5P	P2	75	24	-	7	5.5	8	3	e
	△	SPQ010M1				23						
	△*	SNQ010M1	2.5P	P3	75	24	-	7	5.5	8	3	e
	△	SPR010M				23						
	△*	SNR010M	2.5P	P4	75	24	-	7	5.5	8	3	e
	△	SPS010M				23						
	△*	SNS010M	2.5P	P2	75	24	-	7	5.5	8	3	e
	○	SPQ010J				13						
M10x0.75	○*	SNQ010J	2.5P	P2	75	22	-	7	5.5	8	3	e
	△	SPQ010G				75						
M10x0.5	△*	SNQ010G	2.5P	P2	55	13	-	7	5.5	8	3	e
	△	SPQ0110				2.5P						
M11x1.5	△*	SNQ0110	2.5P	P2	80		25	-	8	6	9	3
	△	SPQ011N				2.5P	P2					
M11x1.25	△*	SNQ011N	2.5P	P2	80			25	-	8	6	9
	△	SPQ011M				2.5P	P2	82				

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M11x1	△*	SNQ011M	2.5P	P2	80	25	-	8	6	9	3	e
M11x0.75	△	SPQ011J	2.5P	P2	82	14	-	8.5	6.5	9	3	e
	△*	SNQ011J			75	22		8	6			
M12x1.75	◎	SPQ012P	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	◎*	SNQ012P				29						
	○	SPQ012P1	1.5P	26								
	○*	SNQ012P1		29								
	○	SPR012P	2.5P	P3		26						
	○*	SNR012P		P4		29						
	○	SPS012P		26								
	○*	SNS012P		29								
M12x1.5	◎	SPQ012O	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	◎*	SNQ012O				29						
	△	SPQ012O1	1.5P	26								
	△*	SNQ012O1		29								
	△	SPR012O	2.5P	P3		26						
	△*	SNR012O		P4		29						
	△	SPS012O		26								
	△*	SNS012O		29								
M12x1.25	◎	SPQ012N	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	◎*	SNQ012N				29						
	△	SPQ012N1	1.5P	26								
	△*	SNQ012N1		29								
	○	SPR012N	2.5P	P3		26						
	○*	SNR012N		P4		29						
	△	SPS012N		26								
	△*	SNS012N		29								
M12x1	○	SPQ012M	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SNQ012M		29								
	△	SPR012M	2.5P	P3		26						
	△*	SNR012M		P4		29						
	△	SPS012M		26								
	△*	SNS012M		29								
M12x0.75	△	SPQ012J	2.5P	P2	82	14	-	8.5	6.5	9	3	e
	△*	SNQ012J			75	22						
M12x0.5	△	SPQ012G	2.5P	P2	82	12	-	8.5	6.5	9	3	e
	△*	SNQ012G			55	13						
M13x1	△	SPQ013M	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SNQ013M			85	29		9.5	7	10		
M14x2	◎	SPQ014Q	2.5P	P2	88	26	-	10.5	8	11	3	e
	◎*	SNQ014Q				30						
	△	SPQ014Q1	1.5P	26								

The products having *mark in the stock column will be available as long as they last.

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M14x2	△*	SNQ014Q1	1.5P	P2	88	30	-	10.5	8	11	3	e
	△	SPR014Q	2.5P	P3		26						
	△*	SNR014Q		P4		30						
	△	SPS014Q	26									
	△*	SNS014Q	30									
M14x1.5	◎	SPQ014O	2.5P	P2	88	26	-	10.5	8	11	3	e
	◎*	SNQ014O	30									
	△	SPQ014O1	1.5P			26						
	△*	SNQ014O1	2.5P	P3		30						
	△	SPR014O				26						
	△*	SNR014O	P4	30								
	○	SPS014O		26								
	○*	SNS014O		30								
M14x1.25	○	SPQ014N	2.5P	P2	88	26	-	10.5	8	11	3	e
	○*	SNQ014N				30						
M14x1	○	SPQ014M	2.5P	P2	88	26	-	10.5	8	11	3	e
	○*	SNQ014M				30						
M15x2	△	SPQ015Q	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SNQ015Q			90	30		10.5	8	11		
M15x1.5	△	SPQ015O	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SNQ015O			90	30		10.5	8	11		
M15x1	△	SPQ015M	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SNQ015M			90	30		10.5	8	11		
M16x2	◎	SPQ016Q	2.5P	P2	95	26	-	12.5	10	13	3	e
	◎*	SNQ016Q				32						
	△	SPQ016Q1	1.5P			26						
	△*	SNQ016Q1		32								
	○	SPR016Q	2.5P	P3		26						
	○*	SNR016Q				32						
	○	SPS016Q	P4	26								
	○*	SNS016Q		32								
	△	SPT016Q		26								
	△*	SNT016Q	32									
M16x1.5	◎	SPQ016O	2.5P	P2	95	26	-	12.5	10	13	3	e
	◎*	SNQ016O				32						
	△	SPQ016O1	1.5P			26						
	△*	SNQ016O1		32								
	△	SPR016O	2.5P	P3		26						
	△*	SNR016O				32						
	○	SPS016O	P4	26								
	○*	SNS016O		32								
M16x1	○	SPQ016M	2.5P	P2	95	26	-	12.5	10	13	3	e

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Spiral Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M16x1	○*	SNQ016M	2.5P	P2	95	32	-	12.5	10	13	3	e
M17x1.5	△	SPQ017O	2.5P	P2	100	33	-	14	11	14	4	e
	△*	SNQ017O										
M17x1	△	SPQ017M	2.5P	P2	100	18	-	14	11	14	4	e
	△*	SNQ017M										
M18x2.5	◎	SPR018R	2.5P	P3	100	33	-	14	11	14	4	e
	◎*	SNR018R		P4		37						
	△	SPS018R		P4		33						
	△*	SNS018R		P4		37						
M18x2	△	SPR018Q	2.5P	P3	100	33	-	14	11	14	4	e
	△*	SNR018Q		P3		37						
M18x1.5	◎	SPQ018O	2.5P	P2	100	33	-	14	11	14	4	e
	◎*	SNQ018O		P2		37						
	△	SPR018O		P3		33						
	△*	SNR018O		P3		37						
	△	SPS018O		P4		33						
	△*	SNS018O		P4		37						
M18x1.25	△	SPQ018N	2.5P	P2	100	33	-	14	11	14	4	e
	△*	SNQ018N		P2	95	30						
M18x1	○	SPQ018M	2.5P	P2	100	18	-	14	11	14	4	e
	○*	SNQ018M		P2	95	30						
M19x1.5	△	SPR019O	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SNR019O		P3		37		14	11	14		
M19x1	△	SPQ019M	2.5P	P2	105	18	-	15	12	15	4	e
	△*	SNQ019M		P2		95		30	14	11		
M20x2.5	◎	SPR020R	2.5P	P3	105	33	-	15	12	15	4	e
	◎*	SNR020R		P4		37						
	○	SPS020R		P4		33						
	○*	SNS020R		P4		37						
M20x2	○	SPR020Q	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SNR020Q		P3		37						
M20x1.5	◎	SPR020O	2.5P	P3	105	33	-	15	12	15	4	e
	◎*	SNR020O		P3		37						
	△	SPS020O		P4		33						
	△*	SNS020O		P4		37						
	△	SPT020O		P5		33						
	△*	SNT020O		P5		37						
M20x1.25	△	SPQ020N	2.5P	P2	105	18	-	15	12	15	4	e
	△*	SNQ020N		P2	95	30						
M20x1	○	SPQ020M	2.5P	P2	105	18	-	15	12	15	4	e
	○*	SNQ020M		P2		95						
M22x2.5	◎	SPR022R	2.5P	P3	115	33	-	17	13	16	4	e

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M22x2.5	◎*	SNR022R	2.5P	P3	115	38	-	17	13	16	4	e
	△	SPS022R		P4		33						
	△*	SNS022R				38						
M22x2	△	SPR022Q	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SNR022Q				38						
M22x1.5	○	SPR022O	2.5P	P3	115	33	-	17	13	16	4	e
	○*	SNR022O				38						
	△	SPS022O		P4		33						
	△*	SNS022O				38						
	△	SPT022O		P5		33						
	△*	SNT022O				38						
M22x1	○	SPQ022M	2.5P	P2	115	19	-	17	13	16	4	e
	○*	SNQ022M			95	30						
M23x1.5	△	SPR023O	2.5P	P3	120	39	-	19	15	18	4	e
	△*	SNR023O			115	38						
M24x3	◎	SPR024S	2.5P	P3	120	39	-	19	15	18	4	e
	◎*	SNR024S				45						
	△	SPS024S		P4		39						
	△*	SNS024S				45						
M24x2	○	SPR024Q	2.5P	P3	120	39	-	19	15	18	4	e
	○*	SNR024Q				45						
M24x1.5	○	SPR024O	2.5P	P3	120	39	-	19	15	18	4	e
	○*	SNR024O				45						
	△	SPS024O		P4		39						
	△*	SNS024O				45						
M24x1	○	SPQ024M	2.5P	P2	120	19	-	19	15	18	4	e
	○*	SNQ024M			95	30						
M25x2	△	SPR025Q	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SNR025Q				45						
M25x1.5	○	SPR025O	2.5P	P3	125	39	-	19	15	18	4	e
	○*	SNR025O				45						
M25x1	△	SPQ025M	2.5P	P2	125	20	-	19	15	18	4	e
	△*	SNQ025M			95	30						
M26x3	△	SPR026S	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SNR026S			125	45						
M26x2	△	SPR026Q	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SNR026Q			125	45						
M26x1.5	○	SPR026O	2.5P	P3	130	39	-	20	15	18	4	e
	○*	SNR026O			125	45						
M26x1	△	SPQ026M	2.5P	P2	130	20	-	20	15	18	4	e
	△*	SNQ026M			95	30						
M27x3	○	SPR027S	2.5P	P3	130	39	-	20	15	18	4	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M27×3	○*	SNR027S	2.5P	P3	130	45	-	20	15	18	4	e
M27×2	○	SPR027Q	2.5P	P3	130	39	-	20	15	18	4	e
	○*	SNR027Q				45						
M27×1.5	○	SPR027O	2.5P	P3	130	39	-	20	15	18	4	e
	○*	SNR027O				45						
M27×1	△	SPQ027M	2.5P	P2	130	20	-	20	15	18	4	e
	△*	SNQ027M			95	30						
M28×2	○	SPR028Q	2.5P	P3	135	46	-	23	17	20	4	e
	○*	SNR028Q			130	45		21				
M28×1.5	○	SPR028O	2.5P	P3	135	46	-	23	17	20	4	e
	○*	SNR028O			130	45		21				
M28×1	△	SPQ028M	2.5P	P2	135	20	-	23	17	20	4	e
	△*	SNQ028M			105	30		21				
M30×3.5	◎	SPS030T	2.5P	P4	135	46	-	23	17	20	4	e
	◎*	SNS030T				48						
M30×3	○	SPR030S	2.5P	P3	135	46	-	23	17	20	4	e
	○*	SNR030S				48						
M30×2	○	SPR030Q	2.5P	P3	135	46	-	23	17	20	4	e
	○*	SNR030Q				45						
M30×1.5	○	SPR030O	2.5P	P3	135	46	-	23	17	20	4	e
	○*	SNR030O				45						
M30×1	△	SPQ030M	2.5P	P2	135	21	-	23	17	20	4	e
	△*	SNQ030M			105	30						
M32×3	△	SPR032S	2.5P	P3	145	51	-	24	19	22	4	e
	△*	SNR032S										
M32×2	△	SPR032Q	2.5P	P3	135	45	-	24	19	22	4	e
	△*	SNR032Q										
M32×1.5	△	SPR032O	2.5P	P3	135	45	-	24	19	22	4	e
	△*	SNR032O										
M32×1	△	SPQ032M	2.5P	P2	105	30	-	24	19	22	4	e
	△*	SNQ032M										
M33×3.5	○	SPS033T	2.5P	P4	145	51	-	25	19	22	4	e
	○*	SNS033T										
M33×3	△	SPR033S	2.5P	P3	145	51	-	25	19	22	4	e
	△*	SNR033S										
M33×2	△	SPR033Q	2.5P	P3	135	45	-	25	19	22	4	e
	△*	SNR033Q										
M33×1.5	△	SPR033O	2.5P	P3	135	45	-	25	19	22	4	e
	△*	SNR033O										
M33×1	△	SPQ033M	2.5P	P2	110	30	-	25	19	22	4	e
	△*	SNQ033M										
M34×3	△	SPR034S	2.5P	P3	145	51	-	26	21	24	4	e

The products having *mark in the stock column will be available as long as they last.

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M34×3	△*	SNR034S	2.5P	P3	145	51	-	26	21	24	4	e
	△	SPR034Q										
M34×2	△*	SNR034Q	2.5P	P3	135	45	-	26	21	24	4	e
	△	SPR034Q										
M34×1.5	△*	SNR034Q	2.5P	P3	135	45	-	26	21	24	4	e
	△	SPR034Q										
M34×1	△*	SNQ034M	2.5P	P2	110	30	-	26	21	24	4	e
	△	SPQ034M										
M35×3	△*	SNR035S	2.5P	P3	155	57	-	26	21	24	4	e
	△	SPR035S										
M35×2	△*	SNR035Q	2.5P	P3	135	45	-	26	21	24	4	e
	△	SPR035Q										
M35×1.5	△*	SNR035Q	2.5P	P3	135	45	-	26	21	24	4	e
	△	SPR035Q										
M35×1	△*	SNR035O	2.5P	P3	135	45	-	26	21	24	4	e
	△	SPR035O										
M35×1	△*	SNQ035M	2.5P	P2	110	30	-	26	21	24	4	e
	△	SPQ035M										
M36×4	◎*	SNS036U	2.5P	P4	155	57	-	28	21	24	4	e
	◎	SPS036U										
M36×3	△*	SNR036S	2.5P	P3	155	57	-	28	21	24	4	e
	△	SPR036S										
M36×2	△*	SNR036Q	2.5P	P3	135	45	-	28	21	24	4	e
	△	SPR036Q										
M36×1.5	△*	SNR036O	2.5P	P3	135	45	-	28	21	24	4	e
	△	SPR036O										
M36×1	△*	SNQ036M	2.5P	P2	110	30	-	28	21	24	4	e
	△	SPQ036M										
M38×3	△*	SNR038S	2.5P	P3	165	60	-	28	21	24	4	e
	△	SPR038S										
M38×2	△*	SNR038Q	2.5P	P3	135	45	-	28	21	24	4	e
	△	SPR038Q										
M38×1.5	△*	SNR038O	2.5P	P3	135	45	-	28	21	24	4	e
	△	SPR038O										
M39×4	△*	SNS039U	2.5P	P4	165	60	-	30	23	26	4	e
	△	SPS039U										
M39×3	△*	SNR039S	2.5P	P3	165	60	-	30	23	26	4	e
	△	SPR039S										
M39×2	△*	SNR039Q	2.5P	P3	135	45	-	30	23	26	4	e
	△	SPR039Q										
M39×1.5	△*	SNR039O	2.5P	P3	135	45	-	30	23	26	4	e
	△	SPR039O										
M40×3	△*	SNR040S	2.5P	P3	165	60	-	30	23	26	4	e
	△	SPR040S										
M40×2	△	SPR040Q	2.5P	P3	135	45	-	30	23	26	4	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
M40×2	△*	SNR040Q	2.5P	P3	135	45	-	30	23	26	4	e
M40×1.5	△	SPR0400	2.5P	P3	135	45	-	30	23	26	4	e
	△*	SNR0400										
M42×4.5	△	SPS042V	2.5P	P4	175	60	-	32	26	30	4	e
	△*	SNS042V										
M42×3	△	SPR042S	2.5P	P3	175	60	-	32	26	30	4	e
	△*	SNR042S										
M42×2	△	SPR042Q	2.5P	P3	135	45	-	32	26	30	4	e
	△*	SNR042Q										
M42×1.5	△	SPR042O	2.5P	P3	135	45	-	32	26	30	4	e
	△*	SNR042O										
M45×4.5	△	SPS045V	2.5P	P4	180	67	-	35	26	30	4	e
	△*	SNS045V										
M45×3	△	SPR045S	2.5P	P3	180	67	-	35	26	30	4	e
	△*	SNR045S										
M45×2	△	SPR045Q	2.5P	P3	140	45	-	35	26	30	4	e
	△*	SNR045Q										
M45×1.5	△	SPR045O	2.5P	P3	140	45	-	35	26	30	4	e
	△*	SNR045O										
M48×5	△	SPS048W	2.5P	P4	185	67	-	38	29	32	4	e
	△*	SNS048W										
M48×4	△	SPS048U	2.5P	P4	185	67	-	38	29	32	4	e
	△*	SNS048U										
M48×3	△	SPR048S	2.5P	P3	185	67	-	38	29	32	4	e
	△*	SNR048S										
M48×2	△	SPR048Q	2.5P	P3	140	45	-	38	29	32	4	e
	△*	SNR048Q										
M48×1.5	△	SPR048O	2.5P	P3	140	45	-	38	29	32	4	e
	△*	SNR048O										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Unified Threads												
No.1-64UNC	△	SPPUN1D	2.5P	P1	42	7.2	-	3	2.5	5	2	b
	△*	SNPUN1D			36	8						p
No.2-56UNC	△	SPPUN2E	2.5P	P1	42	8.1	12	3	2.5	5	2	c
	△*	SNMPUN2E				9.5	15					
No.2-64UNF	△	SPPUN2D	2.5P	P1	42	8.1	12	3	2.5	5	2	c
	△*	SNMPUN2D				9.5	15					
No.3-48UNC	△	SPPUN3F	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SNMPUN3F			44	9.5	16					
No.3-56UNF	△	SPPUN3E	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SNMPUN3E			44	9.5	16					
No.4-40UNC	○	SPPUN4H	2.5P	P1	46	9	14	4	3.2	6	2	c
	○*	SNMPUN4H			44	9.5	16	3	2.5	5		
No.4-48UNF	△	SPPUN4F	2.5P	P1	46	9	14	4	3.2	6	2	c
	△*	SNMPUN4F			44	9.5	16	3	2.5	5		
No.5-40UNC	○	SPPUN5H	2.5P	P1	52	11	16	5	4	7	3	c
	○*	SNMPUN5H			46		18	4	3.2	6		
No.5-44UNF	△	SPPUN5G	2.5P	P1	52	11	16	5	4	7	3	c
	△*	SNMPUN5G			46		18	4	3.2	6		
No.6-32UNC	○	SPQUN6J	2.5P	P2	52	11	16	5	4	7	3	c
	○*	SNMQUN6J			48		13	20	4	3.2		
No.6-40UNF	△	SPPUN6H	2.5P	P1	52	11	16	5	4	7	3	c
	△*	SNMPUN6H			48		13	20	4	3.2		
No.8-32UNC	○	SPQUN8J	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	○*	SNMQUN8J			52		5	4				
No.8-36UNF	△	SPQUN8I	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	SNMQUN8I			52		5	4				
No.10-24UNC	○	SPQUNAM	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	SNMQUNAM					16					
	○*	SNQUNAM										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
No.10-32UNF	○	SPQUNAJ	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	SNMQUNAJ										
	○*	SNQUNAJ										
No.12-24UNC	△	SPQUNCM	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQUNCM										
	△*	SNQUNCM										
No.12-28UNF	△	SPQUNCK	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQUNCK										
	△*	SNQUNCK										
1/4-20UNC	◎	SPQU04N	2.5P	P2	62	15	26	6	4.5	7	3	c
	◎*	SNMQU04N										
	◎*	SNQU04N										
1/4-28UNF	○	SPQU04K	2.5P	P2	62	15	26	6	4.5	7	3	c
	○*	SNMQU04K										
	○*	SNQU04K										
1/4-32UNEF	△	SPQU04J	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQU04J										
	△*	SNQU04J										
5/16-18UNC	◎	SPQU05O	2.5P	P2	70	19	-	6.2	5	8	3	e
	◎*	SNQU05O				22		6.1				
5/16-24UNF	○	SPQU05M	2.5P	P2	70	19	-	6.2	5	8	3	e
	○*	SNQU05M				22		6.1				
5/16-32UNEF	△	SPQU05J	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SNQU05J				22		6.1				
3/8-16UNC	◎	SPQU06P	2.5P	P2	75	23	-	7	5.5	8	3	e
	◎*	SNQU06P				24		7				
3/8-24UNF	○	SPQU06M	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	SNQU06M				24		7				
7/16-14UNC	○	SPRU07Q	2.5P	P3	82	26	-	8.5	6.5	9	3	e
	○*	SNRU07Q				80		8				
7/16-20UNF	○	SPQU07N	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SNQU07N				80		8				
1/2-13UNC	○	SPRU08R	2.5P	P3	88	26	-	10.5	8	11	3	e
	○*	SNRU08R				85		9				
1/2-20UNF	○	SPQU08N	2.5P	P2	88	26	-	10.5	8	11	3	e
	○*	SNQU08N				85		9				
9/16-12UNC	△	SPRU09S	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SNRU09S				90		10.5				
9/16-18UNF	○	SPQU09O	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SNQU09O				90		10.5				
9/16-24UNEF	△	SPQU09M	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SNQU09M				90		10.5				

The products having *mark in the stock column will be available as long as they last.

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
5/8-11UNC	○	SPRU10U	2.5P	P3	95	26	-	12.5	10	13	3	e
	○*	SNRU10U				32		12	9	12		
5/8-18UNF	○	SPQU100	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SNQU100				32		12	9	12		
5/8-24UNEF	△	SPQU10M	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SNQU10M				32		12	9	12		
3/4-10UNC	○	SPRU12V	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SNRU12V				37		14	11	14		
3/4-16UNF	○	SPRU12P	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SNRU12P				37		14	11	14		
3/4-20UNEF	△	SPQU12N	2.5P	P2	105	33	-	15	12	15	4	e
	△*	SNQU12N			95	30		14	11	14		
7/8-9UNC	○	SPRU14W	2.5P	P3	115	33	-	17	13	16	4	e
	○*	SNRU14W				38		17	13	16		
7/8-14UNF	○	SPRU14Q	2.5P	P3	115	33	-	17	13	16	4	e
	○*	SNRU14Q				38		17	13	16		
7/8-20UNEF	△	SPQU14N	2.5P	P2	115	33	-	17	13	16	4	e
	△*	SNQU14N			95	30		17	13	16		
1'-8UNC	○	SPRU16X	2.5P	P3	125	39	-	19	15	18	4	e
	○*	SNRU16X				45		20	15	18		
1'-12UNF	△	SPRU16S	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SNRU16S				45		20	15	18		
1'-14UNS	△	SPRU16Q	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SNRU16Q				45		20	15	18		
1'-20UNEF	△	SPQU16N	2.5P	P2	125	39	-	19	15	18	4	e
	△*	SNQU16N			95	30		20	15	18		
1'1/8-7UNC	△	SPSU18Y	2.5P	P4	135	46	-	23	17	20	4	e
	△*	SNSU18Y				48		22	17	20		
1'1/8-12UNF	△	SPRU18S	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SNRU18S				45		22	17	20		
1'1/8-14UNEF	△	SPRU18Q	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SNRU18Q				45		22	17	20		
1'1/4-7UNC	△	SPSU20Y	2.5P	P4	145	51	-	24	19	22	4	e
	△*	SNSU20Y				51		24	19	22		
1'1/4-8UN	△	SPRU20X	2.5P	P3	145	51	-	24	19	22	4	e
	△*	SNRU20X				51		24	19	22		
1'1/4-12UNF	△	SPRU20S	2.5P	P3	135	45	-	24	19	22	4	e
	△*	SNRU20S				45		24	19	22		
1'3/8-6UNC	△	SPSU22Z	2.5P	P4	155	57	-	26	21	24	4	e
	△*	SNSU22Z				57		26	21	24		
1'3/8-8UN	△	SPRU22X	2.5P	P3	155	57	-	26	21	24	4	e
	△*	SNRU22X				57		26	21	24		

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Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
1'3/8-12UNF	△	SPRU22S	2.5P	P3	135	45	-	26	21	24	4	e
	△*	SNRU22S										
1'1/2-6UNC	△	SPSU24Z	2.5P	P4	160	60	-	30	23	26	4	e
	△*	SNSU24Z										
1'1/2-12UNF	△	SPRU24S	2.5P	P3	135	45	-	30	23	26	4	e
	△*	SNRU24S										
1'3/4-5UNC	△	SPSU280	2.5P	P4	175	67	-	35	26	30	4	e
	△*	SNSU280										
1'3/4-12UN	△	SPRU28S	2.5P	P3	135	45	-	35	26	30	4	e
	△*	SNRU28S										
2'-4.5UNC	△	SPTU329	2.5P	P5	195	70	-	40	32	35	4	e
	△*	SNTU329										
2'-12UN	△	SPRU32S	2.5P	P3	145	45	-	40	32	35	4	e
	△*	SNRU32S										

For Whitworth Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
1/8W40	○	SPPW02H	2.5P	P1	52	11	17	5	4	7	3	c
	○*	SNMPW02H										
	○*	SNPW02H										
5/32W32	△	SPQW2HJ	2.5P	P2	52	11	17	5	4	7	3	c
	△*	SNMQW2HJ										
	△*	SNQW2HJ										
3/16W24	○	SPQW03M	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	○*	SNMQW03M										
	○*	SNQW03M										
7/32W24	△	SPQW3HM	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQW3HM										
	△*	SNQW3HM										
1/4W20	○	SPQW04N	2.5P	P2	62	15	26	6	4.5	7	3	c
	○*	SNMQW04N										
	○*	SNQW04N										
5/16W18	○	SPQW05O	2.5P	P2	70	19	-	6.2	5	8	3	e
	○*	SNQW05O										
3/8W16	○	SPQW06P	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	SNQW06P										
7/16W14	△	SPRW07Q	2.5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	SNRW07Q										
1/2W12	○	SPRW08S	2.5P	P3	88	26	-	10.5	8	11	3	e
	○*	SNRW08S										
9/16W12	△	SPRW09S	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SNRW09S										

The products having *mark in the stock column will be available as long as they last.

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
5/8W11	○	SPRW10U	2.5P	P3	95	26	-	12.5	10	13	3	e
	○*	SNRW10U				32				12		
3/4W10	○	SPRW12V	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SNRW12V				37				14		
7/8W9	○	SPRW14W	2.5P	P3	115	33	-	17	13	16	4	e
	○*	SNRW14W				38						
1"W8	○	SPRW16X	2.5P	P3	125	39	-	19	15	18	4	e
	○*	SNRW16X				45				20		
1'1/8W7	△	SPSW18Y	2.5P	P4	135	46	-	23	17	20	4	e
	△*	SNSW18Y				48				22		
1'1/4W7	△	SPSW20Y	2.5P	P4	145	51	-	24	19	22	4	e
	△*	SNSW20Y										
1'3/8W6	△	SPSW22Z	2.5P	P4	155	57	-	26	21	24	4	e
	△*	SNSW22Z										
1'1/2W6	△	SPSW24Z	2.5P	P4	160	60	-	30	23	26	4	e
	△*	SNSW24Z										
1'5/8W5	△	SPSW260	2.5P	P4	170	67	-	32	26	30	4	e
	△*	SNSW260										
1'3/4W5	△	SPSW280	2.5P	P4	175	67	-	35	26	30	4	e
	△*	SNSW280										
1'7/8W4.5	△	SPSW309	2.5P	P4	185	70	-	38	29	32	4	e
	△*	SNSW309										
2"W4.5	△	SPSW329	2.5P	P4	195	70	-	40	32	35	4	e
	△*	SNSW329										

For Screw Threads used on Sewing Machines

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type		
3/32SM56	△	SPPS06E	2.5P	P1	46	8.1	14	3	2.5	5	2	c		
	△*	SNMPS06E					15							
	△*	SNPS06E					42						9.5	15
1/8SM40	△	SPPS08H	2.5P	P1	52	11	16	5	4	7	3	c		
	△*	SNMPS08H					18			4			3.2	6
	△*	SNPS08H					46							
1/8SM44	○	SPPS08G	2.5P	P1	52	11	16	5	4	7	3	c		
	○*	SNMPS08G					18			4			3.2	6
	○*	SNPS08G					46							
9/64SM40	○	SPPS09H	2.5P	P1	52	11	17	5	4	7	3	c		
	○*	SNMPS09H					20			4			3.2	6
	○*	SNPS09H					48			13			20	4
11/64SM40	○	SPPS11H	2.5P	P1	60	13	21	5.5	4.5	7	3	c		
	○*	SNMPS11H												
	○*	SNPS11H					55							5

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(N-SP) Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
3/16SM28	△	SPQS12K	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	SNMQS12K										
	△*	SNQS12K										
3/16SM32	△	SPQS12J	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	SNMQS12J										
	△*	SNQS12J										
7/32SM32	△	SPQS14J	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQS14J			60							
	△*	SNQS14J										
15/64SM28	△	SPQS15K	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQS15K										
	△*	SNQS15K										
1/4SM24	△	SPQS16M	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNMQS16M										
	△*	SNQS16M										
1/4SM40	△	SPPS16H	2.5P	P1	62	8.6	26	6	4.5	7	3	c
	△*	SNMPS16H			55							
	△*	SNPS16H										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

+SP(N+SP)

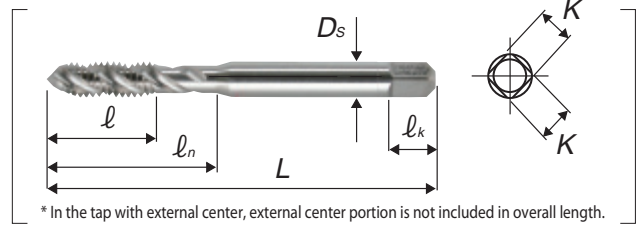
Plus Series Spiral Fluted Taps



~M2.6

M3~

Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

N+SP is available as long as it lasts. +SP takes the place of N+SP.

 Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M1.2×0.25	○*	SNPP1.2B	2.5P	P1	36	4.5	-	3	2.5	5	2	a
M1.4×0.3	◎*	SNPP1.4C	2.5P	P1	36	5.4	-	3	2.5	5	2	a
M1.6×0.35	◎*	SNPP1.6D	2.5P	P1	36	6.3	-	3	2.5	5	2	b
M1.7×0.35	◎*	SNPP1.7D	2.5P	P1	36	6.3	-	3	2.5	5	2	b
	○*	SNPQ1.7D		P2								
	△*	SNPR1.7D		P3								
M1.8×0.35	△*	SNPP1.8D	2.5P	P1	42	6.3	-	3	2.5	5	2	b
M2×0.4	◎	SNPP2.0E	2.5P	P1	42	7.2	12	3	2.5	5	2	c
	○	SNPQ2.0E		P2								
	◎	SNPR2.0E		P3								
	△	SNPS2.0E		P4								
M2.2×0.45	○	SNPP2.2F	2.5P	P1	42	8.1	12	3	2.5	5	2	c
M2.3×0.4	○	SNPP2.3E	2.5P	P1	42	7.2	12	3	2.5	5	2	c
	△	SNPQ2.3E		P2								
	△	SNPR2.3E		P3								
	△	SNPS2.3E		P4								
M2.5×0.45	◎	SNPP2.5F	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	○	SNPQ2.5F		P2								
	○	SNPR2.5F		P3								
	○	SNPS2.5F		P4								
M2.6×0.45	◎	SNPP2.6F	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	○	SNPQ2.6F		P2								
	○	SNPR2.6F		P3								
	△	SNPS2.6F		P4								
M3×0.5	◎	SNPP3.0G	2.5P	P1	46	9	14	4	3.2	6	3	c
	○	SNPQ3.0G		P2								
	○	SNPR3.0G		P3								
	○	SNPS3.0G		P4								
3M0.6	△*	SNPP3.0H	2.5P	P1	46	9	14	4	3.2	6	3	c
M3.5×0.6	○	SNPP3.5H	2.5P	P1	52	11	16	5	4	7	3	c
	△	SNPQ3.5H		P2								
	△	SNPR3.5H		P3								
	△	SNPS3.5H		P4								
M4×0.7	◎	SNPQ4.0I	2.5P	P2	52	11	17	5	4	7	3	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

+SP(N+SP) Plus Series Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M4x0.7	○	SNPR4.0I	2.5P	P3	52	11	17	5	4	7	3	c
	○	SNPS4.0I		P4								
4M0.75	○*	SNPQ4.0J	2.5P	P2	52	11	17	5	4	7	3	c
M4.5x0.75	△	SNPQ4.5J	2.5P	P2	60	13	21	5.5	4.5	7	3	c
M5x0.8	◎	SNPQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	○	SNPR5.0K		P3								
	○	SNPS5.0K		P4								
5M0.9	△*	SNPQ5.0L	2.5P	P2	60	13	22	5.5	4.5	7	3	c
M5.5x0.9	△	SNPQ5.5L	2.5P	P2	62	15	26	6	4.5	7	3	c
M6x1	◎	SNPQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	c
	○	SNPR6.0M		P3								
	○	SNPS6.0M		P4								

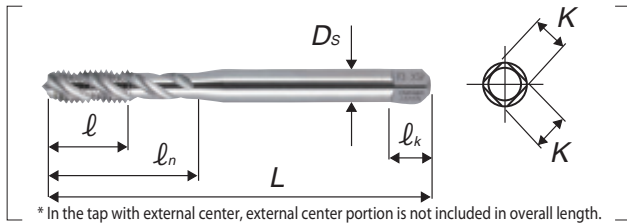
The products having *mark in the stock column will be available as long as they last.

XSP

X Series Spiral Fluted Taps



Segment : 1C



*In the tap with external center, external center portion is not included in overall length.

Applying the blanks of high toughness and high accuracy, XSP derive the maximum performance from high facility machining centers and high precision toolings. Spiral Fluted Taps, Blind Hole Use.
Use with special toolings is recommended.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6x1	○	SNXQ6.0M	2.5P	P2	80	15	30	6	4.9	8	3	g
M8x1.25	○	SNXR8.0N	2.5P	P3	90	19	35	8	6.2	9	3	g
M8x1	○	SNXR8.0M	2.5P	P3	90	15	35	8	6.2	9	3	g
M10x1.5	○	SNXR010O	2.5P	P3	100	23	39	10	8	11	3	g
M10x1.25	○	SNXR010N	2.5P	P3	100	19	39	10	8	11	3	g
M10x1	○	SNXR010M	2.5P	P3	100	15	39	10	8	11	3	g
M12x1.75	○	SNXR012P	2.5P	P3	110	26	45	12	9	12	3	g
M12x1.5	○	SNXR012O	2.5P	P3	110	23	45	12	9	12	3	g
M12x1.25	○	SNXR012N	2.5P	P3	110	19	45	12	9	12	3	g

The products having *mark in the stock column will be available as long as they last.

SP-OX(N-SP-OX)

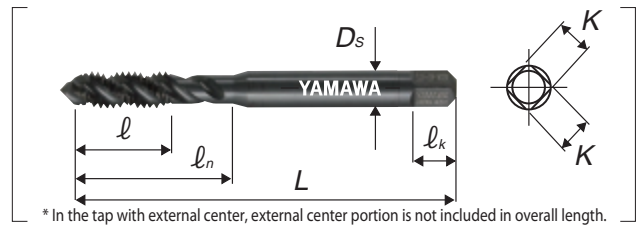
Spiral Fluted Taps, Oxided



Segment : 1C

N-SP-OX is available as long as it lasts. SP-OX takes the place of N-SP-OX.

○ Oversize



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M1.4×0.3	△*	SNMP1.4CX	2.5P	P1	36	5.4	-	3	2.5	5	2	a
M1.6×0.35	△*	SNMP1.6DX	2.5P	P1	36	6.3	-	3	2.5	5	2	b
M1.7×0.35	△*	SNMP1.7DX	2.5P	P1	36	6.3	-	3	2.5	5	2	b
M2×0.4	△	SPP2.0EX	2.5P	P1	42	7.2	12	3	2.5	5	2	c
	△*	SNP2.0EX				9.5	15					
M2.5×0.45	△	SPP2.5FX	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SNP2.5FX				44	9.5					
M2.6×0.45	△	SPP2.6FX	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SNP2.6FX				44	9.5					
M3×0.5	◎	SPP3.0GX	2.5P	P1	46	9	14	4	3.2	6	3	c
	◎*	SNP3.0GX				11	18					
	△	SPQ3.0GX				9	14					
	△	SPR3.0GX				9	14					
M3.5×0.6	△	SPP3.5HX	2.5P	P1	52	11	16	5	4	7	3	c
	△*	SNP3.5HX			48	13	20					
M4×0.7	◎	SPQ4.0IX	2.5P	P2	52	11	17	5	4	7	3	c
	◎*	SNQ4.0IX				13	20					
	△	SPR4.0IX				11	17					
M4×0.5	△	SPP4.0GX	2.5P	P1	52	9	17	5	4	7	3	c
	△*	SNMP4.0GX										
M4.5×0.5	△	SPP4.5GX	2.5P	P1	60	9	21	5.5	4.5	7	3	c
	△*	SNMP4.5GX										
M5×0.8	◎	SPQ5.0KX	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	◎*	SNQ5.0KX				16	25					
	△	SPR5.0KX				13	22					
M6×1	◎	SPQ6.0MX	2.5P	P2	62	15	26	6	4.5	7	3	c
	◎*	SNQ6.0MX				19	28					
	△	SPR6.0MX				15	26					
M7×1	△	SPQ7.0MX	2.5P	P2	70	19	-	6.2	5	8	3	e
M8×1.25	◎	SPQ8.0NX	2.5P	P2	70	19	-	6.2	5	8	3	e
	◎*	SNQ8.0NX				22						
	△	SPR8.0NX				19						
M8×1	△	SPQ8.0MX	2.5P	P2	70	19	-	6.2	5	8	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
<i>L</i>	<i>ℓ</i>	<i>ℓ_n</i>	<i>D_s</i>	<i>K</i>	<i>ℓ_k</i>

SP-OX(N-SP-OX) Spiral Fluted Taps, Oxided

Size	Stock	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>ℓ_n</i> (mm)	<i>D_s</i> (mm)	<i>K</i> (mm)	<i>ℓ_k</i> (mm)	Flute	Type
M10×1.5	◎	SPQ010OX	2.5P	P2	75	23	-	7	5.5	8	3	e
	◎*	SNQ010OX				24						
M12×1.75	◎	SPQ012PX	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	◎*	SNQ012PX				29						
M16×2	○	SPQ016QX	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SNQ016QX				32						
M20×2.5	○	SPR020RX	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SNR020RX				37						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

+SP-OX(N+SP-OX)

Plus Series Spiral Fluted Taps, Oxided

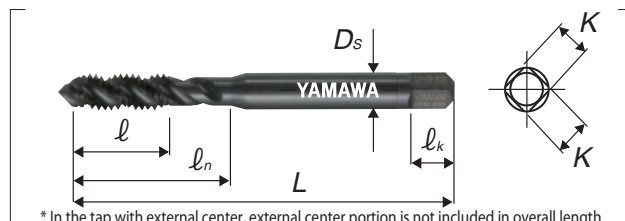
HSS

OX

45°

40°

Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

N+SP-OX is available as long as it lasts. +SP-OX takes the place of N+SP-OX.

○ Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M2×0.4	△	SNPP2.0EX	2.5P	P1	42	7.2	12	3	2.5	5	2	c
M2.5×0.45	△	SNPP2.5FX	2.5P	P1	46	8.1	14	3	2.5	5	2	c
M2.6×0.45	△	SNPP2.6FX	2.5P	P1	46	8.1	14	3	2.5	5	2	c
M3×0.5	◎	SNPP3.0GX	2.5P	P1	46	9	14	4	3.2	6	3	c
	△	SNPQ3.0GX		P2								
	△	SNPR3.0GX		P3								
M3.5×0.6	△	SNPP3.5HX	2.5P	P1	52	11	16	5	4	7	3	c
M4×0.7	◎	SNPQ4.0IX	2.5P	P2	52	11	17	5	4	7	3	c
	△	SNPR4.0IX		P3								
M5×0.8	◎	SNPQ5.0KX	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	△	SNPR5.0KX		P3								
M6×1	◎	SNPQ6.0MX	2.5P	P2	62	15	26	6	4.5	7	3	c
	△	SNPR6.0MX		P3								

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

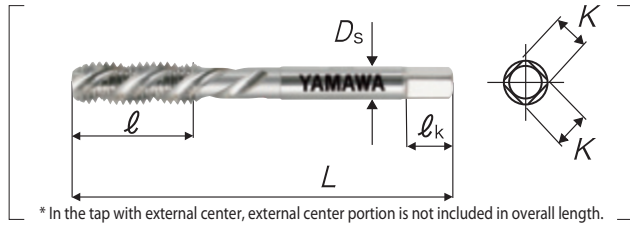
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(LH)(N-SP(LH))

Spiral Fluted Taps for Left Hand Threads



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

N-SP(LH) is available as long as it lasts. SP(LH) takes the place of N-SP(LH).

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M2×0.4	△	SPP2.0E--L	2.5P	P1	42	7.2	12	3	2.5	5	2	c
	△*	SNMP2.0E--L				9.5	15					
	△*	SNP2.0E--L										
M2.3×0.4	△	SPP2.3E--L	2.5P	P1	42	7.2	12	3	2.5	5	2	c
	△*	SNMP2.3E--L				9.5	15					
	△*	SNP2.3E--L										
M2.5×0.45	△	SPP2.5F--L	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SNMP2.5F--L			44	9.5	16					
	△*	SNP2.5F--L										
M2.6×0.45	△	SPP2.6F--L	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SNMP2.6F--L			44	9.5	16					
	△*	SNP2.6F--L										
M3×0.5	○	SPP3.0G--L	2.5P	P1	46	9	14	4	3.2	6	3	c
	○*	SNMP3.0G--L				11	18					
	○*	SNP3.0G--L										
M4×0.7	○	SPQ4.0I--L	2.5P	P2	52	11	17	5	4	7	3	c
	○*	SNMQ4.0I--L				13	20					
	○*	SNQ4.0I--L										
M5×0.8	○	SPQ5.0K--L	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	SNMQ5.0K--L				16	25					
	○*	SNQ5.0K--L										
M6×1	○	SPQ6.0M--L	2.5P	P2	62	15	26	6	4.5	7	3	c
	○*	SNMQ6.0M--L				19	28					
	○*	SNQ6.0M--L										
M7×1	△	SPQ7.0M--L	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SNQ7.0M--L			65							
M8×1.25	○	SPQ8.0N--L	2.5P	P2	70	19	-	6.2	5	8	3	e
	○*	SNQ8.0N--L				22						
M8×1	△	SPQ8.0M--L	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SNQ8.0M--L				22						
M10×1.5	○	SPQ010O--L	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	SNQ010O--L				24						
M10×1.25	○	SPQ010N--L	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	SNQ010N--L				24						

The products having *mark in the stock column will be available as long as they last.

SP(LH)(N-SP(LH)) Spiral Fluted Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1	△	SPQ010M--L	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SNQ010M--L				24						
M12×1.75	○	SPQ012P--L	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SNQ012P--L				29						
M12×1.5	△	SPQ012O--L	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SNQ012O--L				29						
M12×1.25	△	SPQ012N--L	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SNQ012N--L				29						
M12×1	△	SPQ012M--L	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SNQ012M--L				29						
M14×2	△	SPQ014Q--L	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SNQ014Q--L				30						
M14×1.5	△	SPQ014O--L	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SNQ014O--L				30						
M16×2	○	SPQ016Q--L	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SNQ016Q--L				32						
M16×1.5	△	SPQ016O--L	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SNQ016O--L				32						
M18×2.5	△	SPR018R--L	2.5P	P3	100	33	-	14	11	14	4	e
	△*	SNR018R--L				37						
M18×1.5	△	SPQ018O--L	2.5P	P2	100	33	-	14	11	14	4	e
	△*	SNQ018O--L				37						
M20×2.5	○	SPR020R--L	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SNR020R--L				37						
M20×1.5	△	SPR020O--L	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SNR020O--L				37						
M22×2.5	△	SPR022R--L	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SNR022R--L				38						
M22×1.5	△	SPR022O--L	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SNR022O--L				38						
M24×3	○	SPR024S--L	2.5P	P3	120	39	-	19	15	18	4	e
	○*	SNR024S--L				45						
M24×1.5	△	SPR024O--L	2.5P	P3	120	39	-	19	15	18	4	e
	△*	SNR024O--L				45						
M27×3	△	SPR027S--L	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SNR027S--L				45						
M30×3.5	△	SPS030T--L	2.5P	P4	135	46	-	23	17	20	4	e
	△*	SNS030T--L				48						
M30×2	△	SPR030Q--L	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SNR030Q--L				45						
M30×1.5	△	SPR030O--L	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SNR030O--L				45						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SP(LH)(N-SP(LH)) Spiral Fluted Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Unified Threads												
1/4-20UNC	△	SPQU04N--L	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNQU04N--L				19	30					
1/4-28UNF	△	SPQU04K--L	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNQU04K--L				19	30					
5/16-18UNC	△	SPQU05O--L	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SNQU05O--L				22	-	6.1				
5/16-24UNF	△	SPQU05M--L	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SNQU05M--L				22	-	6.1				
3/8-16UNC	△	SPQU06P--L	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SNQU06P--L				24	-	7				
3/8-24UNF	△	SPQU06M--L	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SNQU06M--L				24	-	7				
7/16-14UNC	△	SPRU07Q--L	2.5P	P3	82	26	-	8.5	6.5	9	3	e
7/16-20UNF	△	SPQU07N--L	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SNQU07N--L			80	25	-	8	6			
1/2-13UNC	△	SPRU08R--L	2.5P	P3	88	26	-	10.5	8	11	3	e
	△*	SNRU08R--L			85	29	-	9	7	10		
1/2-20UNF	△	SPQU08N--L	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SNQU08N--L			85	29	-	9	7	10		
For Whitworth Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4W20	△	SPQW04N--L	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SNQW04N--L				19	30					
5/16W18	△	SPQW05O--L	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SNQW05O--L				22	-	6.1				
3/8W16	△	SPQW06P--L	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SNQW06P--L				24	-	7				
7/16W14	△	SPRW07Q--L	2.5P	P3	82	26	-	8.5	6.5	9	3	e
1/2W12	△	SPRW08S--L	2.5P	P3	88	26	-	10.5	8	11	3	e
	△*	SNRW08S--L			85	29	-	9	7	10		
5/8W11	△	SPRW10U--L	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SNRW10U--L				32	-	12	9	12		
3/4W10	△	SPRW12V--L	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SNRW12V--L				37	-	14	11	14		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

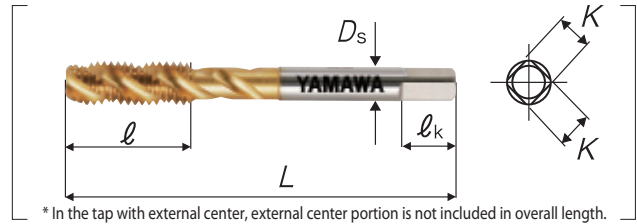
Centering Tools

SP-V(N-SP-V)

Spiral Fluted Taps, TiN coated



Segment : 1C



N-SP-V is available as long as it lasts. SP-V takes the place of N-SP-V.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M8x1.25	○	VSPQ8.0N	2.5P	P2	70	19	-	6.2	5	8	3	e
	○*	VSNQ8.0N				22						
M10x1.5	○	VSPQ0100	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	VSNQ0100				24						
M10x1.25	○	VSPQ010N	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	VSNQ010N				24						
M12x1.75	○	VSPQ012P	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	VSNQ012P				29						
M12x1.5	○	VSPQ0120	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	VSNQ0120				29						
M12x1.25	○	VSPQ012N	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	VSNQ012N				29						
M14x2	○	VSPQ014Q	2.5P	P2	88	26	-	10.5	8	11	3	e
	○*	VSNQ014Q				30						
M16x2	○	VSPQ016Q	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	VSNQ016Q				32						
M20x2.5	○	VSPR020R	2.5P	P3	105	33	-	15	12	15	4	e
	○*	VSNR020R				37						

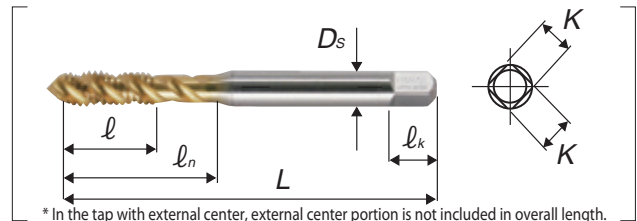
The products having *mark in the stock column will be available as long as they last.

AU+SP

Plus Series Spiral Fluted Taps, TiN coated



Segment : 1C



Special thread portion design with thread crests ground off and a few full threads left unchanged. Combination of this design and the special flute geometry maintains good chip ejection and reduces friction. Coated Spiral Fluted Taps, Blind Hole Use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M2x0.4	○	VSAPQ2.0E	2.5P	P2	42	7.2	12	3	2.5	5	2	d
M2.5x0.45	○	VSAPQ2.5F	2.5P	P2	46	8.1	14	3	2.5	5	2	d
M2.6x0.45	○	VSAPQ2.6F	2.5P	P2	46	8.1	14	3	2.5	5	2	d
M3x0.5	○	VSAPQ3.0G	2.5P	P2	46	9	14	4	3.2	6	3	d

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

AU+SP Plus Series Spiral Fluted Taps, TiN coated

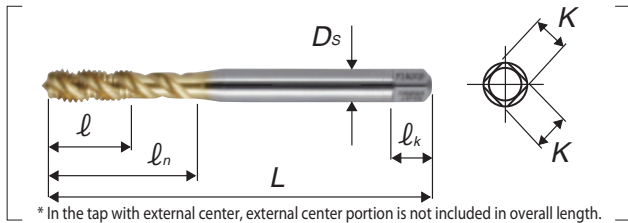
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M4×0.7	○	VSAPQ4.0I	2.5P	P2	52	11	17	5	4	7	3	d
M5×0.8	○	VSAPQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	d
M6×1	○	VSAPQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	d

The products having *mark in the stock column will be available as long as they last.

AUXSP X Series Spiral Fluted Taps, TiN coated



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Applying the blanks of high toughness and high accuracy, AUXSP derive the maximum performance from high facility machining centers and high precision toolings. Special thread portion design with thread crests ground off and a few full threads left unchanged. Combination of this design and the special flute geometry maintains good chip ejection and reduces friction. Coated Spiral Fluted Taps, Blind Hole Use

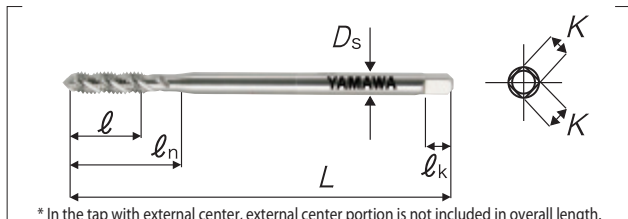
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	○	VSAXQ6.0M	2.5P	P2	80	15	30	6	4.9	8	3	g
M8×1.25	○	VSAXR8.0N	2.5P	P3	90	19	35	8	6.2	9	3	g
M8×1	○	VSAXR8.0M	2.5P	P3	90	15	35	8	6.2	9	3	g
M10×1.5	○	VSAXR010O	2.5P	P3	100	23	39	10	8	11	4	g
M10×1.25	○	VSAXR010N	2.5P	P3	100	19	39	10	8	11	4	g
M10×1	○	VSAXR010M	2.5P	P3	100	15	39	10	8	11	4	g
M12×1.75	○	VSAXR012P	2.5P	P3	110	26	45	12	9	12	4	g
M12×1.5	○	VSAXR012O	2.5P	P3	110	23	45	12	9	12	4	g
M12×1.25	○	VSAXR012N	2.5P	P3	110	19	45	12	9	12	4	g

The products having *mark in the stock column will be available as long as they last.

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

LS-N-SP is available as long as it lasts. LS-SP takes the place of LS-N-SP.

 Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M2×0.4	△	SPP2.0EL07	2.5P	P1	70	7.2	12	3	2.5	5	2	c
	△*	SNMP2.0EL07										
	△*	SNP2.0EL07										
	△	SPP2.0EL10										
	△*	SNP2.0EL10										
M2.3×0.4	△	SPP2.3EL07	2.5P	P1	70	7.2	12	3	2.5	5	2	c

The products having *mark in the stock column will be available as long as they last.

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M2.3×0.4	△*	SNMP2.3EL07	2.5P	P1	70	7.2	12	3	2.5	5	2	c
	△*	SNP2.3EL07				9.5	15					
	△	SPP2.3EL10			100	7.2	12					
	△*	SNP2.3EL10				9.5	15					
M2.5×0.45	△	SPP2.5FL07	2.5P	P1	70	8.1	14	3	2.5	5	2	c
	△*	SNMP2.5FL07				9.5	16					
	△	SPP2.5FL10			100	8.1	14					
	△*	SNP2.5FL10				9.5	16					
M2.6×0.45	△	SPP2.6FL07	2.5P	P1	70	8.1	14	3	2.5	5	2	c
	△*	SNMP2.6FL07				9.5	16					
	△	SPP2.6FL10			100	8.1	14					
	△*	SNP2.6FL10				9.5	16					
M3×0.5	△	SPP3.0GL07	2.5P	P1	70	9	14	4	3.2	6	3	c
	△*	SNMP3.0GL07				11	18					
	△*	SNP3.0GL07			100	9	14					
	◎*	SNMP3.0GL10				11	18					
	◎*	SNP3.0GL10			120	9	14					
	△	SPP3.0GL12				11	18					
	△*	SNMP3.0GL12			150	9	14					
	△*	SNP3.0GL12				11	18					
	○	SPP3.0GL15			100	9	14					
	○*	SNMP3.0GL15				11	18					
	○*	SNP3.0GL15		150	9	14						
	△	SPQ3.0GL10			11	18						
	△*	SNM3.0GL10		100	9	14						
	△*	SNQ3.0GL10			11	18						
	△	SPQ3.0GL15		150	9	14						
	△*	SNM3.0GL15			11	18						
	△*	SNQ3.0GL15		100	9	14						
	△	SPR3.0GL10			11	18						
	△*	SNMR3.0GL10		150	9	14						
	△*	SNR3.0GL10			11	18						
△	SPR3.0GL15	100	9	14								
△*	SNMR3.0GL15		11	18								
△*	SNR3.0GL15	150	9	14								
△*	SNR3.0GL15		11	18								
M4×0.7	△	SPQ4.0IL07	2.5P	P2	70	11	17	5	4	7	3	c
	△*	SNQ4.0IL07				13	20					
	◎	SPQ4.0IL10			100	11	17					
	◎*	SNMQ4.0IL10				13	20					
	◎*	SNQ4.0IL10				11	17					

Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Spiral Pointed Taps | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps (Simple measuring tools) | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M4x0.7	△	SPQ4.0IL12	2.5P	P2	120	11	17	5	4	7	3	c
	△*	SNMQ4.0IL12										
	△*	SNQ4.0IL12										
	◎	SPQ4.0IL15										
	◎*	SNMQ4.0IL15										
	◎*	SNQ4.0IL15										
	△	SPR4.0IL10		P3	100	11	17					
	△*	SNMR4.0IL10										
	△*	SNR4.0IL10										
	△	SPR4.0IL15										
	△*	SNMR4.0IL15										
	△*	SNR4.0IL15										
M5x0.8	◎	SPQ5.0KL10	2.5P	P2	100	13	22	5.5	4.5	7	3	c
	◎*	SNMQ5.0KL10										
	◎*	SNQ5.0KL10										
	△	SPQ5.0KL12										
	△*	SNMQ5.0KL12										
	△*	SNQ5.0KL12										
	◎	SPQ5.0KL15		P3	150	13	22					
	◎*	SNMQ5.0KL15										
	◎*	SNQ5.0KL15										
	△	SPR5.0KL10										
	△*	SNMR5.0KL10										
	△*	SNR5.0KL10										
	△	SPR5.0KL15										
	△*	SNMR5.0KL15										
△*	SNR5.0KL15											
M6x1	◎	SPQ6.0ML10	2.5P	P2	100	15	26	6	4.5	7	3	c
	◎*	SNMQ6.0ML10										
	◎*	SNQ6.0ML10										
	△	SPQ6.0ML12										
	△*	SNMQ6.0ML12										
	△*	SNQ6.0ML12										
	◎	SPQ6.0ML15			120	15	26					
	◎*	SNMQ6.0ML15										
	◎*	SNQ6.0ML15										
	△	SPQ6.0ML20										
	△*	SNQ6.0ML20										
	△*	SNR6.0ML10		100								
	△*	SNMR6.0ML10										
	△*	SNR6.0ML10										
	△	SPR6.0ML10										
	△*	SNMR6.0ML15										
△*	SNR6.0ML15	150	15	26								
△*	SNMR6.0ML15											
M6x1	◎	SPQ6.0ML10	2.5P	P2	100	15	26	6	4.5	7	3	c
	◎*	SNMQ6.0ML10										
	◎*	SNQ6.0ML10										
	△	SPQ6.0ML12										
	△*	SNMQ6.0ML12										
	△*	SNQ6.0ML12										
	◎	SPQ6.0ML15			120	15	26					
	◎*	SNMQ6.0ML15										
	◎*	SNQ6.0ML15										
	△	SPQ6.0ML20										
	△*	SNQ6.0ML20										
	△*	SNR6.0ML10		100								
	△*	SNMR6.0ML10										
	△*	SNR6.0ML10										
	△	SPR6.0ML10										
	△*	SNMR6.0ML15										
△*	SNR6.0ML15	150	15	26								
△*	SNMR6.0ML15											

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

The products having *mark in the stock column will be available as long as they last.

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M6x1	△*	SNR6.0ML15	2.5P	P3	150	19	28	6	4.5	7	3	c	
M6x0.75	△	SPQ6.0JL10	2.5P	P2	100	15	26	6	4.5	7	3	c	
	△*	SNMQ6.0JL10				19	28						
	△*	SNQ6.0JL10											
M8x1.25	◎	SPQ8.0NL10	2.5P	P2	100	19		-	6.2	5	8	3	e
	◎*	SNQ8.0NL10				22							
	△	SPQ8.0NL12				19							
	△*	SNQ8.0NL12				22							
	◎	SPQ8.0NL15				19							
	◎*	SNQ8.0NL15				22							
	△	SPQ8.0NL20				19							
	△*	SNQ8.0NL20				22							
	△	SPR8.0NL10				19	P3						
	△*	SNR8.0NL10				22							
	△	SPR8.0NL15				19							
	△*	SNR8.0NL15				22							
M8x1	△	SPQ8.0ML10	2.5P	P2	100	19		-	6.2	5	8	3	e
	△*	SNQ8.0ML10				22							
	△	SPQ8.0ML15				19							
	△*	SNQ8.0ML15				22							
M10x1.5	◎	SPQ010OL10	2.5P	P2	100	23		-	7	5.5	8	3	e
	◎*	SNQ010OL10				24							
	△	SPQ010OL12				23							
	△*	SNQ010OL12				24							
	◎	SPQ010OL15				23							
	◎*	SNQ010OL15				24							
	△	SPQ010OL20				23							
	△*	SNQ010OL20				24							
	△	SPR010OL10				23	P3						
	△*	SNR010OL10				24							
	△	SPR010OL15				23							
	△*	SNR010OL15				24							
M10x1.25	○	SPQ010NL10	2.5P	P2	100	23		-	7	5.5	8	3	e
	○*	SNQ010NL10				24							
	△	SPQ010NL12				23							
	△*	SNQ010NL12				24							
	○	SPQ010NL15				23							
	○*	SNQ010NL15				24							
	△	SPQ010NL20				23							
△*	SNQ010NL20	24											
M10x1	△	SPQ010ML10	2.5P	P2	100	23		-	7	5.5	8	3	e
	△*	SNQ010ML10				24							
	△	SPQ010ML15				23							

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M10x1	△*	SNQ010ML15	2.5P	P2	150	24	-	7	5.5	8	3	e	
M12x1.75	△	SPQ012PL10	2.5P	P2	100	26	-	8.5	6.5	9	3	e	
	△*	SNQ012PL10				29							
	△	SPQ012PL12				26							
	△*	SNQ012PL12				29							
	◎	SPQ012PL15			150	26							
	◎*	SNQ012PL15				29							
	◎	SPQ012PL20			200	26							
	◎*	SNQ012PL20				29							
	△	SPR012PL15		150	P3	26							
	△*	SNR012PL15				29							
M12x1.5	△	SPQ012OL10	2.5P	P2	100	26	-	8.5	6.5	9	3	e	
	△*	SNQ012OL10				29							
	△	SPQ012OL15			150	26							
	△*	SNQ012OL15				29							
	△	SPQ012OL20				200							26
	△*	SNQ012OL20											29
M12x1.25	△	SPQ012NL10	2.5P	P2	100	26	-	8.5	6.5	9	3	e	
	△*	SNQ012NL10				29							
	△	SPQ012NL12			120	26							
	△*	SNQ012NL12				29							
	○	SPQ012NL15				150							26
	○*	SNQ012NL15											29
	△	SPQ012NL20			200	26							
	△*	SNQ012NL20				29							
M12x1	△	SPQ012ML12	2.5P	P2	120	26	-	8.5	6.5	9	3	e	
	△*	SNQ012ML12				29							
	△	SPQ012ML15			150	26							
	△*	SNQ012ML15				29							
M14x2	△	SPQ014QL12	2.5P	P2	120	26	-	10.5	8	11	3	e	
	△*	SNQ014QL12				30							
	○	SPQ014QL15			150	26							
	○*	SNQ014QL15				30							
	○	SPQ014QL20				200							26
	○*	SNQ014QL20											30
M14x1.5	△	SPQ014OL12	2.5P	P2	120	26	-	10.5	8	11	3	e	
	△*	SNQ014OL12				30							
	○	SPQ014OL15			150	26							
	○*	SNQ014OL15				30							
	△	SPQ014OL20				200							26
	△*	SNQ014OL20											30
M16x2	◎	SPQ016QL15	2.5P	P2	150	26	-	12.5	10	13	3	e	
	◎*	SNQ016QL15				32							

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

The products having *mark in the stock column will be available as long as they last.

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M16×2	⊙	SPQ016QL20	2.5P	P2	200	26	-	12.5	10	13	3	e
	⊙*	SNQ016QL20				32						
	△	SPQ016QL25			250	26						
	△*	SNQ016QL25				32						
M16×1.5	○	SPQ016OL15	2.5P	P2	150	26	-	12.5	10	13	3	e
	○*	SNQ016OL15				32						
	△	SPQ016OL20			200	26						
	△*	SNQ016OL20				32						
M18×2.5	○	SPR018RL15	2.5P	P3	150	33	-	14	11	14	4	e
	○*	SNR018RL15				37						
	△	SPR018RL20			200	33						
	△*	SNR018RL20				37						
	△	SPR018RL25			250	33						
	△*	SNR018RL25				37						
M18×1.5	○	SPQ018OL15	2.5P	P2	150	33	-	14	11	14	4	e
	○*	SNQ018OL15				37						
	△	SPQ018OL20			200	33						
	△*	SNQ018OL20				37						
M20×2.5	⊙	SPR020RL15	2.5P	P3	150	33	-	15	12	15	4	e
	⊙*	SNR020RL15				37						
	⊙	SPR020RL20			200	33						
	⊙*	SNR020RL20				37						
	△	SPR020RL25			250	33						
	△*	SNR020RL25				37						
M20×1.5	○	SPR020OL15	2.5P	P3	150	33	-	15	12	15	4	e
	○*	SNR020OL15				37						
	△	SPR020OL20			200	33						
	△*	SNR020OL20				37						
M22×2.5	△	SPR022RL15	2.5P	P3	150	33	-	17	13	16	4	e
	△*	SNR022RL15				38						
	△	SPR022RL20			200	33						
	△*	SNR022RL20				38						
M22×1.5	○	SPR022OL15	2.5P	P3	150	33	-	17	13	16	4	e
	○*	SNR022OL15				38						
	△	SPR022OL20			200	33						
	△*	SNR022OL20				38						
M24×3	○	SPR024SL15	2.5P	P3	150	39	-	19	15	18	4	e
	○*	SNR024SL15				45						
	⊙	SPR024SL20			200	39						
	⊙*	SNR024SL20				45						
	△	SPR024SL25			250	39						
	△*	SNR024SL25				45						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M24x2	△	SPR024QL20	2.5P	P3	200	39	-	19	15	18	4	e
	△*	SNR024QL20				45						
M24x1.5	○	SPR024OL15	2.5P	P3	150	39	-	19	15	18	4	e
	○*	SNR024OL15				45						
	△	SPR024OL20			39							
	△*	SNR024OL20			45							
M27x3	△	SPR027SL20	2.5P	P3	200	39	-	20	15	18	4	e
	△*	SNR027SL20				45						
	△	SPR027SL25			39							
	△*	SNR027SL25			45							
M27x2	△	SPR027QL20	2.5P	P3	200	39	-	20	15	18	4	e
	△*	SNR027QL20				45						
M27x1.5	△	SPR027OL20	2.5P	P3	200	39	-	20	15	18	4	e
	△*	SNR027OL20				45						
	△	SPR027OL25			39							
	△*	SNR027OL25			45							
M30x3.5	△	SPS030TL20	2.5P	P4	200	46	-	23	17	20	4	e
	△*	SNS030TL20				48						
	△	SPS030TL25			46							
	△*	SNS030TL25			48							
	△	SPS030TL30			46							
	△*	SNS030TL30			48							
M30x1.5	△	SPR030OL20	2.5P	P3	200	46	-	23	17	20	4	e
	△*	SNR030OL20				45						
	△	SPR030OL25			46							
	△*	SNR030OL25			45							
M33x3.5	△	SPS033TL25	2.5P	P4	250	51	-	25	19	22	4	e
	△*	SNS033TL25										
M36x4	△	SPS036UL25	2.5P	P4	250	57	-	28	21	24	4	e
	△*	SNS036UL25										

For Unified Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4-20UNC	△	SPQU04NL10	2.5P	P2	100	15	26	6	4.5	7	3	c
	△*	SNQU04NL10				19	30					
	△	SPQU04NL15			15	26						
	△*	SNQU04NL15			19	30						
1/4-28UNF	△	SPQU04KL10	2.5P	P2	100	15	26	6	4.5	7	3	c
	△*	SNQU04KL10				19	30					
	△	SPQU04KL15			15	26						
	△*	SNQU04KL15			19	30						
5/16-18UNC	△	SPQU05OL10	2.5P	P2	100	19	-	6.2	5	8	3	e
	△*	SNQU05OL10				22	6.1					

The products having *mark in the stock column will be available as long as they last.

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
5/16-18UNC	△	SPQU05OL15	2.5P	P2	150	19	-	6.2	5	8	3	e
	△*	SNQU05OL15				22		6.1				
5/16-24UNF	△	SPQU05ML10	2.5P	P2	100	19	-	6.2	5	8	3	e
	△*	SNQU05ML10				22		6.1				
	△	SPQU05ML15			150	19		6.2				
	△*	SNQU05ML15				22		6.1				
3/8-16UNC	△	SPQU06PL10	2.5P	P2	100	23	-	7	5.5	8	3	e
	△*	SNQU06PL10				24						
	△	SPQU06PL15			150	23						
	△*	SNQU06PL15				24						
	△	SPQU06PL20			200	23						
	△*	SNQU06PL20				24						
3/8-24UNF	△	SPQU06ML10	2.5P	P2	100	23	-	7	5.5	8	3	e
	△*	SNQU06ML10				24						
	△	SPQU06ML15			150	23						
	△*	SNQU06ML15				24						
7/16-14UNC	△	SPRU07QL15	2.5P	P3	150	26	-	8.5	6.5	9	3	e
	△*	SNRU07QL15				25		8	6			
7/16-20UNF	△	SPQU07NL15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	SNQU07NL15				25		8	6			
1/2-13UNC	△	SPRU08RL15	2.5P	P3	150	26	-	10.5	8	11	3	e
	△*	SNRU08RL15				29		9	7	10		
	△	SPRU08RL20			200	26		10.5	8	11		
	△*	SNRU08RL20				29		9	7	10		
1/2-20UNF	△	SPQU08NL15	2.5P	P2	150	26	-	10.5	8	11	3	e
	△*	SNQU08NL15				29		9	7	10		
5/8-11UNC	△	SPRU10UL15	2.5P	P3	150	26	-	12.5	10	13	3	e
	△*	SNRU10UL15				32		12	9	12		
	△	SPRU10UL20			200	26		12.5	10	13		
	△*	SNRU10UL20				32		12	9	12		
5/8-18UNF	△	SPQU10OL15	2.5P	P2	150	26	-	12.5	10	13	3	e
	△*	SNQU10OL15				32		12	9	12		
3/4-10UNC	△	SPRU12VL15	2.5P	P3	150	33	-	15	12	15	4	e
	△*	SNRU12VL15				37		14	11	14		
	△	SPRU12VL20			200	33		15	12	15		
	△*	SNRU12VL20				37		14	11	14		
3/4-16UNF	△	SPRU12PL15	2.5P	P3	150	33	-	15	12	15	4	e
	△*	SNRU12PL15				37		14	11	14		
7/8-9UNC	△	SPRU14WL15	2.5P	P3	150	33	-	17	13	16	4	e
	△*	SNRU14WL15				38						
	△	SPRU14WL20			200	33						
	△*	SNRU14WL20				38						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-SP(LS-N-SP) Long Shank Spiral Fluted Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1'-8UNC	△	SPRU16XL15	2.5P	P3	150	39	-	19	15	18	4	e
	△*	SNRU16XL15				45		20				
	△	SPRU16XL20			200	39	19					
	△*	SNRU16XL20				45	20					
For Whitworth Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4W20	△	SPQW04NL10	2.5P	P2	100	15	26	6	4.5	7	3	c
	△*	SNQW04NL10				19	30					
	△	SPQW04NL15			150	15	26					
	△*	SNQW04NL15				19	30					
5/16W18	△	SPQW05OL10	2.5P	P2	100	19	-	6.2	5	8	3	e
	△*	SNQW05OL10				22	6.1					
	△	SPQW05OL15			150	19	6.2					
	△*	SNQW05OL15				22	6.1					
3/8W16	△	SPQW06PL10	2.5P	P2	100	23	-	7	5.5	8	3	e
	△*	SNQW06PL10				24						
	△	SPQW06PL15			150	23						
	△*	SNQW06PL15				24						
	△	SPQW06PL20			200	23						
	△*	SNQW06PL20				24						
7/16W14	△	SPRW07QL15	2.5P	P3	150	26	-	8.5	6.5	9	3	e
	△*	SNRW07QL15				25	8	6				
1/2W12	△	SPRW08SL15	2.5P	P3	150	26	-	10.5	8	11	3	e
	△*	SNRW08SL15				29		9	10			
	△	SPRW08SL20			200	26		10.5	8	11		
	△*	SNRW08SL20				29		9	10			
5/8W11	△	SPRW10UL15	2.5P	P3	150	26	-	12.5	10	13	3	e
	△*	SNRW10UL15				32		12	9	12		
	△	SPRW10UL20			200	26		12.5	10	13		
	△*	SNRW10UL20				32		12	9	12		
3/4W10	△	SPRW12VL15	2.5P	P3	150	33	-	15	12	15	4	e
	△*	SNRW12VL15				37		14	11	14		
	△	SPRW12VL20			200	33		15	12	15		
	△*	SNRW12VL20				37		14	11	14		
7/8W9	△	SPRW14WL15	2.5P	P3	150	33	-	17	13	16	4	e
	△*	SNRW14WL15				38						
	△	SPRW14WL20			200	33						
	△*	SNRW14WL20				38						
1'W8	△	SPRW16XL15	2.5P	P3	150	39	-	19	15	18	4	e
	△*	SNRW16XL15				45		20				
	△	SPRW16XL20			200	39		19				
	△*	SNRW16XL20				45		20				

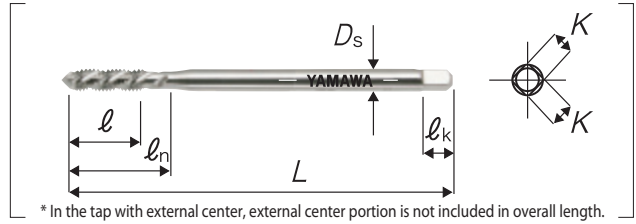
The products having *mark in the stock column will be available as long as they last.

LS-SP(LH)(LS-N-SP(LH))

Long Shank Spiral Fluted Taps for Left Hand Threads



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

LS-N-SP(LH) is available as long as it lasts. LS-SP(LH) takes the place of LS-N-SP(LH).

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	SPP3.0GL10-L	2.5P	P1	100	9	14	4	3.2	6	3	c
	△*	SNMP3.0GL10L					18					
	△*	SNP3.0GL10-L					11					
M4×0.7	△	SPQ4.0IL10-L	2.5P	P2	100	11	17	5	4	7	3	c
	△*	SNMQ4.0IL10L					20					
	△*	SNQ4.0IL10-L					13					
M5×0.8	△	SPQ5.0KL10-L	2.5P	P2	100	13	22	5.5	4.5	7	3	c
	△*	SNMQ5.0KL10L					25					
	△*	SNQ5.0KL10-L					16					
M6×1	△	SPQ6.0ML10-L	2.5P	P2	100	15	26	6	4.5	7	3	c
	△*	SNMQ6.0ML10L					28					
	△*	SNQ6.0ML10-L					19					
	△	SPQ6.0ML15-L			150	15	26					
	△*	SNMQ6.0ML15L					19					
△*	SNQ6.0ML15-L	19										
M8×1.25	△	SPQ8.0NL15-L	2.5P	P2	150	19	-	6.2	5	8	3	e
	△*	SNQ8.0NL15-L					22					
M10×1.5	△	SPQ10.0L15-L	2.5P	P2	150	23	-	7	5.5	8	3	e
	△*	SNQ10.0L15-L					24					
M10×1.25	△	SPQ10.0NL15-L	2.5P	P2	150	23	-	7	5.5	8	3	e
	△*	SNQ10.0NL15-L					24					
M12×1.75	△	SPQ12.0PL15-L	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	SNQ12.0PL15-L					29					
M12×1.5	△	SPQ12.0L15-L	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	SNQ12.0L15-L					29					
M12×1.25	△	SPQ12.0NL15-L	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	SNQ12.0NL15-L					29					
M14×2	△	SPQ14.0QL15-L	2.5P	P2	150	26	-	10.5	8	11	3	e
	△*	SNQ14.0QL15-L					30					
M14×1.5	△	SPQ14.0L15-L	2.5P	P2	150	26	-	10.5	8	11	3	e
	△*	SNQ14.0L15-L					30					
M16×2	△	SPQ16.0QL15-L	2.5P	P2	150	26	-	12.5	10	13	3	e
	△*	SNQ16.0QL15-L					32					
M16×1.5	△	SPQ16.0L15-L	2.5P	P2	150	26	-	12.5	10	13	3	e
	△*	SNQ16.0L15-L					32					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

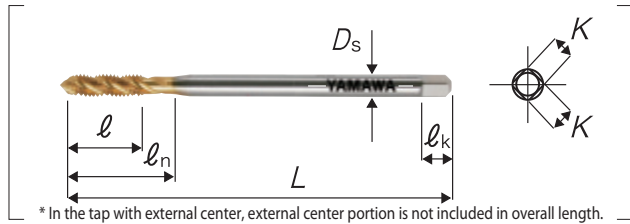
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-SP-V (LS-N-SP-V)

Long Shank Spiral Fluted Taps, TiN coated



Segment : 1C



LS-N-SP-V is available as long as it lasts. LS-SP-V takes the place of LS-N-SP-V.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	VSP3.0GL10	2.5P	P1	100	9	14	4	3.2	6	3	c
	○*	VSNMP3.0GL10					18					
	○*	VSNP3.0GL10					11					
M4×0.7	○	VSPQ4.0IL10	2.5P	P2	100	11	17	5	4	7	3	c
	○*	VSNMQ4.0IL10					20					
	○*	VSNQ4.0IL10					13					
M5×0.8	○	VSPQ5.0KL10	2.5P	P2	100	13	22	5.5	4.5	7	3	c
	○*	VSNMQ5.0KL10					25					
	○*	VSNQ5.0KL10					16					
M6×1	○	VSPQ6.0ML10	2.5P	P2	100	15	26	6	4.5	7	3	c
	○*	VSNMQ6.0ML10					28					
	○*	VSNQ6.0ML10					19					
	△	VSPQ6.0ML15			150	15	26					
	△*	VSNMQ6.0ML15										
△*	VSNQ6.0ML15	19										
M8×1.25	○	VSPQ8.0NL10	2.5P	P2	100	19	-	6.2	5	8	3	e
	○*	VSNQ8.0NL10				22						
	○	VSPQ8.0NL15			150	19						
	○*	VSNQ8.0NL15				22						
M10×1.5	○	VSPQ10.0L15	2.5P	P2	150	23	-	7	5.5	8	3	e
	○*	VSNQ10.0L15				24						
M10×1.25	△	VSPQ10.0NL15	2.5P	P2	150	23	-	7	5.5	8	3	e
	△*	VSNQ10.0NL15				24						
M12×1.75	○	VSPQ12.0PL15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	○*	VSNQ12.0PL15				29						
M12×1.5	△	VSPQ12.0L15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	VSNQ12.0L15				29						
M12×1.25	△	VSPQ12.0NL15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	VSNQ12.0NL15				29						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

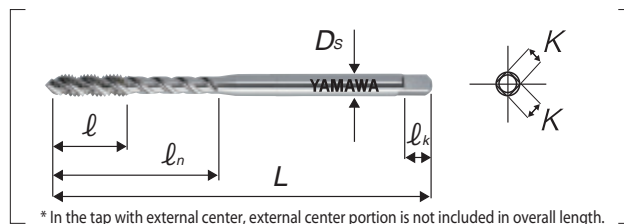
Centering Tools

LS-SP-K

Long Shank Spiral Fluted Taps with Neck



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	2.5P	P1	100	9	28	4	3.2	6	3	c
	△*	-				11						
M4×0.7	△	-	2.5P	P2	100	11	31	5	4	7	3	c
	△*	-				13						
M5×0.8	△	-	2.5P	P2	100	13	38	5.5	4.5	7	3	c
	△*	-				16						
M6×1	△	-	2.5P	P2	100	15	45	6	4.5	7	3	c
	△*	-				19						

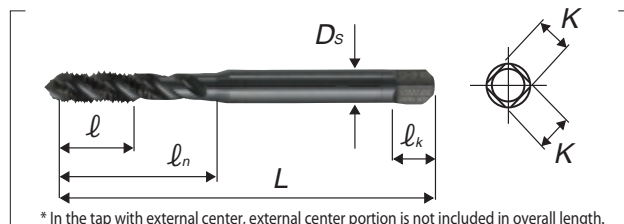
The products having *mark in the stock column will be available as long as they last.

SU+SP/SU-SP

Spiral Fluted Taps for Stainless Steels



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Suitable for stainless steels tending to work harden as well as chrome steels and molybdenum steels. Blind hole use

~M2.6 M3~
Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type	
For Metric Threads													
M1.4×0.3	△	SUMP1.4C	2.5P	P1	36	5.4	-	3	2.5	5	2	a	
	△*	SUP1.4C				8						p	
M1.7×0.35	△	SUMP1.7D	2.5P	P1	36	6.3	-	3	2.5	5	2	b	
	△*	SUP1.7D				8						p	
	△	SUMP1.7D		P2		6.3						b	
	△*	SUP1.7D				8							p
	△	SUMQ1.7D				6.3							
M2×0.4	△	SUPQ1.7D	2.5P	P2	42	7.2	12	3	2.5	5	2	c	
	△*	SUQ1.7D				8							
	○	SUPP2.0E				P1							7.2
	○*	SUP2.0E		9.5									15
	△	SUPQ2.0E		P3		7.2							12
	△*	SUQ2.0E				9.5							15
△	SUPR2.0E	7.2	12										
M2.3×0.4	△	SUR2.0E	2.5P	P1	42	9.5	15	3	2.5	5	2	c	
	△	SUPP2.3E				7.2							12

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M2.3x0.4	△*	SUP2.3E	2.5P	P1	42	9.5	15	3	2.5	5	2	c
	△	SUPQ2.3E		P2		7.2	12					
	△*	SUQ2.3E		P3		9.5	15					
	△	SUPR2.3E				7.2	12					
	△*	SUR2.3E				9.5	15					
M2.5x0.45	○	SUPP2.5F	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	○*	SUP2.5F		P1	44	9.5	16					
	△	SUPQ2.5F		P2	46	8.1	14					
	△*	SUQ2.5F		P3	44	9.5	16					
	△	SUPR2.5F			46	8.1	14					
	△*	SUR2.5F			44	9.5	16					
M2.6x0.45	○	SUPP2.6F	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	○*	SUP2.6F		P1	44	9.5	16					
	△	SUPQ2.6F		P2	46	8.1	14					
	△*	SUQ2.6F		P3	44	9.5	16					
	△	SUPR2.6F			46	8.1	14					
	△*	SUR2.6F			44	9.5	16					
M3x0.5	◎	SUPP3.0G	2.5P	P1	46	9	14	4	3.2	6	3	c
	◎*	SUP3.0G		P1		11	18					
	△	SUPQ3.0G		P2		9	14					
	△*	SUQ3.0G		P3		11	18					
	△	SUPR3.0G				9	14					
	△*	SUR3.0G				11	18					
3M0.6	△	SUPP3.0H	2.5P	P1	46	9	14	4	3.2	6	3	c
	△*	SUP3.0H		P1		11	18					
M3.5x0.6	△	SUPP3.5H	2.5P	P1	52	11	16	4	3.2	6	3	c
	△*	SUP3.5H-3		P1	48	13	20					
	△	SUR3.5H		P3								
M4x0.7	◎	SUPQ4.0I	2.5P	P2	52	11	17	5	4	7	3	c
	◎*	SUQ4.0I		P2		13	20					
	△	SUPR4.0I		P3		11	17					
	△*	SUR4.0I		P4		13	20					
	△	SUPS4.0I				11	17					
	△*	SUS4.0I				13	20					
4M0.75	△	SUPQ4.0J	2.5P	P2	52	11	17	5	4	7	3	c
	△*	SUQ4.0J		P2		13	20					
M5x0.8	◎	SUPQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	◎*	SUQ5.0K		P2		16	25					
	△	SUPR5.0K		P3		13	22					
	△*	SUR5.0K		P4		16	25					
	△	SUPS5.0K				13	22					
	△*	SUS5.0K				16	25					

The products having *mark in the stock column will be available as long as they last.

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
5M0.9	△	SUPQ5.0L	2.5P	P2	60	13	22	5.5	4.5	7	3	c	
	△*	SUQ5.0L				16	25						
M6×1	⊙	SUPQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	c	
	⊙*	SUQ6.0M				19	28						
	△	SUPR6.0M		P3		15	26						
	△*	SUR6.0M				19	28						
	△	SUPS6.0M				15	26						
	△*	SUS6.0M				19	28						
M6×0.75	△	SUMQ6.0J	2.5P	P2	62	15	26	6	4.5	7	3	c	
	△*	SUQ6.0J				19	28						
M8×1.25	⊙	SUMQ8.0N	2.5P	P2	70	19	-	6.2	5	8	3	e	
	⊙*	SUQ8.0N				22							
	△	SUMR8.0N		P3		19							-
	△*	SUR8.0N				22							
	△	SUMS8.0N				19							
	△*	SUS8.0N				22							
M8×1	△	SUMQ8.0M	2.5P	P2	70	19	-	6.2	5	8	3	e	
	△*	SUQ8.0M				22							
M8×0.75	△	SUMQ8.0J	2.5P	P2	70	19	-	6.2	5	8	3	e	
	△*	SUQ8.0J				22							
M10×1.5	⊙	SUMQ0100	2.5P	P2	75	23	-	7	5.5	8	3	e	
	⊙*	SUQ0100				24							
	△	SUMR0100		P3		23							
	△*	SUR0100				24							
	△	SUMS0100				23							
	△*	SUS0100				24							
M10×1.25	○	SUMQ010N	2.5P	P2	75	23	-	7	5.5	8	3	e	
	○*	SUQ010N				24							
	△	SUMR010N		P3		23							
	△*	SUR010N				24							
	△	SUMS010N				23							
	△*	SUS010N				24							
M10×1	△	SUMQ010M	2.5P	P2	75	23	-	7	5.5	8	3	e	
	△*	SUQ010M				24							
	△	SUMS010M		P4		23							
	△*	SUS010M				24							
M12×1.75	⊙	SUMQ012P	2.5P	P2	82	26	-	8.5	6.5	9	3	e	
	⊙*	SUQ012P				29							
	△	SUMR012P		P3		26							
	△*	SUR012P				29							
	△	SUMS012P				26							
	△*	SUS012P				29							

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.5	○	SUMQ0120	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SUQ0120				29						
	△	SUMR0120		P3		26						
	△*	SUR0120				29						
	△	SUMS0120		P4		26						
	△*	SUS0120				29						
M12x1.25	○	SUMQ012N	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SUQ012N				29						
	△	SUMR012N		P3		26						
	△*	SUR012N				29						
M12x1	△	SUMQ012M	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SUQ012M				29						
M14x2	○	SUMQ014Q	2.5P	P2	88	26	-	10.5	8	11	3	e
	○*	SUQ014Q				30						
	△	SUMR014Q		P3		26						
	△*	SUR014Q				30						
	△	SUMS014Q		P4		26						
	△*	SUS014Q				30						
M14x1.5	○	SUMQ014O	2.5P	P2	88	26	-	10.5	8	11	3	e
	○*	SUQ014O				30						
	△	SUMS014O		P4		26						
	△*	SUS014O				30						
M14x1	△	SUMQ014M	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SUQ014M				30						
M16x2	◎	SUMQ016Q	2.5P	P2	95	26	-	12.5	10	13	3	e
	◎*	SUQ016Q				32						
	△	SUMR016Q		P3		26						
	△*	SUR016Q				32						
	△	SUMS016Q		P4		26						
	△*	SUS016Q				32						
M16x1.5	○	SUMQ016O	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SUQ016O				32						
	△	SUMS016O		P4		26						
	△*	SUS016O				32						
M18x2.5	○	SUMR018R	2.5P	P3	100	33	-	14	11	14	4	e
	○*	SUR018R				37						
	△	SUMS018R		P4		33						
	△*	SUS018R				37						
M18x1.5	○	SUMQ018O	2.5P	P2	100	33	-	14	11	14	4	e
	○*	SUQ018O				37						
	△	SUMS018O		P4		33						
	△*	SUS018O				37						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Taps

Spiral Pointed

Hand Taps

Cemented

Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M20×2.5	⊙	SUMR020R	2.5P	P3	105	33	-	15	12	15	4	e
	⊙*	SUR020R				37						
	△	SUMS020R		P4		33						
	△*	SUS020R				37						
M20×1.5	○	SUMR0200	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SUR0200				37						
	△	SUMS0200		P4		33						
	△*	SUS0200				37						
M22×2.5	○	SUMR022R	2.5P	P3	115	33	-	17	13	16	4	e
	○*	SUR022R				38						
	△	SUMS022R		P4		33						
	△*	SUS022R				38						
	△	SUMT022R		P5		33						
	△*	SUT022R				38						
M22×1.5	△	SUMR0220	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SUR0220				38						
	△	SUMS0220		P4		33						
	△*	SUS0220				38						
M24×3	○	SUMR024S	2.5P	P3	120	39	-	19	15	18	4	e
	○*	SUR024S				45						
	△	SUMS024S		P4		39						
	△*	SUS024S				45						
	△	SUMT024S		P5		39						
	△*	SUT024S				45						
M24×1.5	△	SUMR0240	2.5P	P3	120	39	-	19	15	18	4	e
	△*	SUR0240				45						
	△	SUMS0240		P4		39						
	△*	SUS0240				45						
M27×3	△	SUMR027S	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SUR027S				45						
M27×1.5	△	SUMR0270	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SUR0270				45						
M30×3.5	△	SUMS030T	2.5P	P4	135	46	-	23	17	20	4	e
	△*	SUS030T				48						
M30×1.5	△	SUMR0300	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SUR0300				45						
M33×3.5	△	SUS033T	2.5P	P4	145	51	-	25	19	22	4	e
M36×4	△	SUS036U	2.5P	P4	155	57	-	28	21	24	4	e
M39×4	△	SUS039U	2.5P	P4	165	60	-	30	23	26	4	e
M42×4.5	△	SUS042V	2.5P	P4	175	60	-	32	26	30	4	e
M42×1.5	△	SUR0420	2.5P	P3	135	45	-	32	26	30	4	e
M45×4.5	△	SUS045V	2.5P	P4	180	67	-	35	26	30	4	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Unified Threads												
No.2-56UNC	△	SUMPUN2E	2.5P	P1	42	8.1	12	3	2.5	5	2	c
	△*	SUPUN2E				9.5	15					
No.3-48UNC	△	SUMPUN3F	2.5P	P1	46	8.1	14	3	2.5	5	2	c
	△*	SUPUN3F				44	9.5					
No.4-40UNC	△	SUMPUN4H	2.5P	P1	46	9	14	4	3.2	6	2	c
	△*	SUPUN4H				44	9.5	16	3	2.5		
No.4-48UNF	△	SUMPUN4F	2.5P	P1	46	9	14	4	3.2	6	2	c
	△*	SUPUN4F				44	9.5	16	3	2.5		
No.5-40UNC	△	SUMPUN5H	2.5P	P1	52	11	16	5	4	7	3	c
	△*	SUPUN5H					46	18	4	3.2		
No.5-44UNF	△	SUMPUN5G	2.5P	P1	52	11	16	5	4	7	3	c
	△*	SUPUN5G					46	18	4	3.2		
No.6-32UNC	△	SUMQUN6J	2.5P	P2	52	11	16	5	4	7	3	c
	△*	SUQUN6J					48	13	20	4		
No.6-40UNF	△	SUMPUN6H	2.5P	P1	52	11	16	5	4	7	3	c
	△*	SUPUN6H					48	13	20	4		
No.8-32UNC	△	SUMQUN8J	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	SUQUN8J					52	5	4			
No.8-36UNF	△	SUMQUN8I	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	SUQUN8I					52	5	4			
No.10-24UNC	△	SUMQUNAM	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	△*	SUQUNAM					16					
No.10-32UNF	△	SUMQUNAJ	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	△*	SUQUNAJ					16					
1/4-20UNC	△	SUMQU04N	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SUQU04N				19	30					
1/4-28UNF	△	SUMQU04K	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SUQU04K				19	30					
5/16-18UNC	△	SUMQU05O	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SUQU05O				22	6.1					
5/16-24UNF	△	SUMQU05M	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SUQU05M				22	6.1					
3/8-16UNC	△	SUMQU06P	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SUQU06P				24	7					
3/8-24UNF	△	SUMQU06M	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SUQU06M				24	7					
7/16-14UNC	△	SUMRU07Q	2.5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	SURU07Q				80	25	8	6			
7/16-20UNF	△	SUMQU07N	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SUQU07N				80	25	8	6			
1/2-13UNC	△	SUMRU08R	2.5P	P3	88	26	-	10.5	8	11	3	e

The products having *mark in the stock column will be available as long as they last.

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/2-13UNC	△*	SURU08R	2.5P	P3	85	29	-	9	7	10	3	e
1/2-20UNF	△	SUMQU08N	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SUQU08N			85	29		9	7	10		
5/8-11UNC	△	SUMRU10U	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SURU10U				32		12	9	12		
5/8-18UNF	△	SUMQU100	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SUQU100				32		12	9	12		
3/4-10UNC	△	SUMRU12V	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SURU12V				37		14	11	14		
3/4-16UNF	△	SUMRU12P	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SURU12P				37		14	11	14		
7/8-9UNC	△	SUMRU14W	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SURU14W				38						
7/8-14UNF	△	SUMRU14Q	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SURU14Q				38						
1'-8UNC	△	SUMRU16X	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SURU16X				45		20				
1'-12UNF	△	SUMRU16S	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SURU16S				45		20				
For Whitworth Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
3/16W24	△	SUMQW03M	2.5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	SUQW03M				16	25					
1/4W20	△	SUMQW04N	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SUQW04N				19	30					
5/16W18	△	SUMQW05O	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SUQW05O				22	6.1					
3/8W16	△	SUMQW06P	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SUQW06P				24						
7/16W14	△	SUMRW07Q	2.5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	SURW07Q			80	25		8	6			
1/2W12	△	SUMRW08S	2.5P	P3	88	26	-	10.5	8	11	3	e
	△*	SURW08S			85	29		9	7	10		
9/16W12	△	SUMRW09S	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SURW09S			90	30		10.5	8	11		
5/8W11	△	SUMRW10U	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SURW10U				32		12	9	12		
3/4W10	△	SUMRW12V	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SURW12V				37		14	11	14		
7/8W9	△	SUMRW14W	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SURW14W				38						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

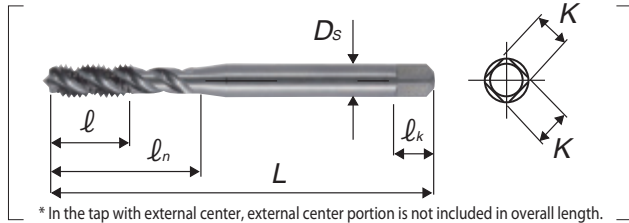
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1'W8	△	SUMRW16X	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SURW16X										

The products having *mark in the stock column will be available as long as they last.

SUXSP X Series Spiral Fluted Taps for Stainless Steels



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Applying the blanks of high toughness and high accuracy, SUXSP derive the maximum performance from high facility machining centers and high precision toolings. Spiral fluted taps for stainless steels, blind hole use
Use with special toolings is recommended.

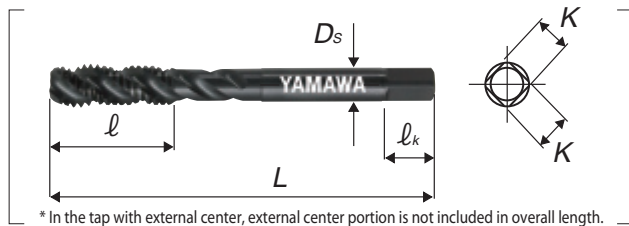
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	○	SUXQ6.0M	2.5P	P2	80	15	30	6	4.9	8	3	g
M8×1.25	○	SUXR8.0N	2.5P	P3	90	19	35	8	6.2	9	3	g
M8×1	○	SUXR8.0M	2.5P	P3	90	15	35	8	6.2	9	3	g
M10×1.5	○	SUXR0100	2.5P	P3	100	23	39	10	8	11	4	g
M10×1.25	○	SUXR010N	2.5P	P3	100	19	39	10	8	11	4	g
M10×1	○	SUXR010M	2.5P	P3	100	15	39	10	8	11	4	g
M12×1.75	○	SUXS012P	2.5P	P4	110	26	45	12	9	12	4	g
M12×1.5	○	SUXR0120	2.5P	P3	110	23	45	12	9	12	4	g
M12×1.25	○	SUXR012N	2.5P	P3	110	19	45	12	9	12	4	g

The products having *mark in the stock column will be available as long as they last.

SU2-SP Spiral Fluted Taps for Tough Stainless Steels



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Most Suitable for such tough stainless steels as SUS316 and SUS317, blind hole use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	SU2MQ3.0G	3P	P2	46	9	14	4	3.2	6	3	d
	○*	SU2Q3.0G										
M3.5×0.6	△	SU2MQ3.5H	3P	P2	52	11	16	5	4	7	3	d
	△*	SU2Q3.5H										
M4×0.7	○	SU2MQ4.0I	3P	P2	52	11	17	5	4	7	3	d
	○*	SU2Q4.0I										

The products having *mark in the stock column will be available as long as they last.

SU2-SP Spiral Fluted Taps for Tough Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M5×0.8	○	SU2MQ5.0K	3P	P2	60	13	22	5.5	4.5	7	3	d
	○*	SU2Q5.0K				16	25					
M6×1	○	SU2MQ6.0M	3P	P2	62	15	26	6	4.5	7	3	d
	○*	SU2Q6.0M				19	28					
M8×1.25	○	SU2MR8.0N	3P	P3	70	19	-	6.2	5	8	3	f
	○*	SU2R8.0N				22						
M10×1.5	○	SU2MR0100	3P	P3	75	23	-	7	5.5	8	3	f
	○*	SU2R0100				24						
M10×1.25	○	SU2MR010N	3P	P3	75	23	-	7	5.5	8	3	f
	○*	SU2R010N				24						
M10×1	△	SU2MR010M	3P	P3	75	23	-	7	5.5	8	3	f
	△*	SU2R010M				24						
M12×1.75	○	SU2MR012P	3P	P3	82	26	-	8.5	6.5	9	4	f
	○*	SU2R012P				29						
M12×1.5	△	SU2MR012O	3P	P3	82	26	-	8.5	6.5	9	4	f
	△*	SU2R012O				29						
M12×1.25	△	SU2MR012N	3P	P3	82	26	-	8.5	6.5	9	4	f
	△*	SU2R012N				29						
M12×1	△	SU2MR012M	3P	P3	82	26	-	8.5	6.5	9	4	f
	△*	SU2R012M				29						
M14×2	△	SU2MR014Q	3P	P3	88	26	-	10.5	8	11	4	f
	△*	SU2R014Q				30						
M14×1.5	△	SU2MR014O	3P	P3	88	26	-	10.5	8	11	4	f
	△*	SU2R014O				30						
M16×2	○	SU2MR016Q	3P	P3	95	26	-	12.5	10	13	4	f
	○*	SU2R016Q				32						
M16×1.5	△	SU2MR016O	3P	P3	95	26	-	12.5	10	13	4	f
	△*	SU2R016O				32						
M18×2.5	△	SU2MS018R	3P	P4	100	33	-	14	11	14	4	f
	△*	SU2S018R				37						
M18×1.5	△	SU2MR018O	3P	P3	100	33	-	14	11	14	4	f
	△*	SU2R018O				37						
M20×2.5	○	SU2MS020R	3P	P4	105	33	-	15	12	15	4	f
	○*	SU2S020R				37						
M20×1.5	△	SU2MS020O	3P	P4	105	33	-	15	12	15	4	f
	△*	SU2S020O				37						
M22×2.5	△	SU2MS022R	3P	P4	115	33	-	17	13	16	4	f
	△*	SU2S022R				38						
M22×1.5	△	SU2MS022O	3P	P4	115	33	-	17	13	16	4	f
	△*	SU2S022O				38						
M24×3	△	SU2MS024S	3P	P4	120	39	-	19	15	18	4	f
	△*	SU2S024S				45						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU2-SP Spiral Fluted Taps for Tough Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M24x1.5	△	SU2MS024O	3P	P4	120	39	-	19	15	18	4	f
	△*	SU2S024O				45						

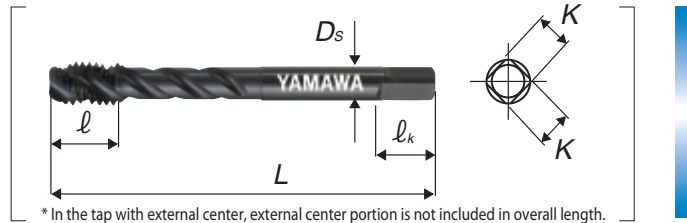
The products having *mark in the stock column will be available as long as they last.

SU-S-SP

Spiral Fluted Taps for Stainless Steels, Deep Hole Use



Segment : 1C



Suitable for stainless steels tending to work harden as well as chrome steels and molybdenum steels. Blind hole use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3x0.5	△	SSMP3.0G-SU	2.5P	P1	46	5	14	4	3.2	6	3	d
	△*	SSP3.0G-SU					18					c
M4x0.7	△	SSMQ4.0I-SU	2.5P	P2	52	7	17	5	4	7	3	d
	△*	SSQ4.0I-SU					20					c
M5x0.8	△	SSMQ5.0K-SU	2.5P	P2	60	9	22	5.5	4.5	7	3	d
	△*	SSQ5.0K-SU					25					c
M6x1	△	SSMQ6.0M-SU	2.5P	P2	62	11	26	6	4.5	7	3	d
	△*	SSQ6.0M-SU					28					c
M8x1.25	△	SSMQ8.0N-SU	2.5P	P2	70	12	-	6.2	5	8	3	e-1
	△*	SSQ8.0N-SU					e					
M10x1.5	△	SSMQ010O-SU	2.5P	P2	75	13	-	7	5.5	8	3	e-1
	△*	SSQ010O-SU					e					
M12x1.75	△	SSMQ012P-SU	2.5P	P2	82	15	-	8.5	6.5	9	3	e-1
	△*	SSQ012P-SU					e					
M14x2	△	SSMQ014Q-SU	2.5P	P2	88	18	-	10.5	8	11	3	e-1
	△*	SSQ014Q-SU					e					
M16x2	△	SSMQ016Q-SU	2.5P	P2	95	18	-	12.5	10	13	3	e-1
	△*	SSQ016Q-SU					e					
M18x2.5	△	SSMR018R-SU	2.5P	P3	100	20	-	14	11	14	4	e-1
	△*	SSR018R-SU					e					
M20x2.5	△	SSMR020R-SU	2.5P	P3	105	20	-	15	12	15	4	e-1
	△*	SSR020R-SU					e					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

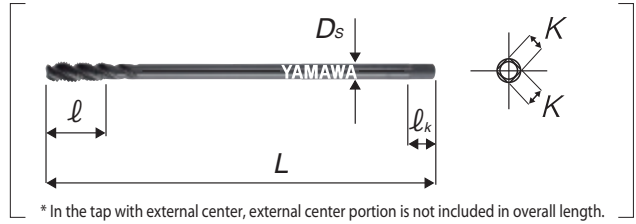
Centering Tools

LS-SU-S-SP

Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Suitable for stainless steels tending to work harden as well as chrome steels and molybdenum steels. Blind hole use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	2.5P	P1	100	5	28	4	3.2	6	3	d
M4×0.7	△	-	2.5P	P2	100	7	31	5	4	7	3	d
	△	-			150							
M5×0.8	△	-	2.5P	P2	100	9	38	5.5	4.5	7	3	d
	△	-			150							
M6×1	△	-	2.5P	P2	100	11	45	6	4.5	7	3	d
	△	-			150							
M8×1.25	△	-	2.5P	P2	100	12	-	6.2	5	8	3	e-1
	△*	-			150							e
	△	-			150							e-1
	△*	-			150							e
M10×1.5	△	-	2.5P	P2	100	13	-	7	5.5	8	3	e-1
	△*	-			150							e
M12×1.75	△	-	2.5P	P2	150	15	-	8.5	6.5	9	3	e-1
	△*	-			150							e
M14×2	△	-	2.5P	P2	150	18	-	10.5	8	11	3	e-1
	△*	-			150							e
M16×2	△	-	2.5P	P2	150	18	-	12.5	10	13	3	e-1
	△*	-			150							e
M20×2.5	△	-	2.5P	P3	150	20	-	15	12	15	3	e-1
	△*	-			150							e
M24×3	△	-	2.5P	P3	150	25	-	19	15	18	4	e-1
	△*	-			150							e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

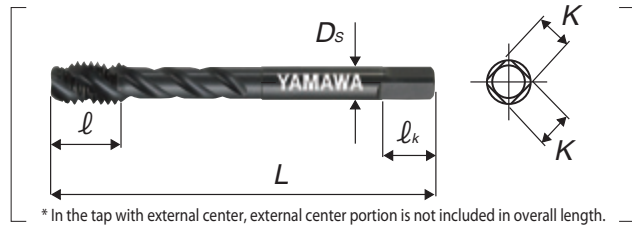
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

S-SP

Spiral Fluted Taps, Deep Hole Use



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Suitable for such deep holes as are deeper than 2 times of the nominal dia. Short thread portion reduces friction and makes smooth the coolant supply.

Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M2×0.4	○	SSMP2.0E	2.5P	P1	42	4	12	3	2.5	5	2	d
	○*	SSP2.0E					15					c
M2.3×0.4	△	SSMP2.3E	2.5P	P1	42	4	12	3	2.5	5	2	d
	△*	SSP2.3E					15					c
M2.5×0.45	△	SSMP2.5F	2.5P	P1	46	4	14	3	2.5	5	2	d
	△*	SSP2.5F			44		16					c
M2.6×0.45	△	SSMP2.6F	2.5P	P1	46	4	14	3	2.5	5	2	d
	△*	SSP2.6F			44		16					c
M3×0.5	◎	SSMP3.0G-3	2.5P	P1	46	5	14	4	3.2	6	3	d
	◎*	SSP3.0G-3		P3			18					c
	△	SSMR3.0G					14					d
	△*	SSR3.0G					18					c
M3.5×0.6	△	SSMP3.5H-3	2.5P	P1	52	7	16	5	4	7	3	d
	△*	SSP3.5H-3		48	20		4					3.2
M4×0.7	◎	SSMQ4.0I	2.5P	P2	52	7	17	5	4	7	3	d
	◎*	SSQ4.0I		P3			20					c
	△	SSMR4.0I					17					d
	△*	SSR4.0I					20					c
M5×0.8	◎	SSMQ5.0K	2.5P	P2	60	9	22	5.5	4.5	7	3	d
	◎*	SSQ5.0K		P3			25					c
	△	SSMR5.0K					22					d
	△*	SSR5.0K					25					c
M6×1	◎	SSMQ6.0M	2.5P	P2	62	11	26	6	4.5	7	3	d
	◎*	SSQ6.0M		P3			28					c
	△	SSMR6.0M					26					d
	△*	SSR6.0M					28					c
M8×1.25	◎	SSMQ8.0N	2.5P	P2	70	12	-	6.2	5	8	3	e-1
	◎*	SSQ8.0N		P3								e
	△	SSMR8.0N										e-1
	△*	SSR8.0N										e
M8×1	△	SSMQ8.0M	2.5P	P2	70	12	-	6.2	5	8	3	e-1
	△*	SSQ8.0M		e								
M10×1.5	◎	SSMQ10.0	2.5P	P2	75	13	-	7	5.5	8	3	e-1
	◎*	SSQ10.0		e								

The products having *mark in the stock column will be available as long as they last.

S-SP Spiral Fluted Taps, Deep Hole Use

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.5	△	SSMR0100	2.5P	P3	75	13	-	7	5.5	8	3	e-1
	△*	SSR0100										e
M10×1.25	○	SSMQ010N	2.5P	P2	75	13	-	7	5.5	8	3	e-1
	○*	SSQ010N				12						e
M10×1	△	SSMQ010M	2.5P	P2	75	13	-	7	5.5	8	3	e-1
	△*	SSQ010M				12						e
M12×1.75	◎	SSMQ012P	2.5P	P2	82	15	-	8.5	6.5	9	3	e-1
	◎*	SSQ012P										e
	△	SSMR012P		P3								e-1
	△*	SSR012P										e
M12×1.5	△	SSMQ0120	2.5P	P2	82	15	-	8.5	6.5	9	3	e-1
	△*	SSQ0120				14						e
M12×1.25	○	SSMQ012N	2.5P	P2	82	15	-	8.5	6.5	9	3	e-1
	○*	SSQ012N				14						e
M12×1	△	SSMQ012M	2.5P	P2	82	15	-	8.5	6.5	9	3	e-1
	△*	SSQ012M				14						e
M14×2	○	SSMQ014Q	2.5P	P2	88	18	-	10.5	8	11	3	e-1
	○*	SSQ014Q										e
M14×1.5	○	SSMQ0140	2.5P	P2	88	14	-	10.5	8	11	3	e-1
	○*	SSQ0140										e
M14×1	△	SSMQ014M	2.5P	P2	88	14	-	10.5	8	11	3	e-1
	△*	SSQ014M										e
M16×2	◎	SSMQ016Q	2.5P	P2	95	18	-	12.5	10	13	3	e-1
	◎*	SSQ016Q										e
M16×1.5	○	SSMQ0160	2.5P	P2	95	14	-	12.5	10	13	3	e-1
	○*	SSQ0160										e
M16×1	△	SSMQ016M	2.5P	P2	95	14	-	12.5	10	13	3	e-1
	△*	SSQ016M										e
M18×2.5	○	SSMR018R	2.5P	P3	100	20	-	14	11	14	4	e-1
	○*	SSR018R										e
M18×2	△	SSMR018Q	2.5P	P3	100	18	-	14	11	14	4	e-1
	△*	SSR018Q										e
M18×1.5	△	SSMQ0180	2.5P	P2	100	14	-	14	11	14	4	e-1
	△*	SSQ0180										e
M18×1	△	SSMQ018M	2.5P	P2	100	14	-	14	11	14	4	e-1
	△*	SSQ018M			95							e
M20×2.5	◎	SSMR020R	2.5P	P3	105	20	-	15	12	15	4	e-1
	◎*	SSR020R										e
M20×2	△	SSMR020Q	2.5P	P3	105	18	-	15	12	15	4	e-1
	△*	SSR020Q										e
M20×1.5	△	SSMR0200	2.5P	P3	105	14	-	15	12	15	4	e-1
	△*	SSR0200										e

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

S-SP Spiral Fluted Taps, Deep Hole Use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M20×1	△	SSMQ020M	2.5P	P2	105	14	-	15	12	15	4	e-1
	△*	SSQ020M			95							e
M22×2.5	○	SSMR022R	2.5P	P3	115	20	-	17	13	16	4	e-1
	○*	SSR022R										e
M22×2	△	SSMR022Q	2.5P	P3	115	18	-	17	13	16	4	e-1
	△*	SSR022Q										e
M22×1.5	△	SSMR022O	2.5P	P3	115	14	-	17	13	16	4	e-1
	△*	SSR022O										e
M24×3	○	SSMR024S	2.5P	P3	120	25	-	19	15	18	4	e-1
	○*	SSR024S										e
M24×2	△	SSMR024Q	2.5P	P3	120	18	-	19	15	18	4	e-1
	△*	SSR024Q										e
M24×1.5	△	SSMR024O	2.5P	P3	120	18	-	19	15	18	4	e-1
	△*	SSR024O										e
M27×3	△	SSMR027S	2.5P	P3	130	25	-	20	15	18	4	e-1
	△*	SSR027S										e
M27×2	△	SSMR027Q	2.5P	P3	130	20	-	20	15	18	4	e-1
	△*	SSR027Q										e
M27×1.5	△	SSMR027O	2.5P	P3	130	20	-	20	15	18	4	e-1
	△*	SSR027O										e
M30×3.5	△	SSMS030T	2.5P	P4	135	30	-	23	17	20	4	e-1
	△*	SSS030T										e
M30×3	△	SSMR030S	2.5P	P3	135	28	-	23	17	20	4	e-1
	△*	SSR030S										e
M30×2	△	SSMR030Q	2.5P	P3	135	20	-	23	17	20	4	e-1
	△*	SSR030Q										e
M30×1.5	△	SSMR030O	2.5P	P3	135	20	-	23	17	20	4	e-1
	△*	SSR030O										e
M33×3.5	△	SSS033T	2.5P	P4	145	30	-	25	19	22	4	e
M33×3	△	SSR033S	2.5P	P3	145	28	-	25	19	22	4	e
M33×2	△	SSR033Q	2.5P	P3	135	20	-	25	19	22	4	e
M33×1.5	△	SSR033O	2.5P	P3	135	20	-	25	19	22	4	e
M36×4	△	SSS036U	2.5P	P4	155	40	-	28	21	24	4	e
M36×3	△	SSR036S	2.5P	P3	155	30	-	28	21	24	4	e
M36×1.5	△	SSR036O	2.5P	P3	135	20	-	28	21	24	4	e
M39×4	△	SSS039U	2.5P	P4	165	40	-	30	23	26	4	e
M42×4.5	△	SSS042V	2.5P	P4	175	40	-	32	26	30	4	e
M45×4.5	△	SSS045V	2.5P	P4	180	45	-	35	26	30	4	e

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

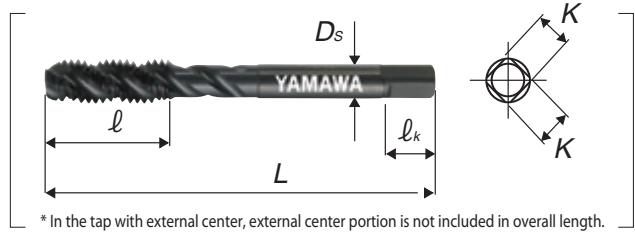
Centering Tools

E-SP

Spiral Fluted Taps for Soft Structural Steels



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Epoch making spiral fluted taps suitable for such soft steels as SS41 and S25C with no concern over the oversize cutting troubles which conventional spiral fluted taps tend to have.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type	
For Metric Threads													
M3×0.5	△	ESHMP3.0G	2.5P	P1	46	9	14	4	3.2	6	2	c	
	○	ESHMP3.0G-3											3
	○*	ESHP3.0G-3											
M3.5×0.6	△	ESHMP3.5H	2.5P	P1	52	11	16	5	4	7	3	c	
	△*	ESHP3.5H			48	13	20	4	3.2	6			
M4×0.7	○	ESHMQ4.0I	2.5P	P2	52	11	17	5	4	7	3	c	
	○*	ESHQ4.0I											13
M5×0.8	○	ESHMQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	c	
	○*	ESHQ5.0K				16	25						
M6×1	○	ESHMQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	c	
	○*	ESHQ6.0M				19	28						
M8×1.25	○	ESHMQ8.0N	2.5P	P2	70	19	-	6.2	5	8	3	e	
	○*	ESHQ8.0N				22							
M10×1.5	○	ESHMQ100	2.5P	P2	75	23	-	7	5.5	8	3	e	
	○*	ESHQ100				24							
M10×1.25	△	ESHMQ101N	2.5P	P2	75	23	-	7	5.5	8	3	e	
	△*	ESHQ101N				24							
M12×1.75	○	ESHMQ12P	2.5P	P2	82	26	-	8.5	6.5	9	3	e	
	○*	ESHQ12P				29							
M12×1.5	△	ESHMQ120	2.5P	P2	82	26	-	8.5	6.5	9	3	e	
	△*	ESHQ120				29							
M12×1.25	△	ESHMQ12N	2.5P	P2	82	26	-	8.5	6.5	9	3	e	
	△*	ESHQ12N				29							
M14×2	△	ESHMQ14Q	2.5P	P2	88	26	-	10.5	8	11	3	e	
	△*	ESHQ14Q				30							
M14×1.5	△	ESHMQ140	2.5P	P2	88	26	-	10.5	8	11	3	e	
	△*	ESHQ140				30							
M16×2	○	ESHMQ16Q	2.5P	P2	95	26	-	12.5	10	13	3	e	
	○*	ESHQ16Q				32							
M16×1.5	△	ESHMQ160	2.5P	P2	95	26	-	12.5	10	13	3	e	
	△*	ESHQ160				32							
M18×2.5	△	ESHMR018R	2.5P	P3	100	33	-	14	11	14	4	e	
	△*	ESHR018R				37							
M18×1.5	△	ESHMQ180	2.5P	P2	100	33	-	14	11	14	4	e	

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

E-SP Spiral Fluted Taps for Soft Structural Steels

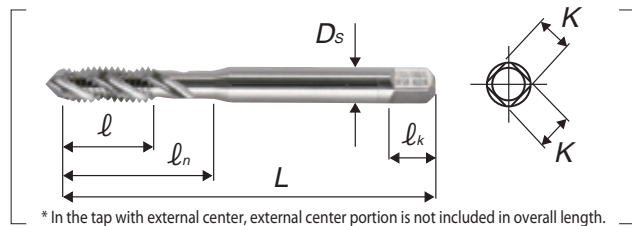
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M18x1.5	△*	ESHQ0180	2.5P	P2	100	37	-	14	11	14	4	e
M20x2.5	○	ESHMR020R	2.5P	P3	105	33	-	15	12	15	4	e
	○*	ESHR020R				37						
M20x1.5	△	ESHMR020O	2.5P	P3	105	33	-	15	12	15	4	e
	△*	ESHR020O				37						
M22x2.5	△	ESHMR022R	2.5P	P3	115	33	-	17	13	16	4	e
	△*	ESHR022R				38						
M22x1.5	△	ESHMR022O	2.5P	P3	115	33	-	17	13	16	4	e
	△*	ESHR022O				38						
M24x3	△	ESHMR024S	2.5P	P3	120	39	-	19	15	18	4	e
	△*	ESHR024S				45						
M24x1.5	△	ESHMR024O	2.5P	P3	120	39	-	19	15	18	4	e
	△*	ESHR024O				45						

The products having *mark in the stock column will be available as long as they last.

HC+SP/HC-SP Spiral Fluted Taps for High Carbon Steels



Segment : 1C



Suitable for high carbon steels such as S55C.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3x0.5	○	SCPP3.0G	2.5P	P1	46	9	14	4	3.2	6	3	c
	○*	SCP3.0G				11	18					
M4x0.7	○	SCPQ4.0I	2.5P	P2	52	11	17	5	4	7	3	c
	○*	SCQ4.0I				13	20					
M5x0.8	○	SCPQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	SCQ5.0K				16	25					
M6x1	○	SCPQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	c
	○*	SCQ6.0M				19	28					
M8x1.25	○	SCMQ8.0N	2.5P	P2	70	19	-	6.2	5	8	3	e
	○*	SCQ8.0N				22						
M8x1	△	SCMQ8.0M	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SCQ8.0M				22						
M10x1.5	○	SCMQ010O	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	SCQ010O				24						
M10x1.25	△	SCMQ010N	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SCQ010N				24						

The products having *mark in the stock column will be available as long as they last.

HC+SP/HC-SP Spiral Fluted Taps for High Carbon Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1	△	SCMQ010M	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SCQ010M				24						
M12×1.75	○	SCMQ012P	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SCQ012P				29						
M12×1.5	△	SCMQ012O	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SCQ012O				29						
M12×1.25	△	SCMQ012N	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SCQ012N				29						
M12×1	△	SCMQ012M	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	SCQ012M				29						
M14×2	△	SCMQ014Q	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SCQ014Q				30						
M14×1.5	△	SCMQ014O	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SCQ014O				30						
M14×1.25	△	SCMQ014N	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SCQ014N				30						
M14×1	△	SCMQ014M	2.5P	P2	88	26	-	10.5	8	11	3	e
	△*	SCQ014M				30						
M16×2	○	SCMQ016Q	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SCQ016Q				32						
M16×1.5	△	SCMQ016O	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SCQ016O				32						
M16×1	△	SCMQ016M	2.5P	P2	95	26	-	12.5	10	13	3	e
	△*	SCQ016M				32						
M18×2.5	△	SCMR018R	2.5P	P3	100	33	-	14	11	14	4	e
	△*	SCR018R				37						
M18×2	△	SCMR018Q	2.5P	P3	100	33	-	14	11	14	4	e
	△*	SCR018Q				37						
M18×1.5	△	SCMQ018O	2.5P	P2	100	33	-	14	11	14	4	e
	△*	SCQ018O				37						
M18×1	△	SCMQ018M	2.5P	P2	100	18	-	14	11	14	4	e
	△*	SCQ018M			95	30						
M20×2.5	○	SCMR020R	2.5P	P3	105	33	-	15	12	15	4	e
	○*	SCR020R				37						
M20×2	△	SCMR020Q	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SCR020Q				37						
M20×1.5	△	SCMR020O	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SCR020O				37						
M20×1	△	SCMQ020M	2.5P	P2	105	18	-	15	12	15	4	e
	△*	SCQ020M			95	30						
M22×2.5	△	SCMR022R	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SCR022R				38						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HC+SP/HC-SP Spiral Fluted Taps for High Carbon Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M22x2	△	SCMR022Q	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SCR022Q				38						
M22x1.5	△	SCMR022O	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SCR022O				38						
M24x3	△	SCMR024S	2.5P	P3	120	39	-	19	15	18	4	e
	△*	SCR024S				45						
M24x2	△	SCMR024Q	2.5P	P3	120	39	-	19	15	18	4	e
	△*	SCR024Q				45						
M24x1.5	△	SCMR024O	2.5P	P3	120	39	-	19	15	18	4	e
	△*	SCR024O				45						
M25x1.5	△	SCMR025O	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SCR025O				45						
M26x1.5	△	SCMR026O	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SCR026O			125	45						
M27x3	△	SCMR027S	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SCR027S				45						
M27x1.5	△	SCMR027O	2.5P	P3	130	39	-	20	15	18	4	e
	△*	SCR027O				45						
M28x1.5	△	SCMR028O	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SCR028O			130	45		21				
M30x3.5	△	SCMS030T	2.5P	P4	135	46	-	23	17	20	4	e
	△*	SCS030T				48						
M30x1.5	△	SCMR030O	2.5P	P3	135	46	-	23	17	20	4	e
	△*	SCR030O				45						

For Whitworth Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4W20	△	SCMQW04N	2.5P	P2	62	15	26	6	4.5	7	3	c
	△*	SCQW04N				19	30					
5/16W18	△	SCMQW05O	2.5P	P2	70	19	-	6.2	5	8	3	e
	△*	SCQW05O				22		6.1				
3/8W16	△	SCMQW06P	2.5P	P2	75	23	-	7	5.5	8	3	e
	△*	SCQW06P				24						
1/2W12	△	SCMRW08S	2.5P	P3	88	26	-	10.5	8	11	3	e
	△*	SCRW08S			85	29		9				
5/8W11	△	SCMRW10U	2.5P	P3	95	26	-	12.5	10	13	3	e
	△*	SCRW10U				32		12				
3/4W10	△	SCMRW12V	2.5P	P3	105	33	-	15	12	15	4	e
	△*	SCRW12V				37		14				
7/8W9	△	SCMRW14W	2.5P	P3	115	33	-	17	13	16	4	e
	△*	SCRW14W				38						
1"W8	△	SCMRW16X	2.5P	P3	125	39	-	19	15	18	4	e
	△*	SCRW16X				45		20				

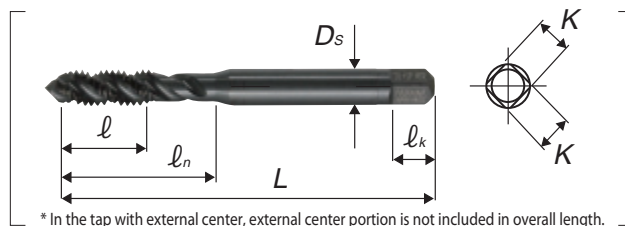
The products having *mark in the stock column will be available as long as they last.

HC+SP-0X/HC-SP-0X

Spiral Fluted Taps for High Carbon Steels, Oxided



Segment : 1C



Suitable for high carbon steels such as S55C. Oxided

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	SCPP3.0GX	2.5P	P1	46	9	14	4	3.2	6	3	c
	○*	SCP3.0GX				11	18					
M4×0.7	○	SCPQ4.0IX	2.5P	P2	52	11	17	5	4	7	3	c
	○*	SCQ4.0IX				13	20					
M5×0.8	○	SCPQ5.0KX	2.5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	SCQ5.0KX				16	25					
M6×1	○	SCPQ6.0MX	2.5P	P2	62	15	26	6	4.5	7	3	c
	○*	SCQ6.0MX				19	28					
M8×1.25	○	SCMQ8.0NX	2.5P	P2	70	19	-	6.2	5	8	3	e
	○*	SCQ8.0NX				22	-					
M10×1.5	○	SCMQ0100X	2.5P	P2	75	23	-	7	5.5	8	3	e
	○*	SCQ0100X				24	-					
M12×1.75	○	SCMQ012PX	2.5P	P2	82	26	-	8.5	6.5	9	3	e
	○*	SCQ012PX				29	-					
M16×2	○	SCMQ016QX	2.5P	P2	95	26	-	12.5	10	13	3	e
	○*	SCQ016QX				32	-					

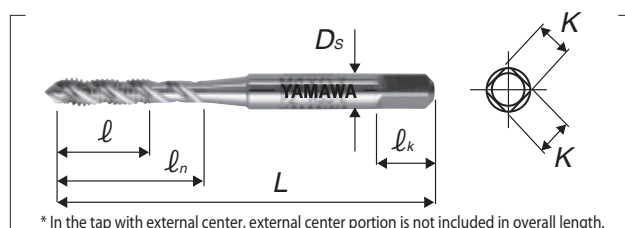
The products having *mark in the stock column will be available as long as they last.

U-SP

Spiral Fluted Taps, Universal Use



Segment : 1C



Special thread portion design with thread crests ground off and a few full threads left unchanged. Combination of this design and the special flute geometry maintains good chip ejection and reduces friction.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	USNMQ3.0G	2.5P	P2	46	9	14	4	3.2	6	3	d
	△*	USNQ3.0G				11	18					
M4×0.7	△	USNMQ4.0I	2.5P	P2	52	11	17	5	4	7	3	d
	△*	USNQ4.0I				13	20					
M5×0.8	△	USNMQ5.0K	2.5P	P2	60	13	22	5.5	4.5	7	3	d
	△*	USNQ5.0K				16	25					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

U-SP Spiral Fluted Taps, Universal Use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M6x1	△	USNMQ6.0M	2.5P	P2	62	15	26	6	4.5	7	3	d
	△*	USNQ6.0M				19	28					
M8x1.25	△	USNMR8.0N	2.5P	P3	70	19	-	6.2	5	8	3	f
	△*	USNR8.0N				22	-					
M10x1.5	△	USNMR0100	2.5P	P3	75	23	-	7	5.5	8	3	f
	△*	USNR0100				24	-					
M10x1.25	△	USNMR010N	2.5P	P3	75	23	-	7	5.5	8	3	f
	△*	USNR010N				24	-					
M12x1.75	△	USNMR012P	2.5P	P3	82	26	-	8.5	6.5	9	3	f
	△*	USNR012P				29	-					
M12x1.5	△	USNMR012O	2.5P	P3	82	26	-	8.5	6.5	9	3	f
	△*	USNR012O				29	-					

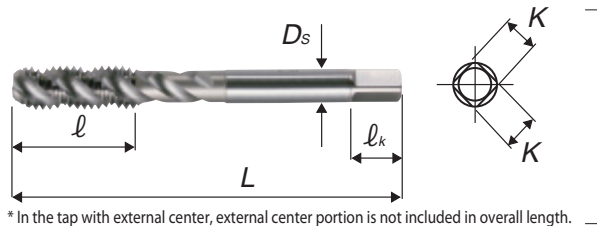
The products having *mark in the stock column will be available as long as they last.

AL+SP/AL-SP

Spiral Fluted Taps for Aluminum Die Castings and Castings



Segment : 1C



In aluminum die casting and aluminum casting tapping, AL+SP/AL-SP solve such problems as chip jamming, chip clogging, and torn threads.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
For Metric Threads													
M2x0.4	○	ASHPQ2.0E	2.5P	P2	42	7.2	12	3	2.5	5	2	c	
	○*	ASHQ2.0E				9.5	15						
	○	ASHMQ2.0E1	1.5P			7.2	12						
	○*	ASHQ2.0E1				9.5	15						
M2.3x0.4	○	ASHPQ2.3E	2.5P	P2	42	7.2	12	3	2.5	5	2	c	
	△*	ASHQ2.3E				9.5	15						
	△	ASHMQ2.3E1	1.5P			7.2	12						
	△*	ASHQ2.3E1				9.5	15						
M2.5x0.45	○	ASHPQ2.5F	2.5P	P2	46	8.1	14	3	2.5	5	2	c	
	○*	ASHQ2.5F				44	9.5						16
	○	ASHMQ2.5F1	1.5P			46	8.1						14
	○*	ASHQ2.5F1				44	9.5						16
M2.6x0.45	○	ASHPQ2.6F	2.5P	P2	46	8.1	14	3	2.5	5	2	c	
	○*	ASHQ2.6F				44	9.5						16
	○	ASHMQ2.6F1	1.5P			46	8.1						14
	○*	ASHQ2.6F1				44	9.5						16
M3x0.5	○	ASHPQ3.0G	2.5P	P2	46	9	14	4	3.2	6	3	c	

The products having *mark in the stock column will be available as long as they last.

AL+SP/AL-SP Spiral Fluted Taps for Aluminum Die Castings and Castings

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type				
M3×0.5	○*	ASHQ3.0G	2.5P	P2	46	11	18	4	3.2	6	3	c				
	○	ASHMQ3.0G1	1.5P			9	14									
	○*	ASHQ3.0G1				11	18									
M3.5×0.6	△	ASHPQ3.5H	2.5P	P2	52	11	16	5	4	7	3	c				
	△*	ASHQ3.5H				48	13						20	4	3.2	6
	△	ASHMQ3.5H1	1.5P			52	11						16	5	4	7
	△*	ASHQ3.5H1				48	13						20	4	3.2	6
M4×0.7	○	ASHPR4.0I	2.5P	P3	52	11	17	5	4	7	3	c				
	○*	ASHR4.0I				13	20									
	○	ASHMR4.0I1	1.5P			11	17									
	○*	ASHR4.0I1				13	20									
M5×0.8	○	ASHPR5.0K	2.5P	P3	60	13	22	5.5	4.5	7	3	c				
	○*	ASHR5.0K				16	25									
	○	ASHMR5.0K1	1.5P			13	22									
	○*	ASHR5.0K1				16	25									
M6×1	○	ASHPR6.0M	2.5P	P3	62	15	26	6	4.5	7	3	c				
	○*	ASHR6.0M				19	28									
	○	ASHMR6.0M1	1.5P			15	26									
	○*	ASHR6.0M1				19	28									
M8×1.25	○	ASHMR8.0N	2.5P	P3	70	19		6.2	5	8	3	e				
	○*	ASHR8.0N				22										
	○	ASHMR8.0N1	1.5P			19										
	○*	ASHR8.0N1				22										
M10×1.5	○	ASHMR010O	2.5P	P3	75	23		7	5.5	8	3	e				
	○*	ASHR010O				24										
	○	ASHMR010O1	1.5P			23										
	○*	ASHR010O1				24										
M10×1.25	△	ASHMR010N	2.5P	P3	75	23		7	5.5	8	3	e				
	△*	ASHR010N				24										
	△	ASHMR010N1	1.5P			23										
	△*	ASHR010N1				24										
M10×1	△	ASHMR010M	2.5P	P3	75	23		7	5.5	8	3	e				
	△*	ASHR010M				24										
	△	ASHMR010M1	1.5P			23										
	△*	ASHR010M1				24										
M12×1.75	○	ASHMR012P	2.5P	P3	82	26		8.5	6.5	9	3	e				
	○*	ASHR012P				29										
	○	ASHMR012P1	1.5P			26										
	○*	ASHR012P1				29										
M12×1.5	△	ASHMR012O	2.5P	P3	82	26		8.5	6.5	9	3	e				
	△*	ASHR012O				29										
	△	ASHMR012O1	1.5P			26										

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

AL+SP/AL-SP Spiral Fluted Taps for Aluminum Die Castings and Castings

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.5	△*	ASHR01201	1.5P	P3	82	29	-	8.5	6.5	9	3	e
M12x1.25	△	ASHMR012N	2.5P	P3	82	29	-	8.5	6.5	9	3	e
	△*	ASHR012N										
	△	ASHMR012N1										
	△*	ASHR012N1										
M12x1	△	ASHMR012M	2.5P	P3	82	29	-	8.5	6.5	9	3	e
	△*	ASHR012M										
	△	ASHMR012M1										
	△*	ASHR012M1										
M14x2	△	ASHMR014Q	2.5P	P3	88	30	-	10.5	8	11	3	e
	△*	ASHR014Q										
	△	ASHMR014Q1										
	△*	ASHR014Q1										
M14x1.5	△	ASHMR014O	2.5P	P3	88	30	-	10.5	8	11	3	e
	△*	ASHR014O										
	△	ASHMR014O1										
	△*	ASHR014O1										
M16x2	△	ASHMR016Q	2.5P	P3	95	32	-	12.5	10	13	3	e
	△*	ASHR016Q										
	△	ASHMR016Q1										
	△*	ASHR016Q1										
M16x1.5	△	ASHMR016O	2.5P	P3	95	32	-	12.5	10	13	3	e
	△*	ASHR016O										
	△	ASHMR016O1										
	△*	ASHR016O1										

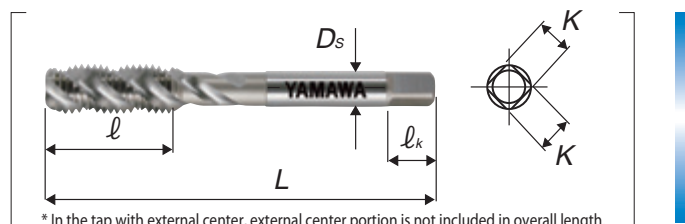
The products having *mark in the stock column will be available as long as they last.

STI-SP

Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

In some parts made of comparably soft materials, it sometimes is necessary to strengthen the internal threads and increase their toughness by inserting helical coils into the internal threads previously cut oversize. STI-SP are the taps to cut the internal threads for such helical coil to enter.

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads													
M3x0.5	○	STIMC3.0G	2.5P	3.650	1b	52	7.5	17	5	4	7	3	c
	○*	STIC3.0G					13	21					
M4x0.7	○	STIMC4.0I	2.5P	4.909	1b	60	13	22	5.5	4.5	7	3	c
	○*	STIC4.0I					16	25					

The products having *mark in the stock column will be available as long as they last.

STI-SP Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M5×0.8	○	STIMC5.0K	2.5P	6.039	1b	62	15	26	6	4.5	7	3	c
	○*	STIC5.0K					19	30					
M6×1	○	STIMC6.0M	2.5P	7.299	1b	70	19	-	6.2	5	8	3	e
	○*	STIC6.0M					22	-					
M8×1.25	○	STIMC8.0N	2.5P	9.624	1b	75	23	-	7	5.5	8	3	e
	○*	STIC8.0N					24	-					
M10×1.5	○	STIMC0100	2.5P	11.948	1b	82	26	-	8.5	6.5	9	3	e
	○*	STIC0100					29	-					
M10×1.25	△	STIMC010N	2.5P	11.624	1b	82	26	-	8.5	6.5	9	3	e
	△*	STIC010N					29	-					
M12×1.75	○	STIMC012P	2.5P	14.273	1b	95	26	-	12.5	10	13	3	e
	○*	STIC012P				90	30	10.5	8	11			
M12×1.5	△	STIMC012O	2.5P	13.948	1b	88	26	-	10.5	8	11	3	e
	△*	STIC012O					30	-					
M12×1.25	△	STIMC012N	2.5P	13.624	1b	88	26	-	10.5	8	11	3	e
	△*	STIC012N					30	-					
M14×2	△	STIMC014Q	2.5P	16.598	1b	100	33	-	14	11	14	3	e
	△*	STIC014Q				95	32	13	10	13			
M14×1.5	△	STIMC014O	2.5P	15.948	1b	95	26	-	12.5	10	13	3	e
	△*	STIC014O					32	-					
M16×2	○	STIMC016Q	2.5P	18.598	1b	105	33	-	15	12	15	4	e
	○*	STIC016Q					37	-	14	11	14		
M16×1.5	△	STIMC016O	2.5P	17.948	1b	100	33	-	14	11	14	4	e
	△*	STIC016O					37	-					
M18×2.5	△	STIMC018R	2.5P	21.248	1b	115	33	-	17	13	16	4	e
	△*	STIC018R					38	-					
M18×1.5	△	STIMC018O	2.5P	19.948	1b	105	33	-	15	12	15	4	e
	△*	STIC018O					37	-					
M20×2.5	○	STIMC020R	2.5P	23.248	1b	120	39	-	19	15	18	4	e
	○*	STIC020R					45	-					
M20×1.5	△	STIMC020O	2.5P	21.948	1b	115	33	-	17	13	16	4	e
	△*	STIC020O					38	-					
M22×2.5	△	STIMC022R	2.5P	25.248	1b	125	39	-	19	15	18	4	e
	△*	STIC022R					45	-	20				
M24×3	○	STIMC024S	2.5P	27.897	1b	135	46	-	23	17	20	4	e
	○*	STIC024S				130	45	21					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

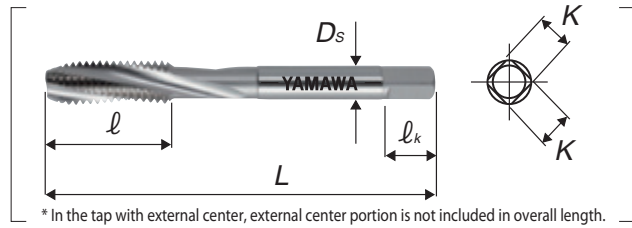
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LO-SP

Low Spiral Fluted Taps



Segment : 1C



Spiral flutes with low helix can break down chips and can eject them smoothly. Suitable for thermal refined steels of high carbon steels and alloy tool steels. Effective in horizontal tapping.

Size	Stock	Code	Chamfer	Helix angle of spiral flutes	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
For Metric Threads														
M3×0.5	△	LSHMP3.0G8	2.5P	8°	P1	46	9	14	4	3.2	6	3	c	
	△*	LSHP3.0G8					11	18						
	△	LSHMP3.0G15		15°			9	14						
	△*	LSHP3.0G15					11	18						
	△	LSHMP3.0G20		20°			9	14						
	△*	LSHP3.0G20					11	18						
M4×0.7	△	LSHMQ4.0I8	2.5P	8°	P2	52	11	17	5	4	7	3	c	
	△*	LSHQ4.0I8					13	20						
	△	LSHMQ4.0I15		15°			11	17						
	△*	LSHQ4.0I15					13	20						
	△	LSHMQ4.0I20		20°			11	17						
	△*	LSHQ4.0I20					13	20						
M5×0.8	△	LSHMQ5.0K8	2.5P	8°	P2	60	13	22	5.5	4.5	7	3	c	
	△*	LSHQ5.0K8					16	25						
	△	LSHMQ5.0K15		15°			13	22						
	△*	LSHQ5.0K15					16	25						
	△	LSHMQ5.0K20		20°			13	22						
	△*	LSHQ5.0K20					16	25						
M6×1	△	LSHMQ6.0M8	2.5P	8°	P2	62	15	26	6	4.5	7	3	c	
	△*	LSHQ6.0M8					19	28						
	△	LSHMQ6.0M15		15°			15	26						
	△*	LSHQ6.0M15					19	28						
	△	LSHMQ6.0M20		20°			15	26						
	△*	LSHQ6.0M20					19	28						
M8×1.25	△	LSHMQ8.0N8	2.5P	8°	P2	70	19	-	6.2	5	8	3	e	
	△*	LSHQ8.0N8					22							
	△	LSHMQ8.0N15		15°			19							-
	△*	LSHQ8.0N15					22							
	△	LSHMQ8.0N20		20°			19							
	△*	LSHQ8.0N20					22							
M10×1.5	△	LSHMQ010O8	2.5P	8°	P2	75	23	-	7	5.5	8	3	e	
	△*	LSHQ010O8					24							
	△	LSHMQ010O15		15°			23							
	△*	LSHQ010O15					24							

The products having *mark in the stock column will be available as long as they last.

LO-SP Low Spiral Fluted Taps

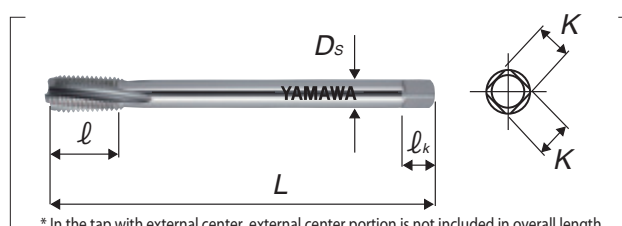
Size	Stock	Code	Chamfer	Helix angle of spiral flutes	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.5	△	LSHMQ010O20	2.5P	20°	P2	75	23	-	7	5.5	8	3	e
	△*	LSHQ010O20					24						
M12×1.75	△	LSHMQ012P8	2.5P	8°	P2	82	26	-	8.5	6.5	9	3	e
	△*	LSHQ012P8					29						
	△	LSHMQ012P15					26						
	△*	LSHQ012P15		29									
	△	LSHMQ012P20		26									
	△*	LSHQ012P20		29									

The products having *mark in the stock column will be available as long as they last.

LS-LO-SP Long Shank Low Spiral Fluted Taps



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Spiral flutes with low helix can break down chips and can eject them smoothly. Suitable for thermal refined steels of high carbon steels and alloy tool steels. Effective in horizontal tapping.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M6×1	△	LSHMQ6.0ML10	2.5P	P2	100	15	26	6	4.5	7	3	c
	△*	LSHQ6.0ML10				19	28					
M8×1.25	△	LSHMQ8.0NL10	2.5P	P2	100	19	-	6.2	5	8	3	e
	△*	LSHQ8.0NL10				22						
	△	LSHMQ8.0NL15			19							
	△*	LSHQ8.0NL15			22							
M10×1.5	△	LSHMQ010OL15	2.5P	P2	150	23	-	7	5.5	8	3	e
	△*	LSHQ010OL15				24						
M10×1.25	△	LSHMQ010NL15	2.5P	P2	150	23	-	7	5.5	8	3	e
	△*	LSHQ010NL15				24						
M12×1.75	△	LSHMQ012PL15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	LSHQ012PL15				29						
M12×1.5	△	LSHMQ012OL15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	LSHQ012OL15				29						
M12×1.25	△	LSHMQ012NL15	2.5P	P2	150	26	-	8.5	6.5	9	3	e
	△*	LSHQ012NL15				29						
M14×2	△	LSHMQ014QL15	2.5P	P2	150	26	-	10.5	8	11	3	e
	△*	LSHQ014QL15				30						
M14×1.5	△	LSHMQ014OL15	2.5P	P2	150	26	-	10.5	8	11	3	e
	△*	LSHQ014OL15				30						
M16×2	△	LSHMQ016QL15	2.5P	P2	150	26	-	12.5	10	13	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-LO-SP Long Shank Low Spiral Fluted Taps

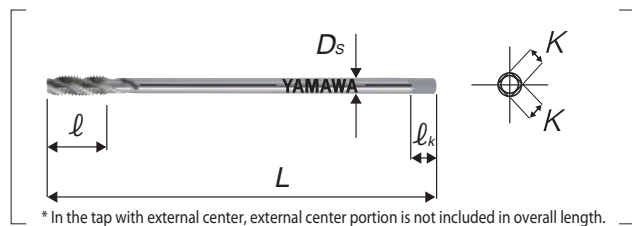
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M16x2	△*	LSHQ016QL15	2.5P	P2	150	32	-	12.5	10	13	3	e
	△	LSHM0016QL20				26						
	△*	LSHQ016QL20				32						
M16x1.5	△	LSHM0016OL15	2.5P	P2	150	26	-	12.5	10	13	3	e
	△*	LSHQ016OL15				32						
	△	LSHM0016OL20				26						
M18x2.5	△	LSHMR018RL20	2.5P	P3	200	33	-	14	11	14	4	e
	△*	LSHR018RL20				37						
M18x1.5	△	LSHM0018OL20	2.5P	P2	200	33	-	14	11	14	4	e
	△*	LSHQ018OL20				37						
M20x2.5	△	LSHMR020RL20	2.5P	P3	200	33	-	15	12	15	4	e
	△*	LSHR020RL20				37						
M20x1.5	△	LSHMR020OL20	2.5P	P3	200	33	-	15	12	15	4	e
	△*	LSHR020OL20				37						
M22x2.5	△	LSHMR022RL20	2.5P	P3	200	33	-	17	13	16	4	e
	△*	LSHR022RL20				38						
M22x1.5	△	LSHMR022OL20	2.5P	P3	200	33	-	17	13	16	4	e
	△*	LSHR022OL20				38						
M24x3	△	LSHMR024SL20	2.5P	P3	200	39	-	19	15	18	4	e
	△*	LSHR024SL20				45						
M24x1.5	△	LSHMR024OL20	2.5P	P3	200	39	-	19	15	18	4	e
	△*	LSHR024OL20				45						

The products having *mark in the stock column will be available as long as they last.

MC-SP Spiral Fluted Taps with Internal Coolant



Segment : 1C



Through internal coolant hole, satisfactory amount of oil is supplied to the exact cutting area. MC-SP can cut high accuracy threads with good surface finish even under high speed cutting.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6x1	△	MSHQ6.0ML10	2.5P	P2	100	19	28	6	4.5	7	3	c
	△	MSHQ6.0ML15				150						
M8x1.25	△	MSHQ8.0NL10	2.5P	P2	100	22	-	6.2	5	8	3	e
	△	MSHQ8.0NL15				150						
M10x1.5	△	MSHQ10.0L10	2.5P	P2	100	24	-	7	5.5	8	3	e
	△	MSHQ10.0L15				150						

The products having *mark in the stock column will be available as long as they last.

MC-SP Spiral Fluted Taps with Internal Coolant

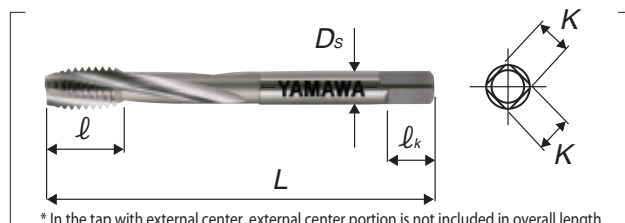
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.25	△	MSHQ010NL10	2.5P	P2	100	24	-	7	5.5	8	3	e
M12×1.75	△	MSHQ012PL10	2.5P	P2	100	29	-	8.5	6.5	9	3	e
	△	MSHQ012PL15			150							
M12×1.5	△	MSHQ012OL10	2.5P	P2	100	29	-	8.5	6.5	9	3	e
M12×1.25	△	MSHQ012NL10	2.5P	P2	100	29	-	8.5	6.5	9	3	e
M14×2	△	MSHQ014QL15	2.5P	P2	150	30	-	10.5	8	11	3	e
M16×2	△	MSHQ016QL15	2.5P	P2	150	32	-	12.5	10	13	3	e
M18×2.5	△	MSHR018RL15	2.5P	P3	150	37	-	14	11	14	4	e
M20×2.5	△	MSHR020RL15	2.5P	P3	150	37	-	15	12	15	4	e
M22×2.5	△	MSHR022RL15	2.5P	P3	150	38	-	17	13	16	4	e
M24×3	△	MSHR024SL15	2.5P	P3	150	45	-	19	15	18	4	e

The products having *mark in the stock column will be available as long as they last.

ZET-B Spiral Fluted Taps for Titanium Alloys



Segment : 1D



* In the tap with external center, external center portion is not included in overall length.

Suitable for titanium alloys which, including titanium as the main component, are tough, light and heat resistant.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	ZETBMQ3.0G	3P	P2	46	5	14	4	3.2	6	3	d
	○*	ZETBQ3.0G					18					c
M4×0.7	○	ZETBMR4.0I	3P	P3	52	7	17	5	4	7	3	d
	○*	ZETBR4.0I					20					c
M5×0.8	○	ZETBMR5.0K	3P	P3	60	9	22	5.5	4.5	7	3	d
	○*	ZETBR5.0K					25					c
M6×1	○	ZETBMR6.0M	3P	P3	62	11	26	6	4.5	7	3	d
	○*	ZETBR6.0M					28					c
M8×1.25	○	ZETBMR8.0N	3P	P3	70	12	-	6.2	5	8	3	e-1
	○*	ZETBR8.0N										e
M10×1.5	○	ZETBMR010O	3P	P3	75	13	-	7	5.5	8	3	e-1
	○*	ZETBR010O										e
M10×1.25	○	ZETBMR010N	3P	P3	75	13	-	7	5.5	8	3	e-1
	○*	ZETBR010N				12						e
M12×1.75	○	ZETBMR012P	3P	P3	82	15	-	8.5	6.5	9	3	e-1
	○*	ZETBR012P										e
M12×1.5	△	ZETBMR012O	3P	P3	82	15	-	8.5	6.5	9	3	e-1
	△*	ZETBR012O				14						e
M12×1.25	△	ZETBMR012N	3P	P3	82	15	-	8.5	6.5	9	3	e-1

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

ZET-B Spiral Fluted Taps for Titanium Alloys

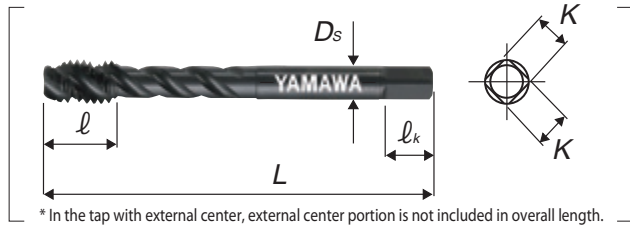
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.25	△*	ZETBR012N	3P	P3	82	14	-	8.5	6.5	9	3	e
M14x2	△	ZETBMR014Q	3P	P3	88	18	-	10.5	8	11	3	e-1
	△*	ZETBR014Q										e
M14x1.5	△	ZETBMR014O	3P	P3	88	14	-	10.5	8	11	3	e-1
	△*	ZETBR014O										e
M16x2	△	ZETBMR016Q	3P	P3	95	18	-	12.5	10	13	4	e-1
	△*	ZETBR016Q										e
M16x1.5	△	ZETBMR016O	3P	P3	95	14	-	12.5	10	13	4	e-1
	△*	ZETBR016O										e
M18x2.5	△	ZETBMS018R	3P	P4	100	20	-	14	11	14	4	e-1
	△*	ZETBS018R										e
M18x1.5	△	ZETBMR018O	3P	P3	100	14	-	14	11	14	4	e-1
	△*	ZETBR018O										e
M20x2.5	△	ZETBMS020R	3P	P4	105	20	-	15	12	15	4	e-1
	△*	ZETBS020R										e
M20x1.5	△	ZETBMS020O	3P	P4	105	14	-	15	12	15	4	e-1
	△*	ZETBS020O										e

The products having *mark in the stock column will be available as long as they last.

ZEN-B Spiral Fluted Taps for Nickel Base Alloys



Segment : 1D



* In the tap with external center, external center portion is not included in overall length.

ZEN-B is the tap for nickel base alloys which, with nickel as main composition, have higher corrosion resistance and higher heat resistance than steels.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3x0.5	○	ZENBMQ3.0G	3P	P2	46	5	14	4	3.2	6	3	d
	○*	ZENBQ3.0G					18					c
M4x0.7	○	ZENBMR4.0I	3P	P3	52	7	17	5	4	7	3	d
	○*	ZENBR4.0I					20					c
M5x0.8	○	ZENBMR5.0K	3P	P3	60	9	22	5.5	4.5	7	3	d
	○*	ZENBR5.0K					25					c
M6x1	○	ZENBMR6.0M	3P	P3	62	11	26	6	4.5	7	3	d
	○*	ZENBR6.0M					28					c
M8x1.25	○	ZENBMR8.0N	3P	P3	70	12	-	6.2	5	8	3	e-1
	○*	ZENBR8.0N					e					
M10x1.5	○	ZENBMR010O	3P	P3	75	13	-	7	5.5	8	3	e-1
	○*	ZENBR010O					e					

The products having *mark in the stock column will be available as long as they last.

ZEN-B Spiral Fluted Taps for Nickel Base Alloys

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.25	○	ZENBMR010N	3P	P3	75	13	-	7	5.5	8	3	e-1
	○*	ZENBR010N				12						e
M12×1.75	○	ZENBMR012P	3P	P3	82	15	-	8.5	6.5	9	3	e-1
	○*	ZENBR012P				15						e
M12×1.5	△	ZENBMR012O	3P	P3	82	15	-	8.5	6.5	9	3	e-1
	△*	ZENBR012O				14						e
M12×1.25	△	ZENBMR012N	3P	P3	82	15	-	8.5	6.5	9	3	e-1
	△*	ZENBR012N				14						e
M14×2	△	ZENBMR014Q	3P	P3	88	18	-	10.5	8	11	3	e-1
	△*	ZENBR014Q				18						e
M14×1.5	△	ZENBMR014O	3P	P3	88	14	-	10.5	8	11	3	e-1
	△*	ZENBR014O				14						e
M16×2	△	ZENBMR016Q	3P	P3	95	18	-	12.5	10	13	3	e-1
	△*	ZENBR016Q				18						e
M16×1.5	△	ZENBMR016O	3P	P3	95	14	-	12.5	10	13	3	e-1
	△*	ZENBR016O				14						e
M18×2.5	△	ZENBMS018R	3P	P4	100	20	-	14	11	14	4	e-1
	△*	ZENBS018R				20						e
M18×1.5	△	ZENBMR018O	3P	P3	100	14	-	14	11	14	4	e-1
	△*	ZENBR018O				14						e
M20×2.5	△	ZENBMS020R	3P	P4	105	20	-	15	12	15	4	e-1
	△*	ZENBS020R				20						e
M20×1.5	△	ZENBMS020O	3P	P4	105	14	-	15	12	15	4	e-1
	△*	ZENBS020O				14						e

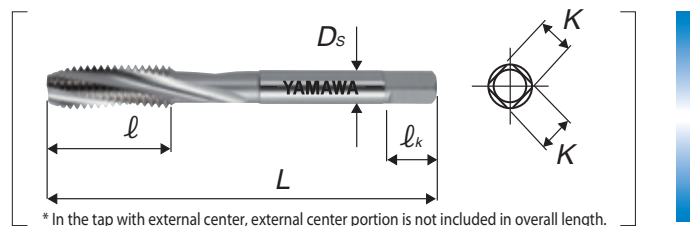
The products having *mark in the stock column will be available as long as they last.

PM-SP

Spiral Fluted Taps for Hard-to-Machine Materials



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	3P	P3	46	9	14	4	3.2	6	3	c
	△*	-				11	18					
M4×0.7	△	-	3P	P3	52	11	17	5	4	7	3	c
	△*	-				13	20					
M5×0.8	△	-	3P	P3	60	13	22	5.5	4.5	7	3	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PM-SP Spiral Fluted Taps for Hard-to-Machine Materials

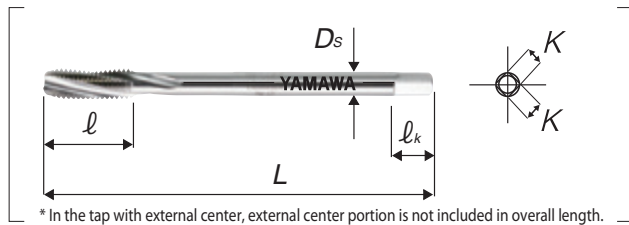
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M5×0.8	△*	-	3P	P3	60	16	25	5.5	4.5	7	3	c
M6×1	△	-	3P	P3	62	15	26	6	4.5	7	3	c
	△*	-				19	28					
M8×1.25	△	-	3P	P3	70	19	-	6.2	5	8	3	e
	△*	-				22	-					
M10×1.5	△	-	3P	P3	75	23	-	7	5.5	8	3	e
	△*	-				24	-					
M10×1.25	△	-	3P	P3	75	23	-	7	5.5	8	3	e
	△*	-				24	-					
M12×1.75	△	-	3P	P3	82	26	-	8.5	6.5	9	3	e
	△*	-				29	-					
M16×2	△	-	3P	P4	95	26	-	12.5	10	13	3	e
	△*	-				32	-					
M16×1.5	△	-	3P	P3	95	26	-	12.5	10	13	3	e
	△*	-				32	-					
M20×2.5	△	-	3P	P4	105	33	-	15	12	15	3	e
	△*	-				37	-					
M24×3	△	-	3P	P4	120	39	-	19	15	18	4	e
	△*	-				45	-					

The products having *mark in the stock column will be available as long as they last.

LS-PM-SP Long Shank Spiral Fluted Taps for Hard-to-Machine Materials



Segment : 1C



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M4×0.7	△	-	3P	P3	100	11	17	5	4	7	3	c
	△*	-				13	20					
M5×0.8	△	-	3P	P3	100	13	22	5.5	4.5	7	3	c
	△*	-				16	25					
M6×1	△	-	3P	P3	100	15	26	6	4.5	7	3	c
	△*	-				19	28					
M8×1.25	△	-	3P	P3	100	19	-	6.2	5	8	3	e
	△*	-				22	-					
	△	-			150	19	-					
	△*	-				22	-					

The products having *mark in the stock column will be available as long as they last.

LS-PM-SP Long Shank Spiral Fluted Taps for Hard-to-Machine Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.5	△	-	3P	P3	150	23	-	7	5.5	8	3	e
	△*	-				24						
M12×1.75	△	-	3P	P3	150	26	-	8.5	6.5	9	3	e
	△*	-				29						
M16×2	△	-	3P	P4	150	26	-	12.5	10	13	3	e
	△*	-				32						
M20×2.5	△	-	3P	P4	150	33	-	15	12	15	3	e
	△*	-				37						

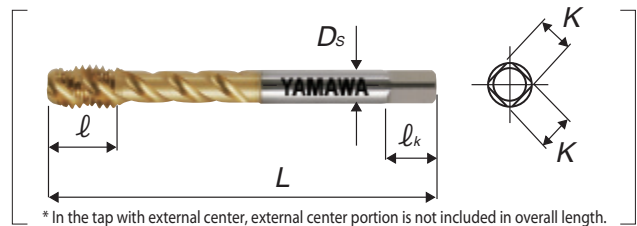
The products having *mark in the stock column will be available as long as they last.

F-SP

Spiral Fluted Taps for High Speed Tapping



Segment : 1C



* In the tap with external center, external center portion is not included in overall length.

Applicable for such high speed tapping as 20m/min to 30m/min. Under low or middle tapping speed, such as lower than 15m/min, poor chip shape and poor chip ejection may cause tapping troubles.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	VFSHMQ3.0G	2.5P	P2	46	5	14	4	3.2	6	3	d
	○*	VFSHQ3.0G					18					c
M4×0.7	○	VFSHMQ4.0I	2.5P	P2	52	7	17	5	4	7	3	d
	○*	VFSHQ4.0I					20					c
M5×0.8	○	VFSHMQ5.0K	2.5P	P2	60	9	22	5.5	4.5	7	3	d
	○*	VFSHQ5.0K					25					c
M6×1	○	VFSHMQ6.0M	2.5P	P2	62	11	26	6	4.5	7	3	d
	○*	VFSHQ6.0M					28					c
M8×1.25	○	VFSHMR8.0N	2.5P	P3	70	12	-	6.2	5	8	3	e-1
	○*	VFSHR8.0N					e					
M10×1.5	○	VFSHMR010O	2.5P	P3	75	13	-	7	5.5	8	3	e-1
	○*	VFSHR010O					e					
M10×1.25	○	VFSHMR010N	2.5P	P3	75	13	-	7	5.5	8	3	e-1
	○*	VFSHR010N				12						e
M12×1.75	○	VFSHMS012P	2.5P	P4	82	15	-	8.5	6.5	9	3	e-1
	○*	VFSHS012P					e					
M12×1.5	○	VFSHMR012O	2.5P	P3	82	15	-	8.5	6.5	9	3	e-1
	○*	VFSHR012O				14						e
M12×1.25	○	VFSHMS012N	2.5P	P4	82	15	-	8.5	6.5	9	3	e-1
	○*	VFSHS012N				14						e
M16×2	△	-	2.5P	P4	95	18	-	12.5	10	13	3	e-1

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

F-SP Spiral Fluted Taps for High Speed Tapping

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M16x2	△*	-	2.5P	P4	95	18	-	12.5	10	13	3	e
M20x2.5	△	-	2.5P	P4	105	20	-	15	12	15	3	e-1
	△*	-										e

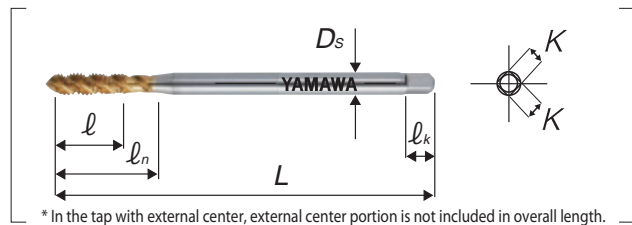
The products having *mark in the stock column will be available as long as they last.

LS-F-SP

Long Shank Spiral Fluted Taps for High Speed Tapping



Segment : 1C



Applicable for such high speed tapping as 20m/min to 30m/min. Under low or middle tapping speed, such as lower than 15m/min, poor chip shape and poor chip ejection may cause tapping troubles.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3x0.5	△	-	2.5P	P2	100	5	14	4	3.2	6	3	d
	△*	-					18					c
M4x0.7	△	-	2.5P	P2	100	7	17	5	4	7	3	d
	△*	-					20					c
M5x0.8	△	-	2.5P	P2	100	9	22	5.5	4.5	7	3	d
	△*	-					25					c
M6x1	△	-	2.5P	P2	100	11	26	6	4.5	7	3	d
	△*	-					28					c
M8x1.25	△	-	2.5P	P3	100	12	-	6.2	5	8	3	e-1
	△*	-					e					
M10x1.5	△	-	2.5P	P3	100	13	-	7	5.5	8	3	e-1
	△*	-					e					
M12x1.75	△	-	2.5P	P4	150	15	-	8.5	6.5	9	3	e-1
	△*	-					e					
M16x2	△	-	2.5P	P4	150	18	-	12.5	10	13	3	e-1
	△*	-					e					

The products having *mark in the stock column will be available as long as they last.

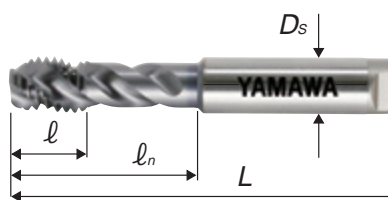
Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Taps | Spiral Pointed | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps (Simple measuring tools) | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

HFIHS

For Ultra Fast Tapping, Vertical Use for Carbon Steels and Alloy Steels



Segment: 1D



* In the tap with external center, external center portion is not included in overall length.

Applicable for ultra high speed tapping. Having internal coolant, HFIHS are suitable for carbon steels and alloy tool steels, blind hole use. Vertical tapping use.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HFIHSS6.0M	2.5P	P4	62	11	27	6	-	-	3	k
M8×1.25	○	HFIHSS8.0N	2.5P	P4	70	12	-	8	-	-	3	m
M10×1.5	○	HFIHSS0100	2.5P	P4	75	13	-	10	-	-	3	m
M10×1.25	○	HFIHSS010N	2.5P	P4	75	12	-	10	-	-	3	m
M12×1.75	○	HFIHSS012P	2.5P	P4	82	15	-	12	-	-	3	m
M12×1.5	○	HFIHSS012O	2.5P	P4	82	14	-	12	-	-	3	m
M12×1.25	○	HFIHSS012N	2.5P	P4	82	14	-	12	-	-	3	m
M14×1.5	○	HFIHSS014O	2.5P	P4	88	14	-	12	-	-	3	m
M16×1.5	○	HFIHSS016O	2.5P	P4	95	14	-	16	-	-	3	m
M18×1.5	○	HFIHSS018O	2.5P	P4	100	14	-	16	-	-	4	m
M20×1.5	○	HFIHST020O	2.5P	P5	105	14	-	16	-	-	4	m

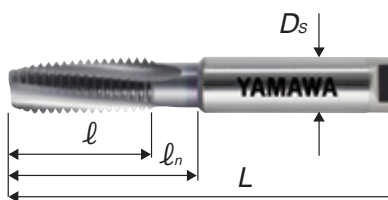
The products having *mark in the stock column will be available as long as they last.

HFISP

For Ultra Fast Tapping, Horizontal Use for Carbon Steels and Alloy Steels



Segment: 1D



* In the tap with external center, external center portion is not included in overall length.

Applicable for ultra high speed tapping. Having internal coolant, HFISP are suitable for carbon steels and alloy tool steels, blind hole use. Horizontal tapping use.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HFISPS6.0M	2.5P	P4	62	19	27	6	-	-	3	k
M8×1.25	○	HFISPS8.0N	2.5P	P4	70	22	-	8	-	-	3	m
M10×1.5	○	HFISPS0100	2.5P	P4	75	24	-	10	-	-	3	m
M10×1.25	○	HFISPS010N	2.5P	P4	75	24	-	10	-	-	3	m
M12×1.75	○	HFISPS012P	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.5	○	HFISPS012O	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.25	○	HFISPS012N	2.5P	P4	82	29	-	12	-	-	3	m
M14×1.5	○	HFISPS014O	2.5P	P4	88	30	-	12	-	-	3	m
M16×1.5	○	HFISPS016O	2.5P	P4	95	32	-	16	-	-	3	m
M18×1.5	○	HFISPS018O	2.5P	P4	100	37	-	16	-	-	4	m
M20×1.5	○	HFISPT020O	2.5P	P5	105	37	-	16	-	-	4	m

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

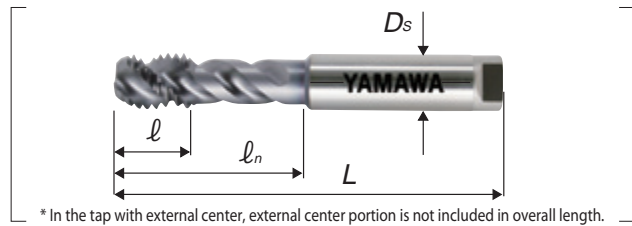
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HFAHS

For Ultra Fast Tapping, Vertical Use for Aluminum Castings and Aluminum Die Castings



Segment : 1D



* In the tap with external center, external center portion is not included in overall length.

Applicable for ultra high speed tapping. Having internal coolant, HFAHS are suitable for aluminum castings, blind hole use. Vertical tapping use.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HFAHSS6.0M	2.5P	P4	62	11	27	6	-	-	3	k
M8×1.25	○	HFAHSS8.0N	2.5P	P4	70	12	-	8	-	-	3	m
M10×1.5	○	HFAHSS010O	2.5P	P4	75	13	-	10	-	-	3	m
M10×1.25	○	HFAHSS010N	2.5P	P4	75	12	-	10	-	-	3	m
M12×1.75	○	HFAHSS012P	2.5P	P4	82	15	-	12	-	-	3	m
M12×1.5	○	HFAHSS012O	2.5P	P4	82	14	-	12	-	-	3	m
M12×1.25	○	HFAHSS012N	2.5P	P4	82	14	-	12	-	-	3	m
M14×1.5	○	HFAHSS014O	2.5P	P4	88	14	-	12	-	-	3	m
M16×1.5	○	HFAHSS016O	2.5P	P4	95	14	-	16	-	-	3	m
M18×1.5	○	HFAHSS018O	2.5P	P4	100	14	-	16	-	-	3	m
M20×1.5	○	HFAHST020O	2.5P	P5	105	14	-	16	-	-	3	m

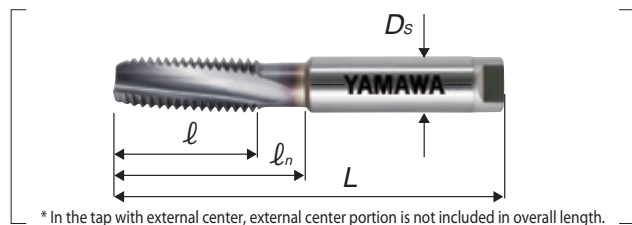
The products having *mark in the stock column will be available as long as they last.

HFASP

For Ultra Fast Tapping, Horizontal Use for Aluminum Castings and Aluminum Die Castings



Segment : 1D



* In the tap with external center, external center portion is not included in overall length.

Applicable for ultra high speed tapping. Having internal coolant, HFASP are suitable for aluminum castings, blind hole use. Vertical tapping use.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HFASPS6.0M	2.5P	P4	62	19	27	6	-	-	3	k
M8×1.25	○	HFASPS8.0N	2.5P	P4	70	22	-	8	-	-	3	m
M10×1.5	○	HFASPS010O	2.5P	P4	75	24	-	10	-	-	3	m
M10×1.25	○	HFASPS010N	2.5P	P4	75	24	-	10	-	-	3	m
M12×1.75	○	HFASPS012P	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.5	○	HFASPS012O	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.25	○	HFASPS012N	2.5P	P4	82	29	-	12	-	-	3	m
M14×1.5	○	HFASPS014O	2.5P	P4	88	30	-	12	-	-	3	m
M16×1.5	○	HFASPS016O	2.5P	P4	95	32	-	16	-	-	3	m
M18×1.5	○	HFASPS018O	2.5P	P4	100	37	-	16	-	-	3	m
M20×1.5	○	HFASPT020O	2.5P	P5	105	37	-	16	-	-	3	m

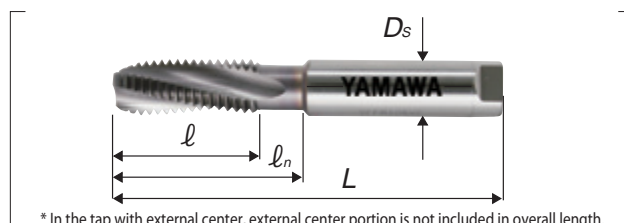
The products having *mark in the stock column will be available as long as they last.

HDISP

For Dry Tapping, Blind Hole Use for Carbon Steels and Alloy Steels



Segment : 1D



* In the tap with external center, external center portion is not included in overall length.

Applicable for the tapping under MQL or Dry condition. Having internal coolant, HDISP are suitable for carbon steels and alloy tool steels, blind hole use. For both horizontal tapping and vertical tapping use.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HDISPS6.0M	2.5P	P4	62	19	27	6	-	-	3	k
M8×1.25	○	HDISPS8.0N	2.5P	P4	70	22	-	8	-	-	3	m
M10×1.5	○	HDISPS0100	2.5P	P4	75	24	-	10	-	-	3	m
M10×1.25	○	HDISPS010N	2.5P	P4	75	24	-	10	-	-	3	m
M10×1	○	HDISPS010M	2.5P	P4	75	24	-	10	-	-	3	m
M12×1.75	○	HDISPS012P	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.5	○	HDISPS012O	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.25	○	HDISPS012N	2.5P	P4	82	29	-	12	-	-	3	m
M14×1.5	○	HDISPS014O	2.5P	P4	88	30	-	12	-	-	3	m
M16×1.5	○	HDISPS016O	2.5P	P4	95	32	-	16	-	-	3	m
M18×1.5	○	HDISPS018O	2.5P	P4	100	37	-	16	-	-	4	m
M20×1.5	○	HDISPT020O	2.5P	P5	105	37	-	16	-	-	4	m

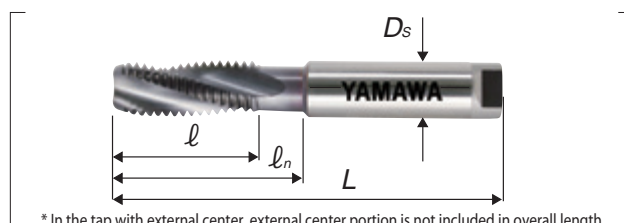
The products having *mark in the stock column will be available as long as they last.

HDASP

For Dry Tapping, Blind Hole Use for Aluminum Castings and Aluminum Die Castings



Segment : 1D



* In the tap with external center, external center portion is not included in overall length.

Applicable for the tapping under MQL or Dry condition. Having internal coolant, HDASP are suitable for aluminum castings, blind hole use. For both horizontal tapping and vertical tapping use.

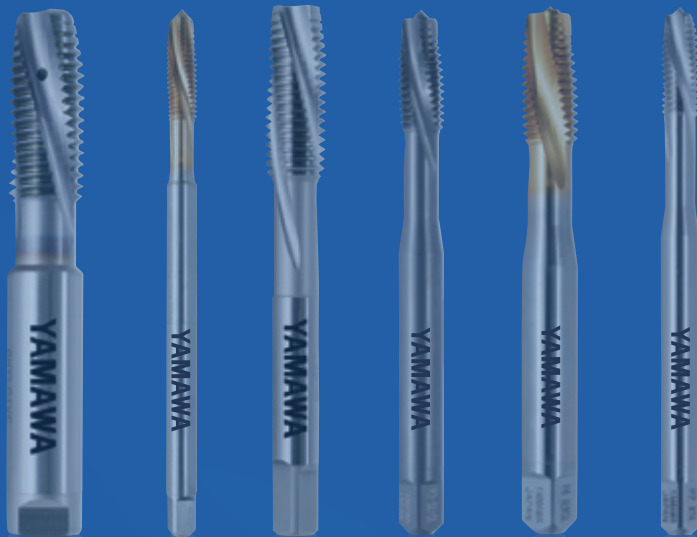
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HDASPS6.0M	2.5P	P4	62	19	27	6	-	-	3	k
M8×1.25	○	HDASPS8.0N	2.5P	P4	70	22	-	8	-	-	3	m
M10×1.5	○	HDASPS010O	2.5P	P4	75	24	-	10	-	-	3	m
M10×1.25	○	HDASPS010N	2.5P	P4	75	24	-	10	-	-	3	m
M12×1.75	○	HDASPS012P	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.5	○	HDASPS012O	2.5P	P4	82	29	-	12	-	-	3	m
M12×1.25	○	HDASPS012N	2.5P	P4	82	29	-	12	-	-	3	m
M14×1.5	○	HDASPS014O	2.5P	P4	88	30	-	12	-	-	3	m
M16×1.5	○	HDASPS016O	2.5P	P4	95	32	-	16	-	-	3	m
M18×1.5	○	HDASPS018O	2.5P	P4	100	37	-	16	-	-	3	m
M20×1.5	○	HDASPT020O	2.5P	P5	105	37	-	16	-	-	3	m

The products having *mark in the stock column will be available as long as they last.

Think threads with **YAMAWA**

○=Standard ○=Below standard △=Made to order

Spiral Fluted Tap Series for through hole



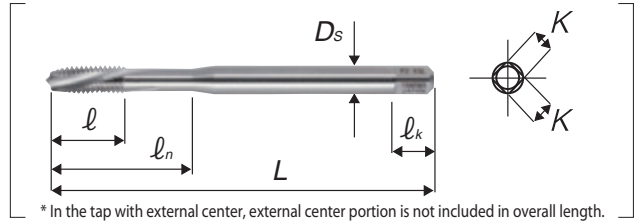
XSL	SL-1
AU+SL	SL-1
AUXSL	SL-2
SU+SL	SL-2
SUXSL	SL-3
ZET-P	SL-3
F-SL	SL-4
LS-F-SL	SL-5
HDISL	SL-6

XSL

X Series Spiral Fluted Taps, Through Hole Use (with LH spiral flutes)



Segment : 1S



* In the tap with external center, external center portion is not included in overall length.

Applying the blanks of high toughness and high accuracy, XSL, spiral fluted taps for through hole use (with LH spiral flutes), derive the maximum performance from high facility machining centers and high precision toolings. Use with special toolings is recommended.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M6x1	○	SNXQ6.0ML	5P	P2	80	15	30	6	4.9	8	3	g
M8x1.25	○	SNXR8.0NL	5P	P3	90	19	35	8	6.2	9	3	g
M8x1	○	SNXR8.0ML	5P	P3	90	15	35	8	6.2	9	3	g
M10x1.5	○	SNXR010OL	5P	P3	100	23	39	10	8	11	3	g
M10x1.25	○	SNXR010NL	5P	P3	100	19	39	10	8	11	3	g
M10x1	○	SNXR010ML	5P	P3	100	15	39	10	8	11	3	g
M12x1.75	○	SNXS012PL	5P	P4	110	26	45	12	9	12	3	g
M12x1.5	○	SNXR012OL	5P	P3	110	23	45	12	9	12	3	g
M12x1.25	○	SNXR012NL	5P	P3	110	19	45	12	9	12	3	g

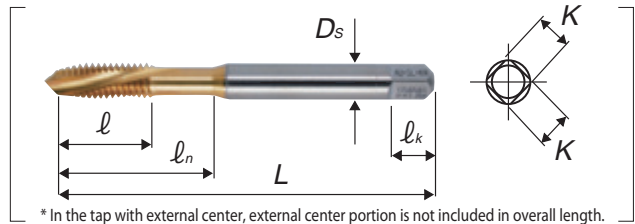
The products having *mark in the stock column will be available as long as they last.

AU+SL

Spiral Fluted Taps, TiN coated, Through Hole Use (with LH spiral flutes)



Segment : 1S



* In the tap with external center, external center portion is not included in overall length.

With high efficiency on both rigid and non-rigid tapping, AU+SL is the coated spiral fluted taps, for through hole use (with LH spiral flutes), enabling consistent tapping in middle speed range (10-25m/min.).

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3x0.5	◎	VSAPQ3.0GL	5P	P2	46	9	14	4	3.2	6	3	c
M4x0.7	◎	VSAPR4.0IL	5P	P2	52	11	17	5	4	7	3	c
M5x0.8	◎	VSAPR5.0KL	5P	P3	60	13	22	5.5	4.5	7	3	c
M6x1	◎	VSAPR6.0ML	5P	P3	62	15	26	6	4.5	7	3	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

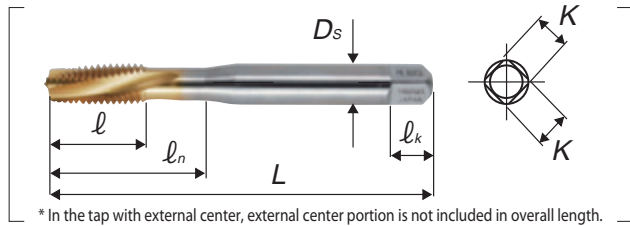
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

AUXSL

X Series Spiral Fluted Taps, TiN coated, Through Hole Use(with LH spiral flutes)



Segment : 1S



* In the tap with external center, external center portion is not included in overall length.

Applying the blanks of high toughness and high accuracy, AUXSL, spiral fluted taps, TiN coated, for through hole use(with LH spiral flutes), derive the maximum performance from high facility machining centers and high precision toolings. Use with special toolings is recommended.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	○	VSAXQ6.0ML	5P	P2	80	15	30	6	4.9	8	3	g
M8×1.25	○	VSAXR8.0NL	5P	P3	90	19	35	8	6.2	9	3	g
M8×1	○	VSAXR8.0ML	5P	P3	90	15	35	8	6.2	9	3	g
M10×1.5	○	VSAXR010OL	5P	P3	100	23	39	10	8	11	3	g
M10×1.25	○	VSAXR010NL	5P	P3	100	19	39	10	8	11	3	g
M10×1	○	VSAXR010ML	5P	P3	100	15	39	10	8	11	3	g
M12×1.75	○	VSAXS012PL	5P	P4	110	26	45	12	9	12	3	g
M12×1.5	○	VSAXR012OL	5P	P3	110	23	45	12	9	12	3	g
M12×1.25	○	VSAXR012NL	5P	P3	110	19	45	12	9	12	3	g

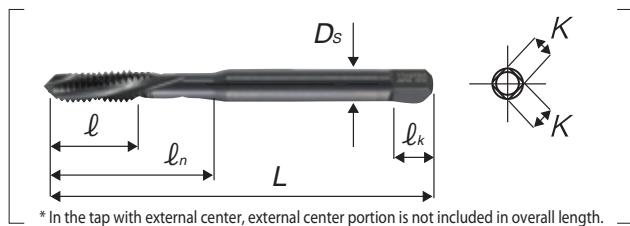
The products having *mark in the stock column will be available as long as they last.

SU+SL

Spiral Fluted Taps for Stainless Steels, Through Hole Use(with LH spiral flutes)



Segment : 1S



* In the tap with external center, external center portion is not included in overall length.

SU+SL is for tapping such sticky materials tending to work-harden as stainless steels as well as chrome steels and molybdenum steels, for through hole use(with LH spiral flutes), enabling tapping in the middle speed range(10m/min~20m/min.). (For the tapping in higher speed than 15m/min, full rigid tapping is recommended.)

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	◎	SUPQ3.0GL	5P	P2	46	9	14	4	3.2	6	3	c
M4×0.7	◎	SUPQ4.0IL	5P	P2	52	11	17	5	4	7	3	c
M5×0.8	◎	SUPR5.0KL	5P	P3	60	13	22	5.5	4.5	7	3	c
M6×1	◎	SUPQ6.0ML	5P	P2	62	15	26	6	4.5	7	3	c

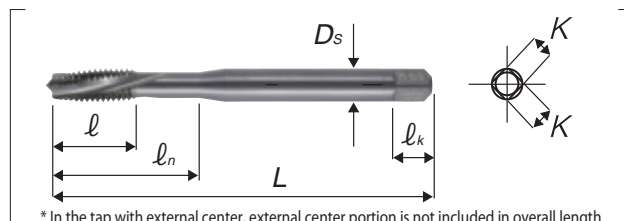
The products having *mark in the stock column will be available as long as they last.

SUXSL

X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)



Segment : 1S



* In the tap with external center, external center portion is not included in overall length.

Applying the blanks of high toughness and high accuracy, SUXSL, spiral fluted taps for stainless steels, through hole use (with LH spiral flutes), derive the maximum performance from high facility machining centers and high precision toolings. Use with special toolings is recommended.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M6x1	○	SUXQ6.0ML	5P	P2	80	15	30	6	4.9	8	3	g
M8x1.25	○	SUXR8.0NL	5P	P3	90	19	35	8	6.2	9	3	g
M8x1	○	SUXR8.0ML	5P	P3	90	15	35	8	6.2	9	3	g
M10x1.5	○	SUXR010OL	5P	P3	100	23	39	10	8	11	3	g
M10x1.25	○	SUXR010NL	5P	P3	100	19	39	10	8	11	3	g
M10x1	○	SUXR010ML	5P	P3	100	15	39	10	8	11	3	g
M12x1.75	○	SUXS012PL	5P	P4	110	26	45	12	9	12	3	g
M12x1.5	○	SUXS012OL	5P	P4	110	23	45	12	9	12	3	g
M12x1.25	○	SUXS012NL	5P	P4	110	19	45	12	9	12	3	g

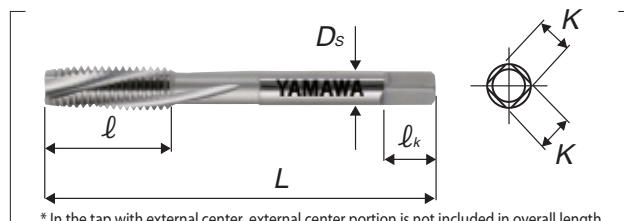
The products having *mark in the stock column will be available as long as they last.

ZET-P

Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)



Segment : 1T



* In the tap with external center, external center portion is not included in overall length.

ZET-P is suitable for titanium alloys which, having titanium as the main component, are tough, light, and heat resistant.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3x0.5	○	ZETPMR3.0G	5P	P3	46	9	14	4	3.2	6	3	c
	○*	ZETPR3.0G				11	18					
M4x0.7	○	ZETPMR4.0I	5P	P3	52	11	17	5	4	7	3	c
	○*	ZETPR4.0I				13	20					
M5x0.8	○	ZETPMR5.0K	5P	P3	60	13	22	5.5	4.5	7	3	c
	○*	ZETPR5.0K				16	25					
M6x1	○	ZETPMR6.0M	5P	P3	62	15	26	6	4.5	7	3	c
	○*	ZETPR6.0M				19	28					
M8x1.25	○	ZETPMS8.0N	5P	P4	70	19	-	6.2	5	8	3	e
	○*	ZETPS8.0N				22	-					
M10x1.5	○	ZETPMS010O	5P	P4	75	23	-	7	5.5	8	3	e
	○*	ZETPS010O				24	-					
M10x1.25	△	ZETPMS010N	5P	P4	75	23	-	7	5.5	8	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

ZET-P Spiral Fluted Taps for Titanium Alloys, Through Hole Use(with LH spiral flutes)

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M10×1.25	△*	ZETPS010N	5P	P4	75	24	-	7	5.5	8	3	e
M12×1.75	○	ZETPMT012P	5P	P5	82	26	-	8.5	6.5	9	3	e
	○*	ZETPT012P				29						
M12×1.5	△	ZETPMS012O	5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	ZETPS012O				29						
M12×1.25	△	ZETPMT012N	5P	P5	82	26	-	8.5	6.5	9	3	e
	△*	ZETPT012N				29						
M14×2	△	ZETPMT014Q	5P	P5	88	26	-	10.5	8	11	3	e
	△*	ZETPT014Q				30						
M14×1.5	△	ZETPMS014O	5P	P4	88	26	-	10.5	8	11	3	e
	△*	ZETPS014O				30						
M16×2	△	ZETPMT016Q	5P	P5	95	26	-	12.5	10	13	3	e
	△*	ZETPT016Q				32						
M16×1.5	△	ZETPMS016O	5P	P4	95	26	-	12.5	10	13	3	e
	△*	ZETPS016O				32						
M18×2.5	△	ZETPMT018R	5P	P5	100	33	-	14	11	14	4	e
	△*	ZETPT018R				37						
M18×1.5	△	ZETPMT018O	5P	P5	100	33	-	14	11	14	4	e
	△*	ZETPT018O				37						
M20×2.5	△	ZETPMT020R	5P	P5	105	33	-	15	12	15	4	e
	△*	ZETPT020R				37						
M20×1.5	△	ZETPMT020O	5P	P5	105	33	-	15	12	15	4	e
	△*	ZETPT020O				37						

The products having *mark in the stock column will be available as long as they last.

F-SL

Spiral Fluted Taps for High Speed Tapping, Through Hole Use(with LH spiral flutes)

HSS

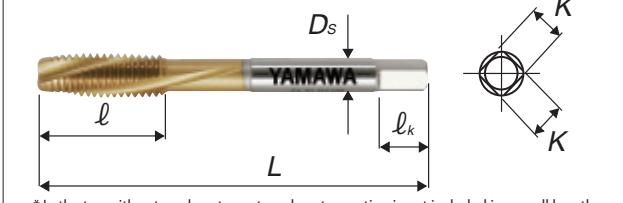
TiN

L15

Synchro

nizeo

Segment : 1S



Applicable for such high speed tapping as 20m/min to 30m/min. Under low or middle tapping speed, such as lower than 15m/min, chip shape and chip ejection may become poor and cause tapping troubles.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	VFSHMQ3.0GL	5P	P2	46	9	14	4	3.2	6	3	c
	○*	VFSHQ3.0GL				11	18					
M4×0.7	○	VFSHMQ4.0IL	5P	P2	52	11	17	5	4	7	3	c
	○*	VFSHQ4.0IL				13	20					
M5×0.8	○	VFSHMQ5.0KL	5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	VFSHQ5.0KL				16	25					

The products having *mark in the stock column will be available as long as they last.

F-SL Spiral Fluted Taps for High Speed Tapping, Through Hole Use(with LH spiral flutes)

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M6×1	○	VFSHMQ6.0ML	5P	P2	62	15	26	6	4.5	7	3	c
	○*	VFSHQ6.0ML				19	28					
M8×1.25	○	VFSHMR8.0NL	5P	P3	70	19	-	6.2	5	8	3	e
	○*	VFSHR8.0NL				22						
M10×1.5	○	VFSHMR010OL	5P	P3	75	23	-	7	5.5	8	3	e
	○*	VFSHR010OL				24						
M10×1.25	○	VFSHMR010NL	5P	P3	75	23	-	7	5.5	8	3	e
	○*	VFSHR010NL				24						
M12×1.75	○	VFSHMS012PL	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	VFSHS012PL				29						
M12×1.5	○	VFSHMR012OL	5P	P3	82	26	-	8.5	6.5	9	3	e
	○*	VFSHR012OL				29						
M12×1.25	○	VFSHMS012NL	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	VFSHS012NL				29						

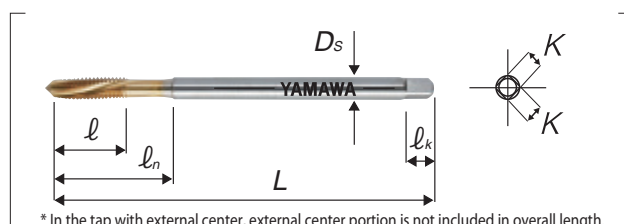
The products having *mark in the stock column will be available as long as they last.

LS-F-SL

Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use(with LH spiral flutes)



Segment : 1S



* In the tap with external center, external center portion is not included in overall length.

Applicable for such high speed tapping as 20m/min to 30m/min. Under low or middle tapping speed, such as lower than 15m/min, chip shape and chip ejection may become poor and cause tapping troubles.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	5P	P2	100	9	14	4	3.2	6	3	c
	△*					11	18					
M4×0.7	△	-	5P	P2	100	11	17	5	4	7	3	c
	△*					13	20					
M5×0.8	△	-	5P	P2	100	13	22	5.5	4.5	7	3	c
	△*					16	25					
M6×1	△	-	5P	P2	100	15	26	6	4.5	7	3	c
	△*					19	28					
M8×1.25	△	-	5P	P3	100	19	-	6.2	5	8	3	e
	△*					22						
M10×1.5	△	-	5P	P3	100	23	-	7	5.5	8	3	e
	△*					24						
M12×1.75	△	-	5P	P4	150	26	-	8.5	6.5	9	3	e
	△*					29						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

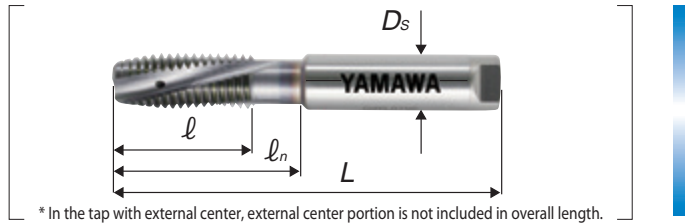
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HDISL

For Dry Tapping, Through Hole Use, for Carbon Steels and Alloy Steels



Segment : 1T



* In the tap with external center, external center portion is not included in overall length.

Tapping under ultra high speed and under mist and dry, is possible with HDISL. Having through coolant hole, HDISL is suitable for aluminum castings, for through hole use(with LH spiral flutes), for both vertical and horizontal use.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HDISLS6.0M	5P	P4	62	19	27	6	-	-	3	k
M8×1.25	○	HDISLS8.0N	5P	P4	70	22	-	8	-	-	3	m
M10×1.5	○	HDISLS010O	5P	P4	75	24	-	10	-	-	3	m
M10×1.25	○	HDISLS010N	5P	P4	75	24	-	10	-	-	3	m
M12×1.75	○	HDISLS012P	5P	P4	82	29	-	12	-	-	3	m
M12×1.5	○	HDISLS012O	5P	P4	82	29	-	12	-	-	3	m
M12×1.25	○	HDISLS012N	5P	P4	82	29	-	12	-	-	3	m
M14×1.5	○	HDISLS014O	5P	P4	88	30	-	12	-	-	3	m
M16×1.5	○	HDISLS016O	5P	P4	95	32	-	16	-	-	3	m
M18×1.5	○	HDISLS018O	5P	P4	100	37	-	16	-	-	4	m
M20×1.5	○	HDISLT020O	5P	P5	105	37	-	16	-	-	4	m

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

M/C Helical
Thread Mills

Dies

Center Drills

Centering Tools

Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Spiral Pointed Tap Series



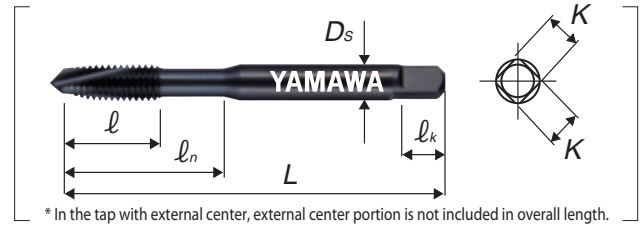
IPO	PO-1	SU+PO/SU-PO	PO-32
PO-Y	PO-1	LS-SU-S-PO	PO-38
PO(N-PO)	PO-2	S-PO	PO-39
+PO(N+PO)	PO-15	HC+PO/HC-PO	PO-41
PO-OX(N-PO-OX)	PO-17	PO STI(N-PO STI)	PO-43
+PO-OX(N+PO-OX)	PO-18	MC-PO	PO-44
PO(LH) (N-PO(LH))	PO-19	EH-PO	PO-45
PO-V(N-PO-V)	PO-22	ZEN-P	PO-46
LS-PO(LS-N-PO)	PO-23	PM-PO	PO-47
LS-PO-V(LS-N-PO-V)	PO-31	LS-PM-PO	PO-48
LS-PO-K	PO-32		

IPO

I Series Spiral Pointed Taps



Segment : 1E



IPO is suitable for tapping general fasteners made from thin steel sheets such as SPC and SPH, and such soft steels lower than SS400 and S20C. IPO is oxidized so that it is suitable for tapping these materials.

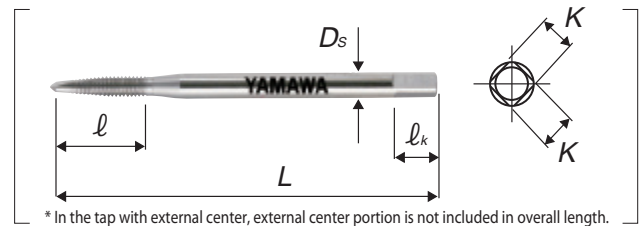
Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads											
M3×0.5	◎	PI73.0G	5P	46	9	14	4	3.2	6	3	c
M4×0.7	◎	PI74.0I	5P	52	11	17	5	4	7	3	c
M5×0.8	◎	PI75.0K	5P	60	13	22	5.5	4.5	7	3	c
M6×1	◎	PI76.0M	5P	62	15	26	6	4.5	7	3	c
M8×1.25	◎	PI78.0N	5P	70	19	-	6.2	5	8	3	e
M10×1.5	◎	PI7010O	5P	75	23	-	7	5.5	8	3	e

PO-Y

Y Series Spiral Pointed Taps



Segment : 1E



PO-Y is available while supplies last.

PO-Y is suitable for tapping general fasteners made from thin steel sheets such as SPC and SPH, and such soft steels lower than SS400 and S20C.

Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads											
M1.4×0.3	○*	PY51.4C	5P	34	7	-	3	2.5	5	2	p
M1.6×0.35	○*	PY61.6D	5P	36	8	-	3	2.5	5	2	p
M1.7×0.35	○*	PY61.7D	5P	36	8	-	3	2.5	5	2	p
M2×0.4	○*	PY62.0E	5P	40	8	-	3	2.5	5	2	p
M2.3×0.4	○*	PY62.3E	5P	42	9.5	-	3	2.5	5	2	p
M2.5×0.45	○*	PY62.5F	5P	44	9.5	-	3	2.5	5	2	p
M2.6×0.45	○*	PY62.6F	5P	44	9.5	-	3	2.5	5	2	p

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

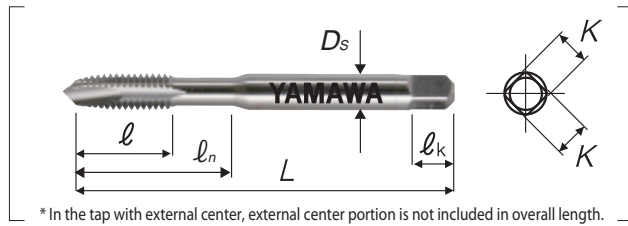
PO(N-PO)

Spiral Pointed Taps



N-PO is available as long as it lasts. PO takes the place of N-PO.

Segment : 1E



* In the tap with external center, external center portion is not included in overall length.

Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type		
For Metric Threads														
M1×0.25	○*	PNP1.0B	5P	P1	32	5.5	-	3	2.5	5	2	p		
M1.1×0.25	△*	PNP1.1B	5P	P1	32	5.5	-	3	2.5	5	2	p		
M1.2×0.25	○	POP1.2B	5P	P1	36	4.5	-	3	2.5	5	2	a		
	○*	PNP1.2B			32	5.5						p		
M1.4×0.3	◎	POP1.4C	5P	P1	36	5.4	-	3	2.5	5	2	a		
	◎*	PNP1.4C				8						p		
	○	POQ1.4C		P2		5.4						a		
	○*	PNQ1.4C				8						p		
	△	POR1.4C				5.4						a		
	△*	PNR1.4C				8						p		
M1.6×0.35	◎	POQ1.6D	5P	P2	36	6.3	-	3	2.5	5	2	b		
	◎*	PNQ1.6D				8						p		
	△	POR1.6D		P3		6.3						b		
	△*	PNR1.6D				8						p		
M1.7×0.35	◎	POQ1.7D	5P	P2	36	6.3	-	3	2.5	5	2	b		
	◎*	PNQ1.7D				8						p		
	○	POR1.7D		P3		6.3						b		
	○*	PNR1.7D				8						p		
	○	POS1.7D				P4						6.3	b	
	△*	PNS1.7D										8	p	
M1.8×0.35	△	POQ1.8D	5P	P2	42	6.3	-	3	2.5	5	2	b		
	△*	PNQ1.8D			36	8						p		
M2×0.4	◎	POQ2.0E	5P	P2	42	7.2	-	3	2.5	5	3	c		
	◎*	PNQ2.0E				9.5							15	
	○	POR2.0E		P3		7.2							12	
	○*	PNR2.0E				9.5							15	
	○	POS2.0E				P4							7.2	12
	○*	PNS2.0E											9.5	15
M2×0.25	△	POP2.0B	5P	P1	42	4.5	-	3	2.5	5	3	c		
	△*	PNP2.0B				7							15	
M2.2×0.45	○	POQ2.2F	5P	P2	42	8.1	-	3	2.5	5	3	c		
	○*	PNQ2.2F				9.5							15	
M2.2×0.25	△	POQ2.2B	5P	P2	42	4.5	-	3	2.5	5	3	c		
	△*	PNQ2.2B				7							15	

The products having *mark in the stock column will be available as long as they last.

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type				
M2.3×0.4	○	POQ2.3E	5P	P2	42	7.2	12	3	2.5	5	3	c				
	○*	PNQ2.3E				9.5	15									
	○	POR2.3E		P3		7.2	12									
	○*	PNR2.3E				9.5	15									
	△	POS2.3E		P4		7.2	12									
	△*	PNS2.3E				9.5	15									
M2.5×0.45	◎	POQ2.5F	5P	P2	46	8.1	14	3	2.5	5	3	c				
	◎*	PNQ2.5F				44	9.5						16			
	○	POR2.5F		P3		46	8.1						14			
	○*	PNR2.5F				44	9.5						16			
	△	POS2.5F		P4		46	8.1						14			
	△*	PNS2.5F				44	9.5						16			
M2.5×0.35	△	POQ2.5D	5P	P2	46	6.3	14	3	2.5	5	3	c				
	△*	PNQ2.5D			44	8	16									
M2.6×0.45	◎	POQ2.6F	5P	P2	46	8.1	14	3	2.5	5	3	c				
	◎*	PNQ2.6F				44	9.5						16			
	○	POR2.6F		P3		46	8.1						14			
	○*	PNR2.6F				44	9.5						16			
	△	POS2.6F		P4		46	8.1						14			
	△*	PNS2.6F				44	9.5						16			
M2.6×0.35	△	POQ2.6D	5P	P2	46	6.3	14	3	2.5	5	3	c				
	△*	PNQ2.6D			44	8	16									
M3×0.5	◎	POQ3.0G	5P	P2	46	9	14	4	3.2	6	3	c				
	○	POR3.0G											P3			
	○	POS3.0G		P4												
3M0.6	△	POQ3.0H	5P	P2	46	9	14	4	3.2	6	3	c				
	△*	PNMQ3.0H														
	△*	PNQ3.0H				11	18									
M3×0.35	△	POQ3.0D	5P	P2	46	6.5	14	4	3.2	6	3	c				
	△*	PNMQ3.0D														
	△*	PNQ3.0D				9.5	18									
M3.5×0.6	○	POQ3.5H	5P	P2	52	11	16	5	4	7	3	c				
	○*	PNQ3.5H				48	13						20	4	3.2	6
	△	POR3.5H		P3		52	11						16	5	4	7
	△*	PNR3.5H				48	13						20	4	3.2	6
	△	POS3.5H		P4		52	11						16	5	4	7
	△*	PNS3.5H				48	13						20	4	3.2	6
M3.5×0.35	△	POQ3.5D	5P	P2	52	6.5	16	5	4	7	3	c				
	△*	PNMQ3.5D														
	△*	PNQ3.5D				48	9.5						20	4	3.2	6
M4×0.7	◎	POQ4.0I	5P	P2	52	11	17	5	4	7	3	c				
	○	POR4.0I											P3			

The products having *mark in the stock column will be available as long as they last.



Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M4×0.7	○	POS4.0I	5P	P4	52	11	17	5	4	7	3	c
	△	POQ4.0J										
4M0.75	△*	PNMQ4.0J	5P	P2	52	11	17	5	4	7	3	c
	△*	PNQ4.0J										
M4×0.5	○	POQ4.0G	5P	P2	52	9	17	5	4	7	3	c
	○*	PNMQ4.0G										
M4.5×0.75	△	POQ4.5J	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PNQ4.5J										
M4.5×0.5	△	POQ4.5G	5P	P2	60	9	21	5.5	4.5	7	3	c
	△*	PNMQ4.5G										
M5×0.8	◎	POQ5.0K	5P	P2	60	13	22	5.5	4.5	7	3	c
	○	POR5.0K		P3								
5M0.9	○	POS5.0K	5P	P4	60	13	22	5.5	4.5	7	3	c
	△	POQ5.0L		P2								
M5×0.5	△*	PNMQ5.0L	5P	P2	60	9	22	5.5	4.5	7	3	c
	△*	PNQ5.0L										
M5×0.5	○	POQ5.0G	5P	P2	60	9	22	5.5	4.5	7	3	c
	○*	PNMQ5.0G										
M5.5×0.9	○*	PNQ5.0G	5P	P2	55	13	25	6	4.5	7	3	c
	△	POQ5.5L										
M5.5×0.5	△*	PNMQ5.5L	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQ5.5L										
M6×1	△	POQ5.5G	5P	P2	62	9	26	6	4.5	7	3	c
	△*	PNMQ5.5G										
M6×0.75	△*	PNQ5.5G	5P	P2	55	13	25	6	4.5	7	3	c
	◎	POQ6.0M										
M6×0.5	○	POR6.0M	5P	P3	62	15	26	6	4.5	7	3	c
	○	POS6.0M		P4								
M6×0.75	○	POQ6.0J	5P	P2	62	15	26	6	4.5	7	3	c
	○*	PNMQ6.0J										
M6×0.5	○*	PNQ6.0J	5P	P2	62	9	26	6	4.5	7	3	c
	△	POR6.0J										
M7×1	△*	PNMR6.0J	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNR6.0J										
M7×1	△	POQ6.0G	5P	P2	62	9	26	6	4.5	7	3	c
	△*	PNMQ6.0G										
M7×1	△*	PNQ6.0G	5P	P2	70	19	-	6.2	5	8	3	e
	○	POQ7.0M										
M7×1	○*	PNQ7.0M	5P	P2	65	19	-	6.2	5	8	3	c
	△	POR7.0M										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M7×1	△*	PNR7.0M	5P	P3	65	19	-	6.2	5	8	3	c
	△	POQ7.0J		P2	70	19	-	6.2	5	8	3	e
M7×0.75	△*	PNQ7.0J	5P	P3	65							c
	△	POR7.0J			70							e
	△*	PNR7.0J			65							c
	△	POQ7.0G			5P							P2
△*	PNQ7.0G	55	13	c								
M8×1.25	◎	POR8.0N	5P	P3	70	19	-	6.2	5	8	3	e
	◎*	PNR8.0N				22						
	○	POS8.0N				19						
	○*	PNS8.0N				22						
M8×1	○	POR8.0M	5P	P3	70	19	-	6.2	5	8	3	e
	○*	PNR8.0M				22						
	△	POS8.0M				19						
	△*	PNS8.0M				22						
M8×0.75	○	POR8.0J	5P	P3	70	19	-	6.2	5	8	3	e
	○*	PNR8.0J				22						
M8×0.5	△	POQ8.0G	5P	P2	70	10	-	6.2	5	8	3	e
	△*	PNQ8.0G			55	13						
M9×1.25	△	POR9.0N	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNR9.0N			72	22						
M9×1	△	POR9.0M	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNR9.0M			72	22						
M9×0.75	△	POR9.0J	5P	P3	75	13	-	7	5.5	8	3	e
	△*	PNR9.0J			72	22						
M9×0.5	△	POQ9.0G	5P	P2	75	11	-	7	5.5	8	3	e
	△*	PNQ9.0G			55	13						
M10×1.5	◎	POR0100	5P	P3	75	23	-	7	5.5	8	3	e
	◎*	PNR0100				24						
	○	POS0100				23						
	○*	PNS0100				24						
M10×1.25	◎	POR010N	5P	P3	75	23	-	7	5.5	8	3	e
	◎*	PNR010N				24						
	△	POS010N				23						
	△*	PNS010N				24						
M10×1	○	POR010M	5P	P3	75	23	-	7	5.5	8	3	e
	○*	PNR010M				24						
	△	POS010M				23						
	△*	PNS010M				24						
M10×0.75	△	POR010J	5P	P3	75	13	-	7	5.5	8	3	e
	△*	PNR010J				22						
M10×0.5	△	POQ010G	5P	P2	75	11	-	7	5.5	8	3	e

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For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M10×0.5	△*	PNQ010G	5P	P2	55	13	-	7	5.5	8	3	e
M11×1.5	△	POS011O	5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	PNS011O										
M11×1.25	△	POR011N	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNR011N										
M11×1	△	POR011M	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNR011M										
M11×0.75	△	POR011J	5P	P3	82	14	-	8.5	6.5	9	3	e
	△*	PNR011J										
M11×0.5	△	POQ011G	5P	P2	82	12	-	8.5	6.5	9	3	e
	△*	PNQ011G										
M12×1.75	◎	POS012P	5P	P4	82	26	-	8.5	6.5	9	3	e
	◎*	PNS012P										
	△	POT012P		P5								
	△*	PNT012P										
M12×1.5	○	POR012O	5P	P3	82	26	-	8.5	6.5	9	3	e
	○*	PNR012O										
	△	POS012O		P4								
	△*	PNS012O										
	△	POT012O		P5								
	△*	PNT012O										
M12×1.25	○	POS012N	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	PNS012N										
	△	POT012N		P5								
	△*	PNT012N										
M12×1	○	POR012M	5P	P3	82	26	-	8.5	6.5	9	3	e
	○*	PNR012M										
	△	POS012M		P4								
	△*	PNS012M										
M12×0.75	△	POR012J	5P	P3	82	14	-	8.5	6.5	9	3	e
	△*	PNR012J			75	22						
M12×0.5	△	POQ012G	5P	P2	82	12	-	8.5	6.5	9	3	e
	△*	PNQ012G			55	13						
M13×1.5	△	POR013O	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNR013O			85	29		9.5	7	10		
M13×1	△	POR013M	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNR013M			85	29		9.5	7	10		
M14×2	○	POS014Q	5P	P4	88	26	-	10.5	8	11	3	e
	○*	PNS014Q										
	△	POT014Q		P5								
	△*	PNT014Q										
M14×1.5	○	POR014O	5P	P3	88	26	-	10.5	8	11	3	e

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Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed Taps

Hand Taps

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Roll Taps

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Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M14×1.5	○*	PNR0140	5P	P3	88	30	-	10.5	8	11	3	e
	△	POS0140		P4		26						
	△*	PNS0140		P5		30						
	△	POT0140		26								
	△*	PNT0140		30								
M14×1.25	△	POR014N	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNR014N				30						
M14×1	○	POR014M	5P	P3	88	26	-	10.5	8	11	3	e
	○*	PNR014M				30						
M14×0.75	△	POR014J	5P	P3	88	15	-	10.5	8	11	3	e
	△*	PNR014J			75	22						
M15×2	△	POS015Q	5P	P4	95	26	-	10.5	10	13	3	e
	△*	PNS015Q				30						
M15×1.5	△	POR015O	5P	P3	95	26	-	10.5	10	13	3	e
	△*	PNR015O				30						
M15×1	△	POR015M	5P	P3	95	26	-	10.5	10	13	3	e
	△*	PNR015M			90	30						
M16×2	◎	POS016Q	5P	P4	95	26	-	12.5	10	13	3	e
	◎*	PNS016Q				32						
	△	POT016Q		P5		26						
	△*	PNT016Q		32								
M16×1.5	○	POR016O	5P	P3	95	26	-	12.5	10	13	3	e
	○*	PNR016O				32						
	△	POS016O		P4		26						
	△*	PNS016O		32								
	△	POT016O		P5		26						
	△*	PNT016O		32								
M16×1	○	POR016M	5P	P3	95	26	-	12.5	10	13	3	e
	○*	PNR016M				32						
M18×2.5	○	POS018R	5P	P4	100	33	-	14	11	14	3	e
	○*	PNS018R				37						
	△	POT018R		P5		33						
	△*	PNT018R		37								
M18×2	△	POS018Q	5P	P4	100	33	-	14	11	14	3	e
	△*	PNS018Q				37						
M18×1.5	○	POS018O	5P	P4	100	33	-	14	11	14	3	e
	○*	PNS018O				37						
	△	POT018O		P5		33						
	△*	PNT018O		37								
M18×1	○	POR018M	5P	P3	100	18	-	14	11	14	3	e
	○*	PNR018M			95	30						
M20×2.5	◎	POS020R	5P	P4	105	33	-	15	12	15	3	e

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M20×2.5	◎*	PNS020R	5P	P4	105	37	-	15	12	15	3	e
	△	POT020R		P5		33						
	△*	PNT020R		37								
M20×2	△	POS020Q	5P	P4	105	33	-	15	12	15	3	e
	△*	PNS020Q		37								
M20×1.5	○	POS020O	5P	P4	105	33	-	15	12	15	3	e
	◎*	PNS020O		37								
	△	POT020O		P5		33						
	△*	PNT020O		37								
M20×1	○	POR020M	5P	P3	105	18	-	15	12	15	3	e
	◎*	PNR020M		95	30							
M22×2.5	○	POS022R	5P	P4	115	33	-	17	13	16	3	e
	◎*	PNS022R		P5		38						
	△	POT022R		33								
	△*	PNT022R		38								
M22×2	△	POS022Q	5P	P4	115	33	-	17	13	16	3	e
	△*	PNS022Q		38								
M22×1.5	○	POS022O	5P	P4	115	33	-	17	13	16	3	e
	◎*	PNS022O		38								
	△	POT022O		P5		33						
	△*	PNT022O		38								
M22×1	△	POR022M	5P	P3	115	19	-	17	13	16	3	e
	△*	PNR022M		95	30							
M24×3	◎	POS024S	5P	P4	120	39	-	19	15	18	3	e
	◎*	PNS024S		P5		45						
	△	POT024S		39								
	△*	PNT024S		45								
M24×2	○	POS024Q	5P	P4	120	39	-	19	15	18	3	e
	◎*	PNS024Q		45								
M24×1.5	○	POS024O	5P	P4	120	39	-	19	15	18	3	e
	◎*	PNS024O		45								
	△	POT024O		P5		39						
	△*	PNT024O		45								
M24×1	△	POR024M	5P	P3	120	19	-	19	15	18	3	e
	△*	PNR024M		95	30							
M25×2	△	POS025Q	5P	P4	125	39	-	19	15	18	3	e
	△*	PNS025Q		45								
M25×1.5	○	POS025O	5P	P4	125	39	-	19	15	18	3	e
	◎*	PNS025O		45								
M26×2	△	POS026Q	5P	P4	130	39	-	20	15	18	4	e
	△*	PNS026Q		125	45							
M26×1.5	○	POS026O	5P	P4	130	39	-	20	15	18	4	e

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MC Helical Thread Mills
Dies
Center Drills
Centering Tools

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M26×1.5	○*	PNS026O	5P	P4	125	45	-	20	15	18	4	e
M26×1	△	POR026M	5P	P3	130	20	-	20	15	18	4	e
	△*	PNR026M			95	30						
M27×3	○	POS027S	5P	P4	130	39	-	20	15	18	4	e
	○*	PNS027S				45						
M27×1.5	○	POS027O	5P	P4	130	39	-	20	15	18	4	e
	○*	PNS027O				45						
M27×1	△	POR027M	5P	P3	130	20	-	20	15	18	4	e
	△*	PNR027M			95	30						
M28×2	△	POS028Q	5P	P4	135	46	-	23	17	20	4	e
	△*	PNS028Q			130	45		21				
M28×1.5	△	POS028O	5P	P4	135	46	-	23	17	20	4	e
	△*	PNS028O			130	45		21				
M30×3.5	○	POT030T	5P	P5	135	46	-	23	17	20	4	e
	○*	PNT030T				48						
M30×3	△	POS030S	5P	P4	135	46	-	23	17	20	4	e
	△*	PNS030S				48						
M30×2	○	POS030Q	5P	P4	135	46	-	23	17	20	4	e
	○*	PNS030Q				45						
M30×1.5	○	POS030O	5P	P4	135	46	-	23	17	20	4	e
	○*	PNS030O				45						
M30×1	△	POR030M	5P	P3	135	21	-	23	17	20	4	e
	△*	PNR030M			105	30						
M32×3	△	POS032S	5P	P4	145	51	-	24	19	22	4	e
	△*	PNS032S										
M32×2	△	POS032Q	5P	P4	135	45	-	24	19	22	4	e
	△*	PNS032Q										
M32×1.5	△	POS032O	5P	P4	135	45	-	24	19	22	4	e
	△*	PNS032O										
M33×3.5	○	POT033T	5P	P5	145	51	-	25	19	22	4	e
	○*	PNT033T										
M33×3	△	POS033S	5P	P4	145	51	-	25	19	22	4	e
	△*	PNS033S										
M33×2	△	POS033Q	5P	P4	135	45	-	25	19	22	4	e
	△*	PNS033Q										
M33×1.5	△	POS033O	5P	P4	135	45	-	25	19	22	4	e
	△*	PNS033O										
M35×2	△	POS035Q	5P	P4	135	45	-	26	21	24	4	e
	△*	PNS035Q										
M35×1.5	△	POS035O	5P	P4	135	45	-	26	21	24	4	e
	△*	PNS035O										
M36×4	○	POT036U	5P	P5	155	57	-	28	21	24	4	e

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M36×4	○*	PNT036U	5P	P5	155	57	-	28	21	24	4	e
M36×3	△	POS036S	5P	P4	155	57	-	28	21	24	4	e
	△*	PNS036S										
M36×2	△	POS036Q	5P	P4	135	45	-	28	21	24	4	e
	△*	PNS036Q										
M36×1.5	△	POS036O	5P	P4	135	45	-	28	21	24	4	e
	△*	PNS036O										
M38×2	△	POS038Q	5P	P4	135	45	-	28	21	24	4	e
	△*	PNS038Q										
M38×1.5	△	POS038O	5P	P4	135	45	-	28	21	24	4	e
	△*	PNS038O										
M39×4	△	POT039U	5P	P5	165	60	-	30	23	26	4	e
	△*	PNT039U										
M39×2	△	POS039Q	5P	P4	135	45	-	30	23	26	4	e
	△*	PNS039Q										
M39×1.5	△	POS039O	5P	P4	135	45	-	30	23	26	4	e
	△*	PNS039O										
M40×3	△	POS040S	5P	P4	165	60	-	30	23	26	4	e
	△*	PNS040S										
M40×2	△	POS040Q	5P	P4	135	45	-	30	23	26	4	e
	△*	PNS040Q										
M40×1.5	△	POS040O	5P	P4	135	45	-	30	23	26	4	e
	△*	PNS040O										
M42×4.5	△	POT042V	5P	P5	175	60	-	32	26	30	4	e
	△*	PNT042V										
M42×2	△	POS042Q	5P	P4	135	45	-	32	26	30	4	e
	△*	PNS042Q										
M42×1.5	△	POS042O	5P	P4	135	45	-	32	26	30	4	e
	△*	PNS042O										
M45×4.5	△	POT045V	5P	P5	180	67	-	35	26	30	4	e
	△*	PNT045V										
M45×2	△	POS045Q	5P	P4	140	45	-	35	26	30	4	e
	△*	PNS045Q										
M45×1.5	△	POS045O	5P	P4	140	45	-	35	26	30	4	e
	△*	PNS045O										
M48×5	△	POT048W	5P	P5	185	67	-	38	29	32	4	e
	△*	PNT048W										
M48×3	△	POS048S	5P	P4	185	67	-	38	29	32	4	e
	△*	PNS048S										
M48×1.5	△	POS048O	5P	P4	140	45	-	38	29	32	4	e
	△*	PNS048O										

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(for blind hole)

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(for through hole)

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Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Unified Threads												
No.0-80UNF	△	POPUN0B	5P	P1	36	6.3	-	3	2.5	5	2	b
	△*	PNPUN0B				8						p
No.1-64UNC	△	POPUN1D	5P	P1	42	7.2	-	3	2.5	5	2	b
	△*	PNPUN1D			36	8						p
No.1-72UNF	△	POPUN1C	5P	P1	42	7.2	-	3	2.5	5	2	b
	△*	PNPUN1C			36	8						p
No.2-56UNC	○	POPUN2E	5P	P1	42	8.1	12	3	2.5	5	3	c
	○*	PNPUN2E				9.5	15					c
No.2-64UNF	△	POPUN2D	5P	P1	42	8.1	12	3	2.5	5	3	c
	△*	PNPUN2D				9.5	15					c
No.3-48UNC	△	POPUN3F	5P	P1	46	8.1	14	3	2.5	5	3	c
	△*	PNPUN3F			44	9.5	16					c
No.3-56UNF	△	POPUN3E	5P	P1	46	8.1	14	3	2.5	5	3	c
	△*	PNPUN3E			44	9.5	16					c
No.4-40UNC	○	POQUN4H	5P	P2	46	9	14	4	3.2	6	3	c
	○*	PNMQUN4H					16	3	2.5	5		
	○*	PNQUN4H										
No.4-48UNF	△	POPUN4F	5P	P1	46	9	14	4	3.2	6	3	c
	△*	PNPUN4F			44	9.5	16	3	2.5	5		
No.5-40UNC	△	POQUN5H	5P	P2	52	11	16	5	4	7	3	c
	△*	PNQUN5H			46		18	4	3.2	6		
No.5-44UNF	△	POPUN5G	5P	P1	52	11	16	5	4	7	3	c
	△*	PNPUN5G			46		18	4	3.2	6		
No.6-32UNC	○	POQUN6J	5P	P2	52	11	16	5	4	7	3	c
	○*	PNQUN6J			48		13	20	4	3.2		
No.6-40UNF	△	POQUN6H	5P	P2	52	11	16	5	4	7	3	c
	△*	PNQUN6H			48		13	20	4	3.2		
No.8-32UNC	○	POQUN8J	5P	P2	60	13	21	5.5	4.5	7	3	c
	○*	PNQUN8J			52		5	4				
No.8-36UNF	△	POQUN8I	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PNQUN8I			52		5	4				
No.10-24UNC	○	POQUNAM	5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	PNQUNAM					16					
No.10-32UNF	○	POQUNAJ	5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	PNQUNAJ					16					
No.12-24UNC	△	POQUNCM	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQUNCM			60		16	5.5				
No.12-28UNF	△	POQUNCK	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQUNCK			60		16	5.5				
1/4-20UNC	○	POQU04N	5P	P2	62	15	26	6	4.5	7	3	c
	○*	PNQU04N				19	30					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4-28UNF	○	POQU04K	5P	P2	62	15	26	6	4.5	7	3	c
	○*	PNQU04K				19	30					
1/4-32UNEF	△	POQU04J	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQU04J				19	30					
5/16-18UNC	○	PORU05O	5P	P3	70	19	-	6.2	5	8	3	e
	○*	PNRU05O				22	6.1					
5/16-24UNF	○	POQU05M	5P	P2	70	19	-	6.2	5	8	3	e
	○*	PNQU05M				22	6.1					
5/16-32UNEF	△	POQU05J	5P	P2	70	19	-	6.2	5	8	3	e
	△*	PNQU05J				22	6.1					
3/8-16UNC	○	PORU06P	5P	P3	75	23	-	7	5.5	8	3	e
	○*	PNRU06P				24	7					
3/8-24UNF	○	POQU06M	5P	P2	75	23	-	7	5.5	8	3	e
	○*	PNQU06M				24	7					
3/8-32UNEF	△	POQU06J	5P	P2	75	13	-	7	5.5	8	3	e
	△*	PNQU06J				22	7					
7/16-14UNC	△	PORU07Q	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNRU07Q			80	25	8	6				
7/16-20UNF	○	PORU07N	5P	P3	82	26	-	8.5	6.5	9	3	e
	○*	PNRU07N			80	25	8	6				
7/16-28UNEF	△	POQU07K	5P	P2	82	26	-	8.5	6.5	9	3	e
	△*	PNQU07K			80	25	8	6				
1/2-13UNC	○	PORU08R	5P	P3	88	26	-	10.5	8	11	3	e
	○*	PNRU08R			85	29	9	7	10			
1/2-20UNF	○	PORU08N	5P	P3	88	26	-	10.5	8	11	3	e
	○*	PNRU08N			85	29	9	7	10			
1/2-28UNEF	△	POQU08K	5P	P2	88	26	-	10.5	8	11	3	e
	△*	PNQU08K			85	29	9	7	10			
9/16-12UNC	△	PORU09S	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PNRU09S			90	30	10.5	8	11			
9/16-18UNF	○	PORU09O	5P	P3	95	26	-	12.5	10	13	3	e
	○*	PNRU09O			90	30	10.5	8	11			
5/8-11UNC	△	PORU10U	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PNRU10U				32	12	9	12			
5/8-18UNF	△	PORU10O	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PNRU10O				32	12	9	12			
3/4-10UNC	△	POSU12V	5P	P4	105	33	-	15	12	15	3	e
	△*	PNSU12V				37	14	11	14			
3/4-16UNF	○	PORU12P	5P	P3	105	33	-	15	12	15	3	e
	○*	PNRU12P				37	14	11	14			
3/4-20UNEF	△	PORU12N	5P	P3	105	33	-	15	12	15	3	e
	△*	PNRU12N			95	30	14	11	14			

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
7/8-9UNC	△	POSU14W	5P	P4	115	33	-	17	13	16	3	e
	△*	PNSU14W				38						
7/8-14UNF	△	PORU14Q	5P	P3	115	33	-	17	13	16	3	e
	△*	PNRU14Q				38						
1'-8UNC	△	POSU16X	5P	P4	125	39	-	19	15	18	3	e
	△*	PNSU16X				45		20				
1'-12UNF	△	POSU16S	5P	P4	125	39	-	19	15	18	3	e
	△*	PNSU16S				45		20				
1'-14UNS	△	POSU16Q	5P	P4	125	39	-	19	15	18	3	e
	△*	PNSU16Q				45		20				
1'1/8-7UNC	△	POSU18Y	5P	P4	135	46	-	23	17	20	4	e
	△*	PNSU18Y				48		22				
1'1/4-7UNC	△	POSU20Y	5P	P4	145	51	-	24	19	22	4	e
	△*	PNSU20Y										
1'3/8-6UNC	△	POTU22Z	5P	P5	155	57	-	26	21	24	4	e
	△*	PNTU22Z										
1'1/2-6UNC	△	POTU24Z	5P	P5	160	60	-	30	23	26	4	e
	△*	PNTU24Z										
For Whitworth Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/8W40	△	POQW02H	5P	P2	52	11	17	5	4	7	3	c
	△*	PNQW02H			46		18	4	3.2	6		
5/32W32	△	POQW2HJ	5P	P2	52	11	17	5	4	7	3	c
	△*	PNQW2HJ				13	21					
3/16W24	○	POQW03M	5P	P2	60	13	21	5.5	4.5	7	3	c
	○*	PNQW03M				16	25					
7/32W24	△	POQW3HM	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQW3HM			60	16	5.5					
1/4W20	○	PORW04N	5P	P3	62	15	26	6	4.5	7	3	c
	○*	PNRW04N				19	30					
5/16W18	○	PORW05O	5P	P3	70	19	-	6.2	5	8	3	e
	○*	PNRW05O				22	6.1					
3/8W16	○	PORW06P	5P	P3	75	23	-	7	5.5	8	3	e
	○*	PNRW06P				24						
7/16W14	△	PORW07Q	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNRW07Q			80	25		8	6			
1/2W12	○	PORW08S	5P	P3	88	26	-	10.5	8	11	3	e
	○*	PNRW08S			85	29		9	7	10		
9/16W12	△	PORW09S	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PNRW09S			90	30		10.5	8	11		
5/8W11	○	PORW10U	5P	P3	95	26	-	12.5	10	13	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(N-PO) Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
5/8W11	○*	PNRW10U	5P	P3	95	32	-	12	9	12	3	e
3/4W10	○	POSW12V	5P	P4	105	33	-	15	12	15	3	e
	○*	PNSW12V				37		14	14			
7/8W9	△	POSW14W	5P	P4	115	33	-	17	13	16	3	e
	△*	PNSW14W				38						
1"W8	△	POSW16X	5P	P4	125	39	-	19	15	18	3	e
	△*	PNSW16X				45		20				
1"1/8W7	△	POSW18Y	5P	P4	135	46	-	23	17	20	4	e
	△*	PNSW18Y				48		22				
1"1/4W7	△	POSW20Y	5P	P4	145	51	-	24	19	22	4	e
	△*	PNSW20Y										
1"3/8W6	△	POTW22Z	5P	P5	155	57	-	26	21	24	4	e
	△*	PNTW22Z										
1"1/2W6	△	POTW24Z	5P	P5	160	60	-	30	23	26	4	e
	△*	PNTW24Z										
2"W4.5	△	POTW329	5P	P5	195	70	-	40	32	35	4	e
	△*	PNTW329										

For Screw Threads used on Sewing Machines

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
3/32SM56	△	POPS06E	5P	P1	46	8.1	14	3	2.5	5	3	c
	△*	PNPS06E				9.5	15					
1/8SM40	△	POQS08H	5P	P2	52	11	16	5	4	7	3	c
	△*	PNQS08H					18	4	3.2	6		
1/8SM44	△	POQS08G	5P	P2	52	11	16	5	4	7	3	c
	△*	PNQS08G					18	4	3.2	6		
9/64SM40	△	POQS09H	5P	P2	52	11	17	5	4	7	3	c
	△*	PNQS09H					20	4	3.2	6		
11/64SM40	△	POQS11H	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PNQS11H					25	5	4			
3/16SM28	△	POQS12K	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PNQS12K				16	25					
3/16SM32	△	POQS12J	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PNQS12J				16	25					
7/32SM32	△	POQS14J	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQS14J				16	26					
15/64SM28	△	POQS15K	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQS15K				19	26					
1/4SM24	△	POQS16M	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQS16M				19	30					
1/4SM40	△	POQS16H	5P	P2	62	8.6	26	6	4.5	7	3	c
	△*	PNQS16H				13	25					

The products having *mark in the stock column will be available as long as they last.

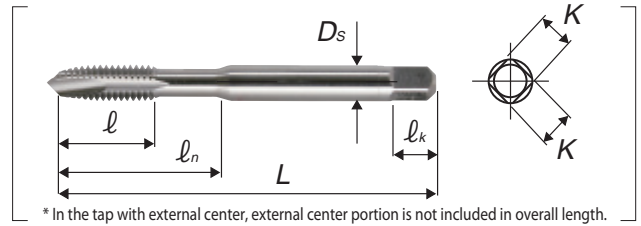
+PO(N+PO)

Plus Series Spiral Pointed Taps



Segment : 1E

N+PO is available as long as it lasts. +PO takes the place of N+PO.



* In the tap with external center, external center portion is not included in overall length.

○* Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M1.2×0.25	○*	PNPP1.2B	5P	P1	36	4.5	-	3	2.5	5	2	a
M1.4×0.3	◎*	PNPP1.4C	5P	P1	36	5.4	-	3	2.5	5	2	a
	○*	PNPQ1.4C		P2								
	△*	PNPR1.4C		P3								
M1.6×0.35	◎*	PNPQ1.6D	5P	P2	36	6.3	-	3	2.5	5	2	b
	△*	PNPR1.6D		P3								
M1.7×0.35	◎*	PNPQ1.7D	5P	P2	36	6.3	-	3	2.5	5	2	b
	○*	PNPR1.7D		P3								
	△*	PNPS1.7D		P4								
M1.8×0.35	△*	PNPQ1.8D	5P	P2	42	6.3	-	3	2.5	5	2	b
M2×0.4	◎*	PNPQ2.0E	5P	P2	42	7.2	12	3	2.5	5	3	c
	○*	PNPR2.0E		P3								
	○*	PNPS2.0E		P4								
M2×0.25	△*	PNPP2.0B	5P	P1	42	4.5	12	3	2.5	5	3	c
M2.2×0.45	○*	PNPQ2.2F	5P	P2	42	8.1	12	3	2.5	5	3	c
M2.2×0.25	△*	PNPQ2.2B	5P	P2	42	4.5	12	3	2.5	5	3	c
M2.3×0.4	○*	PNPQ2.3E	5P	P2	42	7.2	12	3	2.5	5	3	c
	○*	PNPR2.3E		P3								
	△*	PNPS2.3E		P4								
M2.5×0.45	◎*	PNPQ2.5F	5P	P2	46	8.1	14	3	2.5	5	3	c
	○*	PNPR2.5F		P3								
	△*	PNPS2.5F		P4								
M2.5×0.35	△*	PNPQ2.5D	5P	P2	46	6.3	14	3	2.5	5	3	c
M2.6×0.45	◎*	PNPQ2.6F	5P	P2	46	8.1	14	3	2.5	5	3	c
	○*	PNPR2.6F		P3								
	△*	PNPS2.6F		P4								
M2.6×0.35	△*	PNPQ2.6D	5P	P2	46	6.3	14	3	2.5	5	3	c
M3×0.5	◎	PNPQ3.0G	5P	P2	46	9	14	4	3.2	6	3	c
	○	PNPR3.0G		P3								
	○	PNPS3.0G		P4								
M3.5×0.6	○	PNPQ3.5H	5P	P2	52	11	16	5	4	7	3	c
	△	PNPR3.5H		P3								
	△	PNPS3.5H		P4								
M4×0.7	◎	PNPQ4.0I	5P	P2	52	11	17	5	4	7	3	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
<i>L</i>	<i>ℓ</i>	<i>ℓ_n</i>	<i>D_s</i>	<i>K</i>	<i>ℓ_k</i>

+PO(N+PO) Plus Series Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>ℓ_n</i> (mm)	<i>D_s</i> (mm)	<i>K</i> (mm)	<i>ℓ_k</i> (mm)	Flute	Type
M4×0.7	○	PNPR4.0I	5P	P3	52	11	17	5	4	7	3	c
	○	PNPS4.0I		P4								
M4.5×0.75	△	PNPQ4.5J	5P	P2	60	13	21	5.5	4.5	7	3	c
M5×0.8	◎	PNPQ5.0K	5P	P2	60	13	22	5.5	4.5	7	3	c
	○	PNPR5.0K		P3								
	○	PNPS5.0K		P4								
M6×1	◎	PNPQ6.0M	5P	P2	62	15	26	6	4.5	7	3	c
	○	PNPR6.0M		P3								
	○	PNPS6.0M		P4								

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

PO-OX(N-PO-OX)

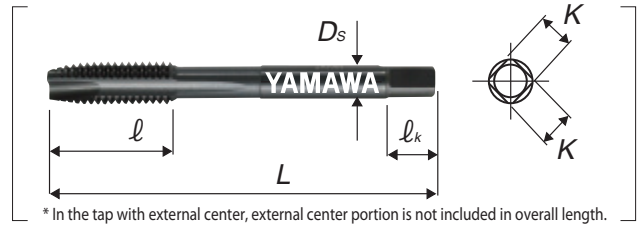
Spiral Pointed Taps, Oxided



Segment : 1E

N-PO-OX is available as long as it lasts. PO-OX takes the place of N-PO-OX.

 Oversize



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M1.4×0.3	△	POP1.4CX	5P	P1	36	5.4	-	3	2.5	5	2	a
	△	POQ1.4CX		P2								
M1.6×0.35	△	POQ1.6DX	5P	P2	36	6.3	-	3	2.5	5	2	b
M1.7×0.35	△	POQ1.7DX	5P	P2	36	6.3	-	3	2.5	5	2	b
M2×0.4	○	POQ2.0EX	5P	P2	42	7.2	12	3	2.5	5	3	c
	○*	PNQ2.0EX				9.5	15					
	△	POR2.0EX		P3		7.2	12					
M2.3×0.4	△	POQ2.3EX	5P	P2	42	7.2	12	3	2.5	5	3	c
M2.5×0.45	△	POQ2.5FX	5P	P2	46	8.1	14	3	2.5	5	3	c
M2.6×0.45	△	POQ2.6FX	5P	P2	46	8.1	14	3	2.5	5	3	c
	△	POR2.6FX		P3								
M3×0.5	◎	POQ3.0GX	5P	P2	46	9	14	4	3.2	6	3	c
	◎*	PNQ3.0GX				11	18					
3M0.6	△*	PNMQ3.0HX	5P	P2	46	9	14	4	3.2	6	3	c
M4×0.7	◎	POQ4.0IX	5P	P2	52	11	17	5	4	7	3	c
	◎*	PNQ4.0IX				13	20					
4M0.75	△*	PNMQ4.0JX	5P	P2	52	11	17	5	4	7	3	c
M5×0.8	◎	POQ5.0KX	5P	P2	60	13	22	5.5	4.5	7	3	c
	◎*	PNQ5.0KX				16	25					
5M0.9	△*	PNMQ5.0LX	5P	P2	60	13	22	5.5	4.5	7	3	c
M6×1	◎	POQ6.0MX	5P	P2	62	15	26	6	4.5	7	3	c
	◎*	PNQ6.0MX				19	28					
M8×1.25	◎	POR8.0NX	5P	P3	70	19	-	6.2	5	8	3	e
	◎*	PNR8.0NX				22						
M10×1.5	○	POR010OX	5P	P3	75	23	-	7	5.5	8	3	e
	○*	PNR010OX				24						
M12×1.75	○	POS012PX	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	PNS012PX				29						
M16×2	○	POS016QX	5P	P4	95	26	-	12.5	10	13	3	e
	○*	PNS016QX				32						
M20×2.5	○	POS020RX	5P	P4	105	33	-	15	12	15	3	e
	○*	PNS020RX				37						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

+PO-OX(N+PO-OX)

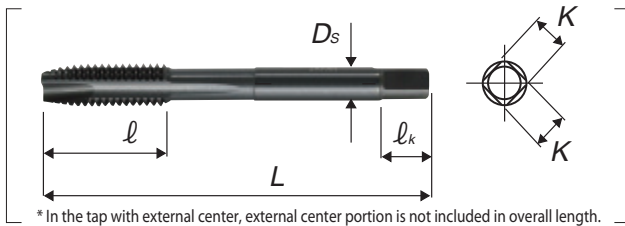
Plus Series Spiral Pointed Taps, Oxided



Segment : 1E

N+PO-OX is available as long as it lasts. +PO-OX takes the place of N+PO-OX.

Oversize



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1.4x0.3	△*	PNPP1.4CX	5P	P1	36	5.4	-	3	2.5	5	2	a
	△*	PNPQ1.4CX		P2								
M1.6x0.35	△*	PNPQ1.6DX	5P	P2	36	6.3	-	3	2.5	5	2	b
M1.7x0.35	△*	PNPQ1.7DX	5P	P2	36	6.3	-	3	2.5	5	2	b
M2x0.4	○*	PNPQ2.0EX	5P	P2	42	7.2	12	3	2.5	5	3	c
	△*	PNPR2.0EX		P3								
M2.3x0.4	△*	PNPQ2.3EX	5P	P2	42	7.2	12	3	2.5	5	3	c
M2.5x0.45	△*	PNPQ2.5FX	5P	P2	46	8.1	14	3	2.5	5	3	c
M2.6x0.45	△*	PNPQ2.6FX	5P	P2	46	8.1	14	3	2.5	5	3	c
	△*	PNPR2.6FX		P3								
M3x0.5	◎	PNPQ3.0GX	5P	P2	46	9	14	4	3.2	6	3	c
	△	PNPR3.0GX		P3								
M3.5x0.6	△	PNPQ3.5HX	5P	P2	52	11	16	5	4	7	3	c
M4x0.7	◎	PNPQ4.0IX	5P	P2	52	11	17	5	4	7	3	c
	△	PNPR4.0IX		P3								
M5x0.8	◎	PNPQ5.0KX	5P	P2	60	13	22	5.5	4.5	7	3	c
	△	PNPR5.0KX		P3								
M6x1	◎	PNPQ6.0MX	5P	P2	62	15	26	6	4.5	7	3	c
	△	PNPR6.0MX		P3								
	△	PNPS6.0MX		P4								

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

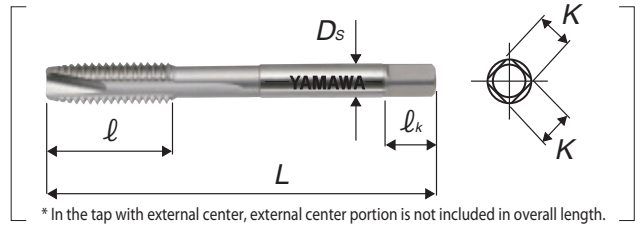
PO(LH) (N-PO(LH))

Spiral Pointed Taps for Left Hand Threads



Segment : 1E

N-PO(LH) is available as long as it lasts. PO(LH) takes the place of N-PO(LH).



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	POQ3.0G--L	5P	P2	46	9	14	4	3.2	6	3	c
	△*	PNQ3.0G--L				11	18					
M4×0.7	△	POQ4.0I--L	5P	P2	52	11	17	5	4	7	3	c
	△*	PNQ4.0I--L				13	20					
M5×0.8	△	POQ5.0K--L	5P	P2	60	13	22	5.5	4.5	7	3	c
	△*	PNQ5.0K--L				16	25					
M6×1	△	POQ6.0M--L	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQ6.0M--L				19	28					
M8×1.25	△	POR8.0N--L	5P	P3	70	19	-	6.2	5	8	3	e
	△*	PNR8.0N--L				22	-					
M8×1	△	POR8.0M--L	5P	P3	70	19	-	6.2	5	8	3	e
	△*	PNR8.0M--L				22	-					
M10×1.5	△	POR10.0--L	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNR10.0--L				24	-					
M10×1.25	△	POR10.0N--L	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNR10.0N--L				24	-					
M10×1	△	POR10.0M--L	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNR10.0M--L				24	-					
M12×1.75	△	POS12P--L	5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	PNS12P--L				29	-					
M12×1.5	△	POR12.0--L	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNR12.0--L				29	-					
M12×1.25	△	POS12N--L	5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	PNS12N--L				29	-					
M14×2	△	POS14Q--L	5P	P4	88	26	-	10.5	8	11	3	e
	△*	PNS14Q--L				30	-					
M14×1.5	△	POR14.0--L	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNR14.0--L				30	-					
M16×2	△	POS16Q--L	5P	P4	95	26	-	12.5	10	13	3	e
	△*	PNS16Q--L				32	-					
M16×1.5	△	POR16.0--L	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PNR16.0--L				32	-					
M18×2.5	△	POS18R--L	5P	P4	100	33	-	14	11	14	3	e
	△*	PNS18R--L				37	-					
M18×1.5	△	POS18.0--L	5P	P4	100	33	-	14	11	14	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PO(LH) (N-PO(LH)) Spiral Pointed Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M18x1.5	△*	PNS0180--L	5P	P4	100	37	-	14	11	14	3	e
M20x2.5	△	POS020R--L	5P	P4	105	33	-	15	12	15	3	e
	△*	PNS020R--L				37						
M20x1.5	△	POS020O--L	5P	P4	105	33	-	15	12	15	3	e
	△*	PNS020O--L				37						
M22x2.5	△	POS022R--L	5P	P4	115	33	-	17	13	16	3	e
	△*	PNS022R--L				38						
M22x1.5	△	POS022O--L	5P	P4	115	33	-	17	13	16	3	e
	△*	PNS022O--L				38						
M24x3	△	POS024S--L	5P	P4	120	39	-	19	15	18	3	e
	△*	PNS024S--L				45						
M24x1.5	△	POS024O--L	5P	P4	120	39	-	19	15	18	3	e
	△*	PNS024O--L				45						
M27x3	△	POS027S--L	5P	P4	130	39	-	20	15	18	4	e
	△*	PNS027S--L				45						
M27x1.5	△	POS027O--L	5P	P4	130	39	-	20	15	18	4	e
	△*	PNS027O--L				45						
M30x3.5	△	POT030T--L	5P	P5	135	46	-	23	17	20	4	e
	△*	PNT030T--L				48						
M30x1.5	△	POS030O--L	5P	P4	135	46	-	23	17	20	4	e
	△*	PNS030O--L				45						

For Unified Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4-20UNC	△	POQU04N--L	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQU04N--L				19	30					
1/4-28UNF	△	POQU04K--L	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PNQU04K--L				19	30					
5/16-18UNC	△	PORU05O--L	5P	P3	70	19	-	6.2	5	8	3	e
	△*	PNRU05O--L				22	6.1					
5/16-24UNF	△	POQU05M--L	5P	P2	70	19	-	6.2	5	8	3	e
	△*	PNQU05M--L				22	6.1					
3/8-16UNC	△	PORU06P--L	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNRU06P--L				24	7					
3/8-24UNF	△	POQU06M--L	5P	P2	75	23	-	7	5.5	8	3	e
	△*	PNQU06M--L				24	7					
7/16-14UNC	△	PORU07Q--L	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNRU07Q--L			80	25	8	6				
7/16-20UNF	△	PORU07N--L	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PNRU07N--L			80	25	8	6				
1/2-13UNC	△	PORU08R--L	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNRU08R--L			85	29	9	7	10			

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

PO(LH) (N-PO(LH)) Spiral Pointed Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/2-20UNF	△	PORU08N--L	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNRU08N--L			85	29		9	7	10		
For Whitworth Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/4W20	△	PORW04N--L	5P	P3	62	15	26	6	4.5	7	3	c
	△*	PNRW04N--L				19	30					
5/16W18	△	PORW05O--L	5P	P3	70	19	-	6.2	5	8	3	e
	△*	PNRW05O--L				22		6.1				
3/8W16	△	PORW06P--L	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PNRW06P--L				24						
1/2W12	△	PORW08S--L	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PNRW08S--L			85	29		9	7	10		
5/8W11	△	PORW10U--L	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PNRW10U--L				32		12	9	12		
3/4W10	△	POSW12V--L	5P	P4	105	33	-	15	12	15	3	e
	△*	PNSW12V--L				37		14	11	14		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

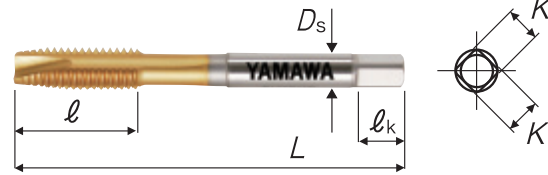
PO-V(N-PO-V)

Spiral Pointed Taps, TiN coated



Segment : 1E

N-PO-V is available as long as it lasts. PO-V takes the place of N-PO-V.



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	VPOQ3.0G	5P	P2	46	9	14	4	3.2	6	3	c
	○*	VPNMQ3.0G										
	○*	VPNQ3.0G										
M4×0.7	○	VPOQ4.0I	5P	P2	52	11	17	5	4	7	3	c
	○*	VPNMQ4.0I										
	○*	VPNQ4.0I										
M5×0.8	○	VPOQ5.0K	5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	VPNMQ5.0K										
	○*	VPNQ5.0K										
M6×1	○	VPOQ6.0M	5P	P2	62	15	26	6	4.5	7	3	c
	○*	VPNMQ6.0M										
	○*	VPNQ6.0M										
M8×1.25	○	VPOR8.0N	5P	P3	70	19	-	6.2	5	8	3	e
	○*	VPNR8.0N										
M10×1.5	○	VPOR10.0O	5P	P3	75	23	-	7	5.5	8	3	e
	○*	VPNR10.0O										
M10×1.25	○	VPOR10.0N	5P	P3	75	23	-	7	5.5	8	3	e
	○*	VPNR10.0N										
M12×1.75	○	VPOS12P	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	VPNS12P										
M12×1.5	○	VPOR12.0O	5P	P3	82	26	-	8.5	6.5	9	3	e
	○*	VPNR12.0O										
M12×1.25	○	VPOS12.0N	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	VPNS12.0N										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-PO(LS-N-PO)

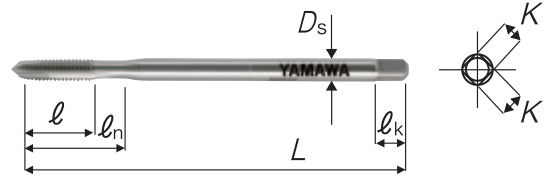
Long Shank Spiral Pointed Taps

HSS



Segment : 1E

LS-N-PO is available as long as it lasts. LS-PO takes the place of LS-N-PO.



* In the tap with external center, external center portion is not included in overall length.

○ Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M2×0.4	△	POQ2.0EL07	5P	P2	70	7.2	12	3	2.5	5	3	c
	△*	PNQ2.0EL07				9.5	15					
	△	POQ2.0EL10			100	7.2	12					
	△*	PNQ2.0EL10				9.5	15					
M2.3×0.4	△	POQ2.3EL07	5P	P2	70	7.2	12	3	2.5	5	3	c
	△*	PNQ2.3EL07				9.5	15					
	△	POQ2.3EL10			100	7.2	12					
	△*	PNQ2.3EL10				9.5	15					
M2.5×0.45	△	POQ2.5FL07	5P	P2	70	8.1	14	3	2.5	5	3	c
	△*	PNQ2.5FL07				9.5	16					
	△	POQ2.5FL10			100	8.1	14					
	△*	PNQ2.5FL10				9.5	16					
M2.6×0.45	△	POQ2.6FL07	5P	P2	70	8.1	14	3	2.5	5	3	c
	△*	PNQ2.6FL07				9.5	16					
	△	POQ2.6FL10			100	8.1	14					
	△*	PNQ2.6FL10				9.5	16					
M3×0.5	△	POQ3.0GL07	5P	P2	70	9	14	4	3.2	6	3	c
	△*	PNMQ3.0GL07				11	18					
	△*	PNQ3.0GL07			100	9	14					
	◎	POQ3.0GL10				11	18					
	◎*	PNMQ3.0GL10			120	9	14					
	◎*	PNQ3.0GL10				11	18					
	△	POQ3.0GL12			150	9	14					
	△*	PNMQ3.0GL12				11	18					
	△*	PNQ3.0GL12			100	9	14					
	○	POQ3.0GL15				11	18					
	○*	PNMQ3.0GL15			150	9	14					
	○*	PNQ3.0GL15				11	18					
	△	POR3.0GL10			100	9	14					
	△*	PNMR3.0GL10				11	18					
	△*	PNR3.0GL10			150	9	14					
	△	POR3.0GL15				11	18					
△*	PNMR3.0GL15	100	9	14								
△*	PNR3.0GL15		11	18								

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M4×0.7	△	POQ4.0IL07	5P	P2	70	11	17	5	4	7	3	c	
	△*	PNMQ4.0IL07					20						
	△*	PNQ4.0IL07				13							
	◎	POQ4.0IL10					17						
	◎*	PNMQ4.0IL10				13							
	◎*	PNQ4.0IL10					20						
	△	POQ4.0IL12			120	11	17						
	△*	PNMQ4.0IL12					20						
	△*	PNQ4.0IL12				13							
	○	POQ4.0IL15					17						
	○*	PNMQ4.0IL15				13							
	○*	PNQ4.0IL15					20						
	△	POR4.0IL10			100	P3	11						17
	△*	PNMR4.0IL10											20
	△*	PNR4.0IL10					13						
	△	POR4.0IL15											17
	△*	PNMR4.0IL15					13						
	△*	PNR4.0IL15											20
M5×0.8	◎	POQ5.0KL10	5P	P2	100	13	22	5.5	4.5	7	3	c	
	◎*	PNMQ5.0KL10					25						
	◎*	PNQ5.0KL10				16							
	△	POQ5.0KL12					22						
	△*	PNMQ5.0KL12				16							
	△*	PNQ5.0KL12					25						
	○	POQ5.0KL15			150	P3	13						22
	○*	PNMQ5.0KL15											25
	○*	PNQ5.0KL15					16						
	△	POR5.0KL10											22
	△*	PNMR5.0KL10					16						
	△*	PNR5.0KL10											25
	△	POR5.0KL15			150	P4	13						22
	△*	PNMR5.0KL15											25
	△*	PNR5.0KL15					16						
	△	POS5.0KL15											22
	△*	PNMS5.0KL15					16						
	△*	PNS5.0KL15											25
M6×1	◎	POQ6.0ML10	5P	P2	100	15	26	6	4.5	7	3	c	
	◎*	PNMQ6.0ML10					28						
	◎*	PNQ6.0ML10				19							
	△	POQ6.0ML12			26								
	△*	PNMQ6.0ML12			15								
	△*	PNQ6.0ML12				28							

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M6x1	○	POQ6.0ML15	5P	P2	150	15	26	6	4.5	7	3	c
	○*	PNMQ6.0ML15										
	○*	PNQ6.0ML15										
	△	POQ6.0ML20										
	△*	PNQ6.0ML20										
	△	POR6.0ML10		P3	100	15	26					
	△*	PNMR6.0ML10										
	△*	PNR6.0ML10										
	△	POR6.0ML15										
	△*	PNMR6.0ML15										
	△*	PNR6.0ML15										
	△	POS6.0ML15		P4	150	15	26					
	△*	PNMS6.0ML15										
	△*	PNS6.0ML15										
△*	PNS6.0ML15											
M8x1.25	◎	POR8.0NL10	5P	P3	100	19	-	6.2	5	8	3	e
	◎*	PNR8.0NL10										
	△	POR8.0NL12										
	△*	PNR8.0NL12			120	22						
	◎	POR8.0NL15										
	◎*	PNR8.0NL15										
	△	POR8.0NL20			200	22						
	△*	PNR8.0NL20										
	△	POS8.0NL15										
△*	PNS8.0NL15											
M8x1	△	POR8.0ML10	5P	P3	100	19	-	6.2	5	8	3	e
	△*	PNR8.0ML10										
	△	POR8.0ML15			150	22						
	△*	PNR8.0ML15										
M10x1.5	◎	POR010OL10	5P	P3	100	23	-	7	5.5	8	3	e
	◎*	PNR010OL10										
	△	POR010OL12										
	△*	PNR010OL12			120	24						
	◎	POR010OL15										
	◎*	PNR010OL15										
	△	POR010OL20			200	24						
	△*	PNR010OL20										
	△	POS010OL15										
△*	PNS010OL15											
M10x1.25	○	POR010NL10	5P	P3	100	23	-	7	5.5	8	3	e
	○*	PNR010NL10										
	○	POR010NL15			150	23						
	○*	PNR010NL15										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type		
M10x1.25	△	POR010NL20	5P	P3	200	23	-	7	5.5	8	3	e		
	△*	PNR010NL20				24								
M10x1	△	POR010ML10	5P	P3	100	23	-	7	5.5	8	3	e		
	△*	PNR010ML10				24								
	△	POR010ML15				150							23	
	△*	PNR010ML15				150							24	
M12x1.75	△	POS012PL10	5P	P4	100	26	-	8.5	6.5	9	3	e		
	△*	PNS012PL10				29								
	△	POS012PL12				120							26	
	△*	PNS012PL12				120							29	
	◎	POS012PL15				150							26	
	◎*	PNS012PL15				150							29	
	○	POS012PL20		200	26									
	○*	PNS012PL20		200	29									
	△	POT012PL15		P5	150	26								
	△*	PNT012PL15			150	29								
M12x1.5	△	POR012OL10	5P	P3	100	26	-	8.5	6.5	9	3	e		
	△*	PNR012OL10				29								
	△	POR012OL15				150							26	
	△*	PNR012OL15				150							29	
	△	POR012OL20				200							26	
	△*	PNR012OL20				200							29	
M12x1.25	△	POS012NL10	5P	P4	100	26	-	8.5	6.5	9	3	e		
	△*	PNS012NL10				29								
	△	POS012NL15				150							26	
	△*	PNS012NL15				150							29	
	△	POS012NL20				200							26	
	△*	PNS012NL20				200							29	
M12x1	△	POR012ML10	5P	P3	100	26	-	8.5	6.5	9	3	e		
	△*	PNR012ML10				29								
	△	POR012ML15				150							26	
	△*	PNR012ML15				150							29	
M14x2	△	POS014QL12	5P	P4	120	26	-	10.5	8	11	3	e		
	△*	PNS014QL12				30								
	○	POS014QL15				150							26	
	○*	PNS014QL15				150							30	
	△	POS014QL20				200							26	
	△*	PNS014QL20				200							30	
	△	POT014QL15				P5							150	26
	△*	PNT014QL15											150	30
M14x1.5	△	POR014OL15	5P	P3	150	26	-	10.5	8	11	3	e		
	△*	PNR014OL15				30								

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M14×1.5	△	POR014OL20	5P	P3	200	26	-	10.5	8	11	3	e
	△*	PNR014OL20				30						
M16×2	◎	POS016QL15	5P	P4	200	26	-	12.5	10	13	3	e
	◎*	PNS016QL15				32						
	○	POS016QL20				26						
	○*	PNS016QL20				32						
	△	POS016QL25		P5	150	26						
	△*	PNS016QL25				32						
	△	POT016QL15				26						
	△*	PNT016QL15				32						
M16×1.5	○	POR016OL15	5P	P3	150	26	-	12.5	10	13	3	e
	○*	PNR016OL15				32						
	△	POR016OL20				26						
	△*	PNR016OL20				32						
M18×2.5	○	POS018RL15	5P	P4	150	33	-	14	11	14	3	e
	○*	PNS018RL15				37						
	△	POS018RL20				33						
	△*	PNS018RL20		37								
	△	POT018RL15		P5	150	33						
	△*	PNT018RL15				37						
M18×1.5	△	POS018OL15	5P	P4	150	33	-	14	11	14	3	e
	△*	PNS018OL15				37						
	△	POS018OL20				33						
	△*	PNS018OL20				37						
M20×2.5	◎	POS020RL15	5P	P4	150	33	-	15	12	15	3	e
	◎*	PNS020RL15				37						
	○	POS020RL20				33						
	○*	PNS020RL20				37						
	△	POS020RL25		P5	150	33						
	△*	PNS020RL25				37						
	△	POT020RL15				33						
	△*	PNT020RL15				37						
M20×1.5	○	POS020OL15	5P	P4	150	33	-	15	12	15	3	e
	○*	PNS020OL15				37						
	△	POS020OL20				33						
	△*	PNS020OL20				37						
M22×2.5	△	POS022RL15	5P	P4	150	33	-	17	13	16	3	e
	△*	PNS022RL15				38						
	△	POS022RL20				33						
	△*	PNS022RL20				38						
M22×1.5	○	POS022OL15	5P	P4	150	33	-	17	13	16	3	e
	○*	PNS022OL15				38						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M22x1.5	△	POS022OL20	5P	P4	200	33	-	17	13	16	3	e
	△*	PNS022OL20				38						
M24x3	○	POS024SL15	5P	P4	150	39	-	19	15	18	3	e
	○*	PNS024SL15				45						
	○	POS024SL20				39						
	○*	PNS024SL20			45							
	△	POS024SL25			250	39						
	△*	PNS024SL25				45						
M24x1.5	△	POS024OL15	5P	P4	150	39	-	19	15	18	3	e
	△*	PNS024OL15				45						
	△	POS024OL20			200	39						
	△*	PNS024OL20				45						
M27x3	△	POS027SL20	5P	P4	200	39	-	20	15	18	4	e
	△*	PNS027SL20				45						
M27x1.5	△	POS027OL20	5P	P4	200	39	-	20	15	18	4	e
	△*	PNS027OL20				45						
	△	POS027OL25			250	39						
	△*	PNS027OL25				45						
M30x3.5	△	POT030TL20	5P	P5	200	46	-	23	17	20	4	e
	△*	PNT030TL20				48						
	△	POT030TL25			250	46						
	△*	PNT030TL25				48						
	△	POT030TL30			300	46						
	△*	PNT030TL30				48						
M30x1.5	△	POS030OL20	5P	P4	200	46	-	23	17	20	4	e
	△*	PNS030OL20				45						
	△	POS030OL25			250	46						
	△*	PNS030OL25				45						
For Unified Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4-20UNC	△	POQU04NL10	5P	P2	100	15	26	6	4.5	7	3	c
	△*	PNQU04NL10				19	30					
	△	POQU04NL15			150	15	26					
	△*	PNQU04NL15				19	30					
1/4-28UNF	△	POQU04KL10	5P	P2	100	15	26	6	4.5	7	3	c
	△*	PNQU04KL10				19	30					
	△	POQU04KL15			150	15	26					
	△*	PNQU04KL15				19	30					
5/16-18UNC	△	PORU05OL10	5P	P3	100	19	-	6.2	5	8	3	e
	△*	PNRU05OL10				22	6.1					
	△	PORU05OL15			150	19	6.2					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type		
5/16-18UNC	△*	PNRU05OL15	5P	P3	150	22	-	6.1	5	8	3	e		
	△	POQU05ML10				19		6.2						
5/16-24UNF	△*	PNQU05ML10	5P	P2	100	22	-	6.1	5	8	3	e		
	△	POQU05ML15				19		6.2						
	△*	PNQU05ML15			150	22		6.1						
	△	POQU06PL10				23								
3/8-16UNC	△*	PNRU06PL10	5P	P3	100	24	-	7	5.5	8	3	e		
	△	PORU06PL15				23								
	△*	PNRU06PL15			150	24								
	△	POQU06ML10				23								
3/8-24UNF	△*	PNQU06ML10	5P	P2	100	24	-	7	5.5	8	3	e		
	△	POQU06ML15				23								
	△*	PNQU06ML15			150	24								
	△	PORU07QL15				26								
7/16-14UNC	△*	PNRU07QL15	5P	P3	150	25	-	8	6.5	9	3	e		
	△	PORU07NL15				26								
7/16-20UNF	△*	PNRU07NL15	5P	P3	150	25	-	8	6.5	9	3	e		
	△	PORU08RL15				26								
1/2-13UNC	△*	PNRU08RL15	5P	P3	150	29	-	9	8	11	3	e		
	△	PORU08RL20				26								
	△*	PNRU08RL20			200	29		9					7	10
	△	PORU08NL15				26								
1/2-20UNF	△*	PNRU08NL15	5P	P3	150	29	-	9	8	11	3	e		
	△	PORU08NL20				26								
	△*	PNRU08NL20			200	29		9					7	10
	△	PORU10UL15				26								
5/8-11UNC	△*	PNRU10UL15	5P	P3	150	32	-	12	10	13	3	e		
	△	PORU10UL20				26								
	△*	PNRU10UL20			200	32		12					9	12
	△	PORU10OL15				26								
5/8-18UNF	△*	PNRU10OL15	5P	P3	150	32	-	12	10	13	3	e		
	△	PORU10OL20				26								
	△*	PNRU10OL20			200	32		12					9	12
	△	POSU12VL15				33								
3/4-10UNC	△*	PNSU12VL15	5P	P4	150	37	-	14	11	14	3	e		
	△	POSU12VL20				33								
	△*	PNSU12VL20			200	37		14					11	14
	△	PORU12PL15				33								
3/4-16UNF	△*	PNRU12PL15	5P	P3	150	37	-	14	11	14	3	e		
	△	PORU12PL20				33								
	△*	PNRU12PL20			200	37		14					11	14
	△	POSU14WL20				33								
7/8-9UNC	△	POSU14WL20	5P	P4	200	33	-	17	13	16	3	e		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

LS-PO(LS-N-PO) Long Shank Spiral Pointed Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
7/8-9UNC	△*	PNSU14WL20	5P	P4	200	38	-	17	13	16	3	e
7/8-14UNF	△	PORU14QL20	5P	P3	200	33	-	17	13	16	3	e
	△*	PNRU14QL20				38						
1'-8UNC	△	POSU16XL20	5P	P4	200	39	-	19	15	18	3	e
	△*	PNSU16XL20				45		20				
1'-12UNF	△	POSU16SL20	5P	P4	200	39	-	19	15	18	3	e
	△*	PNSU16SL20				45		20				

For Whitworth Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type	
1/4W20	△	PORW04NL10	5P	P3	100	15	26	6	4.5	7	3	c	
	△	PORW04NL15				19	30						
	△*	PNRW04NL15				150							
5/16W18	△	PORW05OL10	5P	P3	100	19	-	6.2	5	8	3	e	
	△*	PNRW05OL10				22	6.1						
	△	PORW05OL15				150	19	6.2					
	△*	PNRW05OL15					22	6.1					
3/8W16	△	PORW06PL10	5P	P3	100	23	-	7	5.5	8	3	e	
	△*	PNRW06PL10				24							
	△	PORW06PL15				150							23
	△*	PNRW06PL15											24
7/16W14	△	PORW07QL15	5P	P3	150	26	-	8.5	6.5	9	3	e	
1/2W12	△	PORW08SL15	5P	P3	150	26	-	10.5	8	11	3	e	
	△*	PNRW08SL15				29		9	10				
	△	PORW08SL20				200		26	10.5	8			11
	△*	PNRW08SL20						29	9	10			
5/8W11	△	PORW10UL15	5P	P3	150	26	-	12.5	10	13	3	e	
	△*	PNRW10UL15				32		12	9	12			
	△	PORW10UL20				200		26	12.5	10			13
	△*	PNRW10UL20						32	12	9			12
3/4W10	△	POSW12VL15	5P	P4	150	33	-	15	12	15	3	e	
	△*	PNSW12VL15				37		14	11	14			
	△	POSW12VL20				200		33	15	12			15
	△*	PNSW12VL20						37	14	11			14
7/8W9	△	POSW14WL15	5P	P4	150	33	-	17	13	16	3	e	
	△	POSW14WL20			200	38		17					
	△*	PNSW14WL20											
1'W8	△	POSW16XL15	5P	P4	150	39	-	19	15	18	3	e	
	△*	PNSW16XL15				45		20					
	△	POSW16XL20				200		39					19
	△*	PNSW16XL20						45					20

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

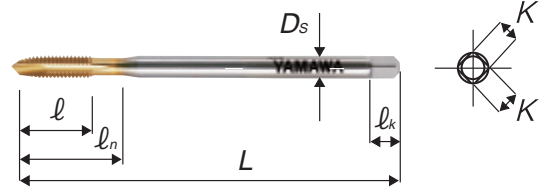
LS-PO-V (LS-N-PO-V)

Long Shank Spiral Pointed Taps, TiN coated



Segment : 1E

LS-N-PO-V is available as long as it lasts. LS-PO-V takes the place of LS-N-PO-V.



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads												
M3x0.5	○	VPOQ3.0GL10	5P	P2	100	9	14	4	3.2	6	3	c
	○*	VPNMQ3.0GL10										
	○*	VPNQ3.0GL10										
M4x0.7	○	VPOQ4.0IL10	5P	P2	100	11	17	5	4	7	3	c
	○*	VPNMQ4.0IL10										
	○*	VPNQ4.0IL10										
M5x0.8	○	VPOQ5.0KL10	5P	P2	100	13	22	5.5	4.5	7	3	c
	○*	VPNMQ5.0KL10										
	○*	VPNQ5.0KL10										
M6x1	○	VPOQ6.0ML10	5P	P2	100	15	26	6	4.5	7	3	c
	○*	VPNMQ6.0ML10										
	○*	VPNQ6.0ML10										
	△	VPOQ6.0ML15			150	15	26					
	△*	VPNMQ6.0ML15										
△*	VPNQ6.0ML15											
M8x1.25	○	VPOR8.0NL10	5P	P3	100	19	-	6.2	5	8	3	e
	○*	VPNR8.0NL10										
	○	VPOR8.0NL15			150	19						
	○*	VPNR8.0NL15										
M10x1.5	○	VPOR010OL15	5P	P3	150	23	-	7	5.5	8	3	e
	○*	VPNR010OL15										
M10x1.25	△	VPOR010NL15	5P	P3	150	23	-	7	5.5	8	3	e
	△*	VPNR010NL15										
M12x1.75	○	VPOS012PL15	5P	P4	150	26	-	8.5	6.5	9	3	e
	○*	VPNS012PL15										
M12x1.5	△	VPOR012OL15	5P	P3	150	26	-	8.5	6.5	9	3	e
	△*	VPNR012OL15										
M12x1.25	△	VPOS012NL15	5P	P4	150	26	-	8.5	6.5	9	3	e
	△*	VPNS012NL15										

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

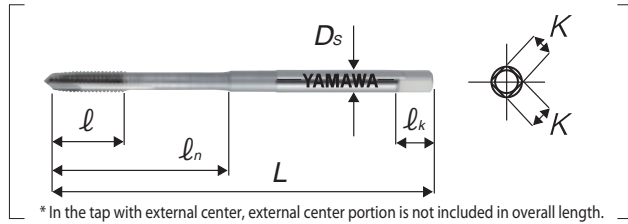
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-PO-K

Long Shank Spiral Pointed Taps with Neck



Segment : 1E



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	5P	P2	100	9	28	4	3.2	6	3	c
	△*	-				11						
M4×0.7	△	-	5P	P2	100	11	31	5	4	7	3	c
	△*	-				13						
M5×0.8	△	-	5P	P2	100	13	38	5.5	4.5	7	3	c
	△*	-				16						
M6×1	△	-	5P	P2	100	15	45	6	4.5	7	3	c
	△*	-				19						

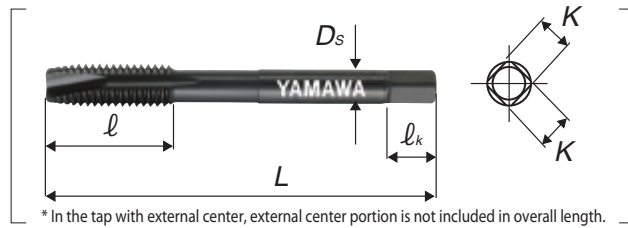
The products having *mark in the stock column will be available as long as they last.

SU+PO/SU-PO

Spiral Pointed Taps for Stainless Steels



Segment : 1E



Suitable for stainless steels tending to work harden as well as chrome steels and molybdenum steels.

 Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1.4×0.3	△	PUPP1.4C	5P	P1	36	5.4	-	3	2.5	5	2	a
	△*	PUP1.4C				8						p
M1.6×0.35	△	PUPQ1.6D	5P	P2	36	6.3	-	3	2.5	5	2	b
	△*	PUQ1.6D				8						p
M1.7×0.35	△	PUPQ1.7D	5P	P2	36	6.3	-	3	2.5	5	2	b
	△*	PUQ1.7D				8						p
M2×0.4	◎	PUPQ2.0E	5P	P2	42	7.2	12	3	2.5	5	2	c
	◎*	PUQ2.0E				9.5						
	△	PUPR2.0E		P3		7.2	12					
	△*	PUR2.0E				9.5						
M2.3×0.4	○	PUPQ2.3E	5P	P2	42	7.2	12	3	2.5	5	2	c
	○*	PUQ2.3E				9.5						
	△	PUPR2.3E		P3		7.2	12					
M2.5×0.45	○	PUPQ2.5F	5P		P2	46		8.1	14	3	2.5	5

The products having *mark in the stock column will be available as long as they last.

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M2.5×0.45	○*	PUQ2.5F	5P	P2	44	9.5	16	3	2.5	5	2	c	
	△	PUPR2.5F		P3	46	8.1	14						
	△*	PUR2.5F		P3	44	9.5	16						
M2.6×0.45	○	PUPQ2.6F	5P	P2	46	8.1	14	3	2.5	5	2	c	
	○*	PUQ2.6F		P2	44	9.5	16						
	△	PUPR2.6F		P3	46	8.1	14						
M3×0.5	△*	PUR2.6F	5P	P3	44	9.5	16	4	3.2	6	3	c	
	◎	PUMQ3.0G		P2	46	9	14						
	◎*	PUQ3.0G		P2		11	18						
M3×0.5	△	PUMR3.0G	5P	P3		9	14	4	3.2	6	3	c	
	△*	PUR3.0G		P3	11	18							
	△	PUMS3.0G		P4	9	14							
M3×0.5	△*	PUS3.0G	5P	P4	11	18	4	3.2	6	3	c		
	△	PUMQ3.0H		P2	46	9						14	
	△	PUMR3.0H		P2	52	11						16	
M3.5×0.6	○	PUMQ3.5H	5P	P2	48	13	20	5	4	7	3	c	
	○*	PUQ3.5H		P2	52	11	16						
M4×0.7	◎	PUMQ4.0I	5P	P2	52	11	17	5	4	7	3	c	
	◎*	PUQ4.0I		P2		13	20						
	△	PUMR4.0I		P3		11	17						
	△*	PUR4.0I		P3		13	20						
	△	PUMS4.0I		P4		11	17						
	△*	PUS4.0I		P4		13	20						
M4×0.75	△	PUMQ4.0J	5P	P2	52	11	17	5	4	7	3	c	
	◎	PUMQ5.0K		P2		13	22						
	◎*	PUQ5.0K		P2		16	25						
	△	PUMR5.0K		P3		13	22						
	△*	PUR5.0K		P3		16	25						
	△	PUMS5.0K		P4		13	22						
M5×0.8	△*	PUS5.0K	5P	P4	60	16	25	5.5	4.5	7	3	c	
	△	PUMQ5.0L		P2		60	13						22
	◎	PUMQ6.0M		P2		15	26						
	◎*	PUQ6.0M		P2		19	28						
	△	PUMR6.0M		P3		15	26						
	△*	PUR6.0M		P3		19	28						
M6×1	△	PUMS6.0M	5P	P4	62	15	26	6	4.5	7	3	c	
	△	PUMQ6.0J		P2		15	26						
	△*	PUQ6.0J		P2		19	28						
M6×0.75	△	PUMQ6.0J	5P	P2	62	15	26	6	4.5	7	3	c	
	△*	PUQ6.0J		P2		19	28						
M7×1	△	PUMQ7.0M	5P	P2	70	19	-	6.2	5	8	3	e	
	△*	PUQ7.0M		P2	65	19	-						
M8×1.25	◎	PUMR8.0N	5P	P3	70	19	-	6.2	5	8	3	e	
	◎*	PUR8.0N		P3		22	19						-

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M8×1.25	△	PUMS8.0N	5P	P4	70	19	-	6.2	5	8	3	e
	△*	PUS8.0N				22						
	△	PUMT8.0N		P5		19						
	△*	PUT8.0N				22						
M8×1	○	PUMR8.0M	5P	P3	70	19	-	6.2	5	8	3	e
	○*	PUR8.0M				22						
M10×1.5	◎	PUMR010O	5P	P3	75	23	-	7	5.5	8	3	e
	◎*	PUR010O				24						
	△	PUMS010O		P4		23						
	△*	PUS010O				24						
M10×1.25	○	PUMR010N	5P	P3	75	23	-	7	5.5	8	3	e
	○*	PUR010N				24						
	△	PUMS010N		P4		23						
	△*	PUS010N				24						
M10×1	△	PUMR010M	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PUR010M				24						
M12×1.75	◎	PUMS012P	5P	P4	82	26	-	8.5	6.5	9	3	e
	◎*	PUS012P				29						
	△	PUMT012P		P5		26						
	△*	PUT012P				29						
M12×1.5	△	PUMR012O	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PUR012O				29						
	△	PUMT012O		P5		26						
	△*	PUT012O				29						
M12×1.25	○	PUMS012N	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	PUS012N				29						
	△	PUMT012N		P5		26						
	△*	PUT012N				29						
M12×1	△	PUMR012M	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PUR012M				29						
M14×2	○	PUMS014Q	5P	P4	88	26	-	10.5	8	11	3	e
	○*	PUS014Q				30						
	△	PUMT014Q		P5		26						
	△*	PUT014Q				30						
M14×1.5	○	PUMR014O	5P	P3	88	26	-	10.5	8	11	3	e
	○*	PUR014O				30						
M16×2	○	PUMS016Q	5P	P4	95	26	-	12.5	10	13	3	e
	○*	PUS016Q				32						
	△	PUMT016Q		P5		26						
	△*	PUT016Q				32						
	△	PUMU016Q		P6		26						
	△*	PUU016Q				32						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M16×1.5	○	PUMR0160	5P	P3	95	26	-	12.5	10	13	3	e
	○*	PUR0160				32						
M16×1	△	PUMR016M	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PUR016M				32						
M18×2.5	△	PUMS018R	5P	P4	100	33	-	14	11	14	3	e
	△*	PUS018R				37						
	△	PUMT018R		P5		33						
	△*	PUT018R				37						
	△	PUMU018R		P6		33						
	△*	PUU018R				37						
M18×1.5	△	PUMS0180	5P	P4	100	33	-	14	11	14	3	e
	△*	PUS0180				37						
M20×2.5	○	PUMS020R	5P	P4	105	33	-	15	12	15	3	e
	○*	PUS020R				37						
	△	PUMT020R		P5		33						
	△*	PUT020R				37						
	△	PUMU020R		P6		33						
	△*	PUU020R				37						
M20×1.5	△	PUMS0200	5P	P4	105	33	-	15	12	15	3	e
	△*	PUS0200				37						
M22×2.5	△	PUMS022R	5P	P4	115	33	-	17	13	16	3	e
	△*	PUS022R				38						
	△	PUMT022R		P5		33						
	△*	PUT022R				38						
	△	PUMU022R		P6		33						
	△*	PUU022R				38						
M22×1.5	△	PUMS0220	5P	P4	115	33	-	17	13	16	3	e
	△*	PUS0220				38						
M24×3	○	PUMS024S	5P	P4	120	39	-	19	15	18	3	e
	○*	PUS024S				45						
	△	PUMT024S		P5		39						
	△*	PUT024S				45						
	△	PUMU024S		P6		39						
	△*	PUU024S				45						
M24×1.5	△	PUMS0240	5P	P4	120	39	-	19	15	18	3	e
	△*	PUS0240				45						
M27×3	△	PUMS027S	5P	P4	130	39	-	20	15	18	4	e
	△*	PUS027S				45						
M27×1.5	△	PUMS0270	5P	P4	130	39	-	20	15	18	4	e
	△*	PUS0270				45						
M30×3.5	△	PUMT030T	5P	P5	135	46	-	23	17	20	4	e
	△*	PUT030T				48						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M30×1.5	△	PUMS0300	5P	P4	135	46	-	23	17	20	4	e
	△*	PUS0300				45						
M33×3.5	△	PUT033T	5P	P5	145	51	-	25	19	22	4	e
M36×4	△	PUT036U	5P	P5	155	57	-	28	21	24	4	e
M39×4	△	PUT039U	5P	P5	165	60	-	30	23	26	4	e
M42×4.5	△	PUT042V	5P	P5	175	60	-	32	26	30	4	e
For Unified Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
No.2-56UNC	△	PUMPUN2E	5P	P1	42	8.1	12	3	2.5	5	2	c
	△*	PUPUN2E				9.5	15					
No.4-40UNC	△	PUMQUN4H	5P	P2	46	9	14	4	3.2	6	2	c
	△*	PUQUN4H				44	9.5					
No.4-48UNF	△	PUMPUN4F	5P	P1	46	9	14	4	3.2	6	2	c
	△*	PUPUN4F				44	9.5					
No.5-40UNC	△	PUMQUN5H	5P	P2	52	11	16	5	4	7	3	c
	△*	PUQUN5H					46					
No.5-44UNF	△	PUMPUN5G	5P	P1	52	11	16	5	4	7	3	c
	△*	PUPUN5G					46					
No.6-32UNC	△	PUMQUN6J	5P	P2	52	11	16	5	4	7	3	c
	△*	PUQUN6J				48	13					
No.6-40UNF	△	PUMQUN6H	5P	P2	52	11	16	5	4	7	3	c
	△*	PUQUN6H				48	13					
No.8-32UNC	△	PUMQUN8J	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PUQUN8J					52	5	4			
No.8-36UNF	△	PUMQUN8I	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PUQUN8I					52	5	4			
No.10-24UNC	△	PUMQUNAM	5P	P2	60	13	22	5.5	4.5	7	3	c
	△*	PUQUNAM				16	25					
No.10-32UNF	△	PUMQUNAJ	5P	P2	60	13	22	5.5	4.5	7	3	c
	△*	PUQUNAJ				16	25					
1/4-20UNC	△	PUMQU04N	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PUQU04N				19	30					
1/4-28UNF	△	PUMQU04K	5P	P2	62	15	26	6	4.5	7	3	c
	△*	PUQU04K				19	30					
5/16-18UNC	△	PUMRU05O	5P	P3	70	19	-	6.2	5	8	3	e
	△*	PURU05O				22	6.1					
5/16-24UNF	△	PUMQU05M	5P	P2	70	19	-	6.2	5	8	3	e
	△*	PUQU05M				22	6.1					
3/8-16UNC	△	PUMRU06P	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PURU06P				24	7					
3/8-24UNF	△	PUMQU06M	5P	P2	75	23	-	7	5.5	8	3	e

The products having *mark in the stock column will be available as long as they last.

SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
3/8-24UNF	△*	PUQU06M	5P	P2	75	24	-	7	5.5	8	3	e
7/16-14UNC	△	PUMRU07Q	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PURU07Q			80	25		8	6			
7/16-20UNF	△	PUMRU07N	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PURU07N			80	25		8	6			
1/2-13UNC	△	PUMRU08R	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PURU08R			85	29		9	7			
1/2-20UNF	△	PUMRU08N	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PURU08N			85	29		9	7			
9/16-18UNF	△	PUMRU09O	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PURU09O			90	30		10.5	8			
5/8-11UNC	△	PUMRU10U	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PURU10U			32	12		9	12			
For Whitworth Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
3/16W24	△	PUMQW03M	5P	P2	60	13	21	5.5	4.5	7	3	c
	△*	PUQW03M				16	25					
1/4W20	△	PUMRW04N	5P	P3	62	15	26	6	4.5	7	3	c
	△*	PURW04N				19	30					
5/16W18	△	PUMRW05O	5P	P3	70	19	-	6.2	5	8	3	e
	△*	PURW05O				22	6.1					
3/8W16	△	PUMRW06P	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PURW06P				24						
7/16W14	△	PUMRW07Q	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PURW07Q			80	25		8	6			
1/2W12	△	PUMRW08S	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PURW08S			85	29		9	7			
5/8W11	△	PUMRW10U	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PURW10U				32		12	9			
3/4W10	△	PUMSW12V	5P	P4	105	33	-	15	12	15	3	e
	△*	PUSW12V				37		14	11			

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)Spiral Fluted Taps
(for through hole)Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

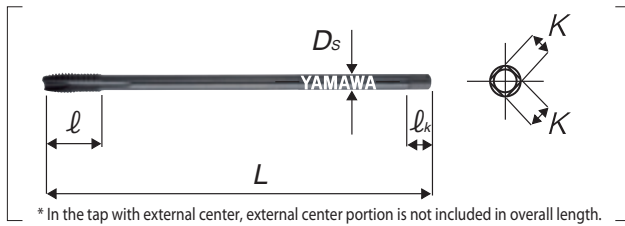
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-SU-S-PO

Long Shank Short Spiral Pointed Taps for Stainless Steels



Segment : 1E



* In the tap with external center, external center portion is not included in overall length.

Suitable for stainless steels tending to work harden as well as chrome steels and molybdenum steels.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type		
For Metric Threads														
M3x0.5	△	-	5P	P2	100	5	28	4	3.2	6	3	d		
M4x0.7	△	-	5P	P2	100	7	31	5	4	7	3	d		
	△	-			150									
M5x0.8	△	-	5P	P2	100	9	38	5.5	4.5	7	3	d		
	△*	-										25	c	
	△	-										150	38	d
	△*	-											25	c
M6x1	△	-	5P	P2	100	11	45	6	4.5	7	3	d		
	△*	-					28					c		
	△	-					150					45	d	
	△*	-										28	c	
M8x1.25	△	-	5P	P3	100	12	-	6.2	5	8	3	e-1		
	△*	-			150							e		
	△	-										e-1		
	△*	-										e		
M10x1.5	△	-	5P	P3	100	13	-	7	5.5	8	3	e-1		
	△*	-			150							e		
	△	-										e-1		
	△*	-										e		
M12x1.75	△	-	5P	P4	150	15	-	8.5	6.5	9	3	e-1		
	△*	-										e		
M16x2	△	-	5P	P4	150	18	-	12.5	10	13	3	e-1		
	△*	-										e		
M20x2.5	△	-	5P	P4	150	20	-	15	12	15	3	e-1		
	△*	-										e		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

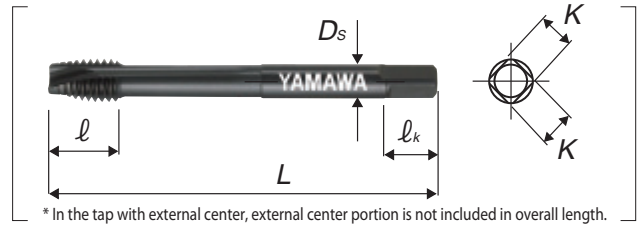
Centering Tools

S-PO

Short Spiral Pointed Taps for Deep Hole Use



Segment : 1E



Suitable for such deep holes as are deeper than 2.5 times of the nominal dia. Short thread portion reduces friction and makes smooth the coolant supply.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M2×0.4	○	PSMQ2.0E	5P	P2	42	4	12	3	2.5	5	2	d
	○*	PSQ2.0E					15					c
M2.3×0.4	△	PSMQ2.3E	5P	P2	42	4	12	3	2.5	5	2	d
	△*	PSQ2.3E					15					c
M2.5×0.45	△	PSMQ2.5F	5P	P2	46	4	14	3	2.5	5	2	d
	△*	PSQ2.5F			44		16					c
M2.6×0.45	△	PSMQ2.6F	5P	P2	46	4	14	3	2.5	5	2	d
	△*	PSQ2.6F			44		16					c
M3×0.5	○	PSMQ3.0G	5P	P2	46	5	14	4	3.2	6	3	d
	○*	PSQ3.0G					18					c
M3.5×0.6	△	PSMQ3.5H	5P	P2	52	7	16	5	4	7	3	d
	△*	PSQ3.5H			48		20					4
M4×0.7	○	PSMQ4.0I	5P	P2	52	7	17	5	4	7	3	d
	○*	PSQ4.0I					20					c
M5×0.8	○	PSMQ5.0K	5P	P2	60	9	22	5.5	4.5	7	3	d
	○*	PSQ5.0K					25					c
M6×1	○	PSMQ6.0M	5P	P2	62	11	26	6	4.5	7	3	d
	○*	PSQ6.0M					28					c
M8×1.25	○	PSMR8.0N	5P	P3	70	12	-	6.2	5	8	3	e-1
	○*	PSR8.0N					e					
M8×1	△	PSMR8.0M	5P	P3	70	12	-	6.2	5	8	3	e-1
	△*	PSR8.0M					e					
M10×1.5	○	PSMR010O	5P	P3	75	13	-	7	5.5	8	3	e-1
	○*	PSR010O					e					
M10×1.25	△	PSMR010N	5P	P3	75	13	-	7	5.5	8	3	e-1
	△*	PSR010N				12						e
M10×1	○	PSMR010M	5P	P3	75	13	-	7	5.5	8	3	e-1
	○*	PSR010M				12						e
M12×1.75	○	PSMS012P	5P	P4	82	15	-	8.5	6.5	9	3	e-1
	○*	PSS012P					e					
M12×1.5	△	PSMR012O	5P	P3	82	15	-	8.5	6.5	9	3	e-1
	△*	PSR012O				14						e
M12×1.25	○	PSMS012N	5P	P4	82	15	-	8.5	6.5	9	3	e-1
	○*	PSS012N				14						e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

S-PO Short Spiral Pointed Taps for Deep Hole Use

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1	△	PSMR012M	5P	P3	82	15	-	8.5	6.5	9	3	e-1
	△*	PSR012M				14						e
M14x2	○	PSMS014Q	5P	P4	88	18	-	10.5	8	11	3	e-1
	○*	PSS014Q										e
M14x1.5	○	PSMR014O	5P	P3	88	14	-	10.5	8	11	3	e-1
	○*	PSR014O										e
M16x2	○	PSMS016Q	5P	P4	95	18	-	12.5	10	13	3	e-1
	○*	PSS016Q										e
M16x1.5	△	PSMR016O	5P	P3	95	14	-	12.5	10	13	3	e-1
	△*	PSR016O										e
M18x2.5	△	PSMS018R	5P	P4	100	20	-	14	11	14	3	e-1
	△*	PSS018R										e
M18x1.5	△	PSMS018O	5P	P4	100	14	-	14	11	14	3	e-1
	△*	PSS018O										e
M20x2.5	○	PSMS020R	5P	P4	105	20	-	15	12	15	3	e-1
	○*	PSS020R										e
M20x1.5	△	PSMS020O	5P	P4	105	14	-	15	12	15	3	e-1
	△*	PSS020O										e
M22x2.5	△	PSMS022R	5P	P4	115	20	-	17	13	16	3	e-1
	△*	PSS022R										e
M22x1.5	△	PSMS022O	5P	P4	115	14	-	17	13	16	3	e-1
	△*	PSS022O										e
M24x3	△	PSMS024S	5P	P4	120	25	-	19	15	18	3	e-1
	△*	PSS024S										e
M24x1.5	△	PSMS024O	5P	P4	120	18	-	19	15	18	3	e-1
	△*	PSS024O										e
M27x3	△	PSMS027S	5P	P4	130	25	-	20	15	18	4	e-1
	△*	PSS027S										e
M27x1.5	△	PSMS027O	5P	P4	130	20	-	20	15	18	4	e-1
	△*	PSS027O										e
M30x3.5	△	PSMT030T	5P	P5	135	30	-	23	17	20	4	e-1
	△*	PST030T										e
M30x1.5	△	PSMS030O	5P	P4	135	20	-	23	17	20	4	e-1
	△*	PSS030O										e
M33x3.5	△	PST033T	5P	P5	145	30	-	25	19	22	4	e
M36x4	△	PST036U	5P	P5	155	40	-	28	21	24	4	e
M39x4	△	PST039U	5P	P5	165	40	-	30	23	26	4	e
M42x4.5	△	PST042V	5P	P5	175	40	-	32	26	30	4	e

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

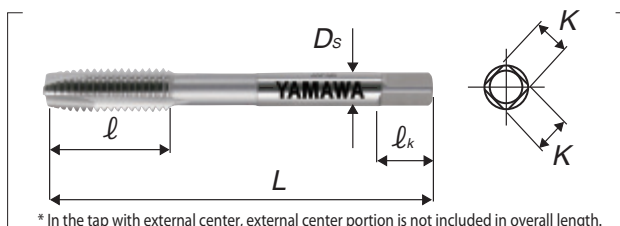
Centering Tools

HC+PO/HC-PO

Spiral Pointed Taps for High Carbon Steels



Segment : 1E



Suitable for high carbon steels such as S55C.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M1.4×0.3	○	PCPP1.4C	5P	P1	36	5.4	-	3	2.5	5	2	a
	○*	PCP1.4C				8						p
M1.6×0.35	○	PCPQ1.6D	5P	P2	36	6.3	-	3	2.5	5	2	b
	○*	PCQ1.6D				8						p
M1.7×0.35	○	PCPQ1.7D	5P	P2	36	6.3	-	3	2.5	5	2	b
	○*	PCQ1.7D				8						p
M2×0.4	○	PCPQ2.0E	5P	P2	42	7.2	12	3	2.5	5	2	c
	○*	PCQ2.0E				9.5						15
M2.5×0.45	○	PCPQ2.5F	5P	P2	46	8.1	14	3	2.5	5	2	c
	○*	PCQ2.5F			44	9.5						16
M2.6×0.45	○	PCPQ2.6F	5P	P2	46	8.1	14	3	2.5	5	2	c
	○*	PCQ2.6F			44	9.5						16
M3×0.5	○	PCM3.0G	5P	P2	46	9	14	4	3.2	6	3	c
	○*	PCQ3.0G				11						18
M4×0.7	○	PCM4.0I	5P	P2	52	11	17	5	4	7	3	c
	○*	PCQ4.0I				13						20
M5×0.8	○	PCM5.0K	5P	P2	60	13	22	5.5	4.5	7	3	c
	○*	PCQ5.0K				16						25
M6×1	○	PCM6.0M	5P	P2	62	15	26	6	4.5	7	3	c
	○*	PCQ6.0M				19						28
M8×1.25	○	PCMR8.0N	5P	P3	70	19	-	6.2	5	8	3	e
	○*	PCR8.0N				22						
M10×1.5	○	PCMR010O	5P	P3	75	23	-	7	5.5	8	3	e
	○*	PCR010O				24						
M10×1.25	△	PCMR010N	5P	P3	75	23	-	7	5.5	8	3	e
	△*	PCR010N				24						
M12×1.75	○	PCMS012P	5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	PCS012P				29						
M12×1.5	△	PCMR012O	5P	P3	82	26	-	8.5	6.5	9	3	e
	△*	PCR012O				29						
M12×1.25	△	PCMS012N	5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	PCS012N				29						
M14×2	△	PCMS014Q	5P	P4	88	26	-	10.5	8	11	3	e
	△*	PCS014Q				30						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HC+PO/HC-PO Spiral Pointed Taps for High Carbon Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M14×1.5	△	PCMR014O	5P	P3	88	26	-	10.5	8	11	3	e
	△*	PCR014O				30						
M16×2	△	PCMS016Q	5P	P4	95	26	-	12.5	10	13	3	e
	△*	PCS016Q				32						
M16×1.5	△	PCMR016O	5P	P3	95	26	-	12.5	10	13	3	e
	△*	PCR016O				32						
M18×2.5	△	PCMS018R	5P	P4	100	33	-	14	11	14	3	e
	△*	PCS018R				37						
M18×1.5	△	PCMS018O	5P	P4	100	33	-	14	11	14	3	e
	△*	PCS018O				37						
M20×2.5	△	PCMS020R	5P	P4	105	33	-	15	12	15	3	e
	△*	PCS020R				37						
M20×1.5	△	PCMS020O	5P	P4	105	33	-	15	12	15	3	e
	△*	PCS020O				37						
M22×2.5	△	PCMS022R	5P	P4	115	33	-	17	13	16	3	e
	△*	PCS022R				38						
M24×3	△	PCMS024S	5P	P4	120	39	-	19	15	18	3	e
	△*	PCS024S				45						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

PO STI(N-PO STI)

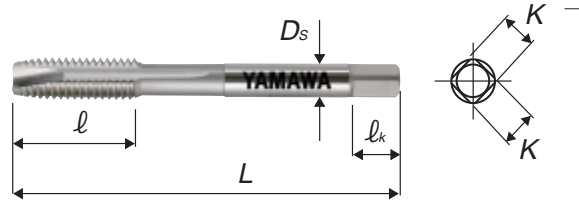
Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts

HSS



Segment : 1E

N-PO STI is available as long as it lasts. PO STI takes the place of N-PO STI.



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads													
M3×0.5	△	-	5P	3.650	1b	52	7.5	17	5	4	7	3	c
	△*	-					13	21					
M4×0.7	△	-	5P	4.909	1b	60	13	22	5.5	4.5	7	3	c
	△*	-					16	25					
M5×0.8	△	-	5P	6.039	1b	62	15	26	6	4.5	7	3	c
	△*	-					19	30					
M6×1	△	-	5P	7.299	1b	70	19	-	6.2	5	8	3	e
	△*	-					22	-					
M8×1.25	△	-	5P	9.624	1b	75	23	-	7	5.5	8	3	e
	△*	-					24	-					
M10×1.5	△	-	5P	11.948	1b	82	26	-	8.5	6.5	9	3	e
	△*	-					29	-					
M12×1.75	△	-	5P	14.273	1b	95	26	-	12.5	10	13	3	e
	△*	-					30	-					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

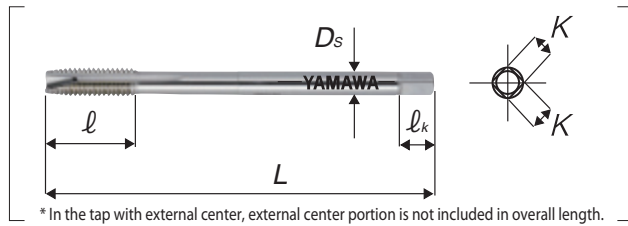
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

MC-PO

Spiral Pointed Taps with Internal Coolant



Segment : 1E



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6×1	△	MPHQ6.0ML10	5P	P2	100	19	28	6	4.5	7	3	c
	△	MPHQ6.0ML15			150							
M8×1.25	△	MPHR8.0NL10	5P	P3	100	22	-	6.2	5	8	3	e
	△	MPHR8.0NL15			150							
M10×1.5	△	MPHR010OL10	5P	P3	100	24	-	7	5.5	8	3	e
	△	MPHR010OL15			150							
M10×1.25	△	MPHR010NL15	5P	P3	150	24	-	7	5.5	8	3	e
M12×1.75	△	MPHS012PL10	5P	P4	100	29	-	8.5	6.5	9	3	e
	△	MPHS012PL15			150							
M12×1.5	△	MPHR012OL10	5P	P3	100	29	-	8.5	6.5	9	3	e
	△	MPHR012OL15			150							
M12×1.25	△	MPHS012NL10	5P	P4	100	29	-	8.5	6.5	9	3	e
	△	MPHS012NL15			150							
M14×2	△	MPHS014QL15	5P	P4	150	30	-	10.5	8	11	3	e
M14×1.5	△	MPHR014OL15	5P	P3	150	30	-	10.5	8	11	3	e
M16×2	△	MPHS016QL15	5P	P4	150	32	-	12.5	10	13	3	e
M16×1.5	△	MPHR016OL15	5P	P3	150	32	-	12.5	10	13	3	e
M18×2.5	△	MPHS018RL15	5P	P4	150	37	-	14	11	14	3	e
M18×1.5	△	MPHS018OL15	5P	P4	150	37	-	14	11	14	3	e
M20×2.5	△	MPHS020RL15	5P	P4	150	37	-	15	12	15	3	e
M20×1.5	△	MPHS020OL15	5P	P4	150	37	-	15	12	15	3	e
M22×2.5	△	MPHS022RL15	5P	P4	150	38	-	17	13	16	3	e
M24×3	△	MPHS024SL15	5P	P4	150	45	-	19	15	18	3	e

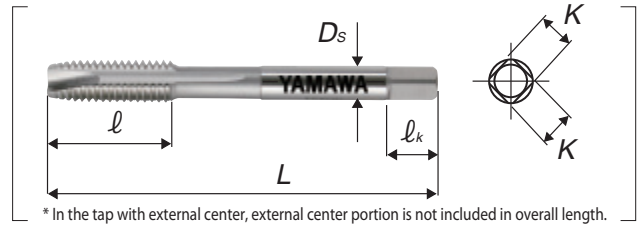
Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

EH-PO

Spiral Pointed Taps for Hard-to-Machine Materials



Segment : 1F



EH-PO is suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels, alloy steels and die steels.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	EPHMR3.0G	4.5P	P3	46	9	14	4	3.2	6	3	c
	○*	EPHR3.0G				11	18					
M4×0.7	○	EPHMR4.0I	4.5P	P3	52	11	17	5	4	7	3	c
	○*	EPHR4.0I				13	20					
M5×0.8	○	EPHMR5.0K	4.5P	P3	60	13	22	5.5	4.5	7	3	c
	○*	EPHR5.0K				16	25					
M6×1	○	EPHMR6.0M	4.5P	P3	62	15	26	6	4.5	7	3	c
	○*	EPHR6.0M				19	28					
M8×1.25	○	EPHMS8.0N	4.5P	P4	70	19	-	6.2	5	8	3	e
	○*	EPHS8.0N				22						
M10×1.5	○	EPHMS010O	4.5P	P4	75	23	-	7	5.5	8	3	e
	○*	EPHS010O				24						
M10×1.25	○	EPHMS010N	4.5P	P4	75	23	-	7	5.5	8	3	e
	○*	EPHS010N				24						
M12×1.75	○	EPHMS012P	4.5P	P4	82	26	-	8.5	6.5	9	3	e
	○*	EPHS012P				29						
M12×1.5	△	EPHMS012O	4.5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	EPHS012O				29						
M12×1.25	△	EPHMS012N	4.5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	EPHS012N				29						
M14×2	△	EPHMT014Q	4.5P	P5	88	26	-	10.5	8	11	3	e
	△*	EPHT014Q				30						
M14×1.5	○	EPHMS014O	4.5P	P4	88	26	-	10.5	8	11	3	e
	○*	EPHS014O				30						
M16×2	○	EPHMT016Q	4.5P	P5	95	26	-	12.5	10	13	3	e
	○*	EPHT016Q				32						
M16×1.5	△	EPHMS016O	4.5P	P4	95	26	-	12.5	10	13	3	e
	△*	EPHS016O				32						
M18×2.5	△	EPHMT018R	4.5P	P5	100	33	-	14	11	14	3	e
	△*	EPHT018R				37						
M18×1.5	△	EPHMS018O	4.5P	P4	100	33	-	14	11	14	3	e
	△*	EPHS018O				37						
M20×2.5	△	EPHMT020R	4.5P	P5	105	33	-	15	12	15	3	e
	△*	EPHT020R				37						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Spiral Pointed Taps | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps (Simple measuring tools) | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

EH-PO Spiral Pointed Taps for Hard-to-Machine Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M20×1.5	△	EPHMS0200	4.5P	P4	105	33	-	15	12	15	3	e
	△*	EPHS0200				37						
M22×2.5	△	EPHMT022R	4.5P	P5	115	33	-	17	13	16	3	e
	△*	EPHT022R				38						
M22×1.5	△	EPHMS0220	4.5P	P4	115	33	-	17	13	16	3	e
	△*	EPHS0220				38						
M24×3	△	EPHMT024S	4.5P	P5	120	39	-	19	15	18	3	e
	△*	EPHT024S				45						
M24×1.5	△	EPHMS0240	4.5P	P4	120	39	-	19	15	18	3	e
	△*	EPHS0240				45						

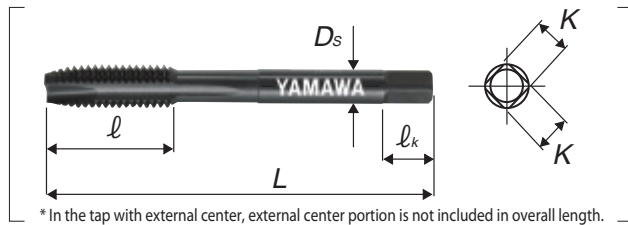
The products having *mark in the stock column will be available as long as they last.

ZEN-P

Spiral Pointed Taps for Nickel Base Alloys



Segment : 1F



* In the tap with external center, external center portion is not included in overall length.

ZEN-P is the tap for nickel base alloys which, with nickel as main composition, have higher corrosion resistance and higher heat resistance than steels.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	ZENPMR3.0G	4.5P	P3	46	9	14	4	3.2	6	3	c
	○*	ZENPR3.0G				11	18					
M4×0.7	○	ZENPMR4.0I	4.5P	P3	52	11	17	5	4	7	3	c
	○*	ZENPR4.0I				13	20					
M5×0.8	○	ZENPMR5.0K	4.5P	P3	60	13	22	5.5	4.5	7	3	c
	○*	ZENPR5.0K				16	25					
M6×1	○	ZENPMR6.0M	4.5P	P3	62	15	26	6	4.5	7	3	c
	○*	ZENPR6.0M				19	28					
M8×1.25	○	ZENPMS8.0N	4.5P	P4	70	19	-	6.2	5	8	3	e
	○*	ZENPS8.0N				22						
M10×1.5	○	ZENPMS0100	4.5P	P4	75	23	-	7	5.5	8	3	e
	○*	ZENPS0100				24						
M10×1.25	△	ZENPMS010N	4.5P	P4	75	23	-	7	5.5	8	3	e
	△*	ZENPS010N				24						
M12×1.75	○	ZENPMT012P	4.5P	P5	82	26	-	8.5	6.5	9	3	e
	○*	ZENPT012P				29						
M12×1.5	△	ZENPMS0120	4.5P	P4	82	26	-	8.5	6.5	9	3	e
	△*	ZENPS0120				29						
M12×1.25	△	ZENPMT012N	4.5P	P5	82	26	-	8.5	6.5	9	3	e

The products having *mark in the stock column will be available as long as they last.

ZEN-P Spiral Pointed Taps for Nickel Base Alloys

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M12×1.25	△*	ZENPT012N	4.5P	P5	82	29	-	8.5	6.5	9	3	e
M14×2	△	ZENPMT014Q	4.5P	P5	88	26	-	10.5	8	11	3	e
	△*	ZENPT014Q				30						
M14×1.5	△	ZENPMS014O	4.5P	P4	88	26	-	10.5	8	11	3	e
	△*	ZENPS014O				30						
M16×2	△	ZENPMT016Q	4.5P	P5	95	26	-	12.5	10	13	3	e
	△*	ZENPT016Q				32						
M16×1.5	△	ZENPMS016O	4.5P	P4	95	26	-	12.5	10	13	3	e
	△*	ZENPS016O				32						
M18×2.5	△	ZENPMT018R	4.5P	P5	100	33	-	14	11	14	3	e
	△*	ZENPT018R				37						
M20×2.5	△	ZENPMT020R	4.5P	P5	105	33	-	15	12	15	3	e
	△*	ZENPT020R				37						
M20×1.5	△	ZENPMT020O	4.5P	P5	105	33	-	15	12	15	3	e
	△*	ZENPT020O				37						

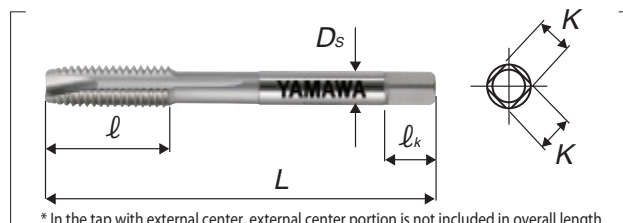
The products having *mark in the stock column will be available as long as they last.

PM-PO

Spiral Pointed Taps for Hard-to-Machine Materials



Segment : 1E



Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	5.5P	P3	46	9	14	4	3.2	6	3	c
	△*	-				11	18					
M4×0.7	△	-	5.5P	P3	52	11	17	5	4	7	3	c
	△*	-				13	20					
M5×0.8	△	-	5.5P	P3	60	13	22	5.5	4.5	7	3	c
	△*	-				16	25					
M6×1	△	-	5.5P	P3	62	15	26	6	4.5	7	3	c
	△*	-				19	28					
M8×1.25	△	-	5.5P	P4	70	19	-	6.2	5	8	3	e
	△*	-				22						
M10×1.5	△	-	5.5P	P4	75	23	-	7	5.5	8	3	e
	△*	-				24						
M10×1.25	△	-	5.5P	P4	75	23	-	7	5.5	8	3	e
	△*	-				24						
M12×1.75	△	-	5.5P	P4	82	26	-	8.5	6.5	9	3	e

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PM-PO Spiral Pointed Taps for Hard-to-Machine Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.75	△*	-	5.5P	P4	82	29	-	8.5	6.5	9	3	e

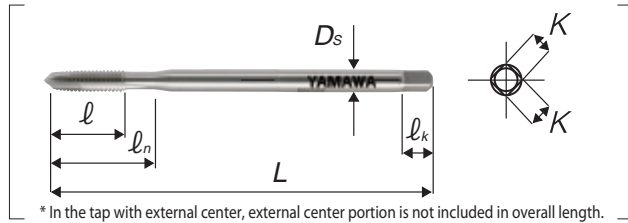
The products having *mark in the stock column will be available as long as they last.

LS-PM-PO

Long Shank Spiral Pointed Taps for Hard-to-Machine Materials



Segment : 1E



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M4x0.7	△	-	5.5P	P3	100	11	17	5	4	7	3	c
	△*	-				13	20					
M5x0.8	△	-	5.5P	P3	100	13	22	5.5	4.5	7	3	c
	△*	-				16	25					
M6x1	△	-	5.5P	P3	100	15	26	6	4.5	7	3	c
	△*	-				19	28					
M8x1.25	△	-	5.5P	P4	100	19	-	6.2	5	8	3	e
	△*	-				22	-					

The products having *mark in the stock column will be available as long as they last.

Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Hand Tap Series



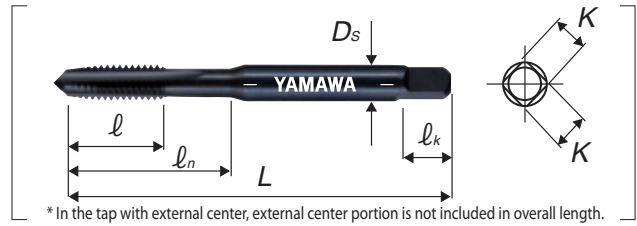
IHT	HT-1
HT-Y	HT-2
HT	HT-2
HT(LH)	HT-40
LS-HT	HT-47
LS-HT(LH)	HT-65
LS-HT-V	HT-68
SU-HT	HT-70
FC-O	HT-77
LA-O	HT-80
AXE-HT	HT-83
MG-HT	HT-84
STI-HT	HT-85
PL-1	HT-89
MC-HT	HT-90
EH-HT	HT-93

IHT

I Series Hand Taps



Segment : 1A



IHT is suitable for tapping general fasteners made from thin steel sheets such as SPC and SPH, and such soft steels lower than SS400 and S20C.

Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Metric Threads											
M3×0.5	◎	HI73.0G5	5P	46	9	14	4	3.2	6	3	c
	○	HI73.0G2	2P								
M4×0.7	◎	HI74.0I5	5P	52	11	17	5	4	7	3	c
	○	HI74.0I2	2P								
M5×0.8	◎	HI75.0K5	5P	60	13	22	5.5	4.5	7	3	c
	○	HI75.0K2	2P								
M6×1	◎	HI76.0M5	5P	62	15	26	6	4.5	7	3	c
	○	HI76.0M2	2P								
M8×1.25	◎	HI78.0N5	5P	70	19	-	6.2	5	8	3	e
	○	HI78.0N2	2P								
M10×1.5	◎	HI7010O5	5P	75	23	-	7	5.5	8	4	e
	○	HI7010O2	2P								

Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Spiral Pointed Taps | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps (Simple measuring tools) | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT-Y

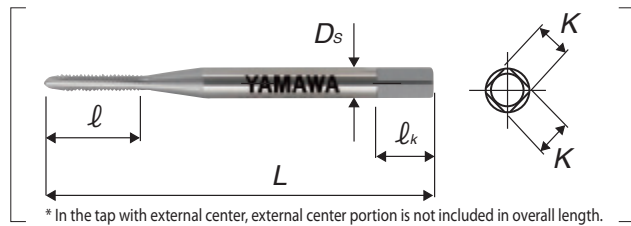
Hand Taps for Thin Soft Structural Steel Sheets



HT-Y are available while supplies last.

HT-Y is suitable for tapping general fasteners made from thin sheet sheets such as SPC and SPH, and such soft steels lower than SS400 and S20C.

Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1.4x0.3	○*	TY51.4C5	5P	5HX	34	7	-	3	2.5	5	3	p
	○*	TY51.4C1	1.5P									
M1.6x0.35	○*	TY61.6D5	5P	6HX	36	8	-	3	2.5	5	3	p
	○*	TY61.6D1	1.5P									
M1.7x0.35	○*	TY61.7D5	5P	6HX	36	8	-	3	2.5	5	3	p
	○*	TY61.7D1	1.5P									
M2x0.4	○*	TY62.0E5	5P	6HX	40	8	-	3	2.5	5	3	p
	○*	TY62.0E1	1.5P									
M2.3x0.4	○*	TY62.3E5	5P	6HX	42	9.5	-	3	2.5	5	3	p
	○*	TY62.3E1	1.5P									
M2.5x0.45	○*	TY62.5F5	5P	6HX	44	9.5	-	3	2.5	5	3	p
	○*	TY62.5F1	1.5P									
M2.6x0.45	○*	TY62.6F5	5P	6HX	44	9.5	-	3	2.5	5	3	p
	○*	TY62.6F1	1.5P									

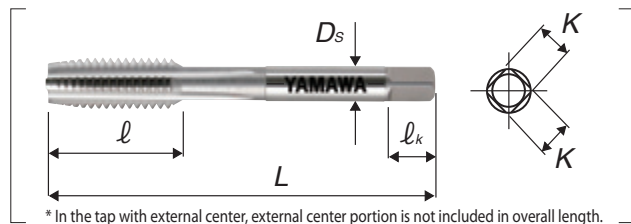
The products having *mark in the stock column will be available as long as they last.

HT

Hand Taps



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1x0.25	○*	TNMP1.0B9	9P	P1	36	4.5	-	3	2.5	5	3	a
	○*	TNP1.0B9										p
	○	TNMP1.0B5	5P									a
	○*	TNP1.0B5										p
	○	TNMP1.0B1	1.5P									a
	○*	TNP1.0B1										p
M1x0.2	△*	TNMP1.0A9	9P	P1	36	3.6	-	3	2.5	5	3	a

The products having *mark in the stock column will be available as long as they last.

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type						
M1.0x0.2	△*	TNP1.0A9	9P	P1	32	5.5	-	3	2.5	5	3	p						
	△	TNMP1.0A5	5P		36	3.6						a						
	△*	TNP1.0A5	1.5P		32	5.5						p						
	△	TNMP1.0A1			36	3.6						a						
	△*	TNP1.0A1	32		5.5	p												
M1.1x0.25	○*	TNMP1.1B9	9P	P1	36	4.5	-	3	2.5	5	3	a						
	○*	TNP1.1B9			32	5.5						p						
	○	TNMP1.1B5	5P		36	4.5						a						
	○*	TNP1.1B5			32	5.5						p						
	○	TNMP1.1B1	1.5P		36	4.5						a						
	○*	TNP1.1B1			32	5.5						p						
M1.1x0.2	△*	TNMP1.1A9	9P	P1	36	3.6	-	3	2.5	5	3	a						
	△	TNMP1.1A5	5P															
	△	TNMP1.1A1	1.5P															
M1.2x0.25	○*	TNMP1.2B9	9P	P1	36	4.5	-	3	2.5	5	3	a						
	○*	TNP1.2B9			32	5.5						p						
	○	TNMP1.2B5	5P		36	4.5						a						
	○*	TNP1.2B5			32	5.5						p						
	○	TNMP1.2B1	1.5P		36	4.5						a						
	○*	TNP1.2B1			32	5.5						p						
	△*	TNMR1.2B9	9P		P3	36						4.5	-	3	2.5	5	3	a
	△	TNMR1.2B5	5P															a
△	TNMR1.2B1	1.5P	a															
M1.2x0.2	△*	TNMP1.2A9	9P	P1	36	3.6	-	3	2.5	5	3	a						
	△*	TNP1.2A9			32	5.5						p						
	△	TNMP1.2A5	5P		36	3.6						a						
	△*	TNP1.2A5			32	5.5						p						
	△	TNMP1.2A1	1.5P		36	3.6						a						
	△*	TNP1.2A1			32	5.5						p						
M1.4x0.3	◎*	TNMP1.4C9	9P	P1	36	5.4	-	3	2.5	5	3	a						
	◎*	TNP1.4C9				8						p						
	◎	TNMP1.4C5	5P			5.4						a						
	◎*	TNP1.4C5				8						p						
	◎	TNMP1.4C1	1.5P			5.4						a						
	◎*	TNP1.4C1				8						p						
	△*	TNMR1.4C9	9P			P3						5.4	a					
	△*	TNR1.4C9										8	p					
	△	TNMR1.4C5	5P									5.4	a					
	△*	TNR1.4C5										8	p					
	△	TNMR1.4C1	1.5P									5.4	a					
△*	TNR1.4C1	8		p														
M1.4x0.2	△*	TNMP1.4A9	9P	P1	36		3.6	-	3	2.5	5	3	a					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M1.4x0.2	△*	TNP1.4A9	9P	P1	36	5.5	-	3	2.5	5	3	p
	△	TNMP1.4A5	5P			a						
	△*	TNP1.4A5	1.5P			p						
	△	TNMP1.4A1				a						
	△*	TNP1.4A1				p						
M1.6x0.35	◎*	TNMQ1.6D9	9P	P2	36	6.3	-	3	2.5	5	3	b
	◎*	TNQ1.6D9	8			p						
	◎	TNMQ1.6D5	5P			b						
	◎*	TNQ1.6D5	8			p						
	◎	TNMQ1.6D1	1.5P			b						
	◎*	TNQ1.6D1				8						p
M1.6x0.2	△*	TNMP1.6A9	9P	P1	36	3.6	-	3	2.5	5	3	b
	△*	TNP1.6A9	5P			p						
	△	TNMP1.6A5	1.5P			b						
	△*	TNP1.6A5				p						
	△	TNMP1.6A1				b						
	△*	TNP1.6A1	5.5			p						
M1.7x0.35	◎*	TNMP1.7D9	9P	P3	36	6.3	-	3	2.5	5	3	b
	◎*	TNP1.7D9	8			p						
	◎	TNMP1.7D5	5P			b						
	◎*	TNP1.7D5	8			p						
	◎	TNMP1.7D1	1.5P			b						
	◎*	TNP1.7D1				8						p
	△*	TNMR1.7D9	9P			b						
	△*	TNR1.7D9	8			p						
	△	TNMR1.7D5	5P			b						
	△*	TNR1.7D5	8			p						
	△	TNMR1.7D1	1.5P			b						
△*	TNR1.7D1	8		p								
M1.7x0.2	△*	TNMP1.7A9	9P	P1	36	3.6	-	3	2.5	5	3	b
	△*	TNP1.7A9	5P			p						
	△	TNMP1.7A5	1.5P			b						
	△*	TNP1.7A5				p						
	△	TNMP1.7A1				b						
	△*	TNP1.7A1	5.5			p						
M1.8x0.35	△*	TNMQ1.8D9	9P	P2	42	6.3	-	3	2.5	5	3	b
	△*	TNQ1.8D9	36		8	p						
	△	TNMQ1.8D5	42		6.3	b						
	△*	TNQ1.8D5	36		8	p						
	△	TNMQ1.8D1	1.5P		42	6.3						b
	△*	TNQ1.8D1			36	8						p
	M1.8x0.2	△*	TNMP1.8A9		9P	P1						42

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type					
M1.8×0.2	△*	TNP1.8A9	9P	P1	36	5.5						p					
	△	TNMP1.8A5	5P		42	3.6						b					
	△*	TNP1.8A5	1.5P		36	5.5						-	3	2.5	5	3	p
	△	TNMP1.8A1			42	3.6						b					
	△*	TNP1.8A1	36		5.5	p											
M2×0.4	◎*	TNMP2.0E9	9P	P3	42	7.2	12	3	2.5	5	3	c					
	◎*	TNP2.0E9	5P			9.5	15										
	◎	TNMP2.0E5				7.2	12										
	◎*	TNP2.0E5	1.5P			9.5	15										
	◎	TNMP2.0E1				7.2	12										
	◎*	TNP2.0E1				9.5	15										
	○*	TNMR2.0E9	9P			7.2	12										
	○*	TNR2.0E9	5P			9.5	15										
	○	TNMR2.0E5				7.2	12										
	○*	TNR2.0E5	1.5P			9.5	15										
	○	TNMR2.0E1				7.2	12										
	○*	TNR2.0E1				9.5	15										
	△*	TNMS2.0E9	9P			P4							7.2	12			
	△*	TNS2.0E9	5P										9.5	15			
	△	TNMS2.0E5											7.2	12			
△*	TNS2.0E5	1.5P	9.5	15													
△	TNMS2.0E1		7.2	12													
△*	TNS2.0E1	9.5	15														
M2×0.25	○*	TNMP2.0B9	9P	P1	42	4.5	12	3	2.5	5	3	c					
	○*	TNP2.0B9	5P			7	15										
	○	TNMP2.0B5				4.5	12										
	○*	TNP2.0B5	1.5P			7	15										
	○	TNMP2.0B1				4.5	12										
○*	TNP2.0B1	7	15														
M2.2×0.45	○*	TNMQ2.2F9	9P	P2	42	8.1	12	3	2.5	5	3	c					
	○*	TNQ2.2F9	5P			9.5	15										
	○	TNMQ2.2F5				8.1	12										
	○*	TNQ2.2F5	1.5P			9.5	15										
	○	TNMQ2.2F1				8.1	12										
	○*	TNQ2.2F1				9.5	15										
M2.2×0.25	△*	TNMP2.2B9	9P	P1	42	4.5	12	3	2.5	5	3	c					
	△*	TNP2.2B9	5P			7	15										
	△	TNMP2.2B5				4.5	12										
	△*	TNP2.2B5	1.5P			7	15										
	△	TNMP2.2B1				4.5	12										
	△*	TNP2.2B1	7			15											
M2.3×0.4	○*	TNMP2.3E9	9P	P1	42	7.2	12	3	2.5	5	3	c					

The products having *mark in the stock column will be available as long as they last.

Hand Taps

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M2.3x0.4	○*	TNP2.3E9	9P	P1	42	9.5	15	3	2.5	5	3	c
	○	TNMP2.3E5	5P			7.2	12					
	○*	TNP2.3E5	1.5P			9.5	15					
	○	TNMP2.3E1				7.2	12					
	○*	TNP2.3E1	9P	9.5		15						
	△*	TNMR2.3E9		7.2		12						
	△*	TNR2.3E9	5P	9.5		15						
	△	TNMR2.3E5		7.2		12						
	△*	TNR2.3E5	1.5P	9.5		15						
	△	TNMR2.3E1		7.2		12						
	△*	TNR2.3E1	P4	9.5		15						
	△*	TNMS2.3E9		9P		7.2	12					
	△	TNMS2.3E5		5P								
	△	TNMS2.3E1	1.5P									
M2.3x0.25	△*	TNMP2.3B9	9P	P1	42	4.5	12	3	2.5	5	3	c
	△*	TNP2.3B9	5P			7	15					
	△	TNMP2.3B5				4.5	12					
	△*	TNP2.3B5	1.5P			7	15					
	△	TNMP2.3B1				4.5	12					
	△*	TNP2.3B1	7			15						
M2.5x0.45	◎*	TNMQ2.5F9	9P	P2	46	8.1	14	3	2.5	5	3	c
	◎*	TNQ2.5F9	5P		44	9.5	16					
	◎	TNMQ2.5F5			46	8.1	14					
	◎*	TNQ2.5F5	44		9.5	16						
	◎	TNMQ2.5F1	1.5P	46	8.1	14						
	◎*	TNQ2.5F1		44	9.5	16						
	○*	TNMR2.5F9	9P	P3	46	8.1	14					
	○*	TNR2.5F9	5P		44	9.5	16					
	○	TNMR2.5F5			46	8.1	14					
	○*	TNR2.5F5	1.5P		44	9.5	16					
	○	TNMR2.5F1		46	8.1	14						
	○*	TNR2.5F1	44	9.5	16							
	△*	TNMS2.5F9	9P	P4	46	8.1	14					
	△	TNMS2.5F5	5P									
△	TNMS2.5F1	1.5P										
M2.5x0.35	△*	TNMQ2.5D9	9P	P2	46	6.3	14	3	2.5	5	3	c
	△*	TNQ2.5D9	5P		44	8	16					
	△	TNMQ2.5D5			46	6.3	14					
	△*	TNQ2.5D5	1.5P		44	8	16					
	△	TNMQ2.5D1			46	6.3	14					
	△*	TNQ2.5D1	44		8	16						
M2.6x0.45	◎*	TNMP2.6F9	9P	P1	46	8.1	14	3	2.5	5	3	c

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M2.6×0.45	◎*	TNP2.6F9	9P	P1	44	9.5	16	3	2.5	5	3	c
	◎	TNMP2.6F5	5P		46	8.1	14					
	◎*	TNP2.6F5			44	9.5	16					
	◎	TNMP2.6F1	1.5P		46	8.1	14					
	◎*	TNP2.6F1		44	9.5	16						
	○*	TNMR2.6F9	9P	P3	46	8.1	14					
	○*	TNR2.6F9			44	9.5	16					
	○	TNMR2.6F5	5P		46	8.1	14					
	○*	TNR2.6F5			44	9.5	16					
	○	TNMR2.6F1	1.5P	46	8.1	14						
	○*	TNR2.6F1		44	9.5	16						
	△*	TNMS2.6F9	9P	P4	46	8.1	14					
	△	TNMS2.6F5	5P									
	△	TNMS2.6F1	1.5P									
M2.6×0.35	△*	TNMQ2.6D9	9P	P2	46	6.3	14	3	2.5	5	3	c
	△*	TNQ2.6D9			44	8	16					
	△	TNMQ2.6D5	5P		46	6.3	14					
	△*	TNQ2.6D5			44	8	16					
	△	TNMQ2.6D1	1.5P		46	6.3	14					
	△*	TNQ2.6D1			44	8	16					
M3×0.5	◎*	TNMQ3.0G9	9P	P2	46	9	14	4	3.2	6	3	c
	◎*	TNQ3.0G9				11	18					
	◎	TNMQ3.0G5	5P			9	14					
	◎*	TNQ3.0G5				11	18					
	◎	TNMQ3.0G1	1.5P			9	14					
	◎*	TNQ3.0G1				11	18					
	○*	TNMR3.0G9	9P	P3	9	14						
	○*	TNR3.0G9			11	18						
	○	TNMR3.0G5	5P		9	14						
	○*	TNR3.0G5			11	18						
	○	TNMR3.0G1	1.5P	9	14							
	○*	TNR3.0G1		11	18							
	△*	TNMS3.0G9	9P	P4	9	14						
	△*	TNS3.0G9			11	18						
	△	TNMS3.0G5	5P		9	14						
	△*	TNS3.0G5			11	18						
	△	TNMS3.0G1	1.5P		9	14						
	△*	TNS3.0G1			11	18						
	△*	TNMT3.0G9	9P	P5	46	9	14					
	△	TNMT3.0G5	5P									
△	TNMT3.0G1	1.5P										
3M0.6	○*	TNMQ3.0H9	9P	P2	46	9	14	4	3.2	6	3	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type				
3M0.6	○*	TNQ3.0H9	9P	P2	46	11	18	4	3.2	6	3	c				
	○	TNMQ3.0H5	5P			9	14									
	○*	TNQ3.0H5	1.5P			11	18									
	○	TNMQ3.0H1				9	14									
	○*	TNQ3.0H1	11			18										
M3×0.35	○*	TNMQ3.0D9	9P	P2	46	6.5	14	4	3.2	6	3	c				
	○*	TNQ3.0D9	5P			9.5	18									
	○	TNMQ3.0D5				6.5	14									
	○*	TNQ3.0D5	1.5P			9.5	18									
	○	TNMQ3.0D1				6.5	14									
	○*	TNQ3.0D1	9.5			18										
M3.5×0.6	○*	TNMQ3.5H9	9P	P2	52	11	16	5	4	7	3	c				
	○*	TNQ3.5H9	5P			48	13						20	4	3.2	6
	○	TNMQ3.5H5				52	11						16	5	4	7
	○*	TNQ3.5H5	1.5P			48	13						20	4	3.2	6
	○	TNMQ3.5H1				52	11						16	5	4	7
	○*	TNQ3.5H1	48			13	20						4	3.2	6	
	△*	TNMR3.5H9	9P	P3	52	11	16	5	4	7						
	△*	TNR3.5H9	5P			48	13						20	4	3.2	6
	△	TNMR3.5H5				52	11						16	5	4	7
	△*	TNR3.5H5	1.5P			48	13						20	4	3.2	6
	△	TNMR3.5H1				52	11						16	5	4	7
	△*	TNR3.5H1	48			13	20						4	3.2	6	
	△*	TNMS3.5H9	9P	P4	52	11	16	5	4	7						
	△*	TNS3.5H9	5P			48	13						20	4	3.2	6
	△	TNMS3.5H5				52	11						16	5	4	7
	△*	TNS3.5H5	1.5P			48	13						20	4	3.2	6
	△	TNMS3.5H1				52	11						16	5	4	7
	△*	TNS3.5H1	48			13	20						4	3.2	6	
M3.5×0.35	○*	TNMQ3.5D9	9P	P2	52	6.5	16	5	4	7	3	c				
	○*	TNQ3.5D9	5P			48	9.5						20	4	3.2	6
	○	TNMQ3.5D5				52	6.5						16	5	4	7
	○*	TNQ3.5D5	1.5P			48	9.5						20	4	3.2	6
	○	TNMQ3.5D1				52	6.5						16	5	4	7
	○*	TNQ3.5D1	48			9.5	20						4	3.2	6	
M4×0.7	◎*	TNMQ4.0I9	9P	P2	52	11	17	5	4	7	3	c				
	◎*	TNQ4.0I9	5P			13	20									
	◎	TNMQ4.0I5				11	17									
	◎*	TNQ4.0I5	1.5P			13	20									
	◎	TNMQ4.0I1				11	17									
	◎*	TNQ4.0I1	13			20										
	◎*	TNMQ4.0I94	9P			11	17				4					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type				
M4×0.7	◎*	TNQ4.0I94	9P	P2	52	13	20	5	4	7	4	c				
	◎	TNMQ4.0I54	5P			11	17									
	◎*	TNQ4.0I54	5P			13	20						3			
	◎	TNMQ4.0I14	1.5P			11	17									
	◎*	TNQ4.0I14	1.5P	13		20										
	△*	TNMR4.0I93	9P	P3		11	17				3					
	△	TNMR4.0I53	5P													
	△	TNMR4.0I13	1.5P													
	○*	TNMR4.0I9	9P													
	○*	TNR4.0I9	9P										13	20		
	○	TNMR4.0I5	5P										11	17	4	
	○*	TNR4.0I5	5P										13	20		
	○	TNMR4.0I1	1.5P										11	17		
	○*	TNR4.0I1	1.5P										13	20		
	△*	TNMS4.0I93	9P										P4	11	17	3
	△	TNMS4.0I53	5P													
	△	TNMS4.0I13	1.5P													
	△*	TNMS4.0I9	9P													
	△*	TNS4.0I9	9P	13		20										
	△	TNMS4.0I5	5P	11		17	4									
△*	TNS4.0I5	5P	13	20												
△	TNMS4.0I1	1.5P	11	17												
△*	TNS4.0I1	1.5P	13	20												
△*	TNMT4.0I9	9P	P5	11	17	3										
△	TNMT4.0I5	5P														
△	TNMT4.0I1	1.5P														
4M0.75	△*	TNMQ4.0J93	9P	P2	52	11	17	5	4	7	3	c				
	△	TNMQ4.0J53	5P													
	△	TNMQ4.0J13	1.5P													
	○*	TNMQ4.0J9	9P										4			
	○*	TNQ4.0J9	9P			13	20									
	○	TNMQ4.0J5	5P			11	17									
	○*	TNQ4.0J5	5P			13	20									
	○	TNMQ4.0J1	1.5P			11	17				4					
○*	TNQ4.0J1	1.5P	13	20												
○*	TNMQ4.0G9	9P	P2	52	9	17	5	4	7	4		c				
○*	TNQ4.0G9	9P											13	20		
○	TNMQ4.0G5	5P									9		17			
○*	TNQ4.0G5	5P									13		20			
○	TNMQ4.0G1	1.5P									9		17			
○*	TNQ4.0G1	1.5P									13		20			
M4.5×0.75	○*	TNMQ4.5J9	9P	P2	60	13	21	5.5	4.5	7	4	c				

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type			
M4.5x0.75	○*	TNQ4.5J9	9P	P2	55	13	21	5	4	7	4	c			
	○	TNMQ4.5J5	5P		60			5.5	4.5						
	○*	TNQ4.5J5	1.5P		55			5	4						
	○	TNMQ4.5J1			60			5.5	4.5						
	○*	TNQ4.5J1	55		5			4							
M4.5x0.5	△*	TNMQ4.5G9	9P	P2	60	13	21	5.5	4.5	7	4	c			
	△*	TNQ4.5G9	5P		55			5	4						
	△	TNMQ4.5G5			60			5.5	4.5						
	△*	TNQ4.5G5	1.5P		55			5	4						
	△	TNMQ4.5G1			60			5.5	4.5						
	△*	TNQ4.5G1	55		5			4							
M5x0.8	◎*	TNMR5.0K9	9P	P3	60	13	22	5.5	4.5	7	3	c			
	◎*	TNR5.0K9	5P										16	25	
	◎	TNMR5.0K5											1.5P	13	22
	◎*	TNR5.0K5	16											25	
	◎	TNMR5.0K1	9P										13	22	
	◎*	TNR5.0K1											16	25	
	◎*	TNMR5.0K94	5P										13	22	
	◎*	TNR5.0K94											16	25	
	◎	TNMR5.0K54	1.5P										13	22	
	◎*	TNR5.0K54											16	25	
	◎	TNMR5.0K14	9P										13	22	
	◎*	TNR5.0K14											16	25	
	△*	TNMS5.0K9	9P										P4	13	22
	△*	TNS5.0K9	5P											16	25
	△	TNMS5.0K5											1.5P	13	22
	△*	TNS5.0K5	16											25	
	△	TNMS5.0K1	9P										P5	13	22
	△*	TNS5.0K1												16	25
	△*	TNMT5.0K9	9P										5P	13	22
	△	TNMT5.0K5	1.5P												
△	TNMT5.0K1	16		25											
5M0.9	△*	TNMQ5.0L93	9P	P2	60	13	22	5.5	4.5	7	3	c			
	△	TNMQ5.0L53	5P												
	△	TNMQ5.0L13	1.5P												
	○*	TNMQ5.0L9	9P												
	○*	TNQ5.0L9	5P										16	25	
	○	TNMQ5.0L5											13	22	
	○*	TNQ5.0L5	1.5P										16	25	
	○	TNMQ5.0L1											13	22	
○*	TNQ5.0L1	16	25												
M5x0.75	△*	TNMQ5.0J9	9P	P2	60	13	22	5.5	4.5	7	4	c			

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

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(for through hole)

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Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type							
M5×0.75	△*	TNQ5.0J9	9P	P2	60	16	25	5.5	4.5	7	4	c							
	△	TNMQ5.0J5	5P			13	22												
	△*	TNQ5.0J5	1.5P			16	25												
	△	TNMQ5.0J1				13	22												
	△*	TNQ5.0J1				16	25												
M5×0.5	○*	TNMQ5.0G9	9P	P2	60	9	22	5.5	4.5	7	4	c							
	○*	TNQ5.0G9	5P			13	25												
	○	TNMQ5.0G5	1.5P			9	22												
	○*	TNQ5.0G5				13	25												
	○	TNMQ5.0G1				9	22												
	○*	TNQ5.0G1	5P			13	25												
	△	TNMR5.0G5	5P			P3	60						9	22					
	△	TNMR5.0G1	1.5P																
M5.5×0.9	△*	TNMQ5.5L9	9P	P2	62	15	26	6	4.5	7	4	c							
	△	TNMQ5.5L5	5P																
	△	TNMQ5.5L1	1.5P																
M5.5×0.75	△*	TNMQ5.5J9	9P	P2	62	15	26	6	4.5	7	4	c							
	△*	TNQ5.5J9	5P			16	25						5.5						
	△	TNMQ5.5J5	1.5P			15	26						6						
	△*	TNQ5.5J5				16	25						5.5						
	△	TNMQ5.5J1				15	26						6						
	△*	TNQ5.5J1	60			16	25						5.5						
M5.5×0.5	△*	TNMQ5.5G9	9P	P2	62	9	26	6	4.5	7	4	c							
	△*	TNQ5.5G9	5P			13	25						5.5						
	△	TNMQ5.5G5	1.5P			9	26						6						
	△*	TNQ5.5G5				13	25						5.5						
	△	TNMQ5.5G1				9	26						6						
	△*	TNQ5.5G1	55			13	25						5.5						
M6×1	◎*	TNMQ6.0M9	9P	P2	62	15	26	6	4.5	7	3	c							
	◎*	TNQ6.0M9	5P			19	28												
	◎	TNMQ6.0M5	1.5P			15	26												
	◎*	TNQ6.0M5				19	28												
	◎	TNMQ6.0M1				15	26												
	◎*	TNQ6.0M1	9P			19	28												
	◎*	TNMQ6.0M94	5P			15	26												
	◎*	TNQ6.0M94				19	28												
	◎	TNMQ6.0M54				15	26												
	◎*	TNQ6.0M54	1.5P			19	28												
	◎	TNMQ6.0M14				15	26												
	◎*	TNQ6.0M14				19	28												
	△*	TNMR6.0M93	9P			P3	62				15		26				3		
△	TNMR6.0M53	5P																	

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M6×1	△	TNMR6.0M13	1.5P	P3	62	15	26	6	4.5	7	4	c
	○*	TNMR6.0M9	9P									
	○*	TNR6.0M9	5P									
	○	TNMR6.0M5										
	○*	TNR6.0M5	1.5P									
	○	TNMR6.0M1										
	○*	TNR6.0M1	P4									
	○*	TNMS6.0M9		9P								
	○*	TNS6.0M9		5P								
	○	TNMS6.0M5										
	○*	TNS6.0M5		1.5P								
	○	TNMS6.0M1										
	○*	TNS6.0M1	P5									
	△*	TNMT6.0M9		9P								
	△	TNMT6.0M5		5P								
	△	TNMT6.0M1	1.5P									
M6×0.75	○*	TNMQ6.0J9	9P	P2	62	15	26	6	4.5	7	4	c
	○*	TNQ6.0J9										
	○	TNMQ6.0J5	5P									
	○*	TNQ6.0J5										
	○	TNMQ6.0J1	1.5P									
	○*	TNQ6.0J1										
	△	TNMR6.0J5	5P	P3								
	△	TNMR6.0J1	1.5P									
	△	TNMS6.0J5	5P			P4						
	△	TNMS6.0J1	1.5P									
M6×0.5	○*	TNMQ6.0G9	9P	P2	62	9	26	6	4.5	7	4	c
	○*	TNQ6.0G9			55	13	25					
	○	TNMQ6.0G5	5P		62	9	26					
	○*	TNQ6.0G5			55	13	25					
	○	TNMQ6.0G1	1.5P		62	9	26					
	○*	TNQ6.0G1			55	13	25					
M7×1	○*	TNMQ7.0M9	9P	P2	70	19	-	6.2	5	8	4	e
	○*	TNQ7.0M9			65							
	○	TNMQ7.0M5	5P		70							
	○*	TNQ7.0M5			65							
	○	TNMQ7.0M1	1.5P		70							
	○*	TNQ7.0M1			65							
	△	TNMS7.0M5	5P	P4	70							
	△*	TNS7.0M5			65							
	△	TNMS7.0M1	1.5P		70							
	△*	TNS7.0M1			65							

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type							
M7×0.75	○*	TNMQ7.0J9	9P	P2	70	19	-	6.2	5	8	4	e							
	○*	TNQ7.0J9			65														
	○	TNMQ7.0J5	5P		70														
	○*	TNQ7.0J5			65														
	○	TNMQ7.0J1	1.5P		70														
	○*	TNQ7.0J1			65														
M7×0.5	△*	TNMQ7.0G9	9P	P2	70	10	-	6.2	5	8	4	e							
	△*	TNQ7.0G9			55	13													
	△	TNMQ7.0G5	5P		70	10													
	△*	TNQ7.0G5			55	13													
	△	TNMQ7.0G1	1.5P		70	10													
	△*	TNQ7.0G1			55	13													
M8×1.25	○*	TNMR8.0N9	9P	P3	70	19	-	6.2	5	8	4	e							
	○*	TNR8.0N9											22						
	○	TNMR8.0N5	5P										19	3					
	○*	TNR8.0N5											22						
	○	TNMR8.0N1	1.5P										19						
	○*	TNR8.0N1											22						
	○*	TNMR8.0N9F	9P										19						
	○*	TNR8.0N9F											22						
	○	TNMR8.0N5F	5P										19						
	○*	TNR8.0N5F											22						
	○	TNMR8.0N1F	1.5P										19						
	○*	TNR8.0N1F											22						
	○*	TNS8.0N9F	9P										22	P4					
	○	TNMS8.0N5F											19						
○*	TNS8.0N5F	5P	22																
○	TNMS8.0N1F		19																
○*	TNS8.0N1F	1.5P	22																
○*	TNMQ8.0M9		9P	70	22	-	6.2	5	8	4	e								
○*	TNQ8.0M9	19																	
○	TNMQ8.0M5	5P	19																
○*	TNQ8.0M5		22																
○	TNMQ8.0M1	1.5P	19																
○*	TNQ8.0M1		22																
△*	TNS8.0M9	9P	P4									22							
△	TNMS8.0M5											19							
△*	TNS8.0M5	5P										22							
△	TNMS8.0M1											19							
△*	TNS8.0M1	1.5P										22							
○*	TNMQ8.0J9											9P	70	19	-	6.2	5	8	4
○*	TNQ8.0J9	22																	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M8x0.75	○	TNMQ8.0J5	5P	P2	70	19	-	6.2	5	8	4	e
	○*	TNQ8.0J5				22						
	○	TNMQ8.0J1	1.5P			19						
	○*	TNQ8.0J1				22						
M8x0.5	○*	TNMQ8.0G9	9P	P2	70	10	-	6.2	5	8	4	e
	○*	TNQ8.0G9	5P			13						
	○	TNMQ8.0G5	1.5P			10						
	○*	TNQ8.0G5				13						
	○	TNMQ8.0G1	9P			10						
	○*	TNQ8.0G1				13						
M9x1.25	△*	TNMR9.0N9	9P	P3	75	23	-	7	5.5	8	4	e
	△*	TNR9.0N9	5P			22						
	△	TNMR9.0N5	1.5P			23						
	△*	TNR9.0N5				22						
	△	TNMR9.0N1	9P			23						
	△*	TNR9.0N1				22						
M9x1	○*	TNMQ9.0M9	9P	P2	75	23	-	7	5.5	8	4	e
	○*	TNQ9.0M9	5P			22						
	○	TNMQ9.0M5	1.5P			23						
	○*	TNQ9.0M5				22						
	○	TNMQ9.0M1	9P			23						
	○*	TNQ9.0M1				22						
M9x0.75	○*	TNMQ9.0J9	9P	P2	75	13	-	7	5.5	8	4	e
	○*	TNQ9.0J9	5P			22						
	○	TNMQ9.0J5	1.5P			13						
	○*	TNQ9.0J5				22						
	○	TNMQ9.0J1	9P			13						
	○*	TNQ9.0J1				22						
M9x0.5	△*	TNMQ9.0G9	9P	P2	75	11	-	7	5.5	8	4	e
	△*	TNQ9.0G9	5P			13						
	△	TNMQ9.0G5	1.5P			11						
	△*	TNQ9.0G5				13						
	△	TNMQ9.0G1	9P			11						
	△*	TNQ9.0G1				13						
M10x1.5	○*	TNMR01009T	9P	P3	75	23	-	7	5.5	8	3	e
	○*	TNR01009T	5P			24						
	○	TNMR01005T	1.5P			23						
	○*	TNR01005T				24						
	○	TNMR01001T	9P			23						
	○*	TNR01001T				24						
	◎*	TNMR01009	9P			23						
	◎*	TNR01009				24						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.5	⊙	TNMR01005	5P	P3	75	23	-	7	5.5	8	4	e
	⊙*	TNR01005				24						
	⊙	TNMR01001	1.5P			23						
	⊙*	TNR01001				24						
	△*	TNS01009	9P	P4		24						
	△	TNMS01005	5P			23						
	△*	TNS01005				24						
	△	TNMS01001	1.5P			23						
	△*	TNS01001				24						
M10×1.25	⊙*	TNMR010N9	9P	P3	75	23	-	7	5.5	8	4	e
	⊙*	TNR010N9				24						
	⊙	TNMR010N5	5P			23						
	⊙*	TNR010N5				24						
	⊙	TNMR010N1	1.5P	P4		23						
	⊙*	TNR010N1				24						
	△	TNMS010N5	5P			23						
	△*	TNS010N5				24						
	△	TNMS010N1	1.5P			23						
△*	TNS010N1	24										
M10×1	⊙*	TNMR010M9	9P	P3	75	23	-	7	5.5	8	4	e
	⊙*	TNR010M9				24						
	⊙	TNMR010M5	5P			23						
	⊙*	TNR010M5				24						
	⊙	TNMR010M1	1.5P	P4		23						
	⊙*	TNR010M1				24						
	△	TNMS010M5	5P			23						
	△*	TNS010M5				24						
	△	TNMS010M1	1.5P			23						
△*	TNS010M1	24										
M10×0.75	⊙*	TNMR010J9	9P	P3	75	13	-	7	5.5	8	4	e
	⊙*	TNR010J9				22						
	⊙	TNMR010J5	5P			13						
	⊙*	TNR010J5				22						
	⊙	TNMR010J1	1.5P			13						
	⊙*	TNR010J1				22						
M10×0.5	⊙*	TNMQ010G9	9P	P2	75	11	-	7	5.5	8	4	e
	⊙*	TNQ010G9				13						
	⊙	TNMQ010G5	5P			11						
	⊙*	TNQ010G5				13						
	⊙	TNMQ010G1	1.5P			11						
	⊙*	TNQ010G1				13						
M11×1.5	△*	TNMS01109	9P	P4	82	26	-	8.5	6.5	9	4	e

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M11x1.5	△*	TNS01109	9P	P4	80	25	-	8	6	9	4	e	
	△	TNMS01105	5P		82	26		8.5	6.5				
	△*	TNS01105	1.5P		80	25		8	6				
	△	TNMS01101			82	26		8.5	6.5				
	△*	TNS01101	80		25	8		6					
M11x1.25	△*	TNMR011N9	9P	P3	82	26	-	8.5	6.5	9	4	e	
	△*	TNR011N9	5P		80	25		8	6				
	△	TNMR011N5			82	26		8.5	6.5				
	△*	TNR011N5	1.5P		80	25		8	6				
	△	TNMR011N1			82	26		8.5	6.5				
	△*	TNR011N1	80		25	8		6					
M11x1	○*	TNMR011M9	9P	P3	82	26	-	8.5	6.5	9	4	e	
	○*	TNR011M9	5P		80	25		8	6				
	○	TNMR011M5			82	26		8.5	6.5				
	○*	TNR011M5	1.5P		80	25		8	6				
	○	TNMR011M1			82	26		8.5	6.5				
	○*	TNR011M1	80		25	8		6					
M11x0.75	△*	TNMR011J9	9P	P3	82	14	-	8.5	6.5	9	4	e	
	△*	TNR011J9	5P		75	22		8	6				
	△	TNMR011J5			82	14		8.5	6.5				
	△*	TNR011J5	1.5P		75	22		8	6				
	△	TNMR011J1			82	14		8.5	6.5				
	△*	TNR011J1	75		22	8		6					
M11x0.5	△*	TNMQ011G9	9P	P2	82	12	-	8.5	6.5	9	4	e	
	△*	TNQ011G9	5P		55	13		8	6				
	△	TNMQ011G5			82	12		8.5	6.5				
	△*	TNQ011G5	1.5P		55	13		8	6				
	△	TNMQ011G1			82	12		8.5	6.5				
	△*	TNQ011G1	55		13	8		6					
M12x1.75	◎*	TNMR012P9	9P	P3	82	29	-	8.5	6.5	9	4	e	
	◎*	TNR012P9	5P										26
	◎	TNMR012P5											29
	◎*	TNR012P5	1.5P										26
	◎	TNMR012P1											29
	◎*	TNR012P1	9P										26
	△*	TNS012P9											29
	△	TNMS012P5	5P										26
	△*	TNS012P5											29
	△	TNMS012P1	1.5P										26
	△*	TNS012P1											29
M12x1.5	◎*	TNMR012O9	9P	P3	82	26	-	8.5	6.5	9	4	e	
	◎*	TNR012O9	29										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M12x1.5	⊙	TNMR012O5	5P	P3	82	26	-	8.5	6.5	9	4	e
	⊙*	TNR012O5				29						
	⊙	TNMR012O1	1.5P			26						
	⊙*	TNR012O1				29						
	△	TNMS012O5	5P	P4		26						
	△*	TNS012O5				29						
	△	TNMS012O1	1.5P			26						
	△*	TNS012O1				29						
M12x1.25	⊙*	TNMS012N9	9P	P4	82	26	-	8.5	6.5	9	4	e
	⊙*	TNS012N9				29						
	⊙	TNMS012N5	5P			26						
	⊙*	TNS012N5				29						
	⊙	TNMS012N1	1.5P			26						
	⊙*	TNS012N1				29						
M12x1	⊙*	TNMR012M9	9P	P3	82	26	-	8.5	6.5	9	4	e
	⊙*	TNR012M9				29						
	⊙	TNMR012M5	5P			26						
	⊙*	TNR012M5				29						
	⊙	TNMR012M1	1.5P			26						
	⊙*	TNR012M1				29						
M12x0.75	△*	TNMR012J9	9P	P3	82	14	-	8.5	6.5	9	4	e
	△*	TNR012J9			75	22						
	△	TNMR012J5	5P		82	14						
	△*	TNR012J5			75	22						
	△	TNMR012J1	1.5P		82	14						
	△*	TNR012J1			75	22						
M12x0.5	⊙*	TNMQ012G9	9P	P2	82	12	-	8.5	6.5	9	4	e
	⊙*	TNQ012G9			55	13						
	⊙	TNMQ012G5	5P		82	12						
	⊙*	TNQ012G5			55	13						
	⊙	TNMQ012G1	1.5P		82	12						
	⊙*	TNQ012G1			55	13						
M13x1.75	△*	TNMR013P9	9P	P3	88	26	-	10.5	8	11	4	e
	△*	TNR013P9			85	29		9.5	7	10		
	△	TNMR013P5	5P		88	26		10.5	8	11		
	△*	TNR013P5			85	29		9.5	7	10		
	△	TNMR013P1	1.5P		88	26		10.5	8	11		
	△*	TNR013P1			85	29		9.5	7	10		
M13x1.5	△*	TNMR013O9	9P	P3	88	26	-	10.5	8	11	4	e
	△*	TNR013O9			85	29		9.5	7	10		
	△	TNMR013O5	5P		88	26		10.5	8	11		
	△*	TNR013O5			85	29		9.5	7	10		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M13x1.5	△	TNMR013O1	1.5P	P3	88	26	-	10.5	8	11	4	e	
	△*	TNR013O1			85	29		9.5	7	10			
M13x1.25	△*	TNMS013N9	9P	P4	88	26	-	10.5	8	11	4	e	
	△*	TNS013N9			85	29		9.5	7	10			
	△	TNMS013N5	5P		88	26		10.5	8	11			
	△*	TNS013N5			85	29		9.5	7	10			
	△	TNMS013N1	1.5P		88	26		10.5	8	11			
	△*	TNS013N1			85	29		9.5	7	10			
M13x1	○*	TNMR013M9	9P	P3	88	26	-	10.5	8	11	4	e	
	○*	TNR013M9			85	29		9.5	7	10			
	○	TNMR013M5	5P		88	26		10.5	8	11			
	○*	TNR013M5			85	29		9.5	7	10			
	○	TNMR013M1	1.5P		88	26		10.5	8	11			
	○*	TNR013M1			85	29		9.5	7	10			
M13x0.75	△*	TNMR013J9	9P	P3	88	14	-	10.5	8	11	4	e	
	△*	TNR013J9			75	22		9.5	7	10			
	△	TNMR013J5	5P		88	14		10.5	8	11			
	△*	TNR013J5			75	22		9.5	7	10			
	△	TNMR013J1	1.5P		88	14		10.5	8	11			
	△*	TNR013J1			75	22		9.5	7	10			
M13x0.5	△*	TNMQ013G9	9P	P2	88	12	-	10.5	8	11	4	e	
	△*	TNQ013G9			55	13		9.5	7	10			
	△	TNMQ013G5	5P		88	12		10.5	8	11			
	△*	TNQ013G5			55	13		9.5	7	10			
	△	TNMQ013G1	1.5P		88	12		10.5	8	11			
	△*	TNQ013G1			55	13		9.5	7	10			
M14x2	◎*	TNMR014Q9	9P	P3	88	30	-	10.5	8	11	4	e	
	◎*	TNR014Q9											26
	◎	TNMR014Q5	5P										26
	◎*	TNR014Q5											30
	◎	TNMR014Q1	1.5P										26
	◎*	TNR014Q1											30
	△*	TNS014Q9	9P										30
	△	TNMS014Q5	5P										26
	△*	TNS014Q5											30
	△	TNMS014Q1	1.5P										26
△*	TNS014Q1	30											
M14x1.5	◎*	TNMR014O9	9P	P3	88	26	-	10.5	8	11	4	e	
	◎*	TNR014O9											30
	◎	TNMR014O5	5P										26
	◎*	TNR014O5											30
	◎	TNMR014O1	1.5P										26

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M14×1.5	◎*	TNR014O1	1.5P	P3	88	30	-	10.5	8	11	4	e
	△	TNMS014O5	5P	P4		26						
	△*	TNS014O5				30						
	△	TNMS014O1	1.5P	P4		26						
	△*	TNS014O1				30						
M14×1.25	◎*	TNMS014N9	9P	P4	88	26	-	10.5	8	11	4	e
	◎*	TNS014N9				30						
	○	TNMS014N5	5P	P4		26						
	◎*	TNS014N5				30						
	○	TNMS014N1	1.5P	P4		26						
	◎*	TNS014N1				30						
M14×1	◎*	TNMR014M9	9P	P3	88	26	-	10.5	8	11	4	e
	◎*	TNR014M9				30						
	○	TNMR014M5	5P	P3		26						
	◎*	TNR014M5				30						
	○	TNMR014M1	1.5P	P3		26						
	◎*	TNR014M1				30						
	△	TNMS014M5	5P	P4		26						
	△*	TNS014M5				30						
	△	TNMS014M1	1.5P	P4		26						
△*	TNS014M1	30										
M14×0.75	△*	TNMR014J9	9P	P3	88	15	-	10.5	8	11	4	e
	△*	TNR014J9			75	22						
	△	TNMR014J5	5P	P3	88	15						
	△*	TNR014J5			75	22						
	△	TNMR014J1	1.5P	P3	88	15						
	△*	TNR014J1			75	22						
M14×0.5	◎*	TNMQ014G9	9P	P2	88	12	-	10.5	8	11	4	e
	◎*	TNQ014G9			58	13						
	○	TNMQ014G5	5P	P2	88	12						
	◎*	TNQ014G5			58	13						
	○	TNMQ014G1	1.5P	P2	88	12						
	◎*	TNQ014G1			58	13						
M15×2	△*	TNMR015Q9	9P	P3	95	26	-	12.5	10	13	4	e
	△*	TNR015Q9			90	30		10.5	8	11		
	△	TNMR015Q5	5P	P3	95	26		12.5	10	13		
	△*	TNR015Q5			90	30		10.5	8	11		
	△	TNMR015Q1	1.5P	P3	95	26		12.5	10	13		
	△*	TNR015Q1			90	30		10.5	8	11		
M15×1.5	◎*	TNMR015O9	9P	P3	95	26	-	12.5	10	13	4	e
	◎*	TNR015O9			90	30		10.5	8	11		
	○	TNMR015O5	5P	P3	95	26		12.5	10	13		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M15x1.5	○*	TNR015O5	5P	P3	90	30	-	10.5	8	11	4	e
	○	TNMR015O1	1.5P		95	26		12.5	10	13		
	○*	TNR015O1			90	30		10.5	8	11		
M15x1.25	△*	TNMS015N9	9P	P4	95	26	-	12.5	10	13	4	e
	△*	TNS015N9			90	30		10.5	8	11		
	△	TNMS015N5	5P		95	26		12.5	10	13		
	△*	TNS015N5			90	30		10.5	8	11		
	△	TNMS015N1	1.5P		95	26		12.5	10	13		
	△*	TNS015N1			90	30		10.5	8	11		
M15x1	○*	TNMR015M9	9P	P3	95	26	-	12.5	10	13	4	e
	○*	TNR015M9			90	30		10.5	8	11		
	○	TNMR015M5	5P		95	26		12.5	10	13		
	○*	TNR015M5			90	30		10.5	8	11		
	○	TNMR015M1	1.5P		95	26		12.5	10	13		
	○*	TNR015M1			90	30		10.5	8	11		
M15x0.75	△*	TNMR015J9	9P	P3	95	15	-	12.5	10	13	4	e
	△*	TNR015J9			75	22		10.5	8	11		
	△	TNMR015J5	5P		95	15		12.5	10	13		
	△*	TNR015J5			75	22		10.5	8	11		
	△	TNMR015J1	1.5P		95	15		12.5	10	13		
	△*	TNR015J1			75	22		10.5	8	11		
M15x0.5	△*	TNMQ015G9	9P	P2	95	13	-	12.5	10	13	4	e
	△*	TNQ015G9			58			10.5	8	11		
	△	TNMQ015G5	5P		95			12.5	10	13		
	△*	TNQ015G5			58			10.5	8	11		
	△	TNMQ015G1	1.5P		95			12.5	10	13		
	△*	TNQ015G1			58			10.5	8	11		
M16x2	◎*	TNMR016Q9	9P	P3	95	26	-	12.5	10	13	4	e
	◎*	TNR016Q9				32						
	◎	TNMR016Q5	5P			26						
	◎*	TNR016Q5				32						
	◎	TNMR016Q1	1.5P			26						
	◎*	TNR016Q1				32						
	△*	TNMS016Q9	9P	26								
	△*	TNS016Q9		32								
	△	TNMS016Q5	5P	26								
	△*	TNS016Q5		32								
	△	TNMS016Q1	1.5P	26								
	△*	TNS016Q1		32								
M16x1.5	◎*	TNMR016O9	9P	P3	95	26	-	12.5	10	13	4	e
	◎*	TNR016O9				32						
	◎	TNMR016O5	26									

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M16x1.5	◎*	TNR016O5	5P	P3	95	32	-	12.5	10	13	4	e
	◎	TNMR016O1	1.5P			26						
	◎*	TNR016O1				32						
	△*	TNMS016O9	9P	P4		26						
	△*	TNS016O9				32						
	△	TNMS016O5	5P			26						
	△*	TNS016O5				32						
	△	TNMS016O1	1.5P			26						
	△*	TNS016O1				32						
M16x1.25	△*	TNMS016N9	9P	P4	95	26	-	12.5	10	13	4	e
	△*	TNS016N9				32						
	△	TNMS016N5	5P			26						
	△*	TNS016N5				32						
	△	TNMS016N1	1.5P			26						
	△*	TNS016N1				32						
M16x1	◎*	TNMR016M9	9P	P3	95	26	-	12.5	10	13	4	e
	◎*	TNR016M9				32						
	○	TNMR016M5	5P			26						
	◎*	TNR016M5		32								
	○	TNMR016M1	1.5P	P4		26						
	◎*	TNR016M1				32						
	△	TNMS016M5	5P			26						
	△*	TNS016M5				32						
	△	TNMS016M1	1.5P			26						
△*	TNS016M1		32									
M16x0.5	△*	TNMQ016G9	9P	P2	95	13	-	12.5	10	13	4	e
	△*	TNQ016G9			60							
	△	TNMQ016G5	5P		95							
	△*	TNQ016G5			60							
	△	TNMQ016G1	1.5P		95							
	△*	TNQ016G1			60							
M17x1.5	△*	TNMS017O9	9P	P4	100	33	-	14	11	14	4	e
	△*	TNS017O9			95	32		13	10	13		
	△	TNMS017O5	5P		100	33		14	11	14		
	△*	TNS017O5			95	32		13	10	13		
	△	TNMS017O1	1.5P		100	33		14	11	14		
	△*	TNS017O1			95	32		13	10	13		
M17x1	◎*	TNMR017M9	9P	P3	100	18	-	14	11	14	4	e
	◎*	TNR017M9			95	32		13	10	13		
	○	TNMR017M5	5P		100	18		14	11	14		
	◎*	TNR017M5			95	32		13	10	13		
	○	TNMR017M1	1.5P		100	18		14	11	14		

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M17x1	○*	TNR017M1	1.5P	P3	95	32	-	13	10	13	4	e	
M18x2.5	○*	TNMS018R9	9P	P4	100	33	-	14	11	14	4	e	
	○*	TNS018R9				37							
	○	TNMS018R5	5P			33							
	○*	TNS018R5				37							
	○	TNMS018R1	1.5P			33							
	○*	TNS018R1				37							
	△*	TNMT018R9	9P	P5		33							
	△*	TNT018R9				37							
	△	TNMT018R5	5P			33							
	△*	TNT018R5				37							
	△	TNMT018R1	1.5P			33							
	△*	TNT018R1				37							
M18x2	○*	TNMS018Q9	9P	P4	100	33	-	14	11	14	4	e	
	○*	TNS018Q9				37							
	○	TNMS018Q5	5P			33							
	○*	TNS018Q5				37							
	○	TNMS018Q1	1.5P			33							
	○*	TNS018Q1				37							
M18x1.5	◎*	TNMR018O9	9P	P3	100	33	-	14	11	14	4	e	
	◎*	TNR018O9				37							
	◎	TNMR018O5	5P			33							
	◎*	TNR018O5				37							
	◎	TNMR018O1	1.5P			33							
	◎*	TNR018O1				37							
	△	TNMS018O5	5P	P4		33							
	△*	TNS018O5				37							
	△	TNMS018O1	1.5P			33							
	△*	TNS018O1				37							
M18x1	○*	TNMR018M9	9P		P3	100	18	-	14	11	14	4	e
	○*	TNR018M9				95	30						
	○	TNMR018M5	5P	100		18							
	○*	TNR018M5		95		30							
	○	TNMR018M1	1.5P	100		18							
	○*	TNR018M1		95		30							
M18x0.5	△*	TNMQ018G9	9P	P2	100	13	-	14	11	14	4	e	
	△*	TNQ018G9			65	15							
	△	TNMQ018G5	5P		100	13							
	△*	TNQ018G5			65	15							
	△	TNMQ018G1	1.5P		100	13							
	△*	TNQ018G1			65	15							
M19x1.5	△*	TNR019O9	9P	P3	105	37	-	14	11	14	4	e	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Coated
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M19×1.5	△	TNMR01905	5P	P3	105	33	-	15	12	15	4	e	
	△*	TNR01905				37		14	11	14			
	△	TNMR01901	1.5P			33		15	12	15			
	△*	TNR01901				37		14	11	14			
M19×1	△*	TNR019M9	9P	P3	95	30	-	14	11	14	4	e	
	△	TNMR019M5	5P		105	18		15	12	15			
	△*	TNR019M5			95	30		14	11	14			
	△	TNMR019M1	1.5P		105	18		15	12	15			
	△*	TNR019M1			95	30		14	11	14			
M20×2.5	◎*	TNS020R9	9P	P4	105	37	-	15	12	15	4	e	
	◎	TNMS020R5	5P			33							
	◎*	TNS020R5				37							
	◎	TNMS020R1	1.5P			33							
	◎*	TNS020R1				37							
	△	TNMT020R5	5P			33							P5
	△*	TNT020R5				37							
	△	TNMT020R1	1.5P			33							
△*	TNT020R1	37											
M20×2	○*	TNS020Q9	9P	P4	105	37	-	15	12	15	4	e	
	○	TNMS020Q5	5P			33							
	○*	TNS020Q5				37							
	○	TNMS020Q1	1.5P			33							
	○*	TNS020Q1				37							
M20×1.5	◎*	TNR020O9	9P	P3	105	37	-	15	12	15	4	e	
	◎	TNMR020O5	5P			33							
	◎*	TNR020O5				37							
	◎	TNMR020O1	1.5P			33							P4
	◎*	TNR020O1				37							
	△	TNMS020O5	5P			33							
	△*	TNS020O5				37							
	△	TNMS020O1	1.5P			33							
△*	TNS020O1	37											
M20×1	○*	TNR020M9	9P	P3	95	30	-	15	12	15	4	e	
	○	TNMR020M5	5P		105	18							
	○*	TNR020M5			95	30							
	○	TNMR020M1	1.5P		105	18							
	○*	TNR020M1			95	30							
M22×2.5	○*	TNS022R9	9P	P4	115	38	-	17	13	16	4	e	
	○	TNMS022R5	5P			33							
	○*	TNS022R5				38							
	○	TNMS022R1	1.5P			33							
	○*	TNS022R1				38							

The products having *mark in the stock column will be available as long as they last.

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed Taps

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M22x2	○*	TNS022Q9	9P	P4	115	38	-	17	13	16	4	e
	○	TNMS022Q5	5P			33						
	○*	TNS022Q5	1.5P			38						
	○	TNMS022Q1				33						
	○*	TNS022Q1	38									
M22x1.5	◎*	TNR022O9	9P	P3	115	38	-	17	13	16	4	e
	◎	TNMR022O5	5P			33						
	◎*	TNR022O5	1.5P			38						
	◎	TNMR022O1				33						
	◎*	TNR022O1	38									
M22x1	○*	TNR022M9	9P	P3	95	30	-	17	13	16	4	e
	○	TNMR022M5	5P		115	19						
	○*	TNR022M5	1.5P		95	30						
	○	TNMR022M1			115	19						
	○*	TNR022M1	95		30							
M24x3	◎*	TNS024S9	9P	P4	120	45	-	19	15	18	4	e
	◎	TNMS024S5	5P			39						
	◎*	TNS024S5	1.5P			45						
	◎	TNMS024S1				39						
	◎*	TNS024S1	45									
M24x2	○*	TNS024Q9	9P	P4	120	45	-	19	15	18	4	e
	○	TNMS024Q5	5P			39						
	○*	TNS024Q5	1.5P			45						
	○	TNMS024Q1				39						
	○*	TNS024Q1	45									
M24x1.5	◎*	TNR024O9	9P	P3	120	45	-	19	15	18	4	e
	◎	TNMR024O5	5P			39						
	◎*	TNR024O5	1.5P			45						
	◎	TNMR024O1				39						
	◎*	TNR024O1	45									
M24x1	○*	TNR024M9	9P	P3	95	30	-	19	15	18	4	e
	○	TNMR024M5	5P		120	19						
	○*	TNR024M5	1.5P		95	30						
	○	TNMR024M1			120	19						
	○*	TNR024M1	95		30							
M25x3	△*	TNS025S9	9P	P4	125	45	-	19	15	18	4	e
	△	TNMS025S5	5P			39						
	△*	TNS025S5	1.5P			45						
	△	TNMS025S1				39						
	△*	TNS025S1	45									
M25x2	○*	TNS025Q9	9P	P4	125	45	-	19	15	18	4	e
	○	TNMS025Q5	5P			39						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M25x2	○*	TNS025Q5	5P	P4	125	45	-	19	15	18	4	e
	○	TNMS025Q1	1.5P			39						
	○*	TNS025Q1				45						
M25x1.5	○*	TNR025O9	9P	P3	125	45	-	19	15	18	4	e
	○	TNMR025O5	5P			39						
	○*	TNR025O5				45						
	○	TNMR025O1	1.5P			39						
	○*	TNR025O1				45						
	M25x1	○*	TNR025M9			9P						
○		TNMR025M5	5P	20								
○*		TNR025M5		30								
○		TNMR025M1	1.5P	20								
○*		TNR025M1		30								
M26x3	△*	TNS026S9	9P	P4	125	45	-	20	15	18	4	e
	△	TNMS026S5	5P			39						
	△*	TNS026S5				45						
	△	TNMS026S1	1.5P			39						
	△*	TNS026S1				45						
M26x2	△*	TNS026Q9	9P	P4	125	45	-	20	15	18	4	e
	△	TNMS026Q5	5P			39						
	△*	TNS026Q5				45						
	△	TNMS026Q1	1.5P			39						
	△*	TNS026Q1				45						
M26x1.5	○*	TNR026O9	9P	P3	125	45	-	20	15	18	4	e
	○	TNMR026O5	5P			39						
	○*	TNR026O5				45						
	○	TNMR026O1	1.5P			39						
	○*	TNR026O1				45						
M27x3	○*	TNS027S9	9P	P4	130	45	-	20	15	18	4	e
	○	TNMS027S5	5P			39						
	○*	TNS027S5				45						
	○	TNMS027S1	1.5P			39						
	○*	TNS027S1				45						
M27x2	○*	TNT027Q9	9P	P5	130	45	-	20	15	18	4	e
	○	TNMT027Q5	5P			39						
	○*	TNT027Q5				45						
	○	TNMT027Q1	1.5P			39						
	○*	TNT027Q1				45						
M27x1.5	○*	TNR027O9	9P	P3	130	45	-	20	15	18	4	e
	○	TNMR027O5	5P			39						
	○*	TNR027O5				45						
	○	TNMR027O1	1.5P			39						

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type		
M27×1.5	○*	TNR027O1	1.5P	P3	130	45	-	20	15	18	4	e		
	○*	TNR027M9	9P										95	30
M27×1	○	TNMR027M5	5P	P3	130	20	-	20	15	18	4	e		
	○*	TNR027M5											9P	95
	○	TNMR027M1	1.5P										130	20
	○*	TNR027M1											95	30
M28×3	△*	TNS028S9	9P	P4	130	45	-	21	17	20	4	e		
	△	TNMS028S5	5P					23						
	△*	TNS028S5	1.5P					21						
	△	TNMS028S1						23						
	△*	TNS028S1	130					45					21	
M28×2	○*	TNS028Q9	9P	P4	130	45	-	21	17	20	4	e		
	○	TNMS028Q5	5P					23						
	○*	TNS028Q5	1.5P					21						
	○	TNMS028Q1						23						
	○*	TNS028Q1	130	45	21									
M28×1.5	○*	TNR028O9	9P	P3	130	45	-	21	17	20	4	e		
	○	TNMR028O5	5P					23						
	○*	TNR028O5	1.5P					21						
	○	TNMR028O1						23						
	○*	TNR028O1	130					45					21	
M28×1	○*	TNR028M9	9P	P3	105	30	-	21	17	20	4	e		
	○	TNMR028M5	5P					23						
	○*	TNR028M5	1.5P					21						
	○	TNMR028M1						23						
	○*	TNR028M1	105					30					21	
M30×3.5	◎*	TNS030T9	9P	P4	135	48	-	23	17	20	4	e		
	◎	TNMS030T5	5P					46						
	◎*	TNS030T5	1.5P					48						
	◎	TNMS030T1						46						
	◎*	TNS030T1	48											
M30×3	○*	TNT030S9	9P	P5	135	48	-	23	17	20	4	e		
	○	TNMT030S5	5P					46						
	○*	TNT030S5	1.5P					48						
	○	TNMT030S1						46						
	○*	TNT030S1	48											
M30×2	◎*	TNS030Q9	9P	P4	135	45	-	23	17	20	4	e		
	◎	TNMS030Q5	5P					46						
	◎*	TNS030Q5	1.5P					46						
	◎	TNMS030Q1						46						
	◎*	TNS030Q1	45											
M30×1.5	◎*	TNR030O9	9P	P3	135	45	-	23	17	20	4	e		

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Spiral Fluted Taps
(for blind hole)

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Simple measuring tools

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Thread Mills

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Center Drills

Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M30×1.5	⊙	TNMR03005	5P	P3	135	46	-	23	17	20	4	e
	⊙*	TNR03005				45						
	⊙	TNMR03001	1.5P			46						
	⊙*	TNR03001				45						
M30×1	○*	TNR030M9	9P	P3	105	30	-	23	17	20	4	e
	○	TNMR030M5	5P		135	21						
	○*	TNR030M5			105	30						
	○	TNMR030M1	1.5P		135	21						
	○*	TNR030M1			105	30						
M32×2	△*	TNS032Q9	9P	P4	135	45	-	24	19	22	4	e
	△	TNS032Q5	5P									
	△	TNS032Q1	1.5P									
M32×1.5	△*	TNS032O9	9P	P4	135	45	-	24	19	22	4	e
	△	TNS032O5	5P									
	△	TNS032O1	1.5P									
M32×1	△*	TNR032M9	9P	P3	105	30	-	24	19	22	4	e
	△	TNR032M5	5P									
	△	TNR032M1	1.5P									
M33×3.5	○*	TNS033T9	9P	P4	145	51	-	25	19	22	4	e
	○	TNS033T5	5P									
	○	TNS033T1	1.5P									
M33×3	△*	TNT033S9	9P	P5	145	51	-	25	19	22	4	e
	△	TNT033S5	5P									
	△	TNT033S1	1.5P									
M33×2	△*	TNS033Q9	9P	P4	135	45	-	25	19	22	4	e
	△	TNS033Q5	5P									
	△	TNS033Q1	1.5P									
M33×1.5	△*	TNS033O9	9P	P4	135	45	-	25	19	22	4	e
	△	TNS033O5	5P									
	△	TNS033O1	1.5P									
M33×1	△*	TNR033M9	9P	P3	110	30	-	25	19	22	4	e
	△	TNR033M5	5P									
	△	TNR033M1	1.5P									
M34×2	△*	TNS034Q9	9P	P4	135	45	-	26	21	24	4	e
	△	TNS034Q5	5P									
	△	TNS034Q1	1.5P									
M34×1.5	△*	TNS034O9	9P	P4	135	45	-	26	21	24	4	e
	△	TNS034O5	5P									
	△	TNS034O1	1.5P									
M34×1	△*	TNR034M9	9P	P3	110	30	-	26	21	24	4	e
	△	TNR034M5	5P									
	△	TNR034M1	1.5P									

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M35x2	△*	TNT035Q9	9P	P5	135	45	-	26	21	24	4	e
	△	TNT035Q5	5P									
	△	TNT035Q1	1.5P									
M35x1.5	△*	TNS035O9	9P	P4	135	45	-	26	21	24	4	e
	△	TNS035O5	5P									
	△	TNS035O1	1.5P									
M36x4	◎*	TNT036U9	9P	P5	155	57	-	28	21	24	4	e
	◎	TNT036U5	5P									
	◎	TNT036U1	1.5P									
M36x3	△*	TNT036S9	9P	P5	155	57	-	28	21	24	4	e
	△	TNT036S5	5P									
	△	TNT036S1	1.5P									
M36x2	△*	TNS036Q9	9P	P4	135	45	-	28	21	24	4	e
	△	TNS036Q5	5P									
	△	TNS036Q1	1.5P									
M36x1.5	△*	TNS036O9	9P	P4	135	45	-	28	21	24	4	e
	△	TNS036O5	5P									
	△	TNS036O1	1.5P									
M36x1	△*	TNR036M9	9P	P3	110	30	-	28	21	24	4	e
	△	TNR036M5	5P									
	△	TNR036M1	1.5P									
M37x1.5	△*	TNS037O9	9P	P4	135	45	-	28	21	24	4	e
	△	TNS037O5	5P									
	△	TNS037O1	1.5P									
M38x2	△*	TNS038Q9	9P	P4	135	45	-	28	21	24	4	e
	△	TNS038Q5	5P									
	△	TNS038Q1	1.5P									
M38x1.5	△*	TNS038O9	9P	P4	135	45	-	28	21	24	4	e
	△	TNS038O5	5P									
	△	TNS038O1	1.5P									
M38x1	△*	TNR038M9	9P	P3	115	30	-	28	21	24	4	e
	△	TNR038M5	5P									
	△	TNR038M1	1.5P									
M39x4	○*	TNT039U9	9P	P5	165	60	-	30	23	26	4	e
	○	TNT039U5	5P									
	○	TNT039U1	1.5P									
M39x3	△*	TNT039S9	9P	P5	165	60	-	30	23	26	4	e
	△	TNT039S5	5P									
	△	TNT039S1	1.5P									
M39x2	△*	TNT039Q9	9P	P5	135	45	-	30	23	26	4	e
	△	TNT039Q5	5P									
	△	TNT039Q1	1.5P									

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HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M39×1.5	△*	TNS039O9	9P	P4	135	45	-	30	23	26	4	e
	△	TNS039O5	5P									
	△	TNS039O1	1.5P									
M39×1	△*	TNR039M9	9P	P3	115	30	-	30	23	26	4	e
	△	TNR039M5	5P									
	△	TNR039M1	1.5P									
M40×4	△*	TNT040U9	9P	P5	165	60	-	30	23	26	4	e
	△	TNT040U5	5P									
	△	TNT040U1	1.5P									
M40×3	△*	TNT040S9	9P	P5	165	60	-	30	23	26	4	e
	△	TNT040S5	5P									
	△	TNT040S1	1.5P									
M40×2	△*	TNS040Q9	9P	P4	135	45	-	30	23	26	4	e
	△	TNS040Q5	5P									
	△	TNS040Q1	1.5P									
M40×1.5	△*	TNS040O9	9P	P4	135	45	-	30	23	26	4	e
	△	TNS040O5	5P									
	△	TNS040O1	1.5P									
M42×4.5	○*	TNT042V9	9P	P5	175	60	-	32	26	30	4	e
	○	TNT042V5	5P									
	○	TNT042V1	1.5P									
M42×4	△*	TNU042U9	9P	P6	175	60	-	32	26	30	4	e
	△	TNU042U5	5P									
	△	TNU042U1	1.5P									
M42×3	△*	TNT042S9	9P	P5	175	60	-	32	26	30	4	e
	△	TNT042S5	5P									
	△	TNT042S1	1.5P									
M42×2	△*	TNS042Q9	9P	P4	135	45	-	32	26	30	4	e
	△	TNS042Q5	5P									
	△	TNS042Q1	1.5P									
M42×1.5	△*	TNS042O9	9P	P4	135	45	-	32	26	30	4	e
	△	TNS042O5	5P									
	△	TNS042O1	1.5P									
M44×4	△*	TNU044U9	9P	P6	175	67	-	35	26	30	4	e
	△	TNU044U5	5P									
	△	TNU044U1	1.5P									
M44×3	△*	TNT044S9	9P	P5	175	67	-	35	26	30	4	e
	△	TNT044S5	5P									
	△	TNT044S1	1.5P									
M44×2	△*	TNS044Q9	9P	P4	135	45	-	35	26	30	4	e
	△	TNS044Q5	5P									
	△	TNS044Q1	1.5P									

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M44x1.5	△*	TNS044O9	9P	P4	135	45	-	35	26	30	4	e
	△	TNS044O5	5P									
	△	TNS044O1	1.5P									
M45x4.5	○*	TNT045V9	9P	P5	180	67	-	35	26	30	4	e
	○	TNT045V5	5P									
	○	TNT045V1	1.5P									
M45x4	△*	TNU045U9	9P	P6	180	67	-	35	26	30	4	e
	△	TNU045U5	5P									
	△	TNU045U1	1.5P									
M45x3	△*	TNT045S9	9P	P5	180	67	-	35	26	30	4	e
	△	TNT045S5	5P									
	△	TNT045S1	1.5P									
M45x2	△*	TNS045Q9	9P	P4	140	45	-	35	26	30	4	e
	△	TNS045Q5	5P									
	△	TNS045Q1	1.5P									
M45x1.5	△*	TNS045O9	9P	P4	140	45	-	35	26	30	4	e
	△	TNS045O5	5P									
	△	TNS045O1	1.5P									
M45x1	△*	TNR045M9	9P	P3	120	30	-	35	26	30	4	e
	△	TNR045M5	5P									
	△	TNR045M1	1.5P									
M46x1.5	△*	TNS046O9	9P	P4	140	45	-	35	26	30	4	e
	△	TNS046O5	5P									
	△	TNS046O1	1.5P									
M48x5	○*	TNT048W9	9P	P5	185	67	-	38	29	32	4	e
	○	TNT048W5	5P									
	○	TNT048W1	1.5P									
M48x4	△*	TNU048U9	9P	P6	185	67	-	38	29	32	4	e
	△	TNU048U5	5P									
	△	TNU048U1	1.5P									
M48x3	△*	TNU048S9	9P	P6	185	67	-	38	29	32	4	e
	△	TNU048S5	5P									
	△	TNU048S1	1.5P									
M48x2	△*	TNS048Q9	9P	P4	140	45	-	38	29	32	4	e
	△	TNS048Q5	5P									
	△	TNS048Q1	1.5P									
M48x1.5	△*	TNS048O9	9P	P4	140	45	-	38	29	32	4	e
	△	TNS048O5	5P									
	△	TNS048O1	1.5P									

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Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Taps
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Simple measuring tools

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HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
For Unified Threads													
No.0-80UNF	○*	TNMPUN0B9	9P	P1	36	6.3	-	3	2.5	5	3	b	
	○*	TNPUN0B9				8						p	
	○	TNMPUN0B5	5P			6.3						b	
	○*	TNPUN0B5				8						p	
	○	TNMPUN0B1	1.5P			6.3						b	
	○*	TNPUN0B1				8						p	
No.1-64UNC	△*	TNMPUN1D9	9P	P1	42	7.2	-	3	2.5	5	3	b	
	△*	TNPUN1D9				8						p	
	△	TNMPUN1D5	5P			42						7.2	b
	△*	TNPUN1D5				36						8	p
	△	TNMPUN1D1	1.5P			42						7.2	b
	△*	TNPUN1D1				36						8	p
No.1-72UNF	○*	TNMPUN1C9	9P	P1	42	7.2	-	3	2.5	5	3	b	
	○*	TNPUN1C9				36						8	p
	○	TNMPUN1C5	5P			42						7.2	b
	○*	TNPUN1C5				36						8	p
	○	TNMPUN1C1	1.5P			42						7.2	b
	○*	TNPUN1C1				36						8	p
No.2-56UNC	○*	TNMPUN2E9	9P	P1	42	8.1	12	3	2.5	5	3	c	
	○*	TNPUN2E9				9.5	15						
	○	TNMPUN2E5	5P			8.1	12						c
	○*	TNPUN2E5				9.5	15						
	○	TNMPUN2E1	1.5P			8.1	12						
	○*	TNPUN2E1				9.5	15						
No.2-64UNF	△*	TNMPUN2D9	9P	P1	42	8.1	12	3	2.5	5	3	c	
	△*	TNPUN2D9				9.5	15						
	△	TNMPUN2D5	5P			8.1	12						c
	△*	TNPUN2D5				9.5	15						
	△	TNMPUN2D1	1.5P			8.1	12						
	△*	TNPUN2D1				9.5	15						
No.3-48UNC	△*	TNMPUN3F9	9P	P1	46	8.1	14	3	2.5	5	3	c	
	△*	TNPUN3F9				44	9.5						
	△	TNMPUN3F5	5P			46	8.1						14
	△*	TNPUN3F5				44	9.5						16
	△	TNMPUN3F1	1.5P			46	8.1						14
	△*	TNPUN3F1				44	9.5						16
No.3-56UNF	△*	TNMPUN3E9	9P	P1	46	8.1	14	3	2.5	5	3	c	
	△*	TNPUN3E9				44	9.5						16
	△	TNMPUN3E5	5P			46	8.1						14
	△*	TNPUN3E5				44	9.5						16
	△	TNMPUN3E1	1.5P			46	8.1						14

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For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type						
No.3-56UNF	△*	TNPUN3E1	1.5P	P1	44	9.5	16	3	2.5	5	3	c						
No.4-40UNC	○*	TNMQUN4H9	9P	P2	46	9	14	4	3.2	6	3	c						
	○*	TNQUN4H9			44	9.5	16	3	2.5	5								
	○	TNMQUN4H5	5P		46	9	14	4	3.2	6								
	○*	TNQUN4H5			44	9.5	16	3	2.5	5								
	○	TNMQUN4H1	1.5P		46	9	14	4	3.2	6								
	○*	TNQUN4H1			44	9.5	16	3	2.5	5								
	△	TNMRUN4H5	5P		P3	46	9	14	4	3.2			6					
	△	TNMRUN4H1	1.5P			46	9	14	4	3.2			6					
No.4-48UNF	△*	TNMPUN4F9	9P	P1	46	9	14	4	3.2	6	3	c						
	△*	TNPUN4F9			44	9.5	16	3	2.5	5								
	△	TNMPUN4F5	5P		46	9	14	4	3.2	6								
	△*	TNPUN4F5			44	9.5	16	3	2.5	5								
	△	TNMPUN4F1	1.5P		46	9	14	4	3.2	6								
	△*	TNPUN4F1			44	9.5	16	3	2.5	5								
	△	TNMRUN4F5	5P		P3	46	9	14	4	3.2			6					
	△	TNMRUN4F1	1.5P			46	9	14	4	3.2			6					
No.5-40UNC	△	TNMQUN5H5	5P	P2	52	11	16	5	4	7	3	c						
	△	TNMQUN5H1	1.5P															
	△	TNMRUN5H5	5P	P3														
	△	TNMRUN5H1	1.5P															
No.5-44UNF	△*	TNMPUN5G9	9P	P1	52	11	16	5	4	7	3	c						
	△*	TNPUN5G9			46								18	4	3.2	6		
	△	TNMPUN5G5	5P		52								16	5	4	7		
	△*	TNPUN5G5			46								18	4	3.2	6		
	△	TNMPUN5G1	1.5P		52								16	5	4	7		
	△*	TNPUN5G1			46								18	4	3.2	6		
	△	TNMRUN5G5	5P		P3								52	16	5	4	7	
	△	TNMRUN5G1	1.5P															
No.6-32UNC	○*	TNMQUN6J9	9P	P2	52	11	16	5	4	7	3	c						
	○*	TNQUN6J9			48								13	20	4	3.2	6	
	○	TNMQUN6J5	5P		52								11	16	5	4	7	
	○*	TNQUN6J5			48								13	20	4	3.2	6	
	○	TNMQUN6J1	1.5P		52								11	16	5	4	7	
	○*	TNQUN6J1			48								13	20	4	3.2	6	
	△	TNMRUN6J5	5P		P3								52	11	16	5	4	7
	△	TNMRUN6J1	1.5P															
No.6-40UNF	△*	TNMQUN6H9	9P	P2	52	11	16	5	4	7	3	c						
	△*	TNQUN6H9			48								13	20	4	3.2	6	
	△	TNMQUN6H5	5P		52								11	16	5	4	7	
	△*	TNQUN6H5			48								13	20	4	3.2	6	
	△	TNMQUN6H1	1.5P		52								11	16	5	4	7	

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Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
No.6-40UNF	△*	TNQUN6H1	1.5P	P2	48	13	20	4	3.2	6	3	c	
	△	TNMRUN6H5	5P	P3	52	11	16	5	4	7			
	△	TNMRUN6H1	1.5P	P3	52	11	16	5	4	7			
No.8-32UNC	○*	TNMQUN8J9	9P	P2	60	13	21	5.5	4.5	7	4	c	
	○*	TNQUN8J9			52			5	4				
	○	TNMQUN8J5	60		5.5			4.5					
	○*	TNQUN8J5	5P		52			5	4				
	○	TNMQUN8J1	1.5P		60			5.5	4.5				
	○*	TNQUN8J1			52			5	4				
	△	TNMRUN8J5	5P		P3			60	5.5				4.5
	△	TNMRUN8J1	1.5P		P3			60	5.5				4.5
No.8-36UNF	△*	TNMQUN8I9	9P	P2	60	13	21	5.5	4.5	7	4	c	
	△*	TNQUN8I9			52			5	4				
	△	TNMQUN8I5	5P		60			5.5	4.5				
	△*	TNQUN8I5			52			5	4				
	△	TNMQUN8I1	1.5P		60			5.5	4.5				
	△*	TNQUN8I1			52			5	4				
	△	TNMRUN8I5	5P		P3			60	5.5				4.5
	△	TNMRUN8I1	1.5P		P3			60	5.5				4.5
No.10-24UNC	○*	TNMQUNAM9	9P	P2	60	13	22	5.5	4.5	7	4	c	
	○*	TNQUNAM9				16	25						
	○	TNMQUNAM5	5P			13	22						
	○*	TNQUNAM5				16	25						
	○	TNMQUNAM1	1.5P			13	22						
	○*	TNQUNAM1				16	25						
	△	TNMRUNAM5	5P			P3	13						22
	△	TNMRUNAM1	1.5P			P3	13						22
No.10-32UNF	○*	TNMQUAJ9	9P	P2	60	13	22	5.5	4.5	7	4	c	
	○*	TNQUNAJ9				16	25						
	○	TNMQUAJ5	5P			13	22						
	○*	TNQUNAJ5				16	25						
	○	TNMQUAJ1	1.5P			13	22						
	○*	TNQUNAJ1				16	25						
	△	TNMRUNAJ5	5P			P3	13						22
	△	TNMRUNAJ1	1.5P			P3	13						22
No.12-24UNC	△*	TNMQUHCM9	9P	P2	62	15	26	6	4.5	7	4	c	
	△*	TNQUNCM9			60	16		5.5					
	△	TNMQUHCM5	5P		62	15		6					
	△*	TNQUNCM5			60	16		5.5					4.5
	△	TNMQUHCM1	1.5P		62	15		6					
	△*	TNQUNCM1			60	16		5.5					
	△	TNMRUNCM5	5P		P3	62		15					6

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type				
No.12-28UNF	△*	TNMQU04N9	9P	P2	62	15	26	6	4.5	7	4	c				
	△*	TNQU04N9														
	△	TNMQU04K5	5P													
	△*	TNQU04K5														
	△	TNMQU04J1	1.5P													
	△*	TNQU04J1														
	△	TNMRU05O5	5P										P3	62	15	6
	△	TNMRU05O1														
No.12-32UNEF	△*	TNMQU05O9	9P	P2	62	15	26	6	4.5	7	4	c				
	△*	TNQU05O9														
	△	TNMQU05J5	5P													
	△*	TNQU05J5														
	△	TNMQU05J1	1.5P													
	△*	TNQU05J1														
1/4-20UNC	○*	TNQU04N9	9P	P2	62	19	30	6	4.5	7	4	c				
	○	TNMQU04N5														
	○*	TNQU04N5	5P													
	○	TNMQU04N1														
	○*	TNQU04N1	1.5P													
○	TNQU04K1															
1/4-28UNF	○*	TNQU04K9	9P	P2	62	19	30	6	4.5	7	4	c				
	○	TNMQU04K5														
	○*	TNQU04K5	5P													
	○	TNMQU04K1														
	○*	TNQU04K1	1.5P													
○	TNQU04J1															
1/4-32UNEF	△*	TNQU04J9	9P	P2	62	19	30	6	4.5	7	4	c				
	△	TNMQU04J5														
	△*	TNQU04J5	5P													
	△	TNMQU04J1														
	△*	TNQU04J1	1.5P													
△	TNQU04K1															
5/16-18UNC	○*	TNMRU05O9	9P	P3	70	19	-	6.2	5	8	4	e				
	○*	TNRU05O9														
	○	TNMRU05O5	5P													
	○*	TNRU05O5														
	○	TNMRU05O1	1.5P													
	○*	TNRU05O1														
5/16-24UNF	○*	TNMQU05M9	9P	P2	70	19	-	6.2	5	8	4	e				
	○*	TNQU05M9														
	○	TNMQU05M5	5P													
	○*	TNQU05M5														
	○	TNMQU05M1	1.5P													
	○*	TNQU05M1														
5/16-32UNEF	△*	TNMQU05J9	9P	P2	70	19	-	6.2	5	8	4	e				

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Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
5/16-32UNEF	△*	TNQU05J9	9P	P2	70	22	-	6.1	5	8	4	e
	△	TNMQU05J5	5P			19		6.2				
	△*	TNQU05J5	1.5P			22		6.1				
	△	TNMQU05J1				19		6.2				
	△*	TNQU05J1	22			6.1						
3/8-16UNC	○*	TNMRU06P9	9P	P3	75	23	-	7	5.5	8	4	e
	○*	TNRU06P9	24									
	○	TNMRU06P5	5P			23						
	○*	TNRU06P5	24									
	○	TNMRU06P1	1.5P			23						
	○*	TNRU06P1	24									
3/8-24UNF	○*	TNMRU06M9	9P	P3	75	23	-	7	5.5	8	4	e
	○*	TNRU06M9	24									
	○	TNMRU06M5	5P			23						
	○*	TNRU06M5	24									
	○	TNMRU06M1	1.5P			23						
	○*	TNRU06M1	24									
3/8-32UNEF	△*	TNMQU06J9	9P	P2	75	13	-	7	5.5	8	4	e
	△*	TNQU06J9	22									
	△	TNMQU06J5	5P			13						
	△*	TNQU06J5	22									
	△	TNMQU06J1	1.5P			13						
	△*	TNQU06J1	22									
7/16-14UNC	○*	TNMRU07Q9	9P	P3	82	26	-	8.5	6.5	9	4	e
	○*	TNRU07Q9	80		25	8		6				
	○	TNMRU07Q5	5P		82	26		8.5	6.5			
	○*	TNRU07Q5	80		25	8		6				
	○	TNMRU07Q1	1.5P		82	26		8.5	6.5			
	○*	TNRU07Q1	80		25	8		6				
7/16-20UNF	○*	TNMRU07N9	9P	P3	82	26	-	8.5	6.5	9	4	e
	○*	TNRU07N9	80		25	8		6				
	○	TNMRU07N5	5P		82	26		8.5	6.5			
	○*	TNRU07N5	80		25	8		6				
	○	TNMRU07N1	1.5P		82	26		8.5	6.5			
	○*	TNRU07N1	80		25	8		6				
7/16-28UNEF	△*	TNMQU07K9	9P	P2	82	26	-	8.5	6.5	9	4	e
	△*	TNQU07K9	80		25	8		6				
	△	TNMQU07K5	5P		82	26		8.5	6.5			
	△*	TNQU07K5	80		25	8		6				
	△	TNMQU07K1	1.5P		82	26		8.5	6.5			
	△*	TNQU07K1	80		25	8		6				
1/2-13UNC	○*	TNMRU08R9	9P	P3	88	26	-	10.5	8	11	4	e

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type				
1/2-13UNC	○*	TNRU08R9	9P	P3	85	29	-	9	7	10	4	e				
	○	TNMRU08R5	5P										10.5	8	11	
	○*	TNRU08R5	1.5P										9	7	10	
	○	TNMRU08R1											10.5	8	11	
	○*	TNRU08R1	9										7	10		
1/2-20UNF	○*	TNMRU08N9	9P	P3	88	26	-	10.5	8	11	4	e				
	○*	TNRU08N9	5P										9	7	10	
	○	TNMRU08N5											10.5	8	11	
	○*	TNRU08N5	1.5P										9	7	10	
	○	TNMRU08N1											10.5	8	11	
	○*	TNRU08N1	9										7	10		
1/2-28UNEF	△*	TNMQU08K9	9P	P2	88	26	-	10.5	8	11	4	e				
	△*	TNQU08K9	5P										9	7	10	
	△	TNMQU08K5											10.5	8	11	
	△*	TNQU08K5	1.5P										9	7	10	
	△	TNMQU08K1											10.5	8	11	
	△*	TNQU08K1	9										7	10		
9/16-12UNC	△*	TNMRU09S9	9P	P3	95	26	-	12.5	10	13	4	e				
	△*	TNRU09S9	5P										10.5	8	11	
	△	TNMRU09S5											12.5	10	13	
	△*	TNRU09S5	1.5P										10.5	8	11	
	△	TNMRU09S1											12.5	10	13	
	△*	TNRU09S1	10.5										8	11		
9/16-18UNF	○*	TNMRU09O9	9P	P3	95	26	-	12.5	10	13	4	e				
	○*	TNRU09O9	5P										10.5	8	11	
	○	TNMRU09O5											12.5	10	13	
	○*	TNRU09O5	1.5P										10.5	8	11	
	○	TNMRU09O1											12.5	10	13	
	○*	TNRU09O1	10.5										8	11		
5/8-11UNC	○*	TNMSU10U9	9P	P4	95	-	-	12.5	10	13	4	e				
	○*	TNSU10U9	5P										32	9	12	
	○	TNMSU10U5											26	12.5	10	13
	○*	TNSU10U5	1.5P										32	12	9	12
	○	TNMSU10U1											26	12.5	10	13
	○*	TNSU10U1	32										12	9	12	
5/8-18UNF	○*	TNMRU10O9	9P	P3	95	-	-	12.5	10	13	4	e				
	○*	TNRU10O9	5P										32	12	9	12
	○	TNMRU10O5											26	12.5	10	13
	○*	TNRU10O5	1.5P										32	12	9	12
	○	TNMRU10O1											26	12.5	10	13
	○*	TNRU10O1	32										12	9	12	
5/8-24UNEF	△*	TNMRU10M9	9P	P3	95	26	-	12.5	10	13	4	e				

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HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
5/8-24UNEF	△*	TNRU10M9	9P	P3	95	32	-	12	9	12	4	e
	△	TNMRU10M5	5P			26		12.5	10	13		
	△*	TNRU10M5	1.5P			32		12	9	12		
	△	TNMRU10M1				26		12.5	10	13		
	△*	TNRU10M1	32			12		9	12			
3/4-10UNC	○*	TNSU12V9	9P	P4	105	37	-	14	11	14	4	e
	○	TNMSU12V5	5P			33		15	12	15		
	○*	TNSU12V5	1.5P			37		14	11	14		
	○	TNMSU12V1				33		15	12	15		
	○*	TNSU12V1	37			14		11	14			
3/4-16UNF	○*	TNRU12P9	9P	P3	105	37	-	14	11	14	4	e
	○	TNMRU12P5	5P			33		15	12	15		
	○*	TNRU12P5	1.5P			37		14	11	14		
	○	TNMRU12P1				33		15	12	15		
	○*	TNRU12P1	37			14		11	14			
3/4-20UNEF	△*	TNRU12N9	9P	P3	95	30	-	14	11	14	4	e
	△	TNMRU12N5	5P		105	33		15	12	15		
	△*	TNRU12N5	1.5P		95	30		14	11	14		
	△	TNMRU12N1			105	33		15	12	15		
	△*	TNRU12N1	95		30	14		11	14			
7/8-9UNC	○*	TNSU14W9	9P	P4	115	38	-	17	13	16	4	e
	○	TNMSU14W5	5P			33						
	○*	TNSU14W5	1.5P			38						
	○	TNMSU14W1				33						
	○*	TNSU14W1	38									
7/8-14UNF	○*	TNSU14Q9	9P	P4	115	38	-	17	13	16	4	e
	○	TNMSU14Q5	5P			33						
	○*	TNSU14Q5	1.5P			38						
	○	TNMSU14Q1				33						
	○*	TNSU14Q1	38									
7/8-20UNEF	△*	TNRU14N9	9P	P3	95	30	-	17	13	16	4	e
	△	TNMRU14N5	5P		115	33						
	△*	TNRU14N5	1.5P		95	30						
	△	TNMRU14N1			115	33						
	△*	TNRU14N1	95		30							
1'-8UNC	○*	TNSU16X9	9P	P4	125	45	-	20	15	18	4	e
	○	TNMSU16X5	5P			39		19				
	○*	TNSU16X5	1.5P			45		20				
	○	TNMSU16X1				39		19				
	○*	TNSU16X1	45			20						
1'-12UNF	○*	TNSU16S9	9P	P4	125	45	-	20	15	18	4	e
	○	TNMSU16S5	5P			39		19				

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1'-12UNF	○*	TNSU16S5	5P	P4	125	45	-	20	15	18	4	e
	○	TNMSU16S1	1.5P			39		19				
	○*	TNSU16S1				45		20				
1'-14UNS	△*	TNSU16Q9	9P	P4	125	45	-	20	15	18	4	e
	△	TNMSU16Q5	5P			39		19				
	△*	TNSU16Q5				45		20				
	△	TNMSU16Q1	1.5P			39		19				
	△*	TNSU16Q1				45		20				
1'-20UNEF	△*	TNRU16N9	9P	P3	95	30	-	20	15	18	4	e
	△	TNMRU16N5	5P		125	39		19				
	△*	TNRU16N5			95	30		20				
	△	TNMRU16N1	1.5P		125	39		19				
	△*	TNRU16N1			95	30		20				
1'-1/8-7UNC	△*	TNTU18Y9	9P	P5	135	48	-	22	17	20	4	e
	△	TNMTU18Y5	5P			46		23				
	△*	TNTU18Y5				48		22				
	△	TNMTU18Y1	1.5P			46		23				
	△*	TNTU18Y1				48		22				
1'-1/4-7UNC	△*	TNTU20Y9	9P	P5	145	51	-	24	19	22	4	e
	△	TNTU20Y5	5P									
	△	TNTU20Y1	1.5P									
1'-1/4-8UN	△*	TNTU20X9	9P	P5	145	51	-	24	19	22	4	e
	△	TNTU20X5	5P									
	△	TNTU20X1	1.5P									
1'-1/4-12UNF	△*	TNSU20S9	9P	P4	135	45	-	24	19	22	4	e
	△	TNSU20S5	5P									
	△	TNSU20S1	1.5P									
1'-3/8-6UNC	△*	TNTU22Z9	9P	P5	155	57	-	26	21	24	4	e
	△	TNTU22Z5	5P									
	△	TNTU22Z1	1.5P									
1'-3/8-8UN	△*	TNTU22X9	9P	P5	155	57	-	26	21	24	4	e
	△	TNTU22X5	5P									
	△	TNTU22X1	1.5P									
1'-3/8-12UNF	△*	TNSU22S9	9P	P4	135	45	-	26	21	24	4	e
	△	TNSU22S5	5P									
	△	TNSU22S1	1.5P									
1'-1/2-6UNC	△*	TNTU24Z9	9P	P5	160	60	-	30	23	26	4	e
	△	TNTU24Z5	5P									
	△	TNTU24Z1	1.5P									
1'-1/2-12UNF	△*	TNSU24S9	9P	P4	135	45	-	30	23	26	4	e
	△	TNSU24S5	5P									
	△	TNSU24S1	1.5P									

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1'3/4-5UNC	△*	TNUU2809	9P	P6	175	67	-	35	26	30	4	e
	△	TNUU2805	5P									
	△	TNUU2801	1.5P									
1'3/4-12UN	△*	TNSU28S9	9P	P4	135	45	-	35	26	30	4	e
	△	TNSU28S5	5P									
	△	TNSU28S1	1.5P									

For Screw Threads used on Sewing Machines

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/16SM80	△	TNMPS04B5	5P	P1	36	6.3	-	3	2.5	5	3	b
	△	TNMPS04B1	1.5P									
5/64SM64	△	TNMPS05D5	5P	P1	42	7.2	12	3	2.5	5	3	c
	△	TNMPS05D1	1.5P									
3/32SM56	△	TNMPS06E5	5P	P1	46	8.1	14	3	2.5	5	3	c
	△	TNMPS06E1	1.5P									
3/32SM100	△	TNMPS06A5	5P	P1	46	3.4	14	3	2.5	5	3	c
	△	TNMPS06A1	1.5P									
1/8SM40	△	TNMQS08H5	5P	P2	52	11	16	5	4	7	3	c
	△	TNMQS08H1	1.5P									
1/8SM44	△	TNMQS08G5	5P	P2	52	11	16	5	4	7	3	c
	△	TNMQS08G1	1.5P									
9/64SM40	△	TNMQS09H5	5P	P2	52	11	17	5	4	7	3	c
	△	TNMQS09H1	1.5P									
11/64SM40	△	TNMQS11H5	5P	P2	60	13	21	5.5	4.5	7	4	c
	△	TNMQS11H1	1.5P									
3/16SM24	△	TNMQS12M5	5P	P2	60	13	21	5.5	4.5	7	4	c
	△	TNMQS12M1	1.5P									
3/16SM28	△	TNMQS12K5	5P	P2	60	13	21	5.5	4.5	7	4	c
	△	TNMQS12K1	1.5P									
3/16SM32	△	TNMQS12J5	5P	P2	60	13	21	5.5	4.5	7	4	c
	△	TNMQS12J1	1.5P									
3/16SM40	△	TNMQS12H5	5P	P2	60	13	21	5.5	4.5	7	4	c
	△	TNMQS12H1	1.5P									
15/64SM28	△	TNMQS15K5	5P	P2	62	15	26	6	4.5	7	4	c
	△	TNMQS15K1	1.5P									

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

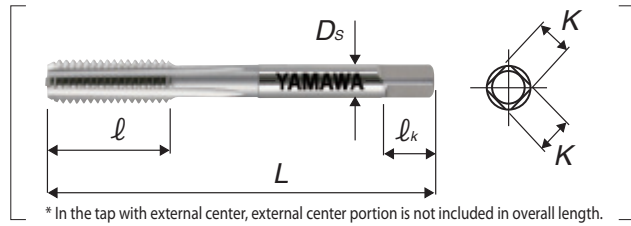
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT(LH)

Hand Taps for Left Hand Threads



Segment : 1A



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1×0.25	△*	TNMP1.0B9-L	9P	P1	36	4.5	-	3	2.5	5	3	a
	△	TNMP1.0B5-L	5P									
	△	TNMP1.0B1-L	1.5P									
M1.2×0.25	△*	TNMP1.2B9-L	9P	P1	36	4.5	-	3	2.5	5	3	a
	△	TNMP1.2B5-L	5P									
	△	TNMP1.2B1-L	1.5P									
M1.4×0.3	△*	TNMP1.4C9-L	9P	P1	36	5.4	-	3	2.5	5	3	a
	△*	TNP1.4C9-L				8						p
	△	TNMP1.4C5-L	5P			5.4						a
	△*	TNP1.4C5-L				8						p
	△	TNMP1.4C1-L	1.5P			5.4						a
	△*	TNP1.4C1-L				8						p
M1.6×0.35	△*	TNMQ1.6D9-L	9P	P2	36	6.3	-	3	2.5	5	3	b
	△*	TNQ1.6D9-L	8			p						
	△	TNMQ1.6D5-L	5P			6.3						b
	△*	TNQ1.6D5-L				8						p
	△	TNMQ1.6D1-L	1.5P			6.3						b
	△*	TNQ1.6D1-L				8						p
M1.7×0.35	△*	TNMP1.7D9-L	9P	P1	36	6.3	-	3	2.5	5	3	b
	△*	TNP1.7D9-L	8			p						
	△	TNMP1.7D5-L	5P			6.3						b
	△*	TNP1.7D5-L				8						p
	△	TNMP1.7D1-L	1.5P			6.3						b
	△*	TNP1.7D1-L				8						p
M2×0.4	△*	TNMP2.0E9-L	9P	P1	42	7.2	12	3	2.5	5	3	c
	△*	TNP2.0E9-L	9.5			15						
	△	TNMP2.0E5-L	5P			7.2	12					
	△*	TNP2.0E5-L				9.5	15					
	△	TNMP2.0E1-L	1.5P			7.2	12					
	△*	TNP2.0E1-L				9.5	15					
M2.3×0.4	△*	TNMP2.3E9-L	9P	P1	42	7.2	12	3	2.5	5	3	c
	△*	TNP2.3E9-L	9.5			15						
	△	TNMP2.3E5-L	5P			7.2	12					
	△*	TNP2.3E5-L				9.5	15					
	△	TNMP2.3E1-L	1.5P			7.2	12					

The products having *mark in the stock column will be available as long as they last.

HT(LH) Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M2.3×0.4	△*	TNP2.3E1-L	1.5P	P1	42	9.5	15	3	2.5	5	3	c
	△*	TNMQ2.5F9-L	9P									
M2.5×0.45	△*	TNQ2.5F9-L	5P	P2	46	9.5	16	3	2.5	5	3	c
	△	TNMQ2.5F5-L										
	△*	TNQ2.5F5-L										
	△	TNMQ2.5F1-L	1.5P									
	△*	TNQ2.5F1-L										
	M2.6×0.45	△*	TNMP2.6F9-L									
△*		TNP2.6F9-L	5P									
△		TNMP2.6F5-L										
△*		TNP2.6F5-L										
△		TNMP2.6F1-L	1.5P									
△*		TNP2.6F1-L										
M3×0.5	○*	TNMQ3.0G9-L	9P	P2	46	9	14	4	3.2	6	3	c
	○*	TNQ3.0G9-L	5P									
	○	TNMQ3.0G5-L										
	○*	TNQ3.0G5-L	1.5P									
	○	TNMQ3.0G1-L										
	○*	TNQ3.0G1-L										
3M0.6	△*	TNMQ3.0H9-L	9P	P2	46	9	14	4	3.2	6	3	c
	△	TNMQ3.0H5-L	5P									
	△	TNMQ3.0H1-L	1.5P									
M3×0.35	△*	TNMQ3.0D9-L	9P	P2	46	6.5	14	4	3.2	6	3	c
	△*	TNQ3.0D9-L										
	△	TNMQ3.0D5-L	5P									
	△*	TNQ3.0D5-L										
	△	TNMQ3.0D1-L	1.5P									
	△*	TNQ3.0D1-L										
M3.5×0.6	△*	TNMQ3.5H9-L	9P	P2	52	11	16	5	4	7	3	c
	△	TNMQ3.5H5-L	5P									
	△	TNMQ3.5H1-L	1.5P									
M4×0.7	○*	TNMQ4.0I9-L	9P	P2	52	11	17	5	4	7	4	c
	○*	TNQ4.0I9-L										
	○	TNMQ4.0I5-L	5P									
	○*	TNQ4.0I5-L										
	○	TNMQ4.0I1-L	1.5P									
	○*	TNQ4.0I1-L										
4M0.75	△*	TNMQ4.0J9-L	9P	P2	52	11	17	5	4	7	4	c
	△	TNMQ4.0J5-L	5P									
	△	TNMQ4.0J1-L	1.5P									
M4×0.5	△*	TNMQ4.0G9-L	9P	P2	52	9	17	5	4	7	4	c
	△	TNMQ4.0G5-L	5P									

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT(LH) Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M4×0.5	△	TNMQ4.0G1-L	1.5P	P2	52	9	17	5	4	7	4	c
	○*	TNMR5.0K9-L	9P									
M5×0.8	○*	TNR5.0K9-L	9P	P3	60	13	22	5.5	4.5	7	4	c
	○	TNMR5.0K5-L										
	○*	TNR5.0K5-L	5P									
	○	TNMR5.0K1-L										
	○*	TNR5.0K1-L	1.5P									
	○	TNR5.0K1-L										
5M0.9	△*	TNMQ5.0L9-L	9P	P2	60	13	22	5.5	4.5	7	4	c
	△	TNMQ5.0L5-L	5P									
	△	TNMQ5.0L1-L	1.5P									
M5×0.5	△*	TNMQ5.0G9-L	9P	P2	60	9	22	5.5	4.5	7	4	c
	△*	TNQ5.0G9-L										
	△	TNMQ5.0G5-L	5P									
	△*	TNQ5.0G5-L										
	△	TNMQ5.0G1-L	1.5P									
	△*	TNQ5.0G1-L										
M6×1	○*	TNMQ6.0M9-L	9P	P2	62	15	26	6	4.5	7	4	c
	○*	TNQ6.0M9-L										
	○	TNMQ6.0M5-L	5P									
	○*	TNQ6.0M5-L										
	○	TNMQ6.0M1-L	1.5P									
	○*	TNQ6.0M1-L										
M6×0.75	△*	TNMQ6.0J9-L	9P	P2	62	15	26	6	4.5	7	4	c
	△*	TNQ6.0J9-L										
	△	TNMQ6.0J5-L	5P									
	△*	TNQ6.0J5-L										
	△	TNMQ6.0J1-L	1.5P									
	△*	TNQ6.0J1-L										
M6×0.5	△*	TNMQ6.0G9-L	9P	P2	62	9	26	6	4.5	7	4	c
	△*	TNQ6.0G9-L										
	△	TNMQ6.0G5-L	5P									
	△*	TNQ6.0G5-L										
	△	TNMQ6.0G1-L	1.5P									
	△*	TNQ6.0G1-L										
M7×0.75	△*	TNMQ7.0J9-L	9P	P2	70	19	-	6.2	5	8	4	e
	△*	TNQ7.0J9-L										
	△	TNMQ7.0J5-L	5P									
	△*	TNQ7.0J5-L										
	△	TNMQ7.0J1-L	1.5P									
	△*	TNQ7.0J1-L										
M8×1.25	○*	TNMR8.0N9-L	9P	P3	70	19	-	6.2	5	8	4	e
	○*	TNR8.0N9-L										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT(LH) Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M8x1.25	○	TNMR8.0N5-L	5P	P3	70	19	-	6.2	5	8	4	e
	○*	TNR8.0N5-L				22						
	○	TNMR8.0N1-L	1.5P			19						
	○*	TNR8.0N1-L				22						
M8x1	△*	TNMQ8.0M9-L	9P	P2	70	19	-	6.2	5	8	4	e
	△*	TNQ8.0M9-L				22						
	△	TNMQ8.0M5-L	5P			19						
	△*	TNQ8.0M5-L				22						
	△	TNMQ8.0M1-L	1.5P			19						
	△*	TNQ8.0M1-L				22						
M8x0.75	△*	TNMQ8.0J9-L	9P	P2	70	19	-	6.2	5	8	4	e
	△*	TNQ8.0J9-L				22						
	△	TNMQ8.0J5-L	5P			19						
	△*	TNQ8.0J5-L				22						
	△	TNMQ8.0J1-L	1.5P			19						
	△*	TNQ8.0J1-L				22						
M8x0.5	△*	TNMQ8.0G9-L	9P	P2	70	10	-	6.2	5	8	4	e
	△*	TNQ8.0G9-L			55	13						
	△	TNMQ8.0G5-L	5P		70	10						
	△*	TNQ8.0G5-L			55	13						
	△	TNMQ8.0G1-L	1.5P		70	10						
	△*	TNQ8.0G1-L			55	13						
M9x1	△*	TNMQ9.0M9-L	9P	P2	75	23	-	7	5.5	8	4	e
	△*	TNQ9.0M9-L			72	22						
	△	TNMQ9.0M5-L	5P		75	23						
	△*	TNQ9.0M5-L			72	22						
	△	TNMQ9.0M1-L	1.5P		75	23						
	△*	TNQ9.0M1-L			72	22						
M9x0.75	△*	TNMQ9.0J9-L	9P	P2	75	13	-	7	5.5	8	4	e
	△*	TNQ9.0J9-L			72	22						
	△	TNMQ9.0J5-L	5P		75	13						
	△*	TNQ9.0J5-L			72	22						
	△	TNMQ9.0J1-L	1.5P		75	13						
	△*	TNQ9.0J1-L			72	22						
M10x1.5	○*	TNMR010O9-L	9P	P3	75	23	-	7	5.5	8	4	e
	○*	TNR010O9-L				24						
	○	TNMR010O5-L	5P			23						
	○*	TNR010O5-L				24						
	○	TNMR010O1-L	1.5P			23						
	○*	TNR010O1-L				24						
M10x1.25	○*	TNMR010N9-L	9P	P3	75	23	-	7	5.5	8	4	e
	○*	TNR010N9-L				24						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT(LH) Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M10×1.25	○	TNMR010N5-L	5P	P3	75	23	-	7	5.5	8	4	e
	○*	TNR010N5-L				24						
	○	TNMR010N1-L	1.5P			23						
	○*	TNR010N1-L				24						
M10×1	△*	TNMR010M9-L	9P	P3	75	23	-	7	5.5	8	4	e
	△*	TNR010M9-L				24						
	△	TNMR010M5-L	5P			23						
	△*	TNR010M5-L				24						
	△	TNMR010M1-L	1.5P			23						
	△*	TNR010M1-L				24						
M11×1.25	△*	TNMR011N9-L	9P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TNR011N9-L				25		8	6			
	△	TNMR011N5-L	5P			26		8.5	6.5			
	△*	TNR011N5-L				25		8	6			
	△	TNMR011N1-L	1.5P			26		8.5	6.5			
	△*	TNR011N1-L				25		8	6			
M11×1	△*	TNMR011M9-L	9P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TNR011M9-L				25		8	6			
	△	TNMR011M5-L	5P			26		8.5	6.5			
	△*	TNR011M5-L				25		8	6			
	△	TNMR011M1-L	1.5P			26		8.5	6.5			
	△*	TNR011M1-L				25		8	6			
M12×1.75	○*	TNMR012P9-L	9P	P3	82	26	-	8.5	6.5	9	4	e
	○*	TNR012P9-L				29						
	○	TNMR012P5-L	5P			26						
	○*	TNR012P5-L				29						
	○	TNMR012P1-L	1.5P			26						
	○*	TNR012P1-L				29						
M12×1.5	○*	TNMR012O9-L	9P	P3	82	26	-	8.5	6.5	9	4	e
	○*	TNR012O9-L				29						
	○	TNMR012O5-L	5P			26						
	○*	TNR012O5-L				29						
	○	TNMR012O1-L	1.5P			26						
	○*	TNR012O1-L				29						
M12×1.25	○*	TNMS012N9-L	9P	P4	82	26	-	8.5	6.5	9	4	e
	○*	TNS012N9-L				29						
	○	TNMS012N5-L	5P			26						
	○*	TNS012N5-L				29						
	○	TNMS012N1-L	1.5P			26						
	○*	TNS012N1-L				29						
M12×1	△*	TNMR012M9-L	9P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TNR012M9-L				29						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

HT(LH) Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M12x1	△	TNMR012M5-L	5P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TNR012M5-L				29						
	△	TNMR012M1-L	1.5P			26						
	△*	TNR012M1-L				29						
M14x2	○*	TNMR014Q9-L	9P	P3	88	26	-	10.5	8	11	4	e
	○*	TNR014Q9-L				30						
	○	TNMR014Q5-L	5P			26						
	○*	TNR014Q5-L				30						
	○	TNMR014Q1-L	1.5P			26						
	○*	TNR014Q1-L				30						
M14x1.5	○*	TNMR014O9-L	9P	P3	88	26	-	10.5	8	11	4	e
	○*	TNR014O9-L				30						
	○	TNMR014O5-L	5P			26						
	○*	TNR014O5-L				30						
	○	TNMR014O1-L	1.5P			26						
	○*	TNR014O1-L				30						
M14x1	△*	TNMR014M9-L	9P	P3	88	26	-	10.5	8	11	4	e
	△*	TNR014M9-L				30						
	△	TNMR014M5-L	5P			26						
	△*	TNR014M5-L				30						
	△	TNMR014M1-L	1.5P			26						
	△*	TNR014M1-L				30						
M16x2	○*	TNMR016Q9-L	9P	P3	95	26	-	12.5	10	13	4	e
	○*	TNR016Q9-L				32						
	○	TNMR016Q5-L	5P			26						
	○*	TNR016Q5-L				32						
	○	TNMR016Q1-L	1.5P			26						
	○*	TNR016Q1-L				32						
M16x1.5	○*	TNMR016O9-L	9P	P3	95	26	-	12.5	10	13	4	e
	○*	TNR016O9-L				32						
	○	TNMR016O5-L	5P			26						
	○*	TNR016O5-L				32						
	○	TNMR016O1-L	1.5P			26						
	○*	TNR016O1-L				32						
M16x1	△*	TNMR016M9-L	9P	P3	95	26	-	12.5	10	13	4	e
	△*	TNR016M9-L				32						
	△	TNMR016M5-L	5P			26						
	△*	TNR016M5-L				32						
	△	TNMR016M1-L	1.5P			26						
	△*	TNR016M1-L				32						
M18x2.5	△*	TNMS018R9-L	9P	P4	100	33	-	14	11	14	4	e
	△*	TNS018R9-L				37						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HT(LH) Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M18×2.5	△	TNMS018R5-L	5P	P4	100	33	-	14	11	14	4	e
	△*	TNS018R5-L				37						
	△	TNMS018R1-L	1.5P			33						
	△*	TNS018R1-L				37						
M18×1.5	○*	TNMR018O9-L	9P	P3	100	33	-	14	11	14	4	e
	○*	TNR018O9-L				37						
	○	TNMR018O5-L	5P			33						
	○*	TNR018O5-L				37						
	○	TNMR018O1-L	1.5P			33						
	○*	TNR018O1-L				37						
M20×2.5	○*	TNS020R9-L	9P	P4	105	37	-	15	12	15	4	e
	○	TNMS020R5-L	5P			33						
	○*	TNS020R5-L				37						
	○	TNMS020R1-L	1.5P			33						
	○*	TNS020R1-L				37						
M20×1.5	○*	TNR020O9-L	9P	P3	105	37	-	15	12	15	4	e
	○	TNMR020O5-L	5P			33						
	○*	TNR020O5-L				37						
	○	TNMR020O1-L	1.5P			33						
	○*	TNR020O1-L				37						
M22×2.5	△*	TNS022R9-L	9P	P4	115	38	-	17	13	16	4	e
	△	TNMS022R5-L	5P			33						
	△*	TNS022R5-L				38						
	△	TNMS022R1-L	1.5P			33						
	△*	TNS022R1-L				38						
M24×3	○*	TNS024S9-L	9P	P4	120	45	-	19	15	18	4	e
	○	TNMS024S5-L	5P			39						
	○*	TNS024S5-L				45						
	○	TNMS024S1-L	1.5P			39						
	○*	TNS024S1-L				45						
M30×3.5	○*	TNS030T9-L	9P	P4	135	48	-	23	17	20	4	e
	○	TNMS030T5-L	5P			46						
	○*	TNS030T5-L				48						
	○	TNMS030T1-L	1.5P			46						
	○*	TNS030T1-L				48						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

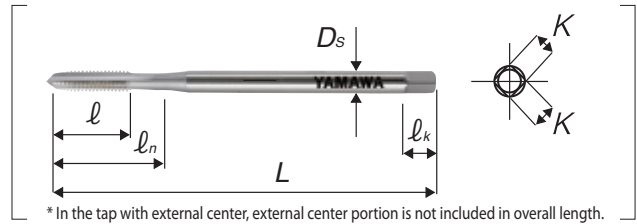
LS-HT

Long Shank Hand Taps

HSS



Segment : 1A



○ Oversize

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type					
For Metric Threads																	
M2×0.4	△	TNMP2.0E507	5P	P1	70	7.2	12	3	2.5	5	3	c					
	△*	L072.0E5-P															
	△	TNMP2.0E510															
	△*	L102.0E5-P															
	△	TNMP2.0E107	1.5P		70	7.2	12						3	2.5	5	3	c
	△*	L072.0E1-P															
	△	TNMP2.0E110															
	△*	L102.0E1-P															
M2.3×0.4	△	TNMP2.3E507	5P	P1	70	7.2	12	3	2.5	5	3	c					
	△*	L072.3E5-P															
	△	TNMP2.3E510															
	△*	L102.3E5-P															
	△	TNMP2.3E107	1.5P		70	7.2	12						3	2.5	5	3	c
	△*	L072.3E1-P															
	△	TNMP2.3E110															
	△*	L102.3E1-P															
M2.5×0.45	△	TNMP2.5F507	5P	P1	70	8.1	14	3	2.5	5	3	c					
	△*	L072.5F5-P															
	△	TNMP2.5F510															
	△*	L102.5F5-P															
	△	TNMP2.5F107	1.5P		70	8.1	14						3	2.5	5	3	c
	△*	L072.5F1-P															
	△	TNMP2.5F110															
	△*	L102.5F1-P															
M2.6×0.45	△	TNMP2.6F507	5P	P1	70	8.1	14	3	2.5	5	3	c					
	△*	L072.6F5-P															
	△	TNMP2.6F510															
	△*	L102.6F5-P															
	△	TNMP2.6F107	1.5P		70	8.1	14						3	2.5	5	3	c
	△*	L072.6F1-P															
	△	TNMP2.6F110															
	△*	L102.6F1-P															
M3×0.5	△	TNMP3.0G507	5P	P1	70	9	14	4	3.2	6	3	c					
	△*	L073.0G5-P															

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type						
M3x0.5	◎	TNMP3.0G510	5P	P1	100	9	14	4	3.2	6	3	c						
	◎*	L103.0G5-P				11	18											
	△	TNMP3.0G512			120	9	14											
	△*	L123.0G5-P				11	18											
	△	TNMP3.0G515			150	9	14											
	△*	L153.0G5-P				11	18											
	△	TNMP3.0G107	70		9	14												
	△*	L073.0G1-P			11	18												
	◎	TNMP3.0G110	1.5P		P1	100	9						14	4	3.2	6	3	c
	◎*	L103.0G1-P					11						18					
	△	TNMP3.0G112				120	9						14					
	△*	L123.0G1-P					11						18					
	△	TNMP3.0G115		150		9	14											
	△*	L153.0G1-P				11	18											
	△	TNMR3.0G510	5P	P3		100	9	14	4	3.2	6	3	c					
	△*	L103.0G5-R					11	18										
	△	TNMR3.0G515				150	9	14										
	△*	L153.0G5-R					11	18										
	△	TNMR3.0G110				100	9	14										
	△*	L103.0G1-R					11	18										
△	TNMR3.0G115	150	9		14													
△*	L153.0G1-R		11		18													
M4x0.7	△	TNMQ4.0I507	5P		P2	70	11	17						5	4	7	3	c
	△*	L074.0I5-Q					13	20										
	◎	TNMQ4.0I510				100	11	17										
	◎*	L104.0I5-Q					13	20										
	△	TNMQ4.0I512		120		11	17											
	△*	L124.0I5-Q				13	20											
	◎	TNMQ4.0I515	150	11		17												
	◎*	L154.0I5-Q		13		20												
	△	TNMQ4.0I107	1.5P	P2		70	11	17	5	4	7	3	c					
	△*	L074.0I1-Q					13	20										
	◎	TNMQ4.0I110				100	11	17										
	◎*	L104.0I1-Q					13	20										
	△	TNMQ4.0I112			120	11	17											
	△*	L124.0I1-Q				13	20											
	◎	TNMQ4.0I115	150		11	17												
	◎*	L154.0I1-Q			13	20												
	△	TNMR4.0I510	5P		P3	100	11	17						5	4	7	3	c
	△*	L104.0I5-R					13	20										
	△	TNMR4.0I515				150	11	17										
	△*	L154.0I5-R					13	20										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type						
M4×0.7	△	TNMR4.0I110	1.5P	P3	100	11	17	5	4	7	3	c						
	△*	L104.0I1-R				13	20											
	△	TNMR4.0I115			150	11	17											
	△*	L154.0I1-R				13	20											
M5×0.8	△	TNMQ5.0K507	5P	P2	70	13	22	5.5	4.5	7	3	c						
	△*	L075.0K5-Q				16	25											
	◎	TNMQ5.0K510			100	13	22											
	◎*	L105.0K5-Q				16	25											
	△	TNMQ5.0K512			120	13	22											
	△*	L125.0K5-Q				16	25											
	◎	TNMQ5.0K515			150	13	22											
	◎*	L155.0K5-Q				16	25											
	△	TNMQ5.0K107	1.5P	P2	70	13	22											
	△*	L075.0K1-Q				16	25											
	◎	TNMQ5.0K110			100	13	22											
	◎*	L105.0K1-Q				16	25											
	△	TNMQ5.0K112			120	13	22											
	△*	L125.0K1-Q				16	25											
	◎	TNMQ5.0K115			150	13	22											
	◎*	L155.0K1-Q				16	25											
	M5×0.8	△	TNMR5.0K510	5P	P3	100	13						22	5.5	4.5	7	3	c
		△*	L105.0K5-R				16						25					
		△	TNMR5.0K515			150	13						22					
		△*	L155.0K5-R				16						25					
△		TNMR5.0K110	1.5P	P3	100	13	22											
△*		L105.0K1-R				16	25											
△		TNMR5.0K115			150	13	22											
△*		L155.0K1-R	16	25														
M6×1		◎	TNMQ6.0M510	5P	P2	100	15	26	6	4.5	7	3	c					
		◎*	L106.0M5-Q				19	28										
	○	TNMQ6.0M512	120			15	26											
	○*	L126.0M5-Q				19	28											
	◎	TNMQ6.0M515	150			15	26											
	◎*	L156.0M5-Q				19	28											
	△	TNMQ6.0M520	200	15	26													
	△*	L206.0M5-Q		19	28													
	M6×1	◎	TNMQ6.0M110	1.5P	P2	100	15	26						6	4.5	7	3	c
		◎*	L106.0M1-Q				19	28										
		○	TNMQ6.0M112			120	15	26										
		○*	L126.0M1-Q				19	28										
		◎	TNMQ6.0M115			150	15	26										
		◎*	L156.0M1-Q				19	28										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type		
M6x1	△	TNMQ6.0M120	1.5P	P2	200	15	26	6	4.5	7	3	c		
	△*	L206.0M1-Q				19	28							
	△	TNMR6.0M510	5P	P3	100	15	26							
	△*	L106.0M5-R				19	28							
	△	TNMR6.0M515				15	26							
	△*	L156.0M5-R				19	28							
	△	TNMR6.0M110	1.5P		100	15	26							
	△*	L106.0M1-R				19	28							
	△	TNMR6.0M115				15	26							
	△*	L156.0M1-R				19	28							
M8x1.25	◎	TNMQ8.0N510	5P		P2	100	19	-	6.2	5	8	4	e	
	◎*	L108.0N5-Q					22							
	○	TNMQ8.0N512		120		19								
	○*	L128.0N5-Q				22								
	◎	TNMQ8.0N515		150		19								
	◎*	L158.0N5-Q				22								
	○	TNMQ8.0N520		200		19								
	○*	L208.0N5-Q				22								
	◎	TNMQ8.0N110	1.5P	100		19								
	◎*	L108.0N1-Q				22								
	○	TNMQ8.0N112		120		19								
	○*	L128.0N1-Q				22								
	◎	TNMQ8.0N115		150		19								
	◎*	L158.0N1-Q				22								
	○	TNMQ8.0N120		200		19								
	○*	L208.0N1-Q				22								
	△	TNMR8.0N510	5P	P3		100	19							
	△*	L108.0N5-R					22							
	△	TNMR8.0N515				150	19							
	△*	L158.0N5-R					22							
	△	TNMR8.0N520				200	19							
	△*	L208.0N5-R					22							
	△	TNMR8.0N110				1.5P	100							19
	△*	L108.0N1-R												22
△	TNMR8.0N115	150	19											
△*	L158.0N1-R		22											
△	TNMR8.0N120	200	19											
△*	L208.0N1-R		22											
M8x1	△	TNMQ8.0M510	5P		P2		100	19	-	6.2	5	8	4	e
	△*	L108.0M5-Q						22						
	△	TNMQ8.0M512				120	19							
	△*	L128.0M5-Q					22							

The products having *mark in the stock column will be available as long as they last.



LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M8x1	△	TNMQ8.0M515	5P	P2	150	19	-	6.2	5	8	4	e	
	△*	L158.0M5-Q				22							
	△	TNMQ8.0M110	100		19								
	△*	L108.0M1-Q			22								
	△	TNMQ8.0M112	120		19								
	△*	L128.0M1-Q			22								
	△	TNMQ8.0M115	150		19								
	△*	L158.0M1-Q			22								
M10x1.5	○	TNMQ0100510	5P	P2	100	23	-	7	5.5	8	4	e	
	○*	L1001005-Q				24							
	○	TNMQ0100512			120	23							
	○*	L1201005-Q				24							
	◎	TNMQ0100515			150	23							
	◎*	L1501005-Q				24							
	○	TNMQ0100520			200	23							
	○*	L2001005-Q				24							
	△	TNMQ0100525	250		23								
	△*	L2501005-Q			24								
	○	TNMQ0100110	1.5P		100	23							
	○*	L1001001-Q				24							
	○	TNMQ0100112			120	23							
	○*	L1201001-Q				24							
	◎	TNMQ0100115			150	23							
	◎*	L1501001-Q				24							
	○	TNMQ0100120			200	23							
	○*	L2001001-Q				24							
	△	TNMQ0100125	250		23								
	△*	L2501001-Q			24								
	△	TNMR0100510	5P		P3	100							23
	△*	L1001005-R											24
	△	TNMR0100515				150							23
	△*	L1501005-R											24
	△	TNMR0100110	1.5P		P3	100							23
	△*	L1001001-R											24
	△	TNMR0100115				150							23
	△*	L1501001-R											24
	△	TNMS0100510	5P		P4	100							23
	△*	L1001005-S											24
	△	TNMS0100515				150							23
	△*	L1501005-S											24
△	TNMS0100110	1.5P	P4	100	23								
△*	L1001001-S				24								

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Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M10x1.5	△	TNMS010O115	1.5P	P4	150	23	-	7	5.5	8	4	e	
	△*	L15010O1-S				24							
M10x1.25	○	TNMQ010N510	5P	P2	100	23	-	7	5.5	8	4	e	
	○*	L10010N5-Q				24							
	○	TNMQ010N512				120							23
	○*	L12010N5-Q											24
	○	TNMQ010N515				150							23
	○*	L15010N5-Q											24
	△	TNMQ010N520				200							23
	△*	L20010N5-Q											24
	○	TNMQ010N110	1.5P	P2	100	23							
	○*	L10010N1-Q				24							
	○	TNMQ010N112				120							23
	○*	L12010N1-Q											24
	○	TNMQ010N115	150	23									
	○*	L15010N1-Q		24									
	△	TNMQ010N120	200	23									
	△*	L20010N1-Q		24									
	△	TNMR010N510	5P	P3	100	23							
	△*	L10010N5-R	24										
	△	TNMR010N110	1.5P	P3	100	23							
	△*	L10010N1-R				24							
△	TNMS010N510	5P	P4	150	23								
△*	L10010N5-S				24								
△	TNMS010N515				23	24							
△*	L15010N5-S					24							
△	TNMS010N110	1.5P	P4	100	23								
△*	L10010N1-S				24								
△	TNMS010N115				23	24							
△*	L15010N1-S					24							
M10x1	△	TNMQ010M510	5P	P2	100	23	-	7	5.5	8	4	e	
	△*	L10010M5-Q				24							
	△	TNMQ010M512				120							23
	△*	L12010M5-Q											24
	△	TNMQ010M515	150	23									
	△*	L15010M5-Q		24									
	△	TNMQ010M110	1.5P	P2	100	23							
	△*	L10010M1-Q				24							
	△	TNMQ010M112				120							23
	△*	L12010M1-Q											24
	△	TNMQ010M115	150	23									
	△*	L15010M1-Q		24									

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type		
M12x1.75	○	TNMQ012P510	5P	P2	100	26	-	8.5	6.5	9	4	e		
	○*	L10012P5-Q				29								
	○	TNMQ012P512			120	26								
	○*	L12012P5-Q				29								
	◎	TNMQ012P515			150	26								
	◎*	L15012P5-Q				29								
	○	TNMQ012P520			200	26								
	○*	L20012P5-Q				29								
	△	TNMQ012P525			250	26								
	△*	L25012P5-Q				29								
	○	TNMQ012P110			1.5P	P3							100	26
	○*	L10012P1-Q												29
	○	TNMQ012P112											120	26
	○*	L12012P1-Q												29
	◎	TNMQ012P115											150	26
	◎*	L15012P1-Q	29											
	○	TNMQ012P120	200	26										
	○*	L20012P1-Q		29										
	△	TNMQ012P125	250	26										
	△*	L25012P1-Q		29										
	△	TNMR012P515	5P	P4									150	26
	△*	L15012P5-R												29
	△	TNMR012P115	1.5P	P4									200	26
	△*	L15012P1-R												29
	△	TNMS012P515	5P	P4									200	26
	△*	L15012P5-S			29									
	△	TNMS012P520			150	26								
	△*	L20012P5-S	29											
	△	TNMS012P115	1.5P	P4	200	26								
	△*	L15012P1-S				29								
△	TNMS012P120	100				26								
△*	L20012P1-S		29											
M12x1.5	△	TNMQ012O510	5P	P2	100	26	-	8.5	6.5	9	4	e		
	△*	L10012O5-Q				29								
	△	TNMQ012O512			120	26								
	△*	L12012O5-Q				29								
	△	TNMQ012O515			150	26								
	△*	L15012O5-Q	29											
	△	TNMQ012O520	200	26										
	△*	L20012O5-Q		29										
	△	TNMQ012O110	1.5P	P2	100	26								
	△*	L10012O1-Q				29								

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For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.5	△	TNMQ012O112	1.5P	P2	120	26						
	△*	L12012O1-Q				29						
	△	TNMQ012O115			150	26						
	△*	L15012O1-Q				29						
	△	TNMQ012O120			200	26						
	△*	L20012O1-Q				29						
	△	TNMS012O515	5P	P4	150	26	-	8.5	6.5	9	4	e
	△*	L15012O5-S				29						
	△	TNMS012O520			200	26						
	△*	L20012O5-S				29						
	△	TNMS012O115	1.5P	P4	150	26						
	△*	L15012O1-S				29						
	△	TNMS012O120			200	26						
	△*	L20012O1-S				29						
M12x1.25	○	TNMQ012N510	5P	P2	100	26						
	○*	L10012N5-Q				29						
	△	TNMQ012N512			120	26						
	△*	L12012N5-Q				29						
	○	TNMQ012N515			150	26						
	○*	L15012N5-Q				29						
	△	TNMQ012N520			200	26						
	△*	L20012N5-Q				29						
	○	TNMQ012N110	1.5P	P2	100	26						
	○*	L10012N1-Q				29						
	△	TNMQ012N112			120	26						
	△*	L12012N1-Q				29						
	○	TNMQ012N115			150	26						
	○*	L15012N1-Q				29						
	△	TNMQ012N120			200	26						
	△*	L20012N1-Q				29						
	△	TNMS012N515	5P	P4	150	26						
	△*	L15012N5-S				29						
	△	TNMS012N520			200	26						
	△*	L20012N5-S				29						
△	TNMS012N115	1.5P	P4	150	26							
△*	L15012N1-S				29							
△	TNMS012N120			200	26							
△*	L20012N1-S				29							
M12x1	△	TNMQ012M510	5P	P2	100	26						
	△*	L10012M5-Q				29						
	△	TNMQ012M515			150	26						
	△*	L15012M5-Q				29						

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Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M12x1	△	TNMQ012M110	1.5P	P2	100	26	-	8.5	6.5	9	4	e	
	△*	L10012M1-Q				29							
	△	TNMQ012M115			150	26							
	△*	L15012M1-Q				29							
M14x2	△	TNMQ014Q512	5P	P2	120	26	-	10.5	8	11	4	e	
	△*	L12014Q5-Q				30							
	○	TNMQ014Q515			150	26							
	○*	L15014Q5-Q				30							
	△	TNMQ014Q520			200	26							
	△*	L20014Q5-Q				30							
	△	TNMQ014Q525			250	26							
	△*	L25014Q5-Q				30							
	△	TNMQ014Q112	1.5P	P2	120	26							
	△*	L12014Q1-Q				30							
	○	TNMQ014Q115			150	26							
	○*	L15014Q1-Q				30							
	△	TNMQ014Q120			200	26							
	△*	L20014Q1-Q				30							
	△	TNMQ014Q125			250	26							
	△*	L25014Q1-Q				30							
	△	TNMR014Q515	5P	P3	150	26							
	△*	L15014Q5-R	30										
	△	TNMR014Q115	1.5P		P3	150							26
	△*	L15014Q1-R											30
M14x1.5	△	TNMQ014O512	5P	P2	120	26	-	10.5	8	11	4	e	
	△*	L12014O5-Q				30							
	○	TNMQ014O515			150	26							
	○*	L15014O5-Q				30							
	△	TNMQ014O520	200	26									
	△*	L20014O5-Q		30									
	△	TNMQ014O112	1.5P	P2	120	26							
	△*	L12014O1-Q				30							
	○	TNMQ014O115			150	26							
	○*	L15014O1-Q				30							
	△	TNMQ014O120	200	26									
	△*	L20014O1-Q		30									
M14x1	△	TNMQ014M515	5P	P2	150	26	-	10.5	8	11	4	e	
	△*	L15014M5-Q	30										
	△	TNMQ014M115	1.5P	P2	150	26							
	△*	L15014M1-Q				30							
M16x2	◎	TNMQ016Q515	5P	P2	150	26	-	12.5	10	13	4	e	
	◎*	L15016Q5-Q				32							

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type							
M16x2	○	TNMQ016Q520	5P	P2	200	26	-	12.5	10	13	4	e							
	○*	L20016Q5-Q				32													
	△	TNMQ016Q525			250	26													
	△*	L25016Q5-Q				32													
	◎	TNMQ016Q115	150		26														
	◎*	L15016Q1-Q			32														
	○	TNMQ016Q120	1.5P		P3	200							26						
	○*	L20016Q1-Q											32						
	△	TNMQ016Q125		250		26													
	△*	L25016Q1-Q				32													
	△	TNMR016Q515	5P	150		26													
	△*	L15016Q5-R				32													
	△	TNMR016Q115	1.5P	26															
	△*	L15016Q1-R		32															
M16x1.5	○	TNMQ016O515	5P	P2		150	26	-	12.5	10	13	4	e						
	○*	L15016O5-Q					32												
	△	TNMQ016O520				200	26												
	△*	L20016O5-Q					32												
	○	TNMQ016O115	1.5P			150	26												
	○*	L15016O1-Q					32												
	△	TNMQ016O120			200	26													
	△*	L20016O1-Q				32													
M16x1	△	TNMQ016M515	5P	P2	150	26	-	12.5	10	13	4	e							
	△*	L15016M5-Q				32													
	△	TNMQ016M115	1.5P			26													
	△*	L15016M1-Q				32													
M18x2.5	△	TNMR018R515	5P		P3	150							33	-	14	11	14	4	e
	△*	L15018R5-R											37						
	△	TNMR018R520				200							33						
	△*	L20018R5-R											37						
	△	TNMR018R525		250		33													
	△*	L25018R5-R				37													
	△	TNMR018R115	1.5P	150		33													
	△*	L15018R1-R				37													
	△	TNMR018R120		200		33													
	△*	L20018R1-R				37													
	△	TNMR018R125	250	33															
	△*	L25018R1-R		37															
	△	TNMS018R515	5P	P4		150	33												
	△*	L15018R5-S					37												
	△	TNMS018R115	1.5P				33												
	△*	L15018R1-S					37												

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Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M18x2	△	TNMR018Q520	5P	P3	200	33	-	14	11	14	4	e	
	△*	L20018Q5-R				37							
	△	TNMR018Q120	1.5P			33							
	△*	L20018Q1-R				37							
M18x1.5	○	TNMQ018O515	5P	P2	150	33	-	14	11	14	4	e	
	○*	L15018O5-Q				37							
	△	TNMQ018O520				200							33
	△*	L20018O5-Q											37
	○	TNMQ018O115	1.5P		150	33							
	○*	L15018O1-Q				37							
	△	TNMQ018O120				200							33
	△*	L20018O1-Q											37
M20x2.5	○	TNMR020R515	5P	P3	150	33	-	15	12	15	4	e	
	○*	L15020R5-R				37							
	○	TNMR020R520				200							33
	○*	L20020R5-R			37								
	△	TNMR020R525			250								33
	△*	L25020R5-R				37							
	○	TNMR020R115	1.5P		150	33							
	○*	L15020R1-R				37							
	○	TNMR020R120				200							33
	○*	L20020R1-R			37								
	△	TNMR020R125			250								33
	△*	L25020R1-R				37							
	△	TNMS020R515	5P		150	33							
	△*	L15020R5-S				37							
△	TNMS020R115	1.5P	150	33									
△*	L15020R1-S			37									
M20x1.5	○	TNMR020O515	5P	P3	150	33	-	15	12	15	4	e	
	○*	L15020O5-R				37							
	△	TNMR020O520				200							33
	△*	L20020O5-R			37								
	○	TNMR020O115	1.5P		150	33							
	○*	L15020O1-R				37							
	△	TNMR020O120				200							33
	△*	L20020O1-R			37								
	△	TNMS020O515	5P		150	33							
	△*	L15020O5-S				37							
	△	TNMS020O115	1.5P		150	33							
	△*	L15020O1-S				37							
M22x2.5	△	TNMR022R515	5P	P3	150	33	-	17	13	16	4	e	
	△*	L15022R5-R				38							

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Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M22x2.5	△	TNMR022R520	5P	P3	200	33	-	17	13	16	4	e	
	△*	L20022R5-R				38							
	△	TNMR022R525			250	33							
	△*	L25022R5-R				38							
	△	TNMR022R115	1.5P		150	33							
	△*	L15022R1-R				38							
	△	TNMR022R120			200	33							
	△*	L20022R1-R				38							
	△	TNMR022R125	5P	P4	250	33							
	△*	L25022R1-R				38							
	△	TNMS022R515			150	33							
	△*	L15022R5-S				38							
	△	TNMS022R115	1.5P	33									
	△*	L15022R1-S		38									
M22x1.5	△	TNMR022O515	5P	P3	150	33	-	17	13	16	4	e	
	△*	L15022O5-R				38							
	△	TNMR022O520			200	33							
	△*	L20022O5-R				38							
	△	TNMR022O115	1.5P		150	33							
	△*	L15022O1-R				38							
	△	TNMR022O120			200	33							
	△*	L20022O1-R				38							
M24x3	○	TNMR024S515	5P	P3	150	39	-	19	15	18	4	e	
	○*	L15024S5-R				45							
	○	TNMR024S520			200	39							
	○*	L20024S5-R				45							
	△	TNMR024S525	250		39								
	△*	L25024S5-R			45								
	○	TNMR024S115			1.5P	150							39
	○*	L15024S1-R											45
	○	TNMR024S120	200	39									
	○*	L20024S1-R		45									
	△	TNMR024S125	5P	P4	250	39							
	△*	L25024S1-R				45							
	△	TNMS024S515			150	39							
	△*	L15024S5-S				45							
	△	TNMS024S115	1.5P	39									
	△*	L15024S1-S		45									
M24x2	△	TNMR024Q520	5P	P3	200	39	-	19	15	18	4	e	
	△*	L20024Q5-R	45										
	△	TNMR024Q120	1.5P			39							
	△*	L20024Q1-R				45							

The products having *mark in the stock column will be available as long as they last.



LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M24×1.5	○	TNMR024O515	5P	P3	150	39	-	19	15	18	4	e	
	○*	L15024O5-R				45							
	△	TNMR024O520				200							39
	△*	L20024O5-R											45
	○	TNMR024O115	1.5P		150	39							
	○*	L15024O1-R				45							
	△	TNMR024O120				200							39
	△*	L20024O1-R											45
M27×3	△	TNMR027S520	5P	P3	200	39	-	20	15	18	4	e	
	△*	L20027S5-R				45							
	△	TNMR027S525				250							39
	△*	L25027S5-R											45
	△	TNMR027S120	1.5P		200	39							
	△*	L20027S1-R				45							
	△	TNMR027S125				250							39
	△*	L25027S1-R											45
M27×2	△	TNMR027Q525	5P	P3	250	39	-	20	15	18	4	e	
	△*	L25027Q5-R				45							
	△	TNMR027Q125	1.5P			39							
	△*	L25027Q1-R				45							
M27×1.5	△	TNMR027O520	5P	P3	200	39	-	20	15	18	4	e	
	△*	L20027O5-R				45							
	△	TNMR027O525				250							39
	△*	L25027O5-R											45
	△	TNMR027O120	1.5P		200	39							
	△*	L20027O1-R				45							
	△	TNMR027O125				250							39
	△*	L25027O1-R											45
M30×3.5	△	TNMS030T520	5P	P4	200	46	-	23	17	20	4	e	
	△*	L20030T5-S				48							
	△	TNMS030T525				250							46
	△*	L25030T5-S											48
	△	TNMS030T530	1.5P		300	46							
	△*	L30030T5-S				48							
	△	TNMS030T120				200							46
	△*	L20030T1-S											48
	△	TNMS030T125	250		46								
	△*	L25030T1-S			48								
	△	TNMS030T130			300	46							
	△*	L30030T1-S				48							
M30×3	△	TNMR030S525	5P	P3	250	46	-	23	17	20	4	e	
	△*	L25030S5-R				48							

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M30x3	△	TNMR030S125	1.5P	P3	250	46	-	23	17	20	4	e	
	△*	L25030S1-R				48							
M30x2	△	TNMR030Q520	5P	P3	200	46	-	23	17	20	4	e	
	△*	L20030Q5-R				45							
	△	TNMR030Q525				250							46
	△*	L25030Q5-R											45
	△	TNMR030Q120	1.5P	P3	200	46	-	23	17	20	4	e	
	△*	L20030Q1-R				45							
	△	TNMR030Q125				250							46
	△*	L25030Q1-R											45
M30x1.5	△	TNMR030O520	5P	P3	200	46	-	23	17	20	4	e	
	△*	L20030O5-R				45							
	△	TNMR030O525				250							46
	△*	L25030O5-R											45
	△	TNMR030O120	1.5P	P3	200	46	-	23	17	20	4	e	
	△*	L20030O1-R				45							
	△	TNMR030O125				250							46
	△*	L25030O1-R											45
M33x3.5	△	L25033T5-S	5P	P4	250	51	-	25	19	22	4	e	
	△	L25033T1-S	1.5P										
M33x3	△	L25033S5-R	5P	P3	250	51	-	25	19	22	4	e	
	△	L25033S1-R	1.5P										
M33x2	△	L25033Q5-R	5P	P3	250	45	-	25	19	22	4	e	
	△	L25033Q1-R	1.5P										
M33x1.5	△	L25033O5-R	5P	P3	250	45	-	25	19	22	4	e	
	△	L25033O1-R	1.5P										
M36x4	△	L25036U5-S	5P	P4	250	57	-	28	21	24	4	e	
	△	L30036U5-S			300								
	△	L25036U1-S	1.5P		250								
	△	L30036U1-S			300								
M36x3	△	L25036S5-R	5P	P3	250	57	-	28	21	24	4	e	
	△	L25036S1-R	1.5P										
M36x2	△	L25036Q5-R	5P	P3	250	45	-	28	21	24	4	e	
	△	L25036Q1-R	1.5P										
M36x1.5	△	L25036O5-R	5P	P3	250	45	-	28	21	24	4	e	
	△	L25036O1-R	1.5P										
M39x4	△	L30039U5-S	5P	P4	300	60	-	30	23	26	4	e	
	△	L30039U1-S	1.5P										
M39x3	△	L25039S5-R	5P	P3	250	60	-	30	23	26	4	e	
	△	L25039S1-R	1.5P										
M39x2	△	L25039Q5-R	5P	P3	250	45	-	30	23	26	4	e	
	△	L25039Q1-R	1.5P										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M39×1.5	△	L25039O5-R	5P	P3	250	45	-	30	23	26	4	e
	△	L25039O1-R	1.5P									
M40×3	△	L25040S5-R	5P	P3	250	60	-	30	23	26	4	e
	△	L30040S5-R										
	△	L25040S1-R	1.5P									
	△	L30040S1-R										
M40×2	△	L25040Q5-R	5P	P3	250	45	-	30	23	26	4	e
	△	L30040Q5-R										
	△	L25040Q1-R	1.5P									
	△	L30040Q1-R										
M40×1.5	△	L25040O5-R	5P	P3	250	45	-	30	23	26	4	e
	△	L30040O5-R										
	△	L25040O1-R	1.5P									
	△	L30040O1-R										
M42×4.5	△	L25042V5-S	5P	P4	250	60	-	32	26	30	4	e
	△	L30042V5-S										
	△	L25042V1-S	1.5P									
	△	L30042V1-S										
M42×3	△	L25042S5-R	5P	P3	250	60	-	32	26	30	4	e
	△	L30042S5-R										
	△	L25042S1-R	1.5P									
	△	L30042S1-R										
M42×2	△	L25042Q5-R	5P	P3	250	45	-	32	26	30	4	e
	△	L30042Q5-R										
	△	L25042Q1-R	1.5P									
	△	L30042Q1-R										
M42×1.5	△	L25042O5-R	5P	P3	250	45	-	32	26	30	4	e
	△	L30042O5-R										
	△	L25042O1-R	1.5P									
	△	L30042O1-R										
M45×4.5	△	L30045V5-S	5P	P4	300	67	-	35	26	30	4	e
	△	L30045V1-S	1.5P									
M45×3	△	L30045S5-R	5P	P3	300	67	-	35	26	30	4	e
	△	L30045S1-R	1.5P									
M45×2	△	L30045Q5-R	5P	P3	300	45	-	35	26	30	4	e
	△	L30045Q1-R	1.5P									
M45×1.5	△	L30045O5-R	5P	P3	300	45	-	35	26	30	4	e
	△	L30045O1-R	1.5P									
M48×5	△	L30048W5-S	5P	P4	300	67	-	38	29	32	4	e
	△	L30048W1-S	1.5P									
M48×3	△	L30048S5-R	5P	P3	300	67	-	38	29	32	4	e
	△	L30048S1-R	1.5P									

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type			
M48x2	△	L30048Q5-R	5P	P3	300	45	-	38	29	32	4	e			
	△	L30048Q1-R	1.5P												
M48x1.5	△	L30048O5-R	5P	P3	300	45	-	38	29	32	4	e			
	△	L30048O1-R	1.5P												
For Unified Threads															
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type			
1/4-20UNC	△	TNMQU04N515	5P	P2	150	15	26	6	4.5	7	3	c			
	△*	L15U04N5-Q											19	30	
	△	TNMQU04N520											200	15	26
	△*	L20U04N5-Q												19	30
	△	TNMQU04N115	1.5P	P2	150	15	26	6	4.5	7	3	c			
	△*	L15U04N1-Q											19	30	
	△	TNMQU04N120											200	15	26
	△*	L20U04N1-Q												19	30
1/4-28UNF	△	TNMQU04K515	5P	P2	150	15	26	6	4.5	7	3	c			
	△*	L15U04K5-Q											19	30	
	△	TNMQU04K520											200	15	26
	△*	L20U04K5-Q												19	30
	△	TNMQU04K115	1.5P	P2	150	15	26	6	4.5	7	3	c			
	△*	L15U04K1-Q											19	30	
	△	TNMQU04K120											200	15	26
	△*	L20U04K1-Q												19	30
5/16-18UNC	△	TNMQU05O515	5P	P2	150	19	-	6.2	5	8	4	e			
	△*	L15U05O5-Q											22	6.1	
	△	TNMQU05O520											200	19	6.2
	△*	L20U05O5-Q												22	6.1
	△	TNMQU05O115	1.5P	P2	150	19	-	6.2	5	8	4	e			
	△*	L15U05O1-Q											22	6.1	
	△	TNMQU05O120											200	19	6.2
	△*	L20U05O1-Q												22	6.1
5/16-24UNF	△	TNMQU05M515	5P	P2	150	19	-	6.2	5	8	4	e			
	△*	L15U05M5-Q											22	6.1	
	△	TNMQU05M520											200	19	6.2
	△*	L20U05M5-Q												22	6.1
	△	TNMQU05M115	1.5P	P2	150	19	-	6.2	5	8	4	e			
	△*	L15U05M1-Q											22	6.1	
	△	TNMQU05M120											200	19	6.2
	△*	L20U05M1-Q												22	6.1
3/8-16UNC	△	TNMQU06P515	5P	P2	150	23	-	7	5.5	8	4	e			
	△*	L15U06P5-Q											24		
	△	TNMQU06P520											200	23	

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Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
3/8-16UNC	△*	L20U06P5-Q	5P	P2	200	24	-	7	5.5	8	4	e	
	△	TNMQU06P115	1.5P		150	23							
	△*	L15U06P1-Q			200	24							
	△	TNMQU06P120			200	23							
	△*	L20U06P1-Q			200	24							
3/8-24UNF	△	TNMQU06M515	5P	P2	150	23	-	7	5.5	8	4	e	
	△*	L15U06M5-Q			150	24							
	△	TNMQU06M520			200	23							
	△*	L20U06M5-Q			200	24							
	△	TNMQU06M115	1.5P		150	23							
	△*	L15U06M1-Q			150	24							
	△	TNMQU06M120			200	23							
	△*	L20U06M1-Q			200	24							
7/16-14UNC	△	TNMRU07Q515	5P	P3	150	-	26	8.5	6.5	9	4	e	
	△*	L15U07Q5-R	25				8	6					
	△	TNMRU07Q115	1.5P				26	8.5	6.5				
	△*	L15U07Q1-R	25				8	6					
7/16-20UNF	△	TNMQU07N515	5P	P2	150	-	26	8.5	6.5	9	4	e	
	△*	L15U07N5-Q					25	8	6				
	△	TNMQU07N520					200	26	8.5				6.5
	△*	L20U07N5-Q	1.5P		150	25	8	6					
	△	TNMQU07N115			150	26	8.5	6.5					
	△*	L15U07N1-Q			200	25	8	6					
	△	TNMQU07N120			200	26	8.5	6.5					
△*	L20U07N1-Q	200	25	8	6								
1/2-13UNC	△	TNMRU08R515	5P	P3	150	-	26	10.5	8	11	4	e	
	△*	L15U08R5-R					29	9	7	10			
	△	TNMRU08R520					200	26	10.5	8			11
	△*	L20U08R5-R					200	29	9	7			10
	△	TNMRU08R115	1.5P		150		26	10.5	8	11			
	△*	L15U08R1-R			150		29	9	7	10			
	△	TNMRU08R120			200		26	10.5	8	11			
	△*	L20U08R1-R			200		29	9	7	10			
1/2-20UNF	△	TNMQU08N515	5P	P2	150	-	26	10.5	8	11	4	e	
	△*	L15U08N5-Q					29	9	7	10			
	△	TNMQU08N520					200	26	10.5	8			11
	△*	L20U08N5-Q					200	29	9	7			10
	△	TNMQU08N115	1.5P		150		26	10.5	8	11			
	△*	L15U08N1-Q			150		29	9	7	10			
	△	TNMQU08N120			200		26	10.5	8	11			
	△*	L20U08N1-Q			200		29	9	7	10			
9/16-18UNF	△	TNMQU09O515	5P	P2	150	26	-	12.5	10	13	4	e	

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For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT Long Shank Hand Taps

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
9/16-18UNF	△*	L15U0905-Q	5P	P2	150	30	-	10.5	8	11	4	e	
	△	TNMQU090115	1.5P			26		12.5	10	13			
	△*	L15U0901-Q				30		10.5	8	11			
5/8-11UNC	△	TNMRU10U515	5P	P3	150	26	-	12.5	10	13	4	e	
	△*	L15U10U5-R				32		12	9	12			
	△	TNMRU10U520				26		12.5	10	13			
	△*	L20U10U5-R				32		12	9	12			
	△	TNMRU10U115	1.5P		150	26		12.5	10	13			
	△*	L15U10U1-R				32		12	9	12			
	△	TNMRU10U120				200		26	12.5	10			13
	△*	L20U10U1-R						32	12	9			12
5/8-18UNF	△	TNMQU100515	5P	P2	150	26	-	12.5	10	13	4	e	
	△*	L15U1005-Q	1.5P			32		12	9	12			
	△	TNMQU100115				26		12.5	10	13			
	△*	L15U1001-Q	32			12		9	12				
3/4-10UNC	△	TNMRU12V515	5P	P3	150	33	-	15	12	15	4	e	
	△*	L15U12V5-R				37		14	11	14			
	△	TNMRU12V520				200		33	15	12			15
	△*	L20U12V5-R						37	14	11			14
	△	TNMRU12V115	1.5P		150	33		15	12	15			
	△*	L15U12V1-R				37		14	11	14			
	△	TNMRU12V120				200		33	15	12			15
	△*	L20U12V1-R						37	14	11			14
3/4-16UNF	△	TNMRU12P515	5P	P3	150	33	-	15	12	15	4	e	
	△*	L15U12P5-R	1.5P			37		14	11	14			
	△	TNMRU12P115				33		15	12	15			
	△*	L15U12P1-R	37			14		11	14				
7/8-9UNC	△	TNMRU14W520	5P	P3	200	33	-	17	13	16	4	e	
	△*	L20U14W5-R	1.5P			38							
	△	TNMRU14W120				33							
1'-8UNC	△	TNMRU16X515	5P	P3	150	39	-	19	15	18	4	e	
	△*	L15U16X5-R				45		20					
	△	TNMRU16X520				200		39					19
	△*	L20U16X5-R						45					20
	△	TNMRU16X115	1.5P		150	39		19					
	△*	L15U16X1-R				45		20					
	△	TNMRU16X120				200		39					19
	△*	L20U16X1-R						45					20

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Spiral Fluted Taps
(for blind hole)

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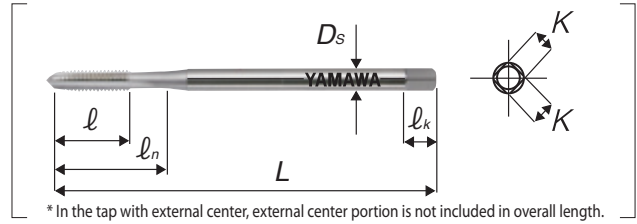
Centering Tools

LS-HT(LH)

Long Shank Hand Taps for Left Hand Threads



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	L (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type							
For Metric Threads																			
M3×0.5	△	TNMP3.0G510L	5P	P1	100	9	14	4	3.2	6	3	c							
	△*	L103.0G5-PL					18												
	△	TNMP3.0G110L	1.5P				9						14						
	△*	L103.0G1-PL					11						18						
M4×0.7	△	TNMQ4.0I510L	5P	P2	100	11	17	5	4	7	3	c							
	△*	L104.0I5-QL					20												
	△	TNMQ4.0I110L	1.5P				11						17						
	△*	L104.0I1-QL					13						20						
M5×0.8	△	TNMQ5.0K510L	5P	P2	100	13	22	5.5	4.5	7	3	c							
	△*	L105.0K5-QL					25												
	△	TNMQ5.0K110L	1.5P				13						22						
	△*	L105.0K1-QL					16						25						
M6×1	△	TNMQ6.0M510L	5P	P2	100	15	26	6	4.5	7	3	c							
	△*	L106.0M5-QL					28												
	△	TNMQ6.0M515L					150						15	26					
	△*	L156.0M5-QL											19	28					
	△	TNMQ6.0M110L	1.5P		100	15	26						6	4.5	7	3	c		
	△*	L106.0M1-QL					28												
	△	TNMQ6.0M115L					150											15	26
	△*	L156.0M1-QL																19	28
M8×1.25	△	TNMQ8.0N510L	5P	P2	100	19	22	6.2	5	8	4	e							
	△*	L108.0N5-QL					22												
	△	TNMQ8.0N515L					150						19	22					
	△*	L158.0N5-QL											22						
	△	TNMQ8.0N110L	1.5P		100	19	22						6.2	5	8	4	e		
	△*	L108.0N1-QL					22												
	△	TNMQ8.0N115L					150											19	22
	△*	L158.0N1-QL																22	
M10×1.5	△	TNMQ010O510L	5P	P2	100	23	24	7	5.5	8	4	e							
	△*	L10010O5-QL					24												
	△	TNMQ010O515L					150											23	24
	△*	L15010O5-QL	24																
	△	TNMQ010O110L	1.5P		100	23	24						7	5.5	8	4	e		
	△*	L10010O1-QL					24												
	△	TNMQ010O115L					150											23	24
△*	L15010O1-QL	24																	

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT(LH) Long Shank Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	L (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M10x1.5	△*	L1501001-QL	1.5P	P2	150	24	-	7	5.5	8	4	e	
	△	TNMQ010N515L	5P			23							
M10x1.25	△*	L15010N5-QL	5P	P2	150	24	-	7	5.5	8	4	e	
	△	TNMQ010N115L				23							
	△*	L15010N1-QL	1.5P			24							
	△	TNMQ012P515L	5P			26							
M12x1.75	△*	L15012P5-QL	5P	P2	150	29	-	8.5	6.5	9	4	e	
	△	TNMQ012P115L				26							
	△*	L15012P1-QL	1.5P			29							
	△	TNMQ012O515L	5P			26							
M12x1.5	△*	L15012O5-QL	5P	P2	150	29	-	8.5	6.5	9	4	e	
	△	TNMQ012O115L				26							
	△*	L15012O1-QL	1.5P			29							
	△	TNMQ012N515L	5P			26							
M12x1.25	△*	L15012N5-QL	5P	P2	150	29	-	8.5	6.5	9	4	e	
	△	TNMQ012N115L				26							
	△*	L15012N1-QL	1.5P			29							
	△	TNMQ014Q515L	5P			26							
M14x2	△*	L15014Q5-QL	5P	P2	150	30	-	10.5	8	11	4	e	
	△	TNMQ014Q115L				26							
	△*	L15014Q1-QL	1.5P			30							
	△	TNMQ014O515L	5P			26							
M14x1.5	△*	L15014O5-QL	5P	P2	150	30	-	10.5	8	11	4	e	
	△	TNMQ014O115L				26							
	△*	L15014O1-QL	1.5P			30							
	△	TNMQ016Q515L	5P			150							26
△*	L15016Q5-QL	5P	200	32									
△	TNMQ016Q520L			P2	200	26							
△*	L20016Q5-QL	32											
M16x2	△	TNMQ016Q115L	5P	P2	150	26	-	12.5	10	13	4	e	
	△*	L15016Q1-QL				1.5P							150
	△	TNMQ016Q120L	200										
	△*	L20016Q1-QL				32							
M16x1.5	△	TNMQ016O515L	5P	P2	150	26	-	12.5	10	13	4	e	
	△*	L15016O5-QL	5P			150							32
	△	TNMQ016O115L											1.5P
	△*	L15016O1-QL	32										
M18x2.5	△	TNMR018R515L	5P	P3	150	33	-	14	11	14	4	e	
	△*	L15018R5-RL	5P			150							37
	△	TNMR018R115L											1.5P
	△*	L15018R1-RL	37										
M18x1.5	△	TNMQ018O515L	5P	P2	150	33	-	14	11	14	4	e	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT(LH) Long Shank Hand Taps for Left Hand Threads

Size	Stock	Code	Chamfer	Class	L (mm)	L (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
M18×1.5	△*	L1501805-QL	5P	P2	150	37	-	14	11	14	4	e	
	△	TNMQ0180115L	1.5P			33							
	△*	L1501801-QL				37							
M20×2.5	△	TNMR020R515L	5P	P3	150	33	-	15	12	15	4	e	
	△*	L15020R5-RL				37							
	△	TNMR020R520L				33							
	△*	L20020R5-RL	37										
	△	TNMR020R115L	1.5P			150							33
	△*	L15020R1-RL				37							
	△	TNMR020R120L				200							33
	△*	L20020R1-RL				200							37
	M20×1.5	△	TNMR020O515L			5P							P3
△*		L15020O5-RL	37										
△		TNMR020O520L	33										
△*		L20020O5-RL	37										
△		TNMR020O115L	1.5P	150	33								
△*		L15020O1-RL		37									
△		TNMR020O120L		200	33								
△*		L20020O1-RL			200	37							
M22×2.5	△	TNMR022R515L	5P	P3	150	33	-	17	13	16	4	e	
	△*	L15022R5-RL				38							
	△	TNMR022R520L				33							
	△*	L20022R5-RL	38										
	△	TNMR022R115L	1.5P			150							33
	△*	L15022R1-RL				38							
	△	TNMR022R120L				200							33
△*	L20022R1-RL			200	38								
M24×3	△	TNMR024S515L	5P	P3	150	39	-	19	15	18	4	e	
	△*	L15024S5-RL				45							
	△	TNMR024S520L				39							
	△*	L20024S5-RL				45							
	△	TNMR024S115L	1.5P			150							39
	△*	L15024S1-RL				45							
	△	TNMR024S120L				200							39
	△*	L20024S1-RL											200
M27×3	△	TNMR027S520L	5P	P3	200	39	-	20	15	18	4	e	
	△*	L20027S5-RL	45										
	△	TNMR027S120L	1.5P			39							
	△*	L20027S1-RL				45							
M30×3.5	△	TNMS030T520L	5P	P4	200	46	-	23	17	20	4	e	
	△*	L20030T5-SL				48							
	△	TNMS030T120L	1.5P			46							

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-HT(LH) Long Shank Hand Taps for Left Hand Threads

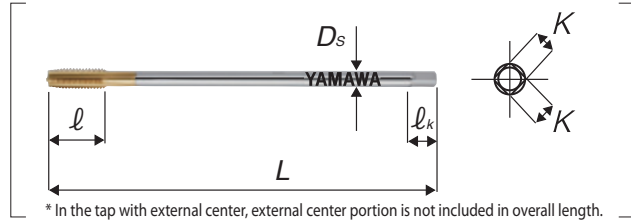
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M30x3.5	△*	L20030T1-SL	1.5P	P4	200	48	-	23	17	20	4	e

The products having *mark in the stock column will be available as long as they last.

LS-HT-V Long Shank Hand Taps, TiN Coated



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
For Metric Threads													
M3x0.5	△	TNMP3.0G510V	5P	P1	100	9	14	4	3.2	6	3	c	
	△*	VL103.0G5-P				11	18						
	△	TNMP3.0G110V	1.5P			9	14						
	△*	VL103.0G1-P				11	18						
M4x0.7	△	TNMQ4.0I510V	5P	P2	100	11	17	5	4	7	3	c	
	△*	VL104.0I5-Q				13	20						
	△	TNMQ4.0I110V	1.5P			11	17						
	△*	VL104.0I1-Q				13	20						
M5x0.8	△	TNMQ5.0K510V	5P	P2	100	13	22	5.5	4.5	7	3	c	
	△*	VL105.0K5-Q				16	25						
	△	TNMQ5.0K110V	1.5P			13	22						
	△*	VL105.0K1-Q				16	25						
M6x1	△	TNMQ6.0M510V	5P	P2	100	15	26	6	4.5	7	3	c	
	△*	VL106.0M5-Q				19	28						
	△	TNMQ6.0M515V				150	15						26
	△*	VL156.0M5-Q					19						28
	△	TNMQ6.0M110V	1.5P		100	15	26						
	△*	VL106.0M1-Q				19	28						
	△	TNMQ6.0M115V				150	15						26
	△*	VL156.0M1-Q					19						28
M8x1.25	△	TNMQ8.0N510V	5P	P2	100	19	-	6.2	5	8	4	e	
	△*	VL108.0N5-Q				22							
	△	TNMQ8.0N515V				150							19
	△*	VL158.0N5-Q											22
	△	TNMQ8.0N110V	1.5P		100	19							
	△*	VL108.0N1-Q				22							
	△	TNMQ8.0N115V				150							19
	△*	VL158.0N1-Q											22
M10x1.5	△	TNMQ10I0510V	5P	P2	100	23	-	7	5.5	8	4	e	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

LS-HT-V Long Shank Hand Taps, TiN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10×1.5	△*	VL1001005-Q	5P	P2	100	24	-	7	5.5	8	4	e
	△	TNMQ0100515V				23						
	△*	VL1501005-Q			150	24						
	△	TNMQ0100110V	1.5P		100	23						
	△*	VL1001001-Q				24						
	△	TNMQ0100115V			23							
	△*	VL1501001-Q		150	24							
M10×1.25	△	TNMQ010N510V	5P	P2	100	23	-	7	5.5	8	4	e
	△*	VL10010N5-Q				24						
	△	TNMQ010N515V			150	23						
	△*	VL15010N5-Q			24							
	△	TNMQ010N110V	1.5P		100	23						
	△*	VL10010N1-Q				24						
	△	TNMQ010N115V			23							
	△*	VL15010N1-Q			150	24						
M12×1.75	△	TNMQ012P510V	5P	P2	100	26	-	8.5	6.5	9	4	e
	△*	VL10012P5-Q				29						
	△	TNMQ012P515V			150	26						
	△*	VL15012P5-Q			29							
	△	TNMQ012P110V	1.5P		100	26						
	△*	VL10012P1-Q				29						
	△	TNMQ012P115V			26							
	△*	VL15012P1-Q			150	29						
M12×1.5	△	TNMQ012O510V	5P	P2	100	26	-	8.5	6.5	9	4	e
	△*	VL10012O5-Q				29						
	△	TNMQ012O515V			150	26						
	△*	VL15012O5-Q			29							
	△	TNMQ012O110V	1.5P		100	26						
	△*	VL10012O1-Q				29						
	△	TNMQ012O115V			26							
	△*	VL15012O1-Q			150	29						
M12×1.25	△	TNMQ012N510V	5P	P2	100	26	-	8.5	6.5	9	4	e
	△*	VL10012N5-Q				29						
	△	TNMQ012N515V			150	26						
	△*	VL15012N5-Q			29							
	△	TNMQ012N110V	1.5P		100	26						
	△*	VL10012N1-Q				29						
	△	TNMQ012N115V			26							
	△*	VL15012N1-Q			150	29						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Spiral Pointed Taps | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps (Simple measuring tools) | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

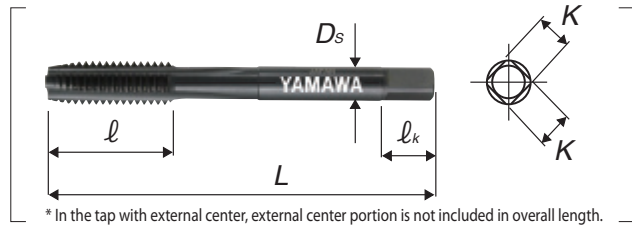
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU-HT

Hand Taps for Stainless Steels



Segment : 1A



SU-HT is suitable for stainless steels which are sticky and tend to work-harden as well as chrome steel and molybdenum steels.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
For Metric Threads													
M2×0.4	○*	TUMQ2.0E9	9P	P2	42	7.2	12	3	2.5	5	3	c	
	○*	TUQ2.0E9				9.5	15						
	○	TUMQ2.0E4	4P			7.2	12						
	○*	TUQ2.0E4				9.5	15						
	○	TUMQ2.0E1	1.5P			7.2	12						
	○*	TUQ2.0E1				9.5	15						
M2.3×0.4	△*	TUMQ2.3E9	9P	P2	42	7.2	12	3	2.5	5	3	c	
	△*	TUQ2.3E9				9.5	15						
	△	TUMQ2.3E4	4P			7.2	12						
	△*	TUQ2.3E4				9.5	15						
	△	TUMQ2.3E1	1.5P			7.2	12						
	△*	TUQ2.3E1				9.5	15						
M2.5×0.45	△*	TUMQ2.5F9	9P	P2	46	8.1	14	3	2.5	5	3	c	
	△*	TUQ2.5F9			44	9.5	16						
	△	TUMQ2.5F4	4P		46	8.1	14						
	△*	TUQ2.5F4			44	9.5	16						
	△	TUMQ2.5F1	1.5P		46	8.1	14						
	△*	TUQ2.5F1			44	9.5	16						
M2.6×0.45	△*	TUMQ2.6F9	9P	P2	46	8.1	14	3	2.5	5	3	c	
	△*	TUQ2.6F9				44	9.5						16
	△	TUMQ2.6F4	4P			46	8.1						14
	△*	TUQ2.6F4				44	9.5						16
	△	TUMQ2.6F1	1.5P			46	8.1						14
	△*	TUQ2.6F1				44	9.5						16
M3×0.5	◎*	TUMQ3.0G9	9P	P2	46	9	14	4	3.2	6	3	c	
	◎*	TUQ3.0G9				11	18						
	◎	TUMQ3.0G4	4P			9	14						
	◎*	TUQ3.0G4				11	18						
	◎	TUMQ3.0G1	1.5P			9	14						
	◎*	TUQ3.0G1				11	18						
M3.5×0.6	△*	TUMQ3.5H9	9P	P2	52	11	16	5	4	7	3	c	
	△*	TUQ3.5H9				48	13						20
	△	TUMQ3.5H4	4P			52	11						16
	△*	TUQ3.5H4				48	13						20

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

SU-HT Hand Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M3.5×0.6	△	TUMQ3.5H1	1.5P	P2	52	11	16	5	4	7	3	c
	△*	TUQ3.5H1			48	13	20	4	3.2	6		
M4×0.7	◎*	TUMQ4.0I9	9P	P2	52	11	17	5	4	7	3	c
	◎*	TUQ4.0I9				13	20					
	◎	TUMQ4.0I4	4P			11	17					
	◎*	TUQ4.0I4				13	20					
	◎	TUMQ4.0I1	1.5P			11	17					
	◎*	TUQ4.0I1				13	20					
M5×0.8	◎*	TUMQ5.0K9	9P	P2	60	13	22	5.5	4.5	7	3	c
	◎*	TUQ5.0K9				16	25					
	◎	TUMQ5.0K4	4P			13	22					
	◎*	TUQ5.0K4				16	25					
	◎	TUMQ5.0K1	1.5P			13	22					
	◎*	TUQ5.0K1				16	25					
M6×1	◎*	TUMQ6.0M9	9P	P2	62	15	26	6	4.5	7	3	c
	◎*	TUQ6.0M9				19	28					
	◎	TUMQ6.0M4	4P			15	26					
	◎*	TUQ6.0M4				19	28					
	◎	TUMQ6.0M1	1.5P			15	26					
	◎*	TUQ6.0M1				19	28					
M6×0.75	△	TUMQ6.0J4	4P	P2	62	15	26	6	4.5	7	3	c
	△*	TUQ6.0J4				19	28					
	△	TUMQ6.0J1	1.5P			15	26					
	△*	TUQ6.0J1				19	28					
M8×1.25	◎*	TUMR8.0N9	9P	P3	70	19	-	6.2	5	8	3	e
	◎*	TUR8.0N9				22						
	◎	TUMR8.0N4	4P			19						
	◎*	TUR8.0N4				22						
	◎	TUMR8.0N1	1.5P			19						
	◎*	TUR8.0N1				22						
M8×1	△	TUMR8.0M4	4P	P3	70	19	-	6.2	5	8	3	e
	△*	TUR8.0M4				22						
	△	TUMR8.0M1	1.5P			19						
	△*	TUR8.0M1				22						
M10×1.5	◎*	TUMR010O9	9P	P3	75	23	-	7	5.5	8	3	e
	◎*	TUR010O9				24						
	◎	TUMR010O4	4P			23						
	◎*	TUR010O4				24						
	◎	TUMR010O1	1.5P			23						
	◎*	TUR010O1				24						
M10×1.25	△	TUMR010N4	4P	P3	75	23	-	7	5.5	8	3	e
	△*	TUR010N4				24						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU-HT Hand Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
M10x1.25	△	TUMR010N1	1.5P	P3	75	23	-	7	5.5	8	4	e	
	△*	TUR010N1				24							
M10x1	△	TUMR010M4	4P	P3	75	23	-	7	5.5	8	3	e	
	△*	TUR010M4				24							
	△	TUMR010M1	1.5P			23					24		4
	△*	TUR010M1				24							
M12x1.75	◎*	TUMS012P9	9P	P4	82	26	-	8.5	6.5	9	3	e	
	◎*	TUS012P9				29							
	◎	TUMS012P4	4P			26					29		4
	◎*	TUS012P4				29							
	◎	TUMS012P1	1.5P			26					29		4
	◎*	TUS012P1				29							
M12x1.5	△	TUMR012O4	4P	P3	82	26	-	8.5	6.5	9	3	e	
	△*	TUR012O4				29							
	△	TUMR012O1	1.5P			26					29		4
	△*	TUR012O1				29							
M12x1.25	△	TUMS012N4	4P	P4	82	26	-	8.5	6.5	9	3	e	
	△*	TUS012N4				29							
	△	TUMS012N1	1.5P			26					29		4
	△*	TUS012N1				29							
M12x1	△	TUMR012M4	4P	P3	82	26	-	8.5	6.5	9	3	e	
	△*	TUR012M4				29							
	△	TUMR012M1	1.5P			26					29		4
	△*	TUR012M1				29							
M14x2	△	TUMS014Q4	4P	P4	88	26	-	10.5	8	11	4	e	
	△*	TUS014Q4				30							
	△	TUMS014Q1	1.5P			26					30		4
	△*	TUS014Q1				30							
M14x1.5	△	TUMR014O4	4P	P3	88	26	-	10.5	8	11	4	e	
	△*	TUR014O4				30							
	△	TUMR014O1	1.5P			26					30		4
	△*	TUR014O1				30							
M14x1.25	△	TUMR014N4	4P	P3	88	26	-	10.5	8	11	4	e	
	△*	TUR014N4				30							
	△	TUMR014N1	1.5P			26					30		4
	△*	TUR014N1				30							
M14x1	△	TUMR014M4	4P	P3	88	26	-	10.5	8	11	4	e	
	△*	TUR014M4				30							
	△	TUMR014M1	1.5P			26					30		4
	△*	TUR014M1				30							
M16x2	○	TUMS016Q4	4P	P4	95	26	-	12.5	10	13	4	e	
	○*	TUS016Q4				32							

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

SU-HT Hand Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M16x2	○	TUMS016Q1	1.5P	P4	95	26	-	12.5	10	13	4	e
	○*	TUS016Q1				32						
M16x1.5	△	TUMR016O4	4P	P3	95	26	-	12.5	10	13	4	e
	△*	TUR016O4				32						
	△	TUMR016O1	1.5P			26						
	△*	TUR016O1				32						
M16x1	△	TUMR016M4	4P	P3	95	26	-	12.5	10	13	4	e
	△*	TUR016M4				32						
	△	TUMR016M1	1.5P			26						
	△*	TUR016M1				32						
M18x2.5	△	TUMS018R4	4P	P4	100	33	-	14	11	14	4	e
	△*	TUS018R4				37						
	△	TUMS018R1	1.5P			33						
	△*	TUS018R1				37						
M18x1.5	△	TUMS018O4	4P	P4	100	33	-	14	11	14	4	e
	△*	TUS018O4				37						
	△	TUMS018O1	1.5P			33						
	△*	TUS018O1				37						
M20x2.5	○	TUMS020R4	4P	P4	105	33	-	15	12	15	4	e
	○*	TUS020R4				37						
	○	TUMS020R1	1.5P			33						
	○*	TUS020R1				37						
M20x1.5	△	TUMS020O4	4P	P4	105	33	-	15	12	15	4	e
	△*	TUS020O4				37						
	△	TUMS020O1	1.5P			33						
	△*	TUS020O1				37						
M22x2.5	△	TUMS022R4	4P	P4	115	33	-	17	13	16	4	e
	△*	TUS022R4				38						
	△	TUMS022R1	1.5P			33						
	△*	TUS022R1				38						
M22x1.5	△	TUMS022O4	4P	P4	115	33	-	17	13	16	4	e
	△*	TUS022O4				38						
	△	TUMS022O1	1.5P			33						
	△*	TUS022O1				38						
M24x3	△	TUMS024S4	4P	P4	120	39	-	19	15	18	4	e
	△*	TUS024S4				45						
	△	TUMS024S1	1.5P			39						
	△*	TUS024S1				45						
M24x1.5	△	TUMS024O4	4P	P4	120	39	-	19	15	18	4	e
	△*	TUS024O4				45						
	△	TUMS024O1	1.5P			39						
	△*	TUS024O1				45						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU-HT Hand Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M27x3	△	TUMS027S4	4P	P4	130	39	-	20	15	18	4	e
	△*	TUS027S4				45						
	△	TUMS027S1	1.5P			39						
	△*	TUS027S1				45						
M27x1.5	△	TUMS027O4	4P	P4	130	39	-	20	15	18	4	e
	△*	TUS027O4				45						
	△	TUMS027O1	1.5P			39						
	△*	TUS027O1				45						
M30x3.5	△	TUMT030T4	4P	P5	135	46	-	23	17	20	4	e
	△*	TUT030T4				48						
	△	TUMT030T1	1.5P			46						
	△*	TUT030T1				48						
M30x1.5	△	TUMS030O4	4P	P4	135	46	-	23	17	20	4	e
	△*	TUS030O4				45						
	△	TUMS030O1	1.5P			46						
	△*	TUS030O1				45						

For Unified Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/4-20UNC	△	TUMQU04N4	4P	P2	62	15	26	6	4.5	7	3	c
	△*	TUQU04N4				19	30					
	△	TUMQU04N1	1.5P			15	26					
	△*	TUQU04N1				19	30					
1/4-28UNF	△	TUMQU04K4	4P	P2	62	15	26	6	4.5	7	3	c
	△*	TUQU04K4				19	30					
	△	TUMQU04K1	1.5P			15	26					
	△*	TUQU04K1				19	30					
5/16-18UNC	△	TUMRU05O4	4P	P3	70	19	-	6.2	5	8	3	e
	△*	TURU05O4				22	6.1					
	△	TUMRU05O1	1.5P			19	6.2	4				
	△*	TURU05O1				22	6.1					
5/16-24UNF	△	TUMQU05M4	4P	P2	70	19	-	6.2	5	8	3	e
	△*	TUQU05M4				22	6.1					
	△	TUMQU05M1	1.5P			19	6.2	4				
	△*	TUQU05M1				22	6.1					
3/8-16UNC	△	TUMRU06P4	4P	P3	75	23	-	7	5.5	8	3	e
	△*	TURU06P4				24						
	△	TUMRU06P1	1.5P			23	4					
	△*	TURU06P1				24						
3/8-24UNF	△	TUMQU06M4	4P	P2	75	23	-	7	5.5	8	3	e
	△*	TUQU06M4				24						
	△	TUMQU06M1	1.5P			23	4					

The products having *mark in the stock column will be available as long as they last.

SU-HT Hand Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
3/8-24UNF	△*	TUQU06M1	1.5P	P2	75	24	-	7	5.5	8	4	e
	△	TUMRU07N4	4P	P3	82	26	-	8.5	6.5	9	3	e
7/16-20UNF	△*	TURU07N4	4P		80	25		8	6		4	
	△	TUMRU07N1			82	26		8.5	6.5		4	
	△*	TURU07N1	1.5P		80	25		8	6		4	
1/2-13UNC	△	TUMRU08R4	4P	P3	88	26	-	10.5	8	11	3	e
	△*	TURU08R4	4P		85	29		9	7	10		
	△	TUMRU08R1			1.5P	88		26	10.5	8	11	
	△*	TURU08R1	85			29		9	7	10	4	
1/2-20UNF	△	TUMRU08N4	4P	P3	88	26	-	10.5	8	11	3	e
	△*	TURU08N4	4P		85	29		9	7	10		
	△	TUMRU08N1			1.5P	88		26	10.5	8	11	
	△*	TURU08N1	85			29		9	7	10	4	
5/8-11UNC	△	TUMRU10U4	4P	P3	95	26	-	12.5	10	13	4	e
	△*	TURU10U4	4P			32		12	9	12		
	△	TUMRU10U1				1.5P		26	12.5	10		
	△*	TURU10U1	32					12	9	12		
5/8-18UNF	△	TUMRU10O4	4P	P3	95	26	-	12.5	10	13	4	e
	△*	TURU10O4	4P			32		12	9	12		
	△	TUMRU10O1				1.5P		26	12.5	10		
	△*	TURU10O1	32					12	9	12		
3/4-10UNC	△	TUMSU12V4	4P	P4	105	33	-	15	12	15	4	e
	△*	TUSU12V4	4P			37		14	11	14		
	△	TUMSU12V1				1.5P		33	15	12		
	△*	TUSU12V1	37					14	11	14		
3/4-16UNF	△	TUMRU12P4	4P	P3	105	33	-	15	12	15	4	e
	△*	TURU12P4	4P			37		14	11	14		
	△	TUMRU12P1				1.5P		33	15	12		
	△*	TURU12P1	37					14	11	14		

For Whitworth Threads

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/4W20	△*	TURW04N9	9P	P3	62	19	30	6	4.5	7	3	c
	△	TUMRW04N4	4P			15	26					
	△*	TURW04N4	1.5P			19	30					
	△	TUMRW04N1				15	26					
	△*	TURW04N1	19			30						
5/16W18	△*	TUMRW05O9	9P	P3	70	19	-	6.2	5	8	3	e
	△*	TURW05O9	4P			22	6.1					
	△	TUMRW05O4				1.5P	19	6.2				
	△*	TURW05O4	22				6.1					
	△	TUMRW05O1	19			6.2	4					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SU-HT Hand Taps for Stainless Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
5/16W18	△*	TURW05O1	1.5P	P3	70	22	-	6.1	5	8	4	e
3/8W16	△*	TUMRW06P9	9P	P3	75	-	7	5.5	8	8	3	e
	△*	TURW06P9										
	△	TUMRW06P4	4P									
	△*	TURW06P4										
	△	TUMRW06P1	1.5P									
	△*	TURW06P1										
	△*	TURW06P1										
7/16W14	△*	TUMRW07Q9	9P	P3	82	-	8.5	6.5	9	9	3	e
	△*	TURW07Q9										
	△	TUMRW07Q4	4P									
	△*	TURW07Q4										
	△	TUMRW07Q1	1.5P									
	△*	TURW07Q1										
	△*	TURW07Q1										
1/2W12	△*	TUMRW08S9	9P	P3	88	-	10.5	8	11	11	3	e
	△*	TURW08S9										
	△	TUMRW08S4	4P									
	△*	TURW08S4										
	△	TUMRW08S1	1.5P									
	△*	TURW08S1										
	△*	TURW08S1										
5/8W11	△*	TUMRW10U9	9P	P3	95	-	12.5	10	13	13	4	e
	△*	TURW10U9										
	△	TUMRW10U4	4P									
	△*	TURW10U4										
	△	TUMRW10U1	1.5P									
	△*	TURW10U1										
3/4W10	△*	TUSW12V9	9P	P4	105	-	14	11	14	14	4	e
	△	TUMSW12V4	4P									
	△*	TUSW12V4										
	△	TUMSW12V1	1.5P									
	△*	TUSW12V1										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

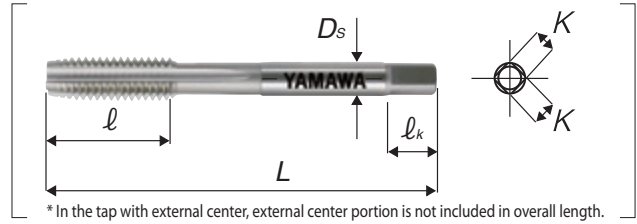
Centering Tools

FC-O

Hand Taps for Cast Irons



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

FC-O is suitable for hard and abrasive materials such as cast irons.

Size	Stock	Code	Chamfer	Thread Limit	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
				$\frac{D_2 - T_{ol} - Z}{+}$ (μm)								
For Metric Threads												
M1.6×0.35	△	TFCM1.6D5	5P	40 ~ 25	36	6.3	-	3	2.5	5	3	b
	△*	TFC1.6D5				8						p
	△	TFCM1.6D1	1.5P			6.3						b
	△*	TFC1.6D1				8						p
M2×0.4	△	TFCM2.0E5	5P	40 ~ 25	42	7.2	12	3	2.5	5	3	c
	△*	TFC2.0E5				9.5	15					
	△	TFCM2.0E1	1.5P			7.2	12					
	△*	TFC2.0E1				9.5	15					
M2.3×0.4	△	TFCM2.3E5	5P	40 ~ 25	42	7.2	12	3	2.5	5	3	c
	△*	TFC2.3E5				9.5	15					
	△	TFCM2.3E1	1.5P			7.2	12					
	△*	TFC2.3E1				9.5	15					
M2.5×0.45	△	TFCM2.5F5	5P	40 ~ 25	46	8.1	14	3	2.5	5	3	c
	△*	TFC2.5F5			44	9.5	16					
	△	TFCM2.5F1	1.5P		46	8.1	14					
	△*	TFC2.5F1			44	9.5	16					
M2.6×0.45	△	TFCM2.6F5	5P	40 ~ 25	46	8.1	14	3	2.5	5	3	c
	△*	TFC2.6F5			44	9.5	16					
	△	TFCM2.6F1	1.5P		46	8.1	14					
	△*	TFC2.6F1			44	9.5	16					
M3×0.5	○	TFCM3.0G5	5P	40 ~ 25	46	9	14	4	3.2	6	3	c
	○*	TFC3.0G5				11	18					
	○	TFCM3.0G1	1.5P			9	14					
	○*	TFC3.0G1				11	18					
M3.5×0.6	△	TFCM3.5H5	5P	40 ~ 25	52	11	16	5	4	7	3	c
	△*	TFC3.5H5			48	13	20	4	3.2	6		
	△	TFCM3.5H1	1.5P		52	11	16	5	4	7		
	△*	TFC3.5H1			48	13	20	4	3.2	6		
M4×0.7	○	TFCM4.0I5	5P	45 ~ 25	52	11	17	5	4	7	4	c
	○*	TFC4.0I5				13	20					
	○	TFCM4.0I1	1.5P			11	17					
	○*	TFC4.0I1				13	20					
M5×0.8	○	TFCM5.0K5	5P	50 ~ 30	60	13	22	5.5	4.5	7	4	c
	○*	TFC5.0K5				16	25					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

FC-O Hand Taps for Cast Irons

Size	Stock	Code	Chamfer	Thread Limit	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
				$\frac{D_2 - ToL \cdot Z}{+}$ (μm)								
M5x0.8	○	TFCM5.0K1	1.5P	50 ~ 30	60	13	22	5.5	4.5	7	4	c
	○*	TFC5.0K1				16	25					
M6x1	◎	TFCM6.0M5	5P	50 ~ 30	62	15	26	6	4.5	7	4	c
	◎*	TFC6.0M5				19	28					
	◎	TFCM6.0M1	1.5P			15	26					
	◎*	TFC6.0M1				19	28					
M8x1.25	◎	TFCM8.0N5	5P	60 ~ 35	70	19	-	6.2	5	8	4	e
	◎*	TFC8.0N5				22	-					
	◎	TFCM8.0N1	1.5P			19	-					
	◎*	TFC8.0N1				22	-					
M8x1	△	TFCM8.0M5	5P	55 ~ 30	70	19	-	6.2	5	8	4	e
	△*	TFC8.0M5				22	-					
	△	TFCM8.0M1	1.5P			19	-					
	△*	TFC8.0M1				22	-					
M10x1.5	◎	TFCM10.0O5	5P	65 ~ 40	75	23	-	7	5.5	8	4	e
	◎*	TFC010O5				24	-					
	◎	TFCM10.0O1	1.5P			23	-					
	◎*	TFC010O1				24	-					
M10x1.25	◎	TFCM10.0N5	5P	60 ~ 35	75	23	-	7	5.5	8	4	e
	◎*	TFC010N5				24	-					
	◎	TFCM10.0N1	1.5P			23	-					
	◎*	TFC010N1				24	-					
M10x1	○	TFCM10.0M5	5P	57 ~ 32	75	23	-	7	5.5	8	4	e
	○*	TFC010M5				24	-					
	○	TFCM10.0M1	1.5P			23	-					
	○*	TFC010M1				24	-					
M12x1.75	◎	TFCM12.0P5	5P	70 ~ 40	82	26	-	8.5	6.5	9	4	e
	◎*	TFC012P5				29	-					
	◎	TFCM12.0P1	1.5P			26	-					
	◎*	TFC012P1				29	-					
M12x1.5	○	TFCM12.0O5	5P	70 ~ 40	82	26	-	8.5	6.5	9	4	e
	○*	TFC012O5				29	-					
	○	TFCM12.0O1	1.5P			26	-					
	○*	TFC012O1				29	-					
M12x1.25	○	TFCM12.0N5	5P	70 ~ 40	82	26	-	8.5	6.5	9	4	e
	○*	TFC012N5				29	-					
	○	TFCM12.0N1	1.5P			26	-					
	○*	TFC012N1				29	-					
M12x1	△	TFCM12.0M5	5P	60 ~ 35	82	26	-	8.5	6.5	9	4	e
	△*	TFC012M5				29	-					
	△	TFCM12.0M1	1.5P			26	-					
	△*	TFC012M1				29	-					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

FC-O Hand Taps for Cast Irons

Size	Stock	Code	Chamfer	Thread Limit	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
				$\frac{D_2 - To\ell - Z}{+}$ (μm)								
M14x2	○	TFCM014Q5	5P	70 ~ 40	88	26	-	10.5	8	11	4	e
	○*	TFC014Q5										
	○	TFCM014Q1	1.5P									
	○*	TFC014Q1										
M14x1.5	○	TFCM014O5	5P	70 ~ 40	88	26	-	10.5	8	11	4	e
	○*	TFC014O5										
	○	TFCM014O1	1.5P									
	○*	TFC014O1										
M16x2	○	TFCM016Q5	5P	70 ~ 40	95	26	-	12.5	10	13	4	e
	○*	TFC016Q5										
	○	TFCM016Q1	1.5P									
	○*	TFC016Q1										
M16x1.5	○	TFCM016O5	5P	70 ~ 40	95	26	-	12.5	10	13	4	e
	○*	TFC016O5										
	○	TFCM016O1	1.5P									
	○*	TFC016O1										
M18x2.5	○	TFCM018R5	5P	80 ~ 45	100	33	-	14	11	14	4	e
	○*	TFC018R5										
	○	TFCM018R1	1.5P									
	○*	TFC018R1										
M18x1.5	○	TFCM018O5	5P	70 ~ 40	100	33	-	14	11	14	4	e
	○*	TFC018O5										
	○	TFCM018O1	1.5P									
	○*	TFC018O1										
M20x2.5	○	TFCM020R5	5P	80 ~ 45	105	33	-	15	12	15	4	e
	○*	TFC020R5										
	○	TFCM020R1	1.5P									
	○*	TFC020R1										
M20x1.5	○	TFCM020O5	5P	75 ~ 40	105	33	-	15	12	15	4	e
	○*	TFC020O5										
	○	TFCM020O1	1.5P									
	○*	TFC020O1										
M22x2.5	△	TFCM022R5	5P	80 ~ 45	115	33	-	17	13	16	4	e
	△*	TFC022R5										
	△	TFCM022R1	1.5P									
	△*	TFC022R1										
M22x1.5	△	TFCM022O5	5P	75 ~ 40	115	33	-	17	13	16	4	e
	△*	TFC022O5										
	△	TFCM022O1	1.5P									
	△*	TFC022O1										
M24x3	△	TFCM024S5	5P	90 ~ 50	120	39	-	19	15	18	4	e
	△*	TFC024S5										

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

FC-O Hand Taps for Cast Irons

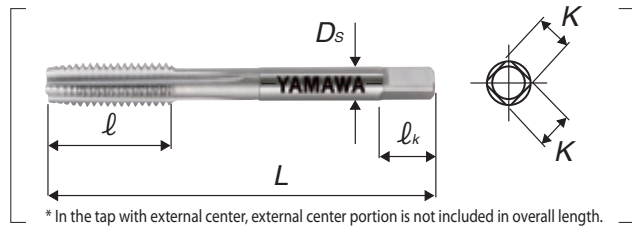
Size	Stock	Code	Chamfer	Thread Limit	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
				$\frac{D_2 - ToL - Z}{(+)} (\mu m)$								
M24x3	△	TFCM024S1	1.5P	90 ~ 50	120	39	-	19	15	18	4	e
	△*	TFC024S1										
M24x1.5	○	TFCM024O5	5P	75 ~ 40	120	39	-	19	15	18	4	e
	○*	TFC024O5										
	○	TFCM024O1	1.5P									
	○*	TFC024O1										

The products having *mark in the stock column will be available as long as they last.

LA-O Hand Taps for Die Cast Materials



Segment : 1A



LA-O is the oversized tap, and is suitable for the materials tending to shrink, such as aluminum alloy die castings (ADC) and zinc alloy die castings (ZDC).

Size	Stock	Code	Chamfer	Thread Limit	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type			
				$\frac{D_2 - ToL - Z}{(+)} (\mu m)$											
For Metric Threads															
M1.4x0.3	△	TLAM1.4C5	5P	36 ~ 21	36	5.4	-	3	2.5	5	3	a			
	△*	TLA1.4C5										p			
	△	TLAM1.4C1	1.5P									5.4	a		
	△*	TLA1.4C1										8	p		
M1.6x0.35	△	TLAM1.6D5	5P	40 ~ 25	36	6.3	-	3	2.5	5	3	b			
	△*	TLA1.6D5										8	p		
	△	TLAM1.6D1	1.5P									6.3	b		
	△*	TLA1.6D1										8	p		
M2x0.4	◎	TLAM2.0E5	5P	40 ~ 25	42	7.2	12	3	2.5	5	3	c			
	◎*	TLA2.0E5											9.5	15	
	◎	TLAM2.0E1	1.5P										7.2	12	
	◎*	TLA2.0E1											9.5	15	
M2.3x0.4	△	TLAM2.3E5	5P	40 ~ 25	42	7.2	12	3	2.5	5	3	c			
	△*	TLA2.3E5											9.5	15	
	△	TLAM2.3E1	1.5P										7.2	12	
	△*	TLA2.3E1											9.5	15	
M2.5x0.45	○	TLAM2.5F5	5P	40 ~ 25	46	8.1	14	3	2.5	5	3	c			
	○*	TLA2.5F5											44	9.5	16
	○	TLAM2.5F1	1.5P										46	8.1	14
	○*	TLA2.5F1											44	9.5	16
M2.6x0.45	△	TLAM2.6F5	5P	40 ~ 25	46	8.1	14	3	2.5	5	3	c			
	△*	TLA2.6F5											44	9.5	16
	△	TLAM2.6F1	1.5P										46	8.1	14

The products having *mark in the stock column will be available as long as they last.

LA-O Hand Taps for Die Cast Materials

Size	Stock	Code	Chamfer	Thread Limit	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
				$\frac{D_2 - To\ell - Z}{+}$ (μm)									
M2.6×0.45	△*	TLA2.6F1	1.5P	40 ~ 25	44	9.5	16	3	2.5	5	3	c	
M3×0.5	○	TLAM3.0G5	5P	40 ~ 25	46	9	14	4	3.2	6	3	c	
	○*	TLA3.0G5				11	18						
	○	TLAM3.0G1	1.5P			9	14						
	○*	TLA3.0G1				11	18						
M3.5×0.6	△	TLAM3.5H5	5P	40 ~ 25	52	11	16	5	4	7	3	c	
	△*	TLA3.5H5				48	13	20	4	3.2			6
	△	TLAM3.5H1	1.5P			52	11	16	5	4			7
	△*	TLA3.5H1				48	13	20	4	3.2			6
M4×0.7	○	TLAM4.0I5	5P	45 ~ 25	52	11	17	5	4	7	3	c	
	○*	TLA4.0I5				13	20						
	○	TLAM4.0I1	1.5P			11	17						
	○*	TLA4.0I1				13	20						
M5×0.8	○	TLAM5.0K5	5P	50 ~ 30	60	13	22	5.5	4.5	7	3	c	
	○*	TLA5.0K5				16	25						
	○	TLAM5.0K1	1.5P			13	22						
	○*	TLA5.0K1				16	25						
M6×1	◎	TLAM6.0M5	5P	50 ~ 30	62	15	26	6	4.5	7	3	c	
	◎*	TLA6.0M5				19	28						
	◎	TLAM6.0M1	1.5P			15	26						
	◎*	TLA6.0M1				19	28						
M8×1.25	○	TLAM8.0N5	5P	65 ~ 40	70	19	-	6.2	5	8	4	e	
	○*	TLA8.0N5				22	-						
	○	TLAM8.0N1	1.5P			19	-						
	○*	TLA8.0N1				22	-						
M8×1	△	TLAM8.0M5	5P	55 ~ 30	70	19	-	6.2	5	8	4	e	
	△*	TLA8.0M5				22	-						
	△	TLAM8.0M1	1.5P			19	-						
	△*	TLA8.0M1				22	-						
M10×1.5	○	TLAM10.0O5	5P	70 ~ 45	75	23	-	7	5.5	8	4	e	
	○*	TLA10.0O5				24	-						
	○	TLAM10.0O1	1.5P			23	-						
	○*	TLA10.0O1				24	-						
M10×1.25	○	TLAM10.0N5	5P	65 ~ 40	75	23	-	7	5.5	8	4	e	
	○*	TLA10.0N5				24	-						
	○	TLAM10.0N1	1.5P			23	-						
	○*	TLA10.0N1				24	-						
M10×1	△	TLAM10.0M5	5P	57 ~ 32	75	23	-	7	5.5	8	4	e	
	△*	TLA10.0M5				24	-						
	△	TLAM10.0M1	1.5P			23	-						
	△*	TLA10.0M1				24	-						
M12×1.75	○	TLAM12P5	5P	75 ~ 45	82	26	-	8.5	6.5	9	4	e	

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LA-O Hand Taps for Die Cast Materials

Size	Stock	Code	Chamfer	Thread Limit	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type	
				$\frac{D_2 - ToL - Z}{(+)} - (\mu m)$									
M12x1.75	○*	TLA012P5	5P	75 ~ 45	82	29	-	8.5	6.5	9	4	e	
	○	TLAM012P1	1.5P										26
	○*	TLA012P1											29
M12x1.5	△	TLAM012O5	5P	75 ~ 45	82	26	-	8.5	6.5	9	4	e	
	△*	TLA012O5											29
	△	TLAM012O1	1.5P										26
	△*	TLA012O1											29
M12x1.25	△	TLAM012N5	5P	75 ~ 45	82	26	-	8.5	6.5	9	4	e	
	△*	TLA012N5											29
	△	TLAM012N1	1.5P										26
	△*	TLA012N1											29
M12x1	△	TLAM012M5	5P	65 ~ 35	82	26	-	8.5	6.5	9	4	e	
	△*	TLA012M5											29
	△	TLAM012M1	1.5P										26
	△*	TLA012M1											29
M14x2	△	TLAM014Q5	5P	75 ~ 45	88	26	-	10.5	8	11	4	e	
	△*	TLA014Q5											30
	△	TLAM014Q1	1.5P										26
	△*	TLA014Q1											30
M14x1.5	○	TLAM014O5	5P	75 ~ 45	88	26	-	10.5	8	11	4	e	
	○*	TLA014O5											30
	○	TLAM014O1	1.5P										26
	○*	TLA014O1											30
M16x2	△	TLAM016Q5	5P	75 ~ 45	95	26	-	12.5	10	13	4	e	
	△*	TLA016Q5											32
	△	TLAM016Q1	1.5P										26
	△*	TLA016Q1											32
M16x1.5	△	TLAM016O5	5P	75 ~ 45	95	26	-	12.5	10	13	4	e	
	△*	TLA016O5											32
	△	TLAM016O1	1.5P										26
	△*	TLA016O1											32
M18x2.5	△	TLAM018R5	5P	85 ~ 50	100	33	-	14	11	14	4	e	
	△*	TLA018R5											37
	△	TLAM018R1	1.5P										33
	△*	TLA018R1											37
M18x1.5	△	TLAM018O5	5P	75 ~ 45	100	33	-	14	11	14	4	e	
	△*	TLA018O5											37
	△	TLAM018O1	1.5P										33
	△*	TLA018O1											37
M20x2.5	△	TLAM020R5	5P	85 ~ 50	105	33	-	15	12	15	4	e	
	△*	TLA020R5											37
	△	TLAM020R1	1.5P										33

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

LA-O Hand Taps for Die Cast Materials

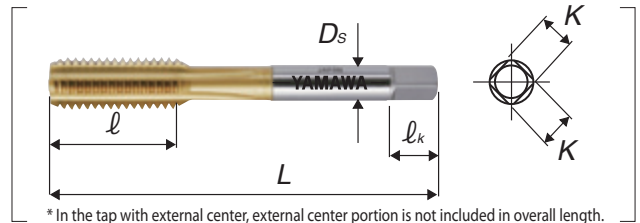
Size	Stock	Code	Chamfer	Thread Limit	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type	
				$\frac{D_2 - To\ell - Z}{+}$ (μm)									
M20×2.5	△*	TLA020R1	1.5P	85 ~ 50	105	37	-	15	12	15	4	e	
	○	TLAM020O5	5P										33
M20×1.5	○*	TLA020O5	5P	80 ~ 45	105	37	-	15	12	15	4	e	
	○	TLAM020O1											1.5P
	○*	TLA020O1											37
M22×2.5	△	TLAM022R5	5P	85 ~ 50	115	33	-	17	13	16	4	e	
	△*	TLA022R5											38
	△	TLAM022R1	1.5P										33
	△*	TLA022R1											38
M22×1.5	△	TLAM022O5	5P	80 ~ 45	115	33	-	17	13	16	4	e	
	△*	TLA022O5											38
	△	TLAM022O1	1.5P										33
	△*	TLA022O1											38
M24×3	△	TLAM024S5	5P	90 ~ 50	120	39	-	19	15	18	4	e	
	△*	TLA024S5											45
	△	TLAM024S1	1.5P										39
	△*	TLA024S1											45
M24×1.5	△	TLAM024O5	5P	80 ~ 45	120	39	-	19	15	18	4	e	
	△*	TLA024O5											45
	△	TLAM024O1	1.5P										39
	△*	TLA024O1											45

The products having *mark in the stock column will be available as long as they last.

AXE-HT AXE Type Hand Taps



Segment : 1B



AXE-HT is suitable for aluminum alloy die castings. Having special tough cutting edge design, AXE-HT assures the longer tool life.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M6×1	△	TAXEMR6.0M1	1.5P	P3	62	15	26	6	4.5	7	3	c
	△*	TAXER6.0M1				19	28					
M8×1.25	△	TAXEMR8.0N1	1.5P	P3	70	19	-	6.2	5	8	4	e
	△*	TAXER8.0N1				22						
M10×1.5	△	TAXEMR010O1	1.5P	P3	75	23	-	7	5.5	8	4	e
	△*	TAXER010O1				24						
M10×1.25	△	TAXEMR010N1	1.5P	P3	75	23	-	7	5.5	8	4	e
	△*	TAXER010N1				24						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

AXE-HT AXE Type Hand Taps

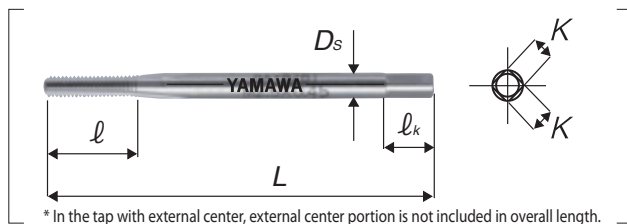
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M10x1	△	TAXEMR010M1	1.5P	P3	75	23	-	7	5.5	8	4	e
	△*	TAXER010M1				24						
M12x1.75	△	TAXEMR012P1	1.5P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TAXER012P1				29						
M12x1.5	△	TAXEMR012O1	1.5P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TAXER012O1				29						
M12x1.25	△	TAXEMR012N1	1.5P	P3	82	26	-	8.5	6.5	9	4	e
	△*	TAXER012N1				29						

The products having *mark in the stock column will be available as long as they last.

MG-HT Hand Taps with Short Chamfer



Segment : 1A



Having short chamfer length of less than 1thread, MG-HT is most suitable for blind holes with little space in the bottom.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M1.4x0.3	△	TMGMQ1.4C1	1P	P2	36	5.4	-	3	2.5	5	3	a
	△*	TMGQ1.4C1				8						p
M1.6x0.35	△	TMGMQ1.6D1	1P	P2	36	6.3	-	3	2.5	5	3	b
	△*	TMGQ1.6D1				8						p
M1.7x0.35	△	TMGMQ1.7D1	1P	P2	36	6.3	-	3	2.5	5	3	b
	△*	TMGQ1.7D1				8						p
M2x0.4	△	TMGMQ2.0E1	1P	P2	42	7.2	12	3	2.5	5	3	c
	△*	TMGQ2.0E1				9.5	15					p
M2.5x0.45	△	TMGMQ2.5F1	1P	P2	46	8.1	14	3	2.5	5	3	c
	△*	TMGQ2.5F1			44	9.5	16					p
M2.6x0.45	△	TMGMQ2.6F1	1P	P2	46	8.1	14	3	2.5	5	3	c
	△*	TMGQ2.6F1			44	9.5	16					p
M3x0.5	△	TMGMQ3.0G1	1P	P2	46	9	14	4	3.2	6	3	c
	△*	TMGQ3.0G1				11	18					p

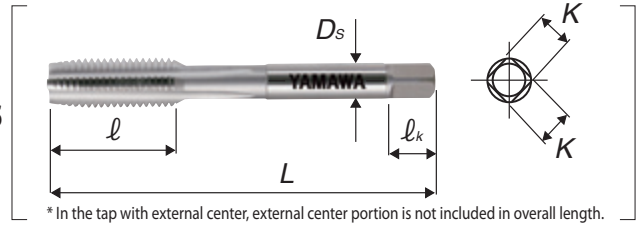
The products having *mark in the stock column will be available as long as they last.

STI-HT

Hand Taps for Helical Coil Wire Screw Thread Inserts



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

In some parts made of comparably soft materials, it sometimes is necessary to strengthen the internal threads and increase their toughness by inserting helical coils into the internal threads previously cut oversize.

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads													
M2.6×0.45	△	TICM2.6F5	5P	3.185	1b	52	6.8	16	5	4	7	3	c
	△*	TIC2.6F5					13	20	4	3.2	6		
	△	TICM2.6F1	1.5P				6.8	16	5	4	7		
	△*	TIC2.6F1					13	20	4	3.2	6		
M3×0.5	◎	TICM3.0G5	5P	3.650	1b	52	7.5	17	5	4	7	3	c
	◎*	TIC3.0G5					13	21					
	◎	TICM3.0G1	1.5P				7.5	17					
	◎*	TIC3.0G1					13	21					
M4×0.7	◎	TICM4.0I5	5P	4.909	1b	60	13	22	5.5	4.5	7	4	c
	◎*	TIC4.0I5					16	25					
	◎	TICM4.0I1	1.5P				13	22					
	◎*	TIC4.0I1					16	25					
M5×0.8	◎	TICM5.0K5	5P	6.039	1b	62	15	26	6	4.5	7	4	c
	◎*	TIC5.0K5					19	30					
	◎	TICM5.0K1	1.5P				15	26					
	◎*	TIC5.0K1					19	30					
M6×1	◎	TICM6.0M5	5P	7.299	1b	70	19	-	6.2	5	8	4	e
	◎*	TIC6.0M5					22						
	◎	TICM6.0M1	1.5P				19						
	◎*	TIC6.0M1					22						
M8×1.25	◎	TICM8.0N5	5P	9.624	1b	75	23	-	7	5.5	8	4	e
	◎*	TIC8.0N5					24						
	◎	TICM8.0N1	1.5P				23						
	◎*	TIC8.0N1					24						
M10×1.5	◎	TICM10.0O5	5P	11.948	1b	82	26	-	8.5	6.5	9	4	e
	◎*	TIC010O5					29						
	◎	TICM10.0O1	1.5P				26						
	◎*	TIC010O1					29						
M10×1.25	△	TICM10.0N5	5P	11.624	1b	82	26	-	8.5	6.5	9	4	e
	△*	TIC010N5					29						
	△	TICM10.0N1	1.5P				26						
	△*	TIC010N1					29						
M10×1	△	TICM10.0M5	5P	11.299	1b	82	26	-	8.5	6.5	9	4	e
	△*	TIC010M5					29						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

STI-HT Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type			
M10x1	△	TICM010M1	1.5P	11.299	1b	82	26	-	8.5	6.5	9	4	e			
	△*	TIC010M1					29									
M12x1.75	◎	TICM012P5	5P	14.273	1b	95	26	-	12.5	10	13	4	e			
	◎*	TIC012P5					30							10.5	8	11
	◎	TICM012P1	1.5P				26		12.5	10	13					
	◎*	TIC012P1					30							10.5	8	11
M12x1.5	△	TICM012O5	5P	13.948	1b	88	26	-	10.5	8	11	4	e			
	△*	TIC012O5					30									
	△	TICM012O1	1.5P				26							10.5	8	11
	△*	TIC012O1					30									
M12x1.25	△	TICM012N5	5P	13.624	1b	88	26	-	10.5	8	11	4	e			
	△*	TIC012N5					30									
	△	TICM012N1	1.5P				26							10.5	8	11
	△*	TIC012N1					30									
M14x2	△	TICM014Q5	5P	16.598	1b	100	33	-	14	11	14	4	e			
	△*	TIC014Q5					32							13	10	13
	△	TICM014Q1	1.5P				33		14	11	14					
	△*	TIC014Q1					32							13	10	13
M14x1.5	△	TICM014O5	5P	15.948	1b	95	26	-	12.5	10	13	4	e			
	△*	TIC014O5					32									
	△	TICM014O1	1.5P				26							12.5	10	13
	△*	TIC014O1					32									
M16x2	○	TICM016Q5	5P	18.598	1b	105	33	-	15	12	15	4	e			
	○*	TIC016Q5					37							14	11	14
	○	TICM016Q1	1.5P				33		15	12	15					
	○*	TIC016Q1					37							14	11	14
M16x1.5	△	TICM016O5	5P	17.948	1b	100	33	-	14	11	14	4	e			
	△*	TIC016O5					37									
	△	TICM016O1	1.5P				33							14	11	14
	△*	TIC016O1					37									
M18x2.5	△	TICM018R5	5P	21.248	1b	115	33	-	17	13	16	4	e			
	△*	TIC018R5					38									
	△	TICM018R1	1.5P				33							17	13	16
	△*	TIC018R1					38									
M18x1.5	△	TICM018O5	5P	19.948	1b	105	33	-	15	12	15	4	e			
	△*	TIC018O5					37									
	△	TICM018O1	1.5P				33							15	12	15
	△*	TIC018O1					37									
M20x2.5	○	TICM020R5	5P	23.248	1b	120	39	-	19	15	18	4	e			
	○*	TIC020R5					45									
	○	TICM020R1	1.5P				39							19	15	18
	○*	TIC020R1					45									

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

STI-HT Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M20×1.5	△	TICM02005	5P	21.948	1b	115	33	-	17	13	16	4	e
	△*	TIC02005					38						
	△	TICM02001	1.5P				33						
	△*	TIC02001					38						
M22×2.5	△	TICM022R5	5P	25.248	1b	125	39	-	19	15	18	4	e
	△*	TIC022R5					45		20				
	△	TICM022R1	1.5P				39		19				
	△*	TIC022R1					45		20				
M22×1.5	△	TICM022O5	5P	23.948	1b	120	39	-	19	15	18	4	e
	△*	TIC022O5					45						
	△	TICM022O1	1.5P				39						
	△*	TIC022O1					45						
M24×3	○	TICM024S5	5P	27.897	1b	135	46	-	23	17	20	4	e
	○*	TIC024S5					45		21				
	○	TICM024S1	1.5P				46		23				
	○*	TIC024S1					45		21				
M24×1.5	△	TICM024O5	5P	25.948	1b	130	39	-	20	15	18	4	e
	△*	TIC024O5					45						
	△	TICM024O1	1.5P				39						
	△*	TIC024O1					45						

For Unified Threads

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
No.4-40UNC	△	TICMUN4H5	5P	3.670	1b	52	11	17	5	4	7	3	c
	△*	TICUN4H5					13	21					
	△	TICMUN4H1	1.5P				11	17					
	△*	TICUN4H1					13	21					
No.4-48UNF	△	TICMUN4F5	5P	3.532	1b	52	11	17	5	4	7	3	c
	△	TICMUN4F1	1.5P										
No.5-40UNC	△	TICMUN5H5	5P	4.000	1b	52	11	17	5	4	7	3	c
	△*	TICUN5H5					13	21					
	△	TICMUN5H1	1.5P				11	17					
	△*	TICUN5H1					13	21					
No.6-32UNC	△	TICMUN6J5	5P	4.536	1b	60	13	22	5.5	4.5	7	3	c
	△*	TICUN6J5					16	25					
	△	TICMUN6J1	1.5P				13	22					
	△*	TICUN6J1					16	25					
No.6-40UNF	△	TICMUN6H5	5P	4.330	1b	60	13	22	5.5	4.5	7	3	c
	△*	TICUN6H5					16	25					
	△	TICMUN6H1	1.5P				13	22					
	△*	TICUN6H1					16	25					
No.8-32UNC	△	TICMUN8J5	5P	5.197	1b	62	15	26	6	4.5	7	4	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

STI-HT Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type					
No.8-32UNC	△*	TICUN8J5	5P	5.197	1b	60	16	26	5.5	4.5	7	4	c					
	△	TICMUN8J1	1.5P											62	15	6	7	4
	△*	TICUN8J1	5P											60	16	5.5	7	4
No.8-36UNF	△	TICMUN8I5	5P	5.083	1b	62	9.5	26	6	4.5	7	4	c					
	△	TICMUN8I1	1.5P															
No.10-24UNC	△	TICMUNAM5	5P	6.201	1b	62	15	26	6	4.5	7	4	c					
	△*	TICUNAM5												19	30			
	△	TICMUNAM1	1.5P											15	26			
	△*	TICUNAM1												19	30			
No.10-32UNF	△	TICMUNAJ5	5P	5.857	1b	62	15	26	6	4.5	7	4	c					
	△*	TICUNAJ5												19	30			
	△	TICMUNAJ1	1.5P											15	26			
	△*	TICUNAJ1												19	30			
No.12-24UNC	△	TICMUNCM5	5P	6.861	1b	70	19	-	6.2	5	8	4	e					
	△*	TICUNCM5												22	6.1			
	△	TICMUNCM1	1.5P											19	6.2			
	△*	TICUNCM1												22	6.1			
1/4-20UNC	△	TICMU04N5	5P	8.000	1b	70	19	-	6.2	5	8	4	e					
	△*	TICU04N5												22	6.1			
	△	TICMU04N1	1.5P											19	6.2			
	△*	TICU04N1												22	6.1			
1/4-28UNF	△	TICMU04K5	5P	7.528	1b	70	19	-	6.2	5	8	4	e					
	△*	TICU04K5												22	6.1			
	△	TICMU04K1	1.5P											19	6.2			
	△*	TICU04K1												22	6.1			
5/16-18UNC	△	TICMU05O5	5P	9.771	1b	75	23	-	7	5.5	8	4	e					
	△*	TICU05O5												80	25	8	6	9
	△	TICMU05O1	1.5P											75	23	7	5.5	8
	△*	TICU05O1												80	25	8	6	9
5/16-24UNF	△	TICMU05M5	5P	9.313	1b	75	23	-	7	5.5	8	4	e					
	△*	TICU05M5												24				
	△	TICMU05M1	1.5P											23				
	△*	TICU05M1												24				
3/8-16UNC	△	TICMU06P5	5P	11.587	1b	82	26	-	8.5	6.5	9	4	e					
	△*	TICU06P5												85	29	9	7	10
	△	TICMU06P1	1.5P											82	26	8.5	6.5	9
	△*	TICU06P1												85	29	9	7	10
3/8-24UNF	△	TICMU06M5	5P	10.900	1b	82	26	-	8.5	6.5	9	4	e					
	△*	TICU06M5												80	25	8	6	
	△	TICMU06M1	1.5P											82	26	8.5	6.5	
	△*	TICU06M1												80	25	8	6	
7/16-14UNC	△	TICMU07Q5	5P	13.469	1b	88	26	-	10.5	8	11	4	e					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps (simple measuring tools)

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

STI-HT Hand Taps for Helical Coil Wire Screw Thread Inserts

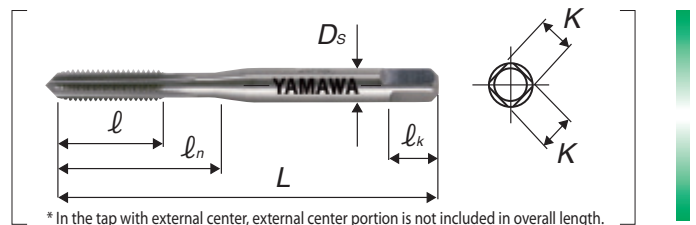
Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
7/16-14UNC	△*	TICU07Q5	5P	13.469	1b	90	30	-	10.5	8	11	4	e
	△	TICMU07Q1	1.5P			88	26						
	△*	TICU07Q1				90	30						
7/16-20UNF	△	TICMU07N5	5P	12.762	1b	88	26	-	10.5	8	11	4	e
	△*	TICU07N5				85	29		9	7	10		
	△	TICMU07N1	1.5P			88	26		10.5	8	11		
	△*	TICU07N1				85	29		9	7	10		
1/2-13UNC	△	TICMU08R5	5P	15.238	1b	95	26	-	12.5	10	13	4	e
	△*	TICU08R5					32		12	9	12		
	△	TICMU08R1	1.5P				26		12.5	10	13		
	△*	TICU08R1					32		12	9	12		
1/2-20UNF	△	TICMU08N5	5P	14.350	1b	95	26	-	12.5	10	13	4	e
	△*	TICU08N5					30		10.5	8	11		
	△	TICMU08N1	1.5P				26		12.5	10	13		
	△*	TICU08N1					30		10.5	8	11		
5/8-11UNC	△	TICMU10U5	5P	18.875	1b	105	33	-	15	12	15	4	e
	△*	TICU10U5					37		14	11	14		
	△	TICMU10U1	1.5P				33		15	12	15		
	△*	TICU10U1					37		14	11	14		
5/8-18UNF	△	TICMU10O5	5P	17.708	1b	100	33	-	14	11	14	4	e
	△*	TICU10O5					37						
	△	TICMU10O1	1.5P				33						
	△*	TICU10O1					37						
3/4-16UNF	△	TICMU12P5	5P	21.112	1b	115	33	-	17	13	16	4	e
	△*	TICU12P5					38						
	△	TICMU12P1	1.5P				33						
	△*	TICU12P1					38						

The products having *mark in the stock column will be available as long as they last.

PL-1 Hand Taps for Plastics



Segment : 1A



PL-1 is for thermosetting plastic which is specially hard-to-machine material among plastics.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M2x0.4	△	TPLM2.0E3	3P	P4	42	7.2	12	3	2.5	5	3	c
	△*	TPL2.0E3				9.5	15					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

PL-1 Hand Taps for Plastics

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M2.3x0.4	△	TPLM2.3E3	3P	P4	42	7.2	12	3	2.5	5	3	c
	△*	TPL2.3E3				9.5	15					
M2.5x0.45	○	TPLM2.5F3	3P	P4	46	8.1	14	3	2.5	5	3	c
	○*	TPL2.5F3				44	9.5					
M2.6x0.45	△	TPLM2.6F3	3P	P4	46	8.1	14	3	2.5	5	3	c
	△*	TPL2.6F3				44	9.5					
M3x0.5	○	TPLM3.0G3	3P	P5	46	9	14	4	3.2	6	4	c
	○*	TPL3.0G3				11	18					
M3.5x0.6	○	TPLM3.5H3	3P	P5	52	11	16	5	4	7	4	c
	○*	TPL3.5H3				48	13					
M4x0.7	○	TPLM4.0I3	3P	P5	52	11	17	5	4	7	4	c
	○*	TPL4.0I3				13	20					
M5x0.8	○	TPLM5.0K3	3P	P5	60	13	22	5.5	4.5	7	4	c
	○*	TPL5.0K3				16	25					
M6x1	△	TPLM6.0M3	3P	P5	62	15	26	6	4.5	7	4	c
	△*	TPL6.0M3				19	28					
M8x1.25	△	TPLM8.0N3	3P	P6	70	19	-	6.2	5	8	4	e
	△*	TPL8.0N3				22	-					

The products having *mark in the stock column will be available as long as they last.

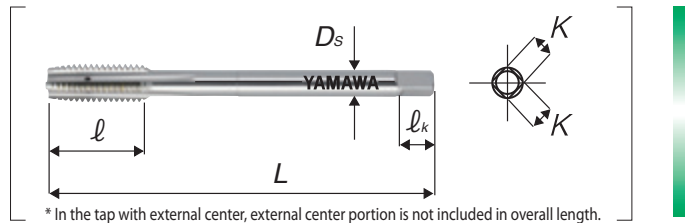
MC-HT

Long Shank Hand Taps with Internal Coolant Hole



Internal coolant hole : 5P = Radial type coolant hole, 1.5P = Through internal coolant hole

Segment : 1A



Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6x1	△	ML106.0M5-Q	5P	P2	100	19	28	6	4.5	7	4	c
	△	ML156.0M5-Q			150							
	△	ML106.0M1-Q	100									
	△	ML156.0M1-Q	150									
M8x1.25	△	ML108.0N5-Q	5P	P2	100	22	-	6.2	5	8	4	e
	△	ML158.0N5-Q			150							
	△	ML108.0N1-Q	100									
	△	ML158.0N1-Q	150									
M10x1.5	△	ML10010O5-Q	5P	P2	100	24	-	7	5.5	8	4	e
	△	ML15010O5-Q			150							
	△	ML10010O1-Q	100									
	△	ML15010O1-Q	150									

MC-HT Long Shank Hand Taps with Internal Coolant Hole

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M10x1.25	△	ML10010N5-Q	5P	P2	100	20	-	7	5.5	8	4	e
	△	ML15010N5-Q			150							
	△	ML10010N1-Q	1.5P		100							
	△	ML15010N1-Q			150							
M12x1.75	△	ML10012P5-Q	5P	P2	100	29	-	8.5	6.5	9	4	e
	△	ML15012P5-Q			150							
	△	ML20012P5-Q			200							
	△	ML10012P1-Q	1.5P		100							
	△	ML15012P1-Q			150							
	△	ML20012P1-Q			200							
M12x1.5	△	ML10012O5-Q	5P	P2	100	29	-	8.5	6.5	9	4	e
	△	ML15012O5-Q			150							
	△	ML20012O5-Q			200							
	△	ML10012O1-Q	1.5P		100							
	△	ML15012O1-Q			150							
	△	ML20012O1-Q			200							
M12x1.25	△	ML10012N5-Q	5P	P2	100	29	-	8.5	6.5	9	4	e
	△	ML15012N5-Q			150							
	△	ML20012N5-Q			200							
	△	ML10012N1-Q	1.5P		100							
	△	ML15012N1-Q			150							
	△	ML20012N1-Q			200							
M14x2	△	ML15014Q5-Q	5P	P2	150	30	-	10.5	8	11	4	e
	△	ML20014Q5-Q			200							
	△	ML15014Q1-Q	1.5P		150							
	△	ML20014Q1-Q			200							
M14x1.5	△	ML15014O5-Q	5P	P2	150	30	-	10.5	8	11	4	e
	△	ML20014O5-Q			200							
	△	ML15014O1-Q	1.5P		150							
	△	ML20014O1-Q			200							
M16x2	△	ML15016Q5-Q	5P	P2	150	32	-	12.5	10	13	4	e
	△	ML20016Q5-Q			200							
	△	ML15016Q1-Q	1.5P		150							
	△	ML20016Q1-Q			200							
M16x1.5	△	ML15016O5-Q	5P	P2	150	32	-	12.5	10	13	4	e
	△	ML20016O5-Q			200							
	△	ML15016O1-Q	1.5P		150							
	△	ML20016O1-Q			200							
M18x2.5	△	ML15018R5-R	5P	P3	150	37	-	14	11	14	4	e
	△	ML20018R5-R			200							
	△	ML15018R1-R	1.5P		150							
	△	ML20018R1-R			200							

Hand Taps

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

MC-HT Long Shank Hand Taps with Internal Coolant Hole

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M18×1.5	△	ML1501805-Q	5P	P2	150	37	-	14	11	14	4	e
	△	ML2001805-Q			200							
	△	ML1501801-Q	1.5P		150							
	△	ML2001801-Q			200							
M20×2.5	△	ML15020R5-R	5P	P3	150	37	-	15	12	15	4	e
	△	ML20020R5-R			200							
	△	ML15020R1-R	1.5P		150							
	△	ML20020R1-R			200							
M20×1.5	△	ML15020O5-R	5P	P3	150	37	-	15	12	15	4	e
	△	ML20020O5-R			200							
	△	ML15020O1-R	1.5P		150							
	△	ML20020O1-R			200							
M22×2.5	△	ML15022R5-R	5P	P3	150	38	-	17	13	16	4	e
	△	ML20022R5-R			200							
	△	ML15022R1-R	1.5P		150							
	△	ML20022R1-R			200							
M22×1.5	△	ML15022O5-R	5P	P3	150	38	-	17	13	16	4	e
	△	ML20022O5-R			200							
	△	ML15022O1-R	1.5P		150							
	△	ML20022O1-R			200							
M24×3	△	ML15024S5-R	5P	P3	150	45	-	19	15	18	4	e
	△	ML20024S5-R			200							
	△	ML15024S1-R	1.5P		150							
	△	ML20024S1-R			200							
M24×1.5	△	ML15024O5-R	5P	P3	150	45	-	19	15	18	4	e
	△	ML20024O5-R			200							
	△	ML15024O1-R	1.5P		150							
	△	ML20024O1-R			200							
M27×3	△	ML20027S5-R	5P	P3	200	45	-	20	15	18	4	e
	△	ML20027S1-R	1.5P									
M27×1.5	△	ML20027O5-R	5P	P3	200	45	-	20	15	18	4	e
	△	ML20027O1-R	1.5P									
M30×3.5	△	ML20030T5-S	5P	P4	200	48	-	23	17	20	4	e
	△	ML20030T1-S	1.5P									
M30×1.5	△	ML20030O5-R	5P	P3	200	45	-	23	17	20	4	e
	△	ML20030O1-R	1.5P									

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

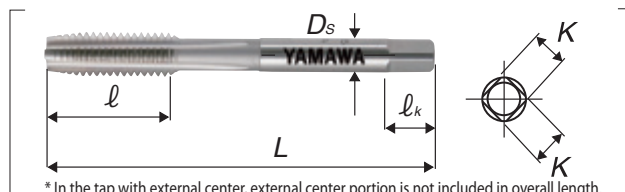
Centering Tools

EH-HT

Hand Taps for Hard-to-Machine Materials



Segment : 1B



EH-PO is suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	ETHMR3.0G5	5P	P3	46	9	14	4	3.2	6	3	c
	○*	ETHR3.0G5										
	○	ETHMR3.0G1	2.5P									
	○*	ETHR3.0G1										
M4×0.7	○	ETHMR4.0I5	5P	P3	52	11	17	5	4	7	3	c
	○*	ETHR4.0I5										
	○	ETHMR4.0I1	2.5P									
	○*	ETHR4.0I1										
M5×0.8	○	ETHMR5.0K5	5P	P3	60	13	22	5.5	4.5	7	3	c
	○*	ETHR5.0K5										
	○	ETHMR5.0K1	2.5P									
	○*	ETHR5.0K1										
M6×1	○	ETHMR6.0M5	5P	P3	62	15	26	6	4.5	7	3	c
	○*	ETHR6.0M5										
	○	ETHMR6.0M1	2.5P									
	○*	ETHR6.0M1										
M8×1.25	○	ETHMS8.0N5	5P	P4	70	19	-	6.2	5	8	4	e
	○*	ETHS8.0N5										
	○	ETHMS8.0N1	2.5P									
	○*	ETHS8.0N1										
M10×1.5	○	ETHMS010O5	5P	P4	75	23	-	7	5.5	8	4	e
	○*	ETHS010O5										
	○	ETHMS010O1	2.5P									
	○*	ETHS010O1										
M10×1.25	△	ETHMS010N5	5P	P4	75	23	-	7	5.5	8	4	e
	△*	ETHS010N5										
	△	ETHMS010N1	2.5P									
	△*	ETHS010N1										
M12×1.75	○	ETHMS012P5	5P	P4	82	26	-	8.5	6.5	9	4	e
	○*	ETHS012P5										
	○	ETHMS012P1	2.5P									
	○*	ETHS012P1										
M12×1.5	△	ETHMS012O5	5P	P4	82	26	-	8.5	6.5	9	4	e
	△*	ETHS012O5										

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

EH-HT Hand Taps for Hard-to-Machine Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.5	△	ETHMS012O1	2.5P	P4	82	26	-	8.5	6.5	9	4	e
	△*	ETHS012O1				29						
M12x1.25	△	ETHMS012N5	5P	P4	82	26	-	8.5	6.5	9	4	e
	△*	ETHS012N5				29						
	△	ETHMS012N1	2.5P			26						
	△*	ETHS012N1				29						
M14x2	△	ETHMT014Q5	5P	P5	88	26	-	10.5	8	11	4	e
	△*	ETHHT014Q5				30						
	△	ETHMT014Q1	2.5P			26						
	△*	ETHHT014Q1				30						
M14x1.5	△	ETHMS014O5	5P	P4	88	26	-	10.5	8	11	4	e
	△*	ETHS014O5				30						
	△	ETHMS014O1	2.5P			26						
	△*	ETHS014O1				30						
M16x2	○	ETHMT016Q5	5P	P5	95	26	-	12.5	10	13	4	e
	○*	ETHHT016Q5				32						
	○	ETHMT016Q1	2.5P			26						
	○*	ETHHT016Q1				32						
M16x1.5	△	ETHMS016O5	5P	P4	95	26	-	12.5	10	13	4	e
	△*	ETHS016O5				32						
	△	ETHMS016O1	2.5P			26						
	△*	ETHS016O1				32						
M18x2.5	△	ETHMT018R5	5P	P5	100	33	-	14	11	14	4	e
	△*	ETHHT018R5				37						
	△	ETHMT018R1	2.5P			33						
	△*	ETHHT018R1				37						
M18x1.5	△	ETHMS018O5	5P	P4	100	33	-	14	11	14	4	e
	△*	ETHS018O5				37						
	△	ETHMS018O1	2.5P			33						
	△*	ETHS018O1				37						
M20x2.5	○	ETHMT020R5	5P	P5	105	33	-	15	12	15	4	e
	○*	ETHHT020R5				37						
	○	ETHMT020R1	2.5P			33						
	○*	ETHHT020R1				37						
M20x1.5	△	ETHMS020O5	5P	P4	105	33	-	15	12	15	4	e
	△*	ETHS020O5				37						
	△	ETHMS020O1	2.5P			33						
	△*	ETHS020O1				37						
M22x2.5	△	ETHMT022R5	5P	P5	115	33	-	17	13	16	4	e
	△*	ETHHT022R5				38						
	△	ETHMT022R1	2.5P			33						
	△*	ETHHT022R1				38						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

EH-HT Hand Taps for Hard-to-Machine Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M22×1.5	△	ETHMS022O5	5P	P4	115	33	-	17	13	16	4	e
	△*	ETHS022O5				38						
	△	ETHMS022O1	2.5P			33						
	△*	ETHS022O1				38						
M24×3	○	ETHMT024S5	5P	P5	120	39	-	19	15	18	4	e
	○*	ETHT024S5				45						
	○	ETHMT024S1	2.5P			39						
	○*	ETHT024S1				45						
M24×1.5	△	ETHMS024O5	5P	P4	120	39	-	19	15	18	4	e
	△*	ETHS024O5				45						
	△	ETHMS024O1	2.5P			39						
	△*	ETHS024O1				45						
M27×3	△	ETHMT027S5	5P	P5	130	39	-	20	15	18	4	e
	△*	ETHT027S5				45						
	△	ETHMT027S1	2.5P			39						
	△*	ETHT027S1				45						
M30×3.5	△	ETHMT030T5	5P	P5	135	46	-	23	17	20	4	e
	△*	ETHT030T5				48						
	△	ETHMT030T1	2.5P			46						
	△*	ETHT030T1				48						

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Cemented Carbide Tap Series



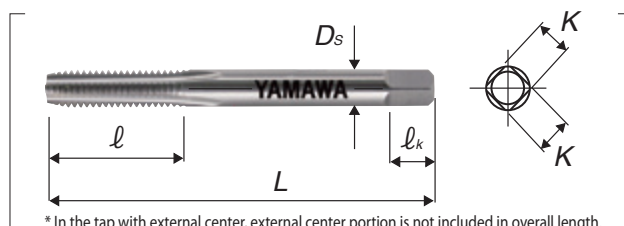
N-CT LA	CT-1
N-CT FC	CT-3
LS-N-CT	CT-7
N-CT-SP	CT-8
N-CT-PO	CT-8
MC-AD-CT	CT-9
N-CT STI	CT-9
EH-CT	CT-10
UH-CT	CT-10
HFACT-P	CT-11
HFACT-B	CT-11
HFICT-P	CT-12
HFICT-B	CT-12

N-CT LA

Cemented Carbide Taps for Light Alloys



Segment : 1L



N-CT LA is the carbide tap suitable for tapping aluminum castings (AC), aluminum die castings (ADC), and zinc die castings (ZDC).

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M1.4×0.3	△	TCNR1.4C3A	3P	P3	34	7	-	3	2.5	5	3	p
	△	TCNR1.4C1A	1.5P									
M1.6×0.35	△	TCNR1.6D3A	3P	P3	36	8	-	3	2.5	5	3	p
	△	TCNR1.6D1A	1.5P									
M1.7×0.35	△	TCNR1.7D3A	3P	P3	36	8	-	3	2.5	5	3	p
	△	TCNR1.7D1A	1.5P									
M2×0.4	○	TCNR2.0E3A	3P	P3	40	8	-	3	2.5	5	3	p
	○	TCNR2.0E1A	1.5P									
M2.2×0.45	△	TCNR2.2F3A	3P	P3	42	9.5	-	3	2.5	5	3	p
	△	TCNR2.2F1A	1.5P									
M2.3×0.4	△	TCNR2.3E3A	3P	P3	42	8	-	3	2.5	5	3	p
	△	TCNR2.3E1A	1.5P									
M2.5×0.45	△	TCNR2.5F3A	3P	P3	44	9.5	-	3	2.5	5	3	p
	△	TCNR2.5F1A	1.5P									
M3×0.5	○	TCNR3.0G3A	3P	P3	46	11	-	4	3.2	6	3	p
	○	TCNR3.0G1A	1.5P									
M3.5×0.6	△	TCNR3.5H3A	3P	P3	48	11	-	4	3.2	6	3	p
	△	TCNR3.5H1A	1.5P									
M4×0.7	○	TCNR4.0I3A	3P	P3	52	13	-	5	4	7	3	p
	○	TCNR4.0I1A	1.5P									
M4×0.5	△	TCNR4.0G3A	3P	P3	52	11	-	5	4	7	3	p
	△	TCNR4.0G1A	1.5P									
M5×0.8	○	TCNR5.0K3A	3P	P3	60	16	-	5.5	4.5	7	3	p
	○	TCNR5.0K1A	1.5P									
M5×0.5	△	TCNR5.0G3A	3P	P3	52	11	-	5.5	4.5	7	3	p
	△	TCNR5.0G1A	1.5P									
M6×1	○	TCNR6.0M3A	3P	P3	62	19	-	6	4.5	7	3	p
	○	TCNR6.0M1A	1.5P									
M6×0.75	△	TCNR6.0J3A	3P	P3	62	13	-	6	4.5	7	3	p
	△	TCNR6.0J1A	1.5P									
M6×0.5	△	TCNR6.0G3A	3P	P3	55	11	-	6	4.5	7	3	p
	△	TCNR6.0G1A	1.5P									
M7×1	△	TCNR7.0M3A	3P	P3	65	19	-	6.2	5	8	3	e
	△	TCNR7.0M1A	1.5P									

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N-CT LA Cemented Carbide Taps for Light Alloys

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M7×0.75	△	TCNR7.0J3A	3P	P3	62	13	-	6.2	5	8	3	e
	△	TCNR7.0J1A	1.5P									
M8×1.25	○	TCNR8.0N3A	3P	P3	70	22	-	6.2	5	8	3	e
	○	TCNR8.0N1A	1.5P									
M8×1	○	TCNR8.0M3A	3P	P3	70	19	-	6.2	5	8	3	e
	○	TCNR8.0M1A	1.5P									
M8×0.75	△	TCNR8.0J3A	3P	P3	62	13	-	6.2	5	8	3	e
	△	TCNR8.0J1A	1.5P									
M10×1.5	△	TCNR010O3A	3P	P3	75	24	-	7	5.5	8	3	e
	△	TCNR010O1A	1.5P									
M10×1.25	○	TCNR010N3A	3P	P3	75	22	-	7	5.5	8	3	e
	○	TCNR010N1A	1.5P									
	△	TCNS010N3A	3P	P4								
	△	TCNS010N1A	1.5P									
M10×1	△	TCNR010M3A	3P	P3	70	19	-	7	5.5	8	3	e
	△	TCNR010M1A	1.5P									
M12×1.75	△	TCNR012P3A	3P	P3	82	30	-	8.5	6.5	9	3	e
	△	TCNR012P1A	1.5P									
M12×1.5	△	TCNR012O3A	3P	P3	82	24	-	8.5	6.5	9	3	e
	△	TCNR012O1A	1.5P									
	△	TCNS012O3A	3P	P4								
	△	TCNS012O1A	1.5P									
M12×1.25	○	TCNR012N3A	3P	P3	80	22	-	8.5	6.5	9	3	e
	○	TCNR012N1A	1.5P									
	△	TCNS012N3A	3P	P4								
	△	TCNS012N1A	1.5P									
M12×1	△	TCNR012M3A	3P	P3	70	19	-	8.5	6.5	9	3	e
	△	TCNR012M1A	1.5P									
M14×2	△	TCNR014Q3A	3P	P3	88	30	-	10.5	8	11	4	e
	△	TCNR014Q1A	1.5P									
	△	TCNS014Q3A	3P	P4								
	△	TCNS014Q1A	1.5P									
M14×1.5	△	TCNR014O3A	3P	P3	88	24	-	10.5	8	11	4	e
	△	TCNR014O1A	1.5P									
	△	TCNS014O3A	3P	P4								
	△	TCNS014O1A	1.5P									
M16×2	△	TCNS016Q3A	3P	P4	95	30	-	12.5	10	13	4	e
	△	TCNS016Q1A	1.5P									
M16×1.5	△	TCNR016O3A	3P	P3	95	24	-	12.5	10	13	4	e
	△	TCNR016O1A	1.5P									
	△	TCNS016O3A	3P	P4								
	△	TCNS016O1A	1.5P									

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

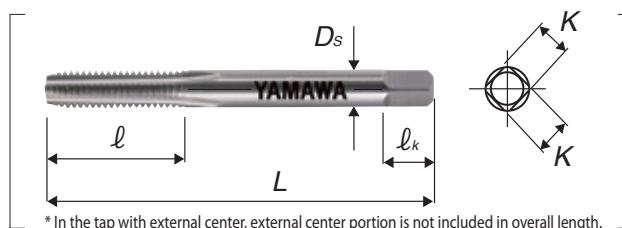
N-CT LA Cemented Carbide Taps for Light Alloys

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M18×2.5	△	TCNS018R3A	3P	P4	100	35	-	14	11	14	4	e
	△	TCNS018R1A	1.5P									
M18×1.5	△	TCNS018O3A	3P	P4	95	24	-	14	11	14	4	e
	△	TCNS018O1A	1.5P									
M20×2.5	△	TCNS020R3A	3P	P4	105	35	-	15	12	15	4	e
	△	TCNS020R1A	1.5P									
M20×1.5	△	TCNS020O3A	3P	P4	95	24	-	15	12	15	4	e
	△	TCNS020O1A	1.5P									

N-CT FC Cemented Carbide Taps for Cast Irons



Segment : 1L



* In the tap with external center, external center portion is not included in overall length.

N-CT-FC is the carbide tap suitable for hard and abrasive materials such as cast irons.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M1.4×0.3	△	TCNR1.4C3	3P	P3	34	7	-	3	2.5	5	3	p
	△	TCNR1.4C1	1.5P									
M1.6×0.35	△	TCNR1.6D3	3P	P3	36	8	-	3	2.5	5	3	p
	△	TCNR1.6D1	1.5P									
M1.7×0.35	△	TCNR1.7D3	3P	P3	36	8	-	3	2.5	5	3	p
	△	TCNR1.7D1	1.5P									
M2×0.4	○	TCNR2.0E3	3P	P3	40	8	-	3	2.5	5	3	p
	○	TCNR2.0E1	1.5P									
M2.2×0.45	△	TCNR2.2F3	3P	P3	42	9.5	-	3	2.5	5	3	p
	△	TCNR2.2F1	1.5P									
M2.3×0.4	△	TCNR2.3E3	3P	P3	42	8	-	3	2.5	5	3	p
	△	TCNR2.3E1	1.5P									
M2.5×0.45	△	TCNR2.5F3	3P	P3	44	9.5	-	3	2.5	5	3	p
	△	TCNR2.5F1	1.5P									
M2.6×0.45	○	TCNR2.6F3	3P	P3	44	9.5	-	3	2.5	5	3	p
	○	TCNR2.6F1	1.5P									
M3×0.5	◎	TCNR3.0G3	3P	P3	46	11	-	4	3.2	6	3	p
	◎	TCNR3.0G1	1.5P									
M3×0.35	△	TCNR3.0D3	3P	P3	46	8	-	4	3.2	6	3	p
	△	TCNR3.0D1	1.5P									
M3.5×0.6	○	TCNR3.5H3	3P	P3	48	11	-	4	3.2	6	3	p
	○	TCNR3.5H1	1.5P									

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N-CT FC Cemented Carbide Taps for Cast Irons

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M4×0.7	◎	TCNR4.0I3	3P	P3	52	13	-	5	4	7	4	p
	◎	TCNR4.0I1	1.5P									
M4×0.5	△	TCNR4.0G3	3P	P3	52	11	-	5	4	7	4	p
	△	TCNR4.0G1	1.5P									
M5×0.8	◎	TCNR5.0K3	3P	P3	60	16	-	5.5	4.5	7	4	p
	◎	TCNR5.0K1	1.5P									
M5×0.5	△	TCNR5.0G3	3P	P3	52	11	-	5.5	4.5	7	4	p
	△	TCNR5.0G1	1.5P									
M6×1	◎	TCNR6.0M3	3P	P3	62	19	-	6	4.5	7	4	p
	◎	TCNR6.0M3F										
	◎	TCNR6.0M1	1.5P									
	◎	TCNR6.0M1F										
M6×0.75	○	TCNR6.0J3	3P	P3	62	13	-	6	4.5	7	4	p
	○	TCNR6.0J1	1.5P									
M6×0.5	△	TCNR6.0G3	3P	P3	55	11	-	6	4.5	7	4	p
	△	TCNR6.0G1	1.5P									
M7×1	○	TCNR7.0M3	3P	P3	65	19	-	6.2	5	8	4	e
	○	TCNR7.0M1	1.5P									
M7×0.75	△	TCNR7.0J3	3P	P3	62	13	-	6.2	5	8	4	e
	△	TCNR7.0J1	1.5P									
M8×1.25	◎	TCNR8.0N3	3P	P3	70	22	-	6.2	5	8	4	e
	◎	TCNR8.0N1	1.5P									
	△	TCNS8.0N3	3P	P4								
	△	TCNS8.0N1	1.5P									
M8×1	○	TCNR8.0M3	3P	P3	70	19	-	6.2	5	8	4	e
	○	TCNR8.0M1	1.5P									
M8×0.75	△	TCNR8.0J3	3P	P3	62	13	-	6.2	5	8	4	e
	△	TCNR8.0J1	1.5P									
M10×1.5	◎	TCNR010O3	3P	P3	75	24	-	7	5.5	8	4	e
	◎	TCNR010O1	1.5P									
	△	TCNS010O3	3P	P4								
	△	TCNS010O1	1.5P									
M10×1.25	○	TCNR010N3	3P	P3	75	22	-	7	5.5	8	4	e
	○	TCNR010N1	1.5P									
	△	TCNS010N3	3P	P4								
	△	TCNS010N1	1.5P									
M10×1	○	TCNR010M3	3P	P3	70	19	-	7	5.5	8	4	e
	○	TCNR010M1	1.5P									
	△	TCNS010M3	3P	P4								
	△	TCNS010M1	1.5P									
M12×1.75	◎	TCNR012P3	3P	P3	82	30	-	8.5	6.5	9	4	e
	◎	TCNR012P1	1.5P									

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

N-CT FC Cemented Carbide Taps for Cast Irons

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M12×1.75	○	TCNS012P3	3P	P4	82	30	-	8.5	6.5	9	4	e
	○	TCNS012P1	1.5P									
M12×1.5	○	TCNR012O3	3P	P3	82	24	-	8.5	6.5	9	4	e
	○	TCNR012O1	1.5P									
	△	TCNS012O3	3P	P4								
	△	TCNS012O1	1.5P									
M12×1.25	○	TCNR012N3	3P	P3	80	22	-	8.5	6.5	9	4	e
	○	TCNR012N1	1.5P									
	△	TCNS012N3	3P	P4								
	△	TCNS012N1	1.5P									
M12×1	△	TCNR012M3	3P	P3	70	19	-	8.5	6.5	9	4	e
	△	TCNR012M1	1.5P									
	△	TCNS012M3	3P	P4								
	△	TCNS012M1	1.5P									
M14×2	△	TCNR014Q3	3P	P3	88	30	-	10.5	8	11	4	e
	△	TCNR014Q1	1.5P									
	○	TCNS014Q3	3P	P4								
	○	TCNS014Q1	1.5P									
M14×1.5	○	TCNR014O3	3P	P3	88	24	-	10.5	8	11	4	e
	○	TCNR014O1	1.5P									
	△	TCNS014O3	3P	P4								
	△	TCNS014O1	1.5P									
M14×1.25	△	TCNR014N3	3P	P3	88	22	-	10.5	8	11	4	e
	△	TCNR014N1	1.5P									
	△	TCNS014N3	3P	P4								
	△	TCNS014N1	1.5P									
M14×1	△	TCNR014M3	3P	P3	70	19	-	10.5	8	11	4	e
	△	TCNR014M1	1.5P									
	△	TCNS014M3	3P	P4								
	△	TCNS014M1	1.5P									
M16×2	○	TCNS016Q3	3P	P4	95	30	-	12.5	10	13	4	e
	○	TCNS016Q1	1.5P									
M16×1.5	△	TCNR016O3	3P	P3	95	24	-	12.5	10	13	4	e
	△	TCNR016O1	1.5P									
	○	TCNS016O3	3P	P4								
	○	TCNS016O1	1.5P									
M16×1	○	TCNS016M3	3P	P4	75	19	-	12.5	10	13	4	e
	○	TCNS016M1	1.5P									
M18×2.5	△	TCNS018R3	3P	P4	100	35	-	14	11	14	4	e
	△	TCNS018R1	1.5P									
M18×1.5	○	TCNS018O3	3P	P4	95	24	-	14	11	14	4	e
	○	TCNS018O1	1.5P									

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N-CT FC Cemented Carbide Taps for Cast Irons

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M20×2.5	○	TCNS020R3	3P	P4	105	35	-	15	12	15	4	e
	○	TCNS020R1	1.5P									
M20×1.5	○	TCNS020O3	3P	P4	95	24	-	15	12	15	4	e
	○	TCNS020O1	1.5P									
M22×2.5	△	TCNS022R3	3P	P4	115	35	-	17	13	16	4	e
	△	TCNS022R1	1.5P									
M22×1.5	△	TCNS022O3	3P	P4	95	24	-	17	13	16	4	e
	△	TCNS022O1	1.5P									
M24×3	△	TCNS024S3	3P	P4	120	35	-	19	15	18	4	e
	△	TCNS024S1	1.5P									
M24×1.5	△	TCNS024O3	3P	P4	95	24	-	19	15	18	4	e
	△	TCNS024O1	1.5P									

For Unified Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
No.4-40UNC	△	TCNRUN4H3	3P	P3	44	9.5	-	3	2.5	5	3	p
	△	TCNRUN4H1	1.5P									
No.4-48UNF	△	TCNRUN4F3	3P	P3	44	9.5	-	3	2.5	5	3	p
	△	TCNRUN4F1	1.5P									
No.5-40UNC	△	TCNRUN5H3	3P	P3	46	9.5	-	4	3.2	6	3	p
	△	TCNRUN5H1	1.5P									
No.6-32UNC	△	TCNRUN6J3	3P	P3	48	11	-	4	3.2	6	3	p
	△	TCNRUN6J1	1.5P									
No.8-32UNC	△	TCNRUN8J3	3P	P3	52	11	-	5	4	7	4	p
	△	TCNRUN8J1	1.5P									
No.10-24UNC	△	TCNRUNAM3	3P	P3	60	16	-	5.5	4.5	7	4	p
	△	TCNRUNAM1	1.5P									
No.10-32UNF	△	TCNRUNAJ3	3P	P3	60	11	-	5.5	4.5	7	4	p
	△	TCNRUNAJ1	1.5P									
1/4-20UNC	△	TCNRU04N3	3P	P3	62	19	-	6	4.5	7	4	p
	△	TCNRU04N1	1.5P									
1/4-28UNF	△	TCNRU04K3	3P	P3	62	16	-	6	4.5	7	4	p
	△	TCNRU04K1	1.5P									
5/16-18UNC	△	TCNRU05O3	3P	P3	70	22	-	6.1	5	8	4	e
	△	TCNRU05O1	1.5P									
5/16-24UNF	△	TCNRU05M3	3P	P3	70	16	-	6.1	5	8	4	e
	△	TCNRU05M1	1.5P									
3/8-16UNC	△	TCNRU06P3	3P	P3	75	24	-	7	5.5	8	4	e
	△	TCNRU06P1	1.5P									
3/8-24UNF	△	TCNRU06M3	3P	P3	75	16	-	7	5.5	8	4	e
	△	TCNRU06M1	1.5P									
7/16-14UNC	△	TCNRU07Q3	3P	P3	80	24	-	8	6	9	4	e

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

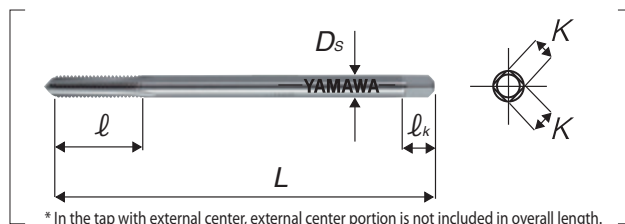
N-CT FC Cemented Carbide Taps for Cast Irons

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
7/16-14UNC	△	TCNRU07Q1	1.5P	P3	80	24	-	8	6	9	4	e
7/16-20UNF	△	TCNRU07N3	3P	P3	80	19	-	8	6	9	4	e
	△	TCNRU07N1	1.5P									
1/2-13UNC	△	TCNRU08R3	3P	P3	85	30	-	9	7	10	4	e
	△	TCNRU08R1	1.5P									
1/2-20UNF	△	TCNRU08N3	3P	P3	85	19	-	9	7	10	4	e
	△	TCNRU08N1	1.5P									
5/8-11UNC	△	TCNSU10U3	3P	P4	95	30	-	12	9	12	4	e
	△	TCNSU10U1	1.5P									
5/8-18UNF	△	TCNSU10O3	3P	P4	95	22	-	12	9	12	4	e
	△	TCNSU10O1	1.5P									
3/4-10UNC	△	TCNSU12V3	3P	P4	105	35	-	14	11	14	4	e
	△	TCNSU12V1	1.5P									
3/4-16UNF	△	TCNSU12P3	3P	P4	95	24	-	14	11	14	4	e
	△	TCNSU12P1	1.5P									

LS-N-CT Long Shank Cemented Carbide Taps



Segment : 1L



Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	3P	P3	100	11	-	4	3.2	6	3	p
	△		1.5P									
M4×0.7	△	-	3P	P3	100	13	-	5	4	7	4	p
	△		1.5P									
M5×0.8	△	-	3P	P3	100	16	-	5.5	4.5	7	4	p
	△		1.5P									
M6×1	△	-	3P	P3	100	19	-	6	4.5	7	4	p
	△		1.5P									
M8×1.25	△	-	3P	P3	100	22	-	6.2	5	8	4	e
	△		1.5P									
M10×1.5	△	-	3P	P3	100	24	-	7	5.5	8	4	e
	△		1.5P									

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

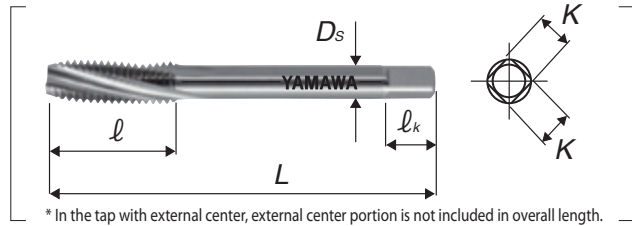
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N-CT-SP

Spiral Fluted Cemented Carbide Taps



Segment : 1L



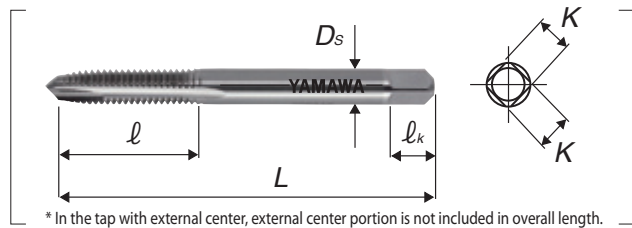
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	-	2.5P	P3	46	11	-	4	3.2	6	3	p
M4×0.7	△	-	2.5P	P3	52	13	-	5	4	7	3	p
M5×0.8	△	-	2.5P	P3	60	16	-	5.5	4.5	7	3	p
M6×1	△	-	2.5P	P3	62	19	-	6	4.5	7	3	p
M8×1.25	△	-	2.5P	P3	70	22	-	6.2	5	8	3	e
M10×1.5	△	-	2.5P	P3	75	24	-	7	5.5	8	3	e
M10×1.25	△	-	2.5P	P3	75	24	-	7	5.5	8	3	e
M12×1.75	△	-	2.5P	P4	82	30	-	8.5	6.5	9	3	e
M12×1.25	△	-	2.5P	P4	80	22	-	8.5	6.5	9	3	e

N-CT-PO

Cemented Carbide Spiral Pointed Taps



Segment : 1L



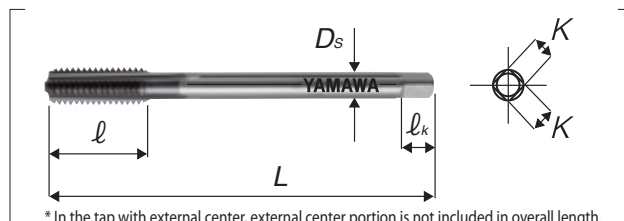
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	△	PCNR3.0G	5P	P3	46	11	-	4	3.2	6	3	p
M4×0.7	△	PCNR4.0I	5P	P3	52	13	-	5	4	7	3	p
M5×0.8	△	PCNR5.0K	5P	P3	60	16	-	5.5	4.5	7	3	p
M6×1	△	PCNR6.0M	5P	P3	62	19	-	6	4.5	7	3	p
M8×1.25	△	PCNR8.0N	5P	P3	70	22	-	6.2	5	8	3	e
M10×1.5	△	PCNS010O	5P	P4	75	24	-	7	5.5	8	3	e
M12×1.75	△	PCNS012P	5P	P4	82	30	-	8.5	6.5	9	3	e

MC-AD-CT

Cemented Carbide Taps with Internal Coolant Hole



Segment : 1L



MC-AD-CT is the carbide tap with coolant hole suitable for the blind holes of aluminum alloy castings and aluminum die castings.

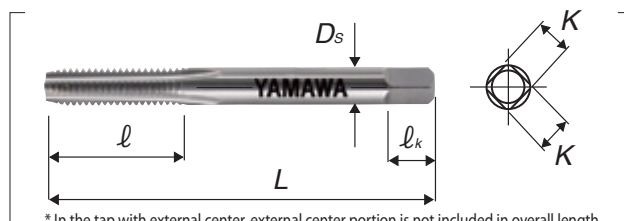
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M6×1	△	MCADR6.0M1	1.5P	P3	100	19	28	6	4.5	7	3	p
M8×1.25	△	MCADR8.0N1	1.5P	P3	100	22	-	6.2	5	8	3	e
M10×1.5	△	MCADS010O1	1.5P	P4	100	24	-	7	5.5	8	3	e
M10×1.25	△	MCADS010N1	1.5P	P4	100	22	-	7	5.5	8	3	e
M10×1	△	MCADS010M1	1.5P	P4	100	19	-	7	5.5	8	3	e
M12×1.75	△	MCADS012P1	1.5P	P4	100	30	-	8.5	6.5	9	3	e
M12×1.5	△	MCADS012O1	1.5P	P4	100	24	-	8.5	6.5	9	3	e
M12×1.25	△	MCADS012N1	1.5P	P4	100	22	-	8.5	6.5	9	3	e

N-CT STI

Cemented Carbide Taps for Helical Coil Wire Screw Thread Inserts



Segment : 1L



In some parts made of comparably soft materials, it sometimes is necessary to strengthen the internal threads and increase their toughness by inserting helical coils into the internal threads previously cut oversize. N-CT STI are the taps to cut the internal threads for such helical coil to enter.

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads													
M3×0.5	△	TCNIC3.0G5	5P	3.650	1B	52	13	-	5	4	7	3	p
	△	TCNIC3.0G1	1.5P										e
M4×0.7	△	TCNIC4.0I5	5P	4.909	1B	60	16	-	5.5	4.5	7	3	p
	△	TCNIC4.0I1	1.5P										e
M5×0.8	△	TCNIC5.0K5	5P	6.039	1B	62	19	-	6	4.5	7	3	p
	△	TCNIC5.0K1	1.5P										e
M6×1	△	TCNIC6.0M5	5P	7.299	1B	65	19	-	6.2	5	8	4	e
	△	TCNIC6.0M1	1.5P										e
M8×1.25	△	TCNIC8.0N5	5P	9.624	1B	75	24	-	7	5.5	8	4	e
	△	TCNIC8.0N1	1.5P										e
M10×1.5	△	TCNIC010O5	5P	11.949	1B	82	30	-	8.5	6.5	9	4	e
	△	TCNIC010O1	1.5P										e

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

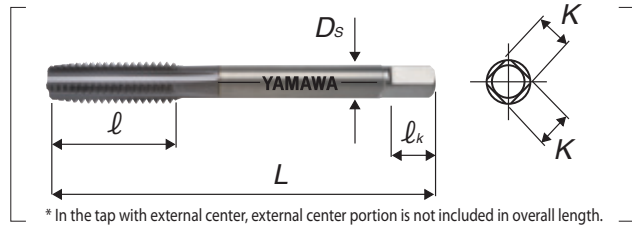
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

EH-CT

Cemented Carbide Taps for Hard Materials



Segment : 1L



EH-CT is most suitable for high hardness steels of 45-55HRC such as hot die steels (SKS3, SKD11 and others). For bored hole size, the max minor dia of 6H class internal threads is recommendable.

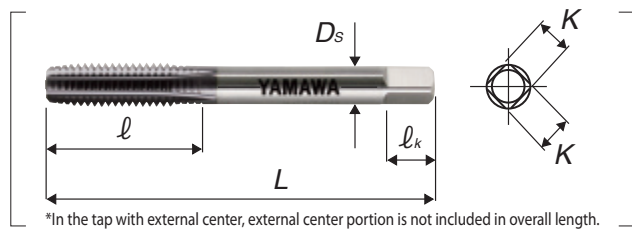
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M3×0.5	○	EHCR3.0G5	5P	P3	46	11	-	4	3.2	6	4	p
M4×0.7	○	EHCR4.0I5	5P	P3	52	13	-	5	4	7	4	p
M5×0.8	○	EHCR5.0K5	5P	P3	60	16	-	5.5	4.5	7	4	p
M6×1	○	EHCR6.0M5	5P	P3	62	19	-	6	4.5	7	4	p
M8×1.25	○	EHCS8.0N5	5P	P4	70	22	-	6.2	5	8	5	e
M10×1.5	○	EHCS010O5	5P	P4	75	24	-	7	5.5	8	5	e
M12×1.75	○	EHCS012P5	5P	P4	82	30	-	8.5	6.5	9	5	e

UH-CT

Cemented Carbide Taps for Ultra Hard Materials



Segment : 1L



UH-CT is suitable for SKD and pre-hardened material which hardness is 50-60HRC (Max 63HRC). With the target of threaded length shorter than 1.5D, UH-CT has 5 thread chamfer considering longer tool life.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M2×0.4	○	UHCR2.0E5	5P	P3	40	8	-	4	3.2	6	3	p
M2.5×0.45	○	UHCR2.5F5	5P	P3	44	9.5	-	4	3.2	6	4	p
M2.6×0.45	○	UHCR2.6F5	5P	P3	44	9.5	-	4	3.2	6	4	p
M3×0.5	○	UHCR3.0G5	5P	P3	46	11	-	5	4	7	4	p
M4×0.7	○	UHCR4.0I5	5P	P3	52	13	-	5.5	4.5	7	4	p
M5×0.8	○	UHCR5.0K5	5P	P3	60	16	-	6	4.5	7	4	p
M6×1	○	UHCR6.0M5	5P	P3	62	19	-	6.2	5	8	5	p
M8×1.25	○	UHCS8.0N5	5P	P4	70	22	-	7	5.5	8	5	e
M10×1.5	○	UHCS010O5	5P	P4	75	24	-	8.5	6.5	9	5	e
M10×1.25	△	UHCS010N5	5P	P4	75	24	-	8.5	6.5	9	5	e
M12×1.75	○	UHCS012P5	5P	P4	82	30	-	10.5	8	11	5	e
M12×1.5	△	UHCS012O5	5P	P4	82	30	-	10.5	8	11	5	e
M12×1.25	△	UHCS012N5	5P	P4	82	30	-	10.5	8	11	5	e
M14×2	△	UHCS014Q5	5P	P4	88	30	-	12.5	10	13	6	e
M14×1.5	△	UHCS014O5	5P	P4	88	30	-	12.5	10	13	6	e

UH-CT Cemented Carbide Taps for Ultra Hard Materials

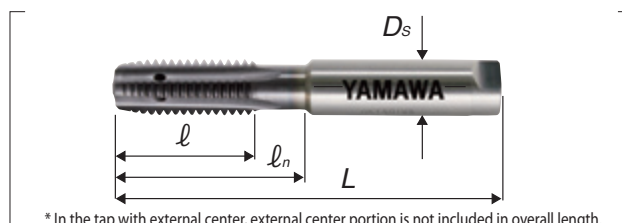
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
M16×2	△	UHCS016Q5	5P	P4	95	30	-	14	11	14	6	e
M16×1.5	△	UHCS016O5	5P	P4	95	30	-	14	11	14	6	e
M18×2.5	△	UHCS018R5	5P	P4	100	35	-	15	12	15	6	e
M18×1.5	△	UHCS018O5	5P	P4	100	35	-	15	12	15	6	e
M20×2.5	△	UHCS020R5	5P	P4	105	35	-	17	13	16	6	e
M20×1.5	△	UHCS020O5	5P	P4	105	35	-	17	13	16	6	e

HFACT-P

Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Aluminum Castings and Aluminum Die Castings



Segment : 1L



* In the tap with external center, external center portion is not included in overall length.

HFACT-P is applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant, dry under cryogenic condition, HFACT-P has radial type coolant hole and is suitable for through holes of such materials as aluminum castings.

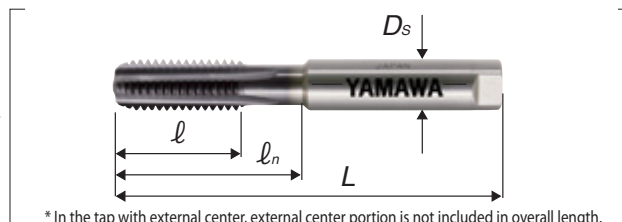
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HFACTPR6.0M	4P	P3	62	19	-	6	-	-	3	j
M8×1.25	○	HFACTPR8.0N	4P	P3	70	22	32	8	-	-	3	k
M10×1.5	○	HFACTPR0100	4P	P3	75	24	36	10	-	-	3	k
M10×1.25	○	HFACTPR010N	4P	P3	75	24	36	10	-	-	3	k
M12×1.75	○	HFACTPR012P	4P	P3	82	29	40	12	-	-	3	k
M12×1.5	○	HFACTPR012O	4P	P3	82	29	40	12	-	-	3	k
M12×1.25	○	HFACTPR012N	4P	P3	82	29	40	12	-	-	3	k

HFACT-B

Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Aluminum Castings and Aluminum Die Castings



Segment : 1L



* In the tap with external center, external center portion is not included in overall length.

HFACT-B is applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant, dry under cryogenic condition, HFACT-B has center through type coolant hole and is suitable for blind holes of such materials as aluminum castings.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Metric Threads												
M6×1	○	HFACTBR6.0M	2.5P	P3	62	19	-	6	-	-	3	j
M8×1.25	○	HFACTBR8.0N	2.5P	P3	70	22	32	8	-	-	3	k
M10×1.5	○	HFACTBR0100	2.5P	P3	75	24	36	10	-	-	3	k
M10×1.25	○	HFACTBR010N	2.5P	P3	75	24	36	10	-	-	3	k
M12×1.75	○	HFACTBR012P	2.5P	P3	82	29	40	12	-	-	3	k

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HFACT-B Cemented Carbide Cutting Taps for Ultra Fast Tappings, Blind Hole Use, suitable for aluminum castings and aluminum die castings

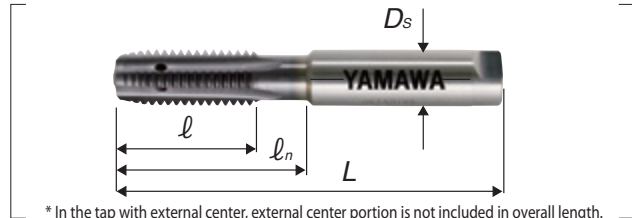
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
M12x1.5	○	HFACTBR012O	2.5P	P3	82	29	40	12	-	-	3	k
M12x1.25	○	HFACTBR012N	2.5P	P3	82	29	40	12	-	-	3	k

HFICT-P

Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Cast Irons



Segment : 1L



HFICT-P is applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant, dry under cryogenic condition, HFICT-P has radial type coolant hole and is suitable for through holes of such materials as aluminum cast iron.

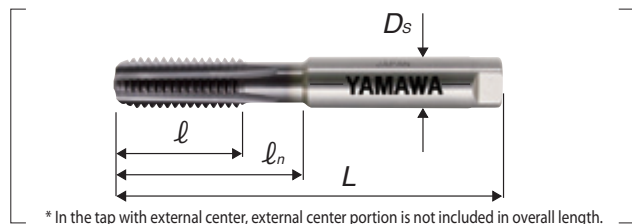
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6x1	○	HFICTPR6.0M	4P	P3	62	19	-	6	-	-	4	j
M8x1.25	○	HFICTPR8.0N	4P	P3	70	22	32	8	-	-	4	k
M10x1.5	○	HFICTPR010O	4P	P3	75	24	36	10	-	-	4	k
M10x1.25	○	HFICTPR010N	4P	P3	75	24	36	10	-	-	4	k
M12x1.75	○	HFICTPR012P	4P	P3	82	29	40	12	-	-	4	k
M12x1.5	○	HFICTPR012O	4P	P3	82	29	40	12	-	-	4	k
M12x1.25	○	HFICTPR012N	4P	P3	82	29	40	12	-	-	4	k

HFICT-B

Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Cast Irons



Segment : 1L



HFICT-B is applicable under ultra high speed cutting. For such tapping conditions as inner coolant supply, mist coolant, dry under cryogenic condition, HFICT-B has center through type coolant hole and is suitable for blind holes of such materials as cast iron.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Metric Threads												
M6x1	○	HFICTBR6.0M	2.5P	P3	62	19	-	6	-	-	4	j
M8x1.25	○	HFICTBR8.0N	2.5P	P3	70	22	32	8	-	-	4	k
M10x1.5	○	HFICTBR010O	2.5P	P3	75	24	36	10	-	-	4	k
M10x1.25	○	HFICTBR010N	2.5P	P3	75	24	36	10	-	-	4	k
M12x1.75	○	HFICTBR012P	2.5P	P3	82	29	40	12	-	-	4	k
M12x1.5	○	HFICTBR012O	2.5P	P3	82	29	40	12	-	-	4	k
M12x1.25	○	HFICTBR012N	2.5P	P3	82	29	40	12	-	-	4	k

Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Roll Tap Series



R-Y	RO-1
N+RZ/N-RZ	RO-1
LS-N-RZ	RO-9
N+RS/N-RS	RO-11
LS-N-RS	RO-21
N-RS STI	RO-23
R+V/R-V	RO-24
OL+RZ/OL-RZ	RO-27
HP+RZ/HP-RZ	RO-30
SC-TL-RZ	RO-35

R-Y

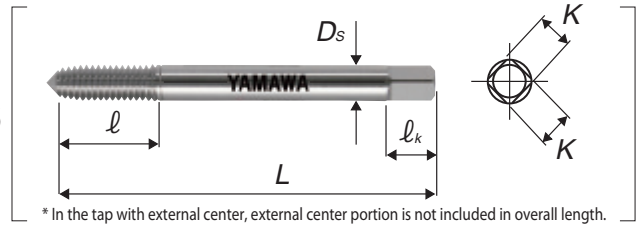
Thread Forming Taps for Thin Soft Structural Steel Sheets



Number of oil grooves : Non

For tapping general fasteners made from such thin steel sheets as SPC and SPH, and from such soft steels as under SS400 and S20C.

Segment : 1J



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Lobe	Type
For Metric Threads												
M2×0.4	○	RY2.0E3	3P	6HX	42	7	-	3	2.5	5	4	p
M2.5×0.45	○	RY2.5F3	3P	6HX	44	8	-	3	2.5	5	4	p
M2.6×0.45	○	RY2.6F3	3P	6HX	44	8	-	3	2.5	5	4	p
M3×0.5	○	RY3.0G3	3P	6HX	46	9	-	4	3.2	6	4	p
M4×0.7	○	RY4.0I3	3P	6HX	52	11	-	5	4	7	4	p
M5×0.8	○	RY5.0K3	3P	6HX	60	12	-	5.5	4.5	7	4	p
M6×1	○	RY6.0M3	3P	6HX	62	15	-	6	4.5	7	4	p
M8×1.25	○	RY8.0N3	3P	6HX	70	18	-	6.2	5	8	4	e

N+RZ/N-RZ

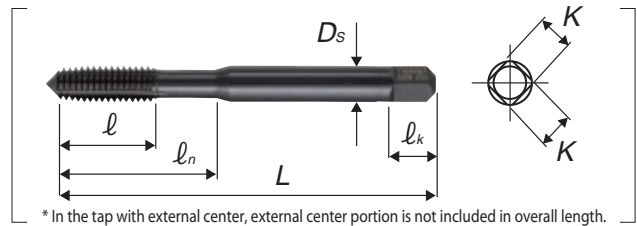
Thread Forming Taps for Steels



Number of oil grooves : Metric thread : M2.6 and smaller=non, M3~M7=4, M8=3, M10 and larger=4

N+RZ/N-RZ is the forming taps suitable for steel materials such as carbon steels, alloy steels and stainless steels.

Segment : 1J



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Lobe	Type	
For Metric Threads													
M1×0.25	○	NRZP41.0BP	4P	G4	36	4.5	-	3	2.5	5	4	a	
	○*	NRZ41.0BP			32	5.5					3	p	
	○	NRZP41.0BB	2P		36	4.5					4	a	
	○*	NRZ41.0BB			32	5.5					3	p	
	△	NRZP51.0BP	4P	G5	36	4.5					4	a	
	△*	NRZ51.0BP			32	5.5					3	p	
	△	NRZP51.0BB			2P	36					4.5	4	a
	△*	NRZ51.0BB				32					5.5	3	p
M1.2×0.25	○	NRZP41.2BP	4P	G4	36	4.5	-	3	2.5	5	4	a	
	○*	NRZ41.2BP			32	5.5					3	p	
	○	NRZP41.2BB	2P		36	4.5					4	a	
	○*	NRZ41.2BB			32	5.5					3	p	
	△	NRZP51.2BP	4P	G5	36	4.5					4	a	
	△*	NRZ51.2BP			32	5.5					3	p	

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
M1.2x0.25	△	NRZP51.2BB	2P	G5	36	4.5	-	3	2.5	5	4	a
	△*	NRZ51.2BB				32					5.5	3
M1.4x0.3	◎	NRZP41.4CP	4P	G4	36	5	-	3	2.5	5	4	b
	◎*	NRZ41.4CP				7					3	p
	◎	NRZP41.4CB	2P	5		4					b	
	◎*	NRZ41.4CB		7		3					p	
	○	NRZP51.4CP	4P	G5		5					4	b
	○*	NRZ51.4CP				7					3	p
	○	NRZP51.4CB	2P	5		4					b	
	○*	NRZ51.4CB		7		3					p	
M1.6x0.35	○	NRZP41.6DP	4P	G4	36	6	-	3	2.5	5	4	b
	○*	NRZ41.6DP				8					3	p
	○	NRZP41.6DB	2P	6		4					b	
	○*	NRZ41.6DB		8		3					p	
	○	NRZP51.6DP	4P	G5		6					4	b
	○*	NRZ51.6DP				8					3	p
	○	NRZP51.6DB	2P	6		4					b	
	○*	NRZ51.6DB		8		3					p	
M1.7x0.35	◎	NRZP41.7DP	4P	G4	36	6	-	3	2.5	5	4	b
	◎*	NRZ41.7DP				8					3	p
	◎	NRZP41.7DB	2P	6		4					b	
	◎*	NRZ41.7DB		8		3					p	
	◎	NRZP51.7DP	4P	G5		6					4	b
	◎*	NRZ51.7DP				8					3	p
	◎	NRZP51.7DB	2P	6		4					b	
	◎*	NRZ51.7DB		8		3					p	
	○	NRZP61.7DP	4P	G6		6					4	b
	○*	NRZ61.7DP				8					3	p
○	NRZP61.7DB	2P	6	4	b							
○*	NRZ61.7DB		8	3	p							
M1.8x0.35	△	NRZP41.8DP	4P	G4	42	6	-	3	2.5	5	4	b
	△*	NRZ41.8DP			36	8					3	p
	△	NRZP41.8DB	2P	42	6	4					b	
	△*	NRZ41.8DB		36	8	3					p	
	△	NRZP51.8DP	4P	G5	42	6					4	b
	△*	NRZ51.8DP			36	8					3	p
	△	NRZP51.8DB	2P	42	6	4					b	
	△*	NRZ51.8DB		36	8	3					p	
M2x0.4	◎	NRZP42.0EP	4P	G4	42	7	-	3	2.5	5	4	b
	◎*	NRZ42.0EP				8					p	
	◎	NRZP42.0EB	2P			7					b	
	◎*	NRZ42.0EB				8					p	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type	
M2×0.4	⊙	NRZP52.0EP	4P	G5	42	7	-	3	2.5	5	4	b	
	⊙*	NRZ52.0EP				8						p	
	⊙	NRZP52.0EB	2P			7						b	
	⊙*	NRZ52.0EB				8						p	
	○	NRZP62.0EP	4P	G6		7						b	
	○*	NRZ62.0EP				8						p	
	○	NRZP62.0EB	2P			7						b	
	○*	NRZ62.0EB				8						p	
M2×0.25	△	NRZM42.0BP	4P	G4	42	4.5	-	3	2.5	5	4	b	
	△*	NRZ42.0BP				8						p	
	△	NRZM42.0BB	2P			4.5						b	
	△*	NRZ42.0BB				8						p	
	△	NRZM52.0BP	4P	G5		4.5						b	
	△*	NRZ52.0BP				8						p	
	△	NRZM52.0BB	2P			4.5						b	
	△*	NRZ52.0BB				8						p	
M2.2×0.45	△	NRZP52.2FP	4P	G5	42	8	-	3	2.5	5	4	b	
	△*	NRZ52.2FP				9.5						p	
	△	NRZP52.2FB	2P			8						b	
M2.3×0.4	△	NRZP42.3EP	4P	G4	42	7	-	3	2.5	5	4	b	
	△*	NRZ42.3EP				9.5						p	
	△	NRZP42.3EB	2P			7						b	
	△*	NRZ42.3EB				9.5						p	
	△	NRZP52.3EP	4P	G5		7						b	
	△*	NRZ52.3EP				9.5						p	
	△	NRZP52.3EB	2P			7						b	
	△*	NRZ52.3EB				9.5						p	
	△	NRZP62.3EP	4P	G6		7						b	
	△*	NRZ62.3EP				9.5						p	
	△	NRZP62.3EB	2P			7						b	
	△*	NRZ62.3EB				9.5						p	
M2.5×0.45	○	NRZP52.5FP	4P	G5	46	8	14	-	3	2.5	5	4	c
	○*	NRZ52.5FP				9.5							p
	○	NRZP52.5FB	2P			8							c
	○*	NRZ52.5FB				9.5							p
	○	NRZP62.5FP	4P	G6		8							c
	○*	NRZ62.5FP				9.5							p
	○	NRZP62.5FB	2P			8							c
	○*	NRZ62.5FB				9.5							p
M2.5×0.35	△	NRZM52.5DP	4P	G5	46	6	14	-	3	2.5	5	4	c
	△*	NRZ52.5DP				9.5							p
	△	NRZM52.5DB	2P			6							c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Lobe	Type				
M2.5x0.35	△*	NRZ52.5DB	2P	G5	44	9.5	-	3	2.5	5	4	p				
	○	NRZP52.6FP	4P	G5	46	8	14	3	2.5	5	4	c				
○*	NRZ52.6FP	4P	44		9.5	-	p									
○	NRZP52.6FB	2P	46		8	14	c									
○*	NRZ52.6FB	2P	44		9.5	-	p									
M2.6x0.45	○	NRZP62.6FP	4P	G6	46	8	14	3	2.5	5	4	c				
	○*	NRZ62.6FP	4P		44	9.5	-					p				
	○	NRZP62.6FB	2P	46	8	14	c									
	○*	NRZ62.6FB	2P													
	△*	NRZ72.6FP	4P	G7	44	9.5	-									p
	△*	NRZ72.6FB	2P													
M2.6x0.35	△	NRZM52.6DP	4P	G5	46	6	14	3	2.5	5	4					c
	△*	NRZ52.6DP	4P		44	9.5	-									p
	△	NRZM52.6DB	2P		46	6	14									c
	△*	NRZ52.6DB	2P		44	9.5	-									p
M3x0.5	◎	NRZP53.0GP	4P	G5	46	9	14	4	3.2	6	4	c				
	◎*	NRZ53.0GP	4P			11	-					p				
	◎	NRZP53.0GB	2P			9	14					c				
	◎*	NRZ53.0GB	2P			11	-					p				
	◎	NRZP63.0GP	4P	G6		9	14					c				
	◎*	NRZ63.0GP	4P			11	-					p				
	◎	NRZP63.0GB	2P	9		14	c									
	◎*	NRZ63.0GB	2P	11		-	p									
	○	NRZP73.0GP	4P	G7		9	14					c				
	○*	NRZ73.0GP	4P			11	-					p				
	○	NRZP73.0GB	2P			9	14					c				
	○*	NRZ73.0GB	2P			11	-					p				
	△	NRZP83.0GP	4P	G8		9	14					c				
	△*	NRZ83.0GP	4P			11	-					p				
△	NRZP83.0GB	2P	9		14	c										
△*	NRZ83.0GB	2P	11		-	p										
M3x0.35	△	NRZM53.0DP	4P	G5	46	6.5	14	4	3.2	6	4	c				
	△*	NRZ53.0DP	4P			11	-					p				
	△	NRZM53.0DB	2P			6.5	14					c				
	△*	NRZ53.0DB	2P			11	-					p				
M3.5x0.6	○	NRZP53.5HP	4P	G5	52	11	16	5	4	7	4	c				
	○*	NRZ53.5HP	4P		48	13	-					4	3.2	6	p	
	○	NRZP53.5HB	2P		52	11	16					5	4	7	c	
	○*	NRZ53.5HB	2P		48	13	-					4	3.2	6	p	
	○	NRZP63.5HP	4P	G6	52	11	16					5	4	7	c	
	○*	NRZ63.5HP	4P		48	13	-					4	3.2	6	p	
	○	NRZP63.5HB	2P		52	11	16					5	4	7	c	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented
Carbide Taps
Roll Taps
Special Thread Taps
Simple measuring tools
Pipe Taps
MC Helical
Thread Mills
Dies
Center Drills
Centering Tools

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type									
M3.5×0.6	○*	NRZ63.5HB	2P	G6	48	13	-	4	3.2	6	4	p									
	△	NRZP73.5HP	4P	G7	52	11	16	5	4	7		c									
	△*	NRZ73.5HP			48	13	-	4	3.2	6		p									
	△	NRZP73.5HB	52		11	16	5	4	7	c											
	△*	NRZ73.5HB	2P		48	13	-	4	3.2	6		p									
M4×0.7	○	NRZP54.0IP	4P	G5	52	11	17	5	4	7	4	c									
	○*	NRZ54.0IP				13	-					p									
	○	NRZP54.0IB	2P			11	17					c									
	○*	NRZ54.0IB				13	-					p									
	◎	NRZP64.0IP	4P	G6		11	17					c									
	◎*	NRZ64.0IP				13	-					p									
	◎	NRZP64.0IB	2P			11	17					c									
	◎*	NRZ64.0IB				13	-					p									
	○	NRZP74.0IP	4P	G7		11	17					c									
	○*	NRZ74.0IP				13	-					p									
	○	NRZP74.0IB	2P			11	17					c									
	○*	NRZ74.0IB				13	-					p									
	△	NRZP84.0IP	4P	G8		11	17					c									
	△*	NRZ84.0IP				13	-					p									
	△	NRZP84.0IB	2P			11	17					c									
△*	NRZ84.0IB	13			-	p															
M4×0.5	△	NRZM54.0GP	4P	G5	52	9	17	5	4	7	4	c									
	△*	NRZ54.0GP				13	-					p									
	△	NRZM54.0GB	2P			9	17					c									
	△*	NRZ54.0GB				13	-					p									
	△	NRZM64.0GP	4P	G6		9	17					c									
	△	NRZM64.0GB	2P										G7	60	13	22	5.5	4.5	7	4	c
	△	NRZM74.0GB													2P	G7					13
M5×0.8	△	NRZP55.0KP	4P	G5	60	13	22	5.5	4.5	7	4	c									
	△*	NRZ55.0KP				16	-					p									
	△	NRZP55.0KB	2P			13	22					c									
	△*	NRZ55.0KB				16	-					p									
	○	NRZP65.0KP	4P	G6		13	22					c									
	○*	NRZ65.0KP				16	-					p									
	○	NRZP65.0KB	2P			13	22					c									
	○*	NRZ65.0KB				16	-					p									
	○	NRZP75.0KP	4P	G7		13	22					c									
	○*	NRZ75.0KP				16	-					p									
	○	NRZP75.0KB	2P			13	22					c									
	○*	NRZ75.0KB				16	-					p									
	△	NRZP85.0KP	4P	G8		13	22					c									
△*	NRZ85.0KP	16			-	p															

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
 Spiral Fluted Taps (for through hole)
 Spiral Pointed Taps
 Hand Taps
 Cemented Carbide Taps
 Roll Taps
 Special Thread Taps (Simple measuring tools)
 Pipe Taps
 MC Helical Thread Mills
 Dies
 Center Drills
 Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type	
M5×0.8	△	NRZP85.0KB	2P	G8	60	13	22	5.5	4.5	7	4	c	
	△*	NRZ85.0KB				-	p						
M5×0.5	△	NRZM65.0GP	4P	G6	60	9	22	5.5	4.5	7	4	c	
	△*	NRZ65.0GP				-	p						
	△	NRZM65.0GB	2P			9	22					c	
	△*	NRZ65.0GB				-	p						
M6×1	△	NRZP56.0MP	4P	G5	62	15	26	6	4.5	7	4	c	
	△*	NRZ56.0MP				-	p						
	△	NRZP56.0MB	2P			15	26					c	
	△*	NRZ56.0MB				-	p						
	○	NRZP66.0MP	4P	G6		15	26					c	
	○*	NRZ66.0MP				-	p						
	○	NRZP66.0MB	2P			15	26					c	
	○*	NRZ66.0MB				-	p						
	○	NRZP76.0MP	4P	G7		15	26					c	
	○*	NRZ76.0MP				-	p						
	○	NRZP76.0MB	2P			15	26					c	
	○*	NRZ76.0MB				-	p						
	△*	NRZ86.0MP	4P	G8		19	-					p	
	△*	NRZ86.0MB	2P										
M6×0.75	△	NRZM66.0JP	4P	G6	62	15	26	6	4.5	7	4	c	
	△*	NRZ66.0JP				-	p						
	△	NRZM66.0JB	2P			15	26					c	
	△*	NRZ66.0JB				-	p						
	△	NRZM76.0JP	4P	G7		15	26					c	
	△*	NRZ76.0JP				-	p						
	△	NRZM76.0JB	2P			15	26					c	
△*	NRZ76.0JB	-			p								
M6×0.5	△	NRZM66.0GP	4P	G6	62	9	26	6	4.5	7	4	c	
	△*	NRZ66.0GP			-	p							
	△	NRZM66.0GB	2P		62	9	26					c	
	△*	NRZ66.0GB			-	p							
M7×1	△	NRZM77.0MP	4P	G7	70	19	-	6.2	5	8	4	e	
	△*	NRZ77.0MP			65								
	△	NRZM77.0MB	2P		70								
	△*	NRZ77.0MB			65								
M7×0.75	△	NRZM77.0JP	4P	G7	70	19	-	6.2	5	8	4	e	
	△	NRZM77.0JB	2P										
M8×1.25	○	NRZM78.0NP	4P	G7	70	19	-	6.2	5	8	6	e	
	○*	NRZ78.0NP											18
	○	NRZM78.0NB	2P										19
	○*	NRZ78.0NB											18

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
M8x1.25	△	NRZM88.0NP	4P	G8	70	19	-	6.2	5	8	6	e
	△*	NRZ88.0NP				18						
	△	NRZM88.0NB	2P			19						
	△*	NRZ88.0NB				18						
M8x1	△	NRZM78.0MP	4P	G7	70	19	-	6.2	5	8	6	e
	△*	NRZ78.0MP				18						
	△	NRZM78.0MB	2P			19						
	△*	NRZ78.0MB				18						
M8x0.75	△	NRZM78.0JP	4P	G7	70	19	-	6.2	5	8	6	e
	△*	NRZ78.0JP				18						
	△	NRZM78.0JB	2P			19						
	△*	NRZ78.0JB				18						
M10x1.5	△	NRZM7010OP	4P	G7	75	23	-	7	5.5	8	8	e
	△*	NRZ7010OP				21						
	△	NRZM7010OB	2P			23						
	△*	NRZ7010OB				21						
	△	NRZM8010OP	4P	G8		23						
	△*	NRZ8010OP				21						
	△	NRZM8010OB	2P			23						
	△*	NRZ8010OB				21						
M10x1.25	△	NRZM7010NP	4P	G7	75	23	-	7	5.5	8	8	e
	△*	NRZ7010NP				21						
	△	NRZM7010NB	2P			23						
	△*	NRZ7010NB				21						
	△	NRZM8010NP	4P	G8		23						
	△*	NRZ8010NP				21						
	△	NRZM8010NB	2P			23						
	△*	NRZ8010NB				21						
M10x1	△	NRZM7010MP	4P	G7	75	23	-	7	5.5	8	8	e
	△*	NRZ7010MP				20						
	△	NRZM7010MB	2P			23						
	△*	NRZ7010MB				20						
M12x1.75	△	NRZM8012PP	4P	G8	82	26	-	8.5	6.5	9	8	e
	△*	NRZ8012PP				25						
	△	NRZM8012PB	2P			26						
	△*	NRZ8012PB				25						
	△	NRZM9012PP	4P	G9		26						
	△*	NRZ9012PP				25						
	△	NRZM9012PB	2P			26						
	△*	NRZ9012PB				25						
M12x1.5	△	NRZM8012OP	4P	G8	82	26	-	8.5	6.5	9	8	e
	△*	NRZ8012OP				25						

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RZ/N-RZ Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type	
M12x1.5	△	NRZM8012OB	2P	G8	82	26	-	8.5	6.5	9	8	e	
	△*	NRZ8012OB				25							
M12x1.25	△	NRZM8012NP	4P	G8	82	26	-	8.5	6.5	9	8	e	
	△*	NRZ8012NP				25							
	△	NRZM8012NB	2P	26									
	△*	NRZ8012NB		25									
	△	NRZM9012NP	4P	G9		26							
	△*	NRZ9012NP				25							
	△	NRZM9012NB	2P	26									
	△*	NRZ9012NB		25									
M12x1	△	NRZM7012MP	4P	G7	82	26	-	8.5	6.5	9	8	e	
	△*	NRZ7012MP				20							
	△	NRZM7012MB	2P			26							
	△*	NRZ7012MB				20							
M14x2	△	NRZM9014QP	4P	G9	88	26	-	10.5	8	11	8	e	
	△*	NRZ9014QP	2P										
	△	NRZM9014QB		G10									4P
	△*	NRZ9014QB	2P										
	△	NRZM0014QP		G10									4P
	△*	NRZ0014QP	2P										
	△	NRZM0014QB		G10									2P
△*	NRZ0014QB												
M14x1.5	△	NRZM9014OP	4P	G9	88	26	-	10.5	8	11	8	e	
	△*	NRZ9014OP	2P										
	△	NRZM9014OB											2P
	△*	NRZ9014OB											
M14x1	△	NRZM8014MP	4P	G8	88	26	-	10.5	8	11	8	e	
	△*	NRZ8014MP											20
	△	NRZM8014MB	2P										26
	△*	NRZ8014MB											20
M16x2	△	NRZM9016QP	4P	G9	95	26	-	12.5	10	13	8	e	
	△*	NRZ9016QP	2P										
	△	NRZM9016QB		G10									4P
	△*	NRZ9016QB	2P										
	△	NRZM0016QP		G10									4P
	△*	NRZ0016QP	2P										
	△	NRZM0016QB		G10									2P
△*	NRZ0016QB												
M16x1.5	△	NRZM9016OP	4P	G9	95	26	-	12.5	10	13	8	e	
	△*	NRZ9016OP											2P
	△	NRZM9016OB	2P										
	△*	NRZ9016OB											

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
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Roll Taps
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Dies
Center Drills
Centering Tools

N+RZ/N-RZ Thread Forming Taps for Steels

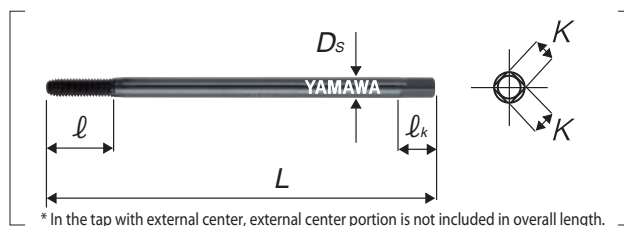
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
M20×1.5	△	NRZM9020OP	4P	G9	105	33	-	15	12	15	8	e
	△*	NRZ9020OP				32						
	△	NRZM9020OB	2P			33						
	△*	NRZ9020OB				32						
	△	NRZM0020OP	4P	G10		33						
	△*	NRZ0020OP				32						
	△	NRZM0020OB	2P			33						
	△*	NRZ0020OB				32						

The products having *mark in the stock column will be available as long as they last.

LS-N-RZ Long Shank Thread Forming Taps for Steels



Segment : 1J



Number of oil grooves : M3~M6=4, M8=3, M10=4

LS-N-RZ is the forming taps suitable for steel materials such as carbon steels, alloy steels and stainless steels.

 Recommended Class

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
For Metric Threads												
M3×0.5	△	NRZM53.0GP10	4P	G5	100	9	14	4	3.2	6	4	c
	△*	NRZ53.0GP10				11	-					p
	△	NRZM53.0GB10	2P			9	14					c
	△*	NRZ53.0GB10				11	-					p
	△	NRZM63.0GP10	4P	G6		9	14					c
	△*	NRZ63.0GP10				11	-					p
	△	NRZM63.0GB10	2P			9	14					c
	△*	NRZ63.0GB10				11	-					p
M4×0.7	△	NRZM64.0IP10	4P	G6	100	11	17	5	4	7	4	c
	△*	NRZ64.0IP10				13	-					p
	△	NRZM64.0IB10	2P			11	17					c
	△*	NRZ64.0IB10				13	-					p
	△	NRZM74.0IP10	4P	G7		11	17					c
	△*	NRZ74.0IP10				13	-					p
	△	NRZM74.0IB10	2P			11	17					c
	△*	NRZ74.0IB10				13	-					p
M5×0.8	△	NRZM65.0KP10	4P	G6	100	13	22	5.5	4.5	7	4	c
	△*	NRZ65.0KP10				16	-					p
	△	NRZM65.0KB10	2P			13	22					c
	△*	NRZ65.0KB10				16	-					p
	△	NRZM75.0KP10	4P	G7		13	22					c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

LS-N-RZ Long Shank Thread Forming Taps for Steels

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Lobe	Type													
M5x0.8	△*	NRZ75.0KP10	4P	G7	100	16	-	5.5	4.5	7	4	p													
	△	NRZM75.0KB10	2P			13	22					c													
	△*	NRZ75.0KB10				16	-					p													
M6x1	△	NRZM76.0MP10	4P	G7	100	15	26	6	4.5	7	4	c													
	△*	NRZ76.0MP10				19	-					p													
	△	NRZM76.0MP15				150	15					26	c												
	△*	NRZ76.0MP15					19					-	p												
	△	NRZM76.0MB10	2P	G7	100	15	26	6	4.5	7	4	c													
	△*	NRZ76.0MB10				19	-					p													
	△	NRZM76.0MB15				150	15					26	c												
	△*	NRZ76.0MB15					19					-	p												
	M8x1.25	△	NRZM86.0MP10	4P	G7	100	15	26	6.2	5	8	6	c												
		△*	NRZ86.0MP10				19	-					p												
		△	NRZM86.0MB10	2P			G8	100					15	26	6.2	5	8	6	c						
		△*	NRZ86.0MB10										19	-					p						
△		NRZM78.0NP10	4P										G7	100					19	-	6.2	5	8	6	e
△*		NRZ78.0NP10																	18	-					e
△	NRZM78.0NP15	2P	G7	150	19	-	6.2	5	8	6	e														
△*	NRZ78.0NP15				18	-					e														
△	NRZM78.0NB10				100	19					-	e													
△*	NRZ78.0NB10					18					-	e													
M10x1.5	△	NRZM78.0NB15			2P	G7					150	19	-	7	5.5	8	8	e							
	△*	NRZ78.0NB15										18	-					e							
	△	NRZM7010OP10	4P	G7			100	23	-	7		5.5	8					8	e						
	△*	NRZ7010OP10						21	-										e						
	△	NRZM7010OP15			150			23	-		e														
	△*	NRZ7010OP15						21	-		e														
	△	NRZM7010OB10	2P		G7		100	23	-		7								5.5	8	8	e			
	△*	NRZ7010OB10						21	-													e			
△	NRZM7010OB15	150				23		-	e																
△*	NRZ7010OB15					21		-	e																

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

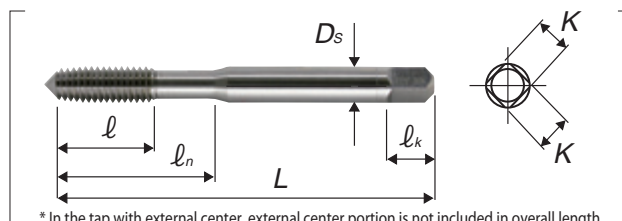
N+RS/N-RS

Thread Forming Taps for Non-Ferrous Materials



Segment : 1J

Number of oil grooves : Metric thread : M2.6 and smaller=non, M3 and larger=1
Unified thread : No.4 and smaller=non, No.5 and larger=1



* In the tap with external center, external center portion is not included in overall length.

N+RS/N-RS is the forming taps suitable for non-ferrous materials such as aluminum castings, aluminum die casting and brass.

Recommended Class

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Lobe	Type	
For Metric Threads													
M1×0.25	⊙	NRSP41.0BP	4P	G4	36	4.5	-	3	2.5	5	4	a	
	⊙*	NRS41.0BP				5.5					3	p	
	⊙	NRSP41.0BB	2P			4.5					4	a	
	⊙*	NRS41.0BB				5.5					3	p	
	△	NRSP51.0BP	4P	G5	36	4.5	-	3	2.5	5	4	a	
	△*	NRS51.0BP				5.5					3	p	
	△	NRSP51.0BB				2P					4.5	4	a
	△*	NRS51.0BB									5.5	3	p
M1.2×0.25	⊙	NRSP41.2BP	4P	G4	36	4.5	-	3	2.5	5	4	a	
	⊙*	NRS41.2BP				5.5					3	p	
	⊙	NRSP41.2BB	2P			4.5					4	a	
	⊙*	NRS41.2BB				5.5					3	p	
	○	NRSP51.2BP	4P	G5	36	4.5	-	3	2.5	5	4	a	
	○*	NRS51.2BP				5.5					3	p	
	○	NRSP51.2BB				2P					4.5	4	a
	○*	NRS51.2BB									5.5	3	p
M1.4×0.3	⊙	NRSP41.4CP	4P	G4	36	5	-	3	2.5	5	4	b	
	⊙*	NRS41.4CP				7					3	p	
	⊙	NRSP41.4CB	2P			5					4	b	
	⊙*	NRS41.4CB				7					3	p	
	⊙	NRSP51.4CP	4P	G5	36	5	-	3	2.5	5	4	b	
	⊙*	NRS51.4CP				7					3	p	
	⊙	NRSP51.4CB				2P					5	4	b
	⊙*	NRS51.4CB									7	3	p
M1.6×0.35	○	NRSP41.6DP	4P	G4	36	6	-	3	2.5	5	4	b	
	○*	NRS41.6DP				8					3	p	
	○	NRSP41.6DB	2P			6					4	b	
	○*	NRS41.6DB				8					3	p	
	⊙	NRSP51.6DP	4P	G5	36	6	-	3	2.5	5	4	b	
	⊙*	NRS51.6DP				8					3	p	
	⊙	NRSP51.6DB				2P					6	4	b
	⊙*	NRS51.6DB									8	3	p
M1.7×0.35	⊙	NRSP41.7DP	4P	G4	36	6	-	3	2.5	5	4	b	
	⊙*	NRS41.7DP				8					3	p	

The products having *mark in the stock column will be available as long as they last.

Think threads with



⊙=Standard ○=Below standard △=Made to order

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
M1.7x0.35	◎	NRSP41.7DB	2P	G4	36	6	-	3	2.5	5	4	b
	◎*	NRS41.7DB				8					3	p
	◎	NRSP51.7DP	4P	G5		6					4	b
	◎*	NRS51.7DP				8					3	p
	◎	NRSP51.7DB	2P	G5		6					4	b
	◎*	NRS51.7DB				8					3	p
	○	NRSP61.7DP	4P	G6		6					4	b
	○*	NRS61.7DP				8					3	p
	○	NRSP61.7DB	2P	G6		6					4	b
	○*	NRS61.7DB				8					3	p
M1.8x0.35	△	NRSP41.8DP	4P	G4	42	6	-	3	2.5	5	4	b
	△*	NRS41.8DP			36	8					3	p
	△	NRSP41.8DB	2P	G4	42	6					4	b
	△*	NRS41.8DB			36	8					3	p
	△	NRSP51.8DP	4P	G5	42	6					4	b
	△*	NRS51.8DP			36	8					3	p
	△	NRSP51.8DB	2P	G5	42	6					4	b
	△*	NRS51.8DB			36	8					3	p
M2x0.4	◎	NRSP42.0EP	4P	G4	42	7	-	3	2.5	5	4	b
	◎*	NRS42.0EP				8						p
	◎	NRSP42.0EB	2P	G4		7						b
	◎*	NRS42.0EB				8						p
	◎	NRSP52.0EP	4P	G5		7						b
	◎*	NRS52.0EP				8						p
	◎	NRSP52.0EB	2P	G5		7						b
	◎*	NRS52.0EB				8						p
	○	NRSP62.0EP	4P	G6		7						b
	○*	NRS62.0EP				8						p
	○	NRSP62.0EB	2P	G6		7						b
	○*	NRS62.0EB				8						p
M2x0.25	△	NRSM42.0BP	4P	G4	42	4.5	-	3	2.5	5	4	b
	△*	NRS42.0BP				8						p
	△	NRSM42.0BB	2P	G4		4.5						b
	△*	NRS42.0BB				8						p
	△	NRSM52.0BP	4P	G5		4.5						b
	△	NRSM52.0BB	2P	G5		4.5						b
M2.3x0.4	○	NRSP42.3EP	4P	G4	42	7	-	3	2.5	5	4	b
	○*	NRS42.3EP				9.5						p
	○	NRSP42.3EB	2P	G4		7						b
	○*	NRS42.3EB				9.5						p
	○	NRSP52.3EP	4P	G5		7						b
	○*	NRS52.3EP				9.5						p

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type												
M2.3×0.4	○	NRSP52.3EB	2P	G5	42	7	-	3	2.5	5	4	b												
	○*	NRS52.3EB				9.5						p												
	△	NRSP62.3EP	4P	G6		7						-	3	2.5	5	4	b							
	△*	NRS62.3EP				9.5											p							
	△	NRSP62.3EB	2P	G6		7											-	3	2.5	5	4	b		
	△*	NRS62.3EB				9.5																p		
M2.5×0.45	◎	NRSP52.5FP	4P	G5	46	8	14	3	2.5	5	4											c		
	◎*	NRS52.5FP			44	9.5	-															p		
	◎	NRSP52.5FB	2P	G5	46	8	14					3	2.5	5	4	c								
	◎*	NRS52.5FB			44	9.5	-									p								
	○	NRSP62.5FP	4P	G6	46	8	14									3	2.5	5	4	c				
	○*	NRS62.5FP			44	9.5	-													p				
	○	NRSP62.5FB	2P	G6	46	8	14													3	2.5	5	4	c
	○*	NRS62.5FB			44	9.5	-																	p
M2.5×0.35	△	NRSM42.5DP	4P	G4	46	6	14	3	2.5	5	4													c
	△*	NRS42.5DP			44	9.5	-																	p
	△	NRSM42.5DB	2P	G4	46	6	14					3	2.5	5	4									c
	△*	NRS42.5DB			44	9.5	-																	p
	△	NRSM52.5DP	4P	G5	46	6	14									3	2.5	5	4					c
	△*	NRS52.5DP			44	9.5	-																	p
	△	NRSM52.5DB	2P	G5	46	6	14													3	2.5	5	4	c
	△*	NRS52.5DB			44	9.5	-																	p
M2.6×0.45	◎	NRSP52.6FP	4P	G5	46	8	14	3	2.5	5	4													c
	◎*	NRS52.6FP			44	9.5	-																	p
	◎	NRSP52.6FB	2P	G5	46	8	14					3	2.5	5	4									c
	◎*	NRS52.6FB			44	9.5	-																	p
	○	NRSP62.6FP	4P	G6	46	8	14									3	2.5	5	4					c
	○*	NRS62.6FP			44	9.5	-																	p
	○	NRSP62.6FB	2P	G6	46	8	14													3	2.5	5	4	c
	○*	NRS62.6FB			44	9.5	-																	p
M2.6×0.35	△	NRSM52.6DP	4P	G5	46	6	14	3	2.5	5	4													c
	△*	NRS52.6DP			44	9.5	-																	p
	△	NRSM52.6DB	2P	G5	46	6	14					3	2.5	5	4									c
	△*	NRS52.6DB			44	9.5	-																	p
	△	NRSM62.6DP	4P	G6	46	6	14									3	2.5	5	4					c
	△*	NRS62.6DP			44	9.5	-																	p
	△	NRSM62.6DB	2P	G6	46	6	14													3	2.5	5	4	c
	△*	NRS62.6DB			44	9.5	-																	p
M3×0.5	◎	NRSP53.0GP	4P	G5	46	9	14	4	3.2	6	4													c
	◎*	NRS53.0GP				11	-																	p
	◎	NRSP53.0GB	2P	G5		9	14					4	3.2	6	4									c
	◎*	NRS53.0GB				11	-																	p

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type							
M3x0.5	◎	NRSP63.0GP	4P	G6	46	9	14	4	3.2	6	4	c							
	◎*	NRS63.0GP				11	-					p							
	◎	NRSP63.0GB	2P			9	14					c							
	◎*	NRS63.0GB				11	-					p							
	○	NRSP73.0GP	4P	G7		9	14					c							
	○*	NRS73.0GP				11	-					p							
	○	NRSP73.0GB	2P			9	14					c							
	○*	NRS73.0GB				11	-					p							
	△	NRSP83.0GP	4P	G8		9	14					c							
	△*	NRS83.0GP				11	-					p							
	△	NRSP83.0GB				2P	9					14	c						
	△*	NRS83.0GB					11					-	p						
M3x0.35	△	NRSM53.0DP	4P	G5	46	6.5	14	4	3.2	6	4	c							
	△*	NRS53.0DP				11	-					p							
	△	NRSM53.0DB	2P			6.5	14					c							
	△*	NRS53.0DB				11	-					p							
	△	NRSM63.0DP	4P	G6		6.5	14					c							
	△*	NRS63.0DP				11	-					p							
	△	NRSM63.0DB	2P			6.5	14					c							
	△*	NRS63.0DB				11	-					p							
M3.5x0.6	○	NRSP53.5HP	4P	G5	52	11	16	5	4	7	4	c							
	○*	NRS53.5HP				48	13					-	4	3.2	6	p			
	○	NRSP53.5HB	2P			11	16					5	4	7	c				
	○*	NRS53.5HB				48	13					-	4	3.2	6	p			
	○	NRSP63.5HP	4P	G6		11	16					5	4	7	c				
	○*	NRS63.5HP				48	13					-	4	3.2	6	p			
	○	NRSP63.5HB	2P			11	16					5	4	7	c				
	○*	NRS63.5HB				48	13					-	4	3.2	6	p			
△	NRSP73.5HP	4P	G7	11	16	5	4	7	c										
M3.5x0.35	△	NRSM53.5DP	4P	G5	52	6.5	16	5	4	7	4	c							
	△	NRSM53.5DB	2P																
	△	NRSM63.5DP	4P	G6									48	13	-	4	3.2	6	p
	△*	NRS63.5DP											52	6.5	16	5	4	7	c
	△	NRSM63.5DB	2P										48	13	-	4	3.2	6	p
	△*	NRS63.5DB											52	6.5	16	5	4	7	c
M4x0.7	○	NRSP54.0IP	4P	G5	52	11	17	5	4	7	4	c							
	○*	NRS54.0IP				13	-					p							
	○	NRSP54.0IB	2P			11	17					c							
	○*	NRS54.0IB				13	-					p							
	◎	NRSP64.0IP	4P	G6		11	17					c							
	◎*	NRS64.0IP				13	-					p							
	◎	NRSP64.0IB				11	17					c							

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
M4×0.7	◎*	NRS64.0IB	2P	G6	52	13	-	5	4	7	4	p
	○	NRSP74.0IP	4P	G7		11	17					c
	◎*	NRS74.0IP				13	-					p
	○	NRSP74.0IB	2P	G7		11	17					c
	◎*	NRS74.0IB				13	-					p
	△	NRSP84.0IP	4P	G8		11	17					c
	△*	NRS84.0IP				13	-					p
	△	NRSP84.0IB	2P	G8		11	17					c
△*	NRS84.0IB	13			-	p						
M4×0.5	△	NRSM64.0GP	4P	G6	52	9	17	5	4	7	4	c
	△*	NRS64.0GP				13	-					p
	△	NRSM64.0GB	2P	G6		9	17					c
	△*	NRS64.0GB				13	-					p
	△	NRSM74.0GP	4P	G7		9	17					c
	△	NRSM74.0GB	2P			c						
M5×0.8	△	NRSP55.0KP	4P	G5	60	13	22	5.5	4.5	7	4	c
	△*	NRS55.0KP				16	-					p
	△	NRSP55.0KB	2P	G5		13	22					c
	△*	NRS55.0KB				16	-					p
	◎	NRSP65.0KP	4P	G6		13	22					c
	◎*	NRS65.0KP				16	-					p
	◎	NRSP65.0KB	2P	G6		13	22					c
	◎*	NRS65.0KB				16	-					p
	○	NRSP75.0KP	4P	G7		13	22					c
	○*	NRS75.0KP				16	-					p
	○	NRSP75.0KB	2P	G7		13	22					c
	○*	NRS75.0KB				16	-					p
△	NRSP85.0KB	2P	G8	13	22	c						
△*	NRS85.0KB			16	-	p						
M5×0.5	△	NRSM65.0GP	4P	G6	60	9	22	5.5	4.5	7	4	c
	△*	NRS65.0GP			55	16	-					p
	△	NRSM65.0GB	2P	G6	60	9	22					c
	△*	NRS65.0GB			55	16	-					p
	△	NRSM75.0GP	4P	G7	60	9	22					c
	△*	NRS75.0GP			55	16	-					p
	△	NRSM75.0GB	2P	G7	60	9	22					c
△*	NRS75.0GB	55			16	-	p					
M6×1	△	NRSP56.0MP	4P	G5	62	15	26	6	4.5	7	4	c
	△*	NRS56.0MP				19	-					p
	△	NRSP56.0MB	2P	G5		15	26					c
	△*	NRS56.0MB				19	-					p
	○	NRSP66.0MP	4P	G6		15	26					c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type	
M6×1	○*	NRS66.0MP	4P	G6	62	19	-	6	4.5	7	4	p	
	○	NRSP66.0MB	2P			15	26					c	
	○*	NRS66.0MB	4P			19	-					p	
	◎	NRSP76.0MP				15	26					c	
	◎*	NRS76.0MP	G7	19		-	p						
	◎	NRSP76.0MB		15		26	c						
	◎*	NRS76.0MB		2P		19	-					p	
	△*	NRS86.0MP		4P									G8
△*	NRS86.0MB	2P											
M6×0.75	△	NRSM66.0JP	4P	G6	62	15	26	6	4.5	7	4	c	
	△*	NRS66.0JP	2P			19	-					p	
	△	NRSM66.0JB	4P			15	26					c	
	△*	NRS66.0JB				19	-					p	
	△	NRSM76.0JP	G7	15		26	c						
	△*	NRS76.0JP		19		-	p						
	△	NRSM76.0JB		2P		15	26					c	
	△*	NRS76.0JB		19		-	p						
M6×0.5	△	NRSM66.0GP	4P	G6	62	9	26	6	4.5	7	4	c	
	△*	NRS66.0GP	2P		55	17	-					p	
	△	NRSM66.0GB	4P		62	9	26					c	
	△*	NRS66.0GB			55	17	-					p	
M7×1	△	NRSM67.0MP	4P	G6	70	19	-	6.2	5	8	4	e	
	△	NRSM67.0MB	2P										
	△	NRSM77.0MP	4P	G7									
	△	NRSM77.0MB	2P										
M7×0.75	△	NRSM77.0JP	4P	G7	70	19	-	6.2	5	8	4	e	
	△*	NRS77.0JP	65										
	△	NRSM77.0JB	2P		70								
	△*	NRS77.0JB	65										
M8×1.25	○	NRSM78.0NP	4P	G7	70	19	-	6.2	5	8	6	e	
	○*	NRS78.0NP	18										
	○	NRSM78.0NB	2P										19
	○*	NRS78.0NB	18										
	○	NRSM88.0NP	4P	G8									19
	○*	NRS88.0NP	18										
	○	NRSM88.0NB	2P										19
	○*	NRS88.0NB	18										
M8×1	△	NRSM78.0MP	4P	G7	70	19	-	6.2	5	8	6	e	
	△*	NRS78.0MP	18										
	△	NRSM78.0MB	2P										19
	△*	NRS78.0MB	18										
M8×0.75	△	NRSM78.0JP	4P	G7	70	19	-	6.2	5	8	6	e	

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type	
M8×0.75	△*	NRS78.0JP	4P	G7	70	18	-	6.2	5	8	6	e	
	△	NRSM78.0JB	2P			19							
	△*	NRS78.0JB				18							
M10×1.5	○	NRSM7010OP	4P	G7	75	23	-	7	5.5	8	6	e	
	○*	NRS7010OP				21							
	○	NRSM7010OB	2P			23							
	○*	NRS7010OB		21									
	△	NRSM8010OP	4P	G8		23							
	△*	NRS8010OP				21							
	△	NRSM8010OB	2P			23							
	△*	NRS8010OB				21							
	M10×1.25	△	NRSM7010NP			4P							G7
△*		NRS7010NP			21								
△		NRSM7010NB	2P	23									
△*		NRS7010NB		21									
△		NRSM8010NP	4P	G8	23								
△*		NRS8010NP			21								
△		NRSM8010NB	2P		23								
△*		NRS8010NB			21								
M10×1	△	NRSM7010MP	4P		G7	75	23	-	7	5.5	8	6	e
	△*	NRS7010MP		20									
	△	NRSM7010MB	2P	23									
	△*	NRS7010MB		20									
	M12×1.75	△	NRSM8012PP	4P	G8		82						
△*		NRS8012PP		25									
△		NRSM8012PB	2P	26									
△*		NRS8012PB		25									
△		NRSM9012PP	4P	G9	26								
△*		NRS9012PP			25								
△		NRSM9012PB	2P		26								
△*		NRS9012PB			25								
M12×1.5	△	NRSM8012OP	4P		G8	82	26	-	8.5	6.5	9	6	e
	△*	NRS8012OP		25									
	△	NRSM8012OB	2P	26									
	△*	NRS8012OB		25									
	△	NRSM9012OP	4P	G9	26								
	△*	NRS9012OP			25								
	△	NRSM9012OB	2P		26								
	△*	NRS9012OB			25								
M12×1.25	△	NRSM8012NP	4P		G8	82	26	-	8.5	6.5	9	6	e
	△*	NRS8012NP		25									
	△	NRSM8012NB	2P	26									

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type	
M12x1.25	△*	NRS8012NB	2P	G8	82	25	-	8.5	6.5	9	6	e	
	△	NRSM9012NP	4P	G9		26							
	△*	NRS9012NP				25							
	△	NRSM9012NB	2P			26							
	△*	NRS9012NB				25							
M12x1	△	NRSM7012MP	4P		G7	82	26	-	8.5	6.5	9	6	e
	△*	NRS7012MP		20									
	△	NRSM7012MB	2P	26									
	△*	NRS7012MB		20									
M14x2	△	NRSM9014QP	4P	G9	88	26	-	10.5	8	11	6	e	
	△*	NRS9014QP											
	△	NRSM9014QB	2P										
	△*	NRS9014QB											
	△	NRSM0014QP	4P	G10									
	△*	NRS0014QP											
	△	NRSM0014QB	2P										
△*	NRS0014QB												
M14x1.5	△	NRSM9014OP	4P		G9	88	26	-	10.5	8	11	6	e
	△*	NRS9014OP											
	△	NRSM9014OB	2P										
	△*	NRS9014OB											
M14x1	△	NRSM8014MP	4P	G8	88	26	-	10.5	8	11	6	e	
	△*	NRS8014MP											
	△	NRSM8014MB	2P										
	△*	NRS8014MB											
M16x2	△	NRSM9016QP	4P	G9	95	26	-	12.5	10	13	6	e	
	△*	NRS9016QP											
	△	NRSM9016QB	2P										
	△*	NRS9016QB											
	△	NRSM0016QP	4P	G10									
	△*	NRS0016QP											
	△	NRSM0016QB	2P										
△*	NRS0016QB												
M16x1.5	△	NRSM9016OP	4P		G9	95	26	-	12.5	10	13	6	e
	△*	NRS9016OP											
	△	NRSM9016OB	2P										
	△*	NRS9016OB											
M16x1	△	NRSM8016MP	4P	G8	95	26	-	12.5	10	13	6	e	
	△*	NRS8016MP											
	△	NRSM8016MB	2P										
	△*	NRS8016MB											
M18x1.5	△	NRSM9018OP	4P	G9	100	33	-	14	11	14	6	e	

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Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type							
M18x1.5	△*	NRS9018OP	4P	G9	100	32	-	14	11	14	6	e							
	△	NRSM9018OB	2P			33													
	△*	NRS9018OB				32													
M20x2.5	△	NRSM1020RP	4P	G11	105	33	-	15	12	15	6	e							
	△*	NRS1020RP				32													
	△	NRSM1020RB	2P			33													
△*	NRS1020RB	32																	
M20x1.5	△	NRSM9020OP	4P	G9	105	33	-	15	12	15	6	e							
	△*	NRS9020OP				32													
	△	NRSM9020OB	2P			33													
	△*	NRS9020OB				32													
For Unified Threads																			
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type							
No.0-80UNF	△	NRSM5UN0BP	4P	G5	36	6.3	-	3	2.5	5	3	b							
	△*	NRS5UN0BP				8						p							
	△	NRSM5UN0BB	2P			6.3						b							
	△*	NRS5UN0BB				8						p							
No.1-72UNF	△	NRSM5UN1CP	4P	G5	42	7.2	-	3	2.5	5	3	b							
	△	NRSM5UN1CB	2P																
No.2-56UNC	△	NRSM4UN2EP	4P	G4	42	8.1	-	3	2.5	5	4	b							
	△*	NRS4UN2EP				9.5						p							
	△	NRSM4UN2EB	2P			8.1						b							
	△*	NRS4UN2EB				9.5						p							
	△	NRSM5UN2EP	4P	G5		8.1						b							
	△*	NRS5UN2EP				9.5						p							
	△	NRSM5UN2EB	2P			8.1						b							
	△*	NRS5UN2EB				9.5						p							
	No.3-48UNC	△	NRSM4UN3FP	4P		G4						46	8.1	14	3	2.5	5	4	c
		△	NRSM4UN3FB	2P															
△		NRSM5UN3FP	4P	G5															
△		NRSM5UN3FB	2P																
No.4-40UNC	△	NRSM5UN4HP	4P	G5	46	9	14	4	3.2	6	4	c							
	△*	NRS5UN4HP			44	11	-	3	2.5	5		p							
	△	NRSM5UN4HB	2P		46	9	14	4	3.2	6		c							
	△*	NRS5UN4HB			44	11	-	3	2.5	5		p							
	△	NRSM6UN4HP	4P	G6	46	9	14	4	3.2	6		c							
	△*	NRS6UN4HP			44	11	-	3	2.5	5		p							
	△	NRSM6UN4HB	2P		46	9	14	4	3.2	6		c							
	△*	NRS6UN4HB			44	11	-	3	2.5	5		p							

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Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
No.4-40UNC	△	NRSM7UN4HP	4P	G7	46	9	14	4	3.2	6	4	c
	△	NRSM7UN4HB	2P									p
No.4-48UNF	△	NRSM5UN4FP	4P	G5	46	9	14	4	3.2	6	4	c
	△	NRSM5UN4FB	2P	G6								
	△	NRSM6UN4FP	4P									
	△	NRSM6UN4FB	2P									
No.6-32UNC	△	NRSM5UN6JP	4P	G5	52	11	16	5	4	7	4	c
	△*	NRS5UN6JP	2P		48	13	-	4	3.2	6		p
	△	NRSM5UN6JB			52	11	16	5	4	7		c
	△*	NRS5UN6JB	48		13	-	4	3.2	6	p		
	△	NRSM6UN6JP	4P	G6	52	11	16	5	4	7		c
	△*	NRS6UN6JP	2P		48	13	-	4	3.2	6		p
	△	NRSM6UN6JB			52	11	16	5	4	7		c
	△*	NRS6UN6JB	48		13	-	4	3.2	6	p		
	△	NRSM7UN6JP	4P	G7	52	11	16	5	4	7		c
	△	NRSM7UN6JB	2P									
No.6-40UNF	△	NRSM5UN6HP	4P	G5	52	11	16	5	4	7	4	c
	△	NRSM5UN6HB	2P									
No.8-32UNC	△	NRSM6UN8JP	4P	G6	60	13	21	5.5	4.5	7	4	c
	△*	NRS6UN8JP	2P		52		-	5	4			p
	△	NRSM6UN8JB			60		21	5.5	4.5			c
	△*	NRS6UN8JB	52		-		5	4	p			
	△	NRSM7UN8JP	4P	G7	60	21	5.5	4.5	c			
	△	NRSM7UN8JB	2P									
△	NRSM8UN8JP	4P	G8									
No.8-36UNF	△	NRSM5UN8IP	4P	G5	60	13	21	5.5	4.5	7	4	c
	△	NRSM5UN8IB	2P									
	△	NRSM6UN8IB		G6								
No.10-24UNC	△	NRSM6UNAMP	4P	G6	60	13	22	5.5	4.5	7	4	c
	△	NRSM6UNAMB	2P									
	△	NRSM7UNAMP	4P	G7								
	△	NRSM7UNAMB	2P									
No.10-32UNF	△	NRSM6UNAJP	4P	G6	60	13	22	5.5	4.5	7	4	c
	△	NRSM6UNAJB	2P									
	△	NRSM7UNAJP	4P	G7								
	△	NRSM7UNAJB	2P									
1/4-20UNC	△	NRSM6U04NP	4P	G6	62	15	26	6	4.5	7	4	c
	△*	NRS6U04NP					-					p
	△	NRSM6U04NB	2P				26					c
	△*	NRS6U04NB					-					p
	△	NRSM7U04NP	4P				26					c
	△*	NRS7U04NP					-					p

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N+RS/N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
1/4-20UNC	△	NRSM7U04NB	2P	G7	62	15	26	6	4.5	7	4	c
	△*	NRS7U04NB				19	-					p
1/4-28UNF	△	NRSM6U04KP	4P	G6	62	15	26	6	4.5	7	4	c
	△*	NRS6U04KP				19	-					p
	△	NRSM6U04KB	2P			15	26					c
	△*	NRS6U04KB				19	-					p

The products having *mark in the stock column will be available as long as they last.

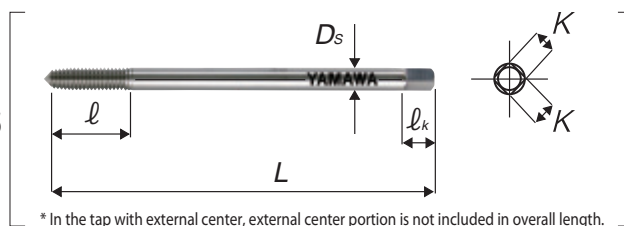
LS-N-RS

Long Shank Thread Forming Taps for Non-Ferrous Materials



Number of oil grooves : 1

Segment : 1J



* In the tap with external center, external center portion is not included in overall length.

LS-N-RS is the forming taps suitable for non-ferrous materials such as aluminum castings, aluminum die casting and brass.

Recommended Class

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
For Metric Threads												
M3×0.5	○	NRSM53.0GP10	4P	G5	100	9	14	4	3.2	6	4	c
	○*	NRS53.0GP10				11	-					p
	○	NRSM53.0GB10	2P			9	14					c
	○*	NRS53.0GB10				11	-					p
	○	NRSM63.0GP10	4P	G6		9	14					c
	○*	NRS63.0GP10				11	-					p
	○	NRSM63.0GB10	2P			9	14					c
	○*	NRS63.0GB10				11	-					p
M4×0.7	○	NRSM64.0IP10	4P	G6	100	11	17	5	4	7	4	c
	○*	NRS64.0IP10				13	-					p
	○	NRSM64.0IB10	2P			11	17					c
	○*	NRS64.0IB10				13	-					p
	○	NRSM74.0IP10	4P	G7		11	17					c
	○*	NRS74.0IP10				13	-					p
	○	NRSM74.0IB10	2P			11	17					c
	○*	NRS74.0IB10				13	-					p
M5×0.8	△	NRSM65.0KP10	4P	G6	100	13	22	5.5	4.5	7	4	c
	△*	NRS65.0KP10				16	-					p
	△	NRSM65.0KB10	2P			13	22					c
	△*	NRS65.0KB10				16	-					p
	△	NRSM75.0KP10	4P	G7		13	22					c
	△*	NRS75.0KP10				16	-					p
	△	NRSM75.0KB10	2P	13		22	c					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

LS-N-RS Long Shank Thread Forming Taps for Non-Ferrous Materials

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type													
M5x0.8	△*	NRS75.0KB10	2P	G7	100	16	-	5.5	4.5	7	4	p													
	○	NRSM76.0MP10	4P	G7	100	15	26	6	4.5	7	4	c													
○*	NRS76.0MP10	19				-	p																		
○	NRSM76.0MP15	15			26	c																			
○*	NRS76.0MP15	19			-	p																			
M6x1	○	NRSM76.0MB10	2P	G7	100	15	26	6	4.5	7	4	c													
	○*	NRS76.0MB10				19	-					p													
	○	NRSM76.0MB15			15	26	c																		
	○*	NRS76.0MB15			19	-	p																		
	△	NRSM86.0MP10	4P	G8	100	15	26					6	4.5	7	4	c									
	△*	NRS86.0MP10				19	-									p									
	△	NRSM86.0MP15			15	26	c																		
	△*	NRS86.0MP15			19	-	p																		
	△	NRSM86.0MB10	2P	G8	100	15	26									6	4.5	7	4	c					
	△*	NRS86.0MB10				19	-													p					
	△	NRSM86.0MB15			15	26	c																		
	△*	NRS86.0MB15			19	-	p																		
	M8x1.25	△	NRSM78.0NP10	4P	G7	100	19													-	6.2	5	8	6	e
		△*	NRS78.0NP10				18																		
△		NRSM78.0NP15	19																						
△*		NRS78.0NP15	18																						
△		NRSM78.0NB10	2P	100		19																			
△*		NRS78.0NB10				18																			
△		NRSM78.0NB15		19																					
△*		NRS78.0NB15		18																					
M10x1.5	△	NRSM7010OP10	4P	G7	100	23	-	7	5.5	8	6	e													
	△*	NRS7010OP10				21																			
	△	NRSM7010OP15			23																				
	△*	NRS7010OP15			21																				
	△	NRSM7010OB10	2P		100	23																			
	△*	NRS7010OB10				21																			
	△	NRSM7010OB15			23																				
	△*	NRS7010OB15			21																				

The products having *mark in the stock column will be available as long as they last.

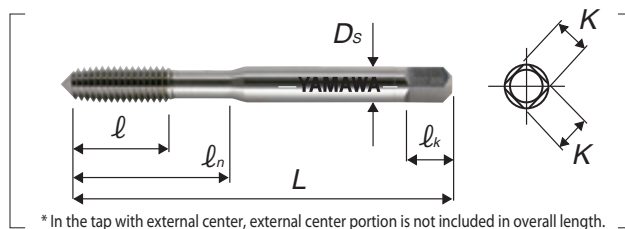
Spiral Fluted Taps (for blind hole)
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MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N-RS STI

Thread Forming Taps for Helical Coil Wire Screw Thread Inserts for Non-Ferrous Materials



Segment : 1J



Number of oil grooves : 1

In some parts made from comparably soft materials, it sometimes is necessary to strengthen the internal threads and increase their toughness by inserting helical coils into the internal threads previously cut oversize.

Size	Stock	Code	Chamfer	Basic Major Dia (mm)	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Lobe	Type
For Metric Threads													
M3×0.5	△	NRSM3IC3.0GP	4P	3.650	G3	52	7.5	17	5	4	7	4	c
	△*	NRS3IC3.0GP					-	p					
	△	NRSM3IC3.0GB	2P				7.5	17					c
	△*	NRS3IC3.0GB					-	p					
M4×0.7	△	NRSM4IC4.0IP	4P	4.909	G4	60	13	22	5.5	4.5	7	4	c
	△*	NRS4IC4.0IP					-	p					
	△	NRSM4IC4.0IB	2P				13	22					c
	△*	NRS4IC4.0IB					-	p					
M5×0.8	△	NRSM4IC5.0KP	4P	6.039	G4	62	15	26	6	4.5	7	4	c
	△*	NRS4IC5.0KP					-	p					
	△	NRSM4IC5.0KB	2P				15	26					c
	△*	NRS4IC5.0KB					-	p					
M6×1	△	NRSM4IC6.0MP	4P	7.299	G4	70	19	-	6.2	5	8	4	e
	△*	NRS4IC6.0MP					18						
	△	NRSM4IC6.0MB	2P				19	18					
	△*	NRS4IC6.0MB					18						
M8×1.25	△	NRSM4IC8.0NB	2P	9.624	G4	75	23	-	7	5.5	8	6	e
	△*	NRS4IC8.0NB					21						
M10×1.5	△	NRSM5IC010OB	2P	11.949	G5	82	26	-	8.5	6.5	9	6	e
	△*	NRS5IC010OB					25						
M12×1.75	△	NRSM6IC012PB	2P	14.273	G6	95	26	-	12.5	10	13	6	e
	△*	NRS6IC012PB				90	10.5	8					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

R+V/R-V

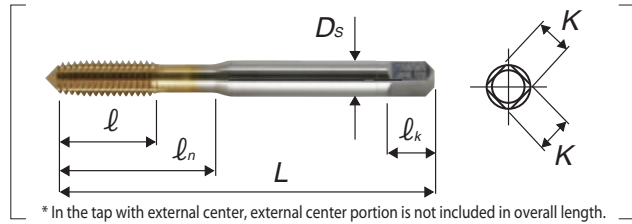
Thread Forming Taps, TiN coated



Segment : 1J

Number of oil grooves : Metric thread : M2.6 and smaller=non, M3 and larger=4

R+V/R-V is the coated forming taps for steels and non-ferrous materials.



Recommended Class

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Lobe	Type	
For Metric Threads													
M1×0.25	○	RVP41.0BP	4P	G4	36	4.5		3	2.5	5	4	a	
	○*	RV41.0BP											
	○	RVP41.0BB											
	○*	RV41.0BB											
		△	RVP51.0BP	4P	G5	36	4.5		3	2.5	5	4	a
		△*	RV51.0BP										
		△	RVP51.0BB										
		△*	RV51.0BB										
M1.2×0.25	○	RVP41.2BP	4P	G4	36	4.5		3	2.5	5	4	a	
	○*	RV41.2BP											
	○	RVP41.2BB											
	○*	RV41.2BB											
		△	RVP51.2BP	4P	G5	36	4.5		3	2.5	5	4	a
		△*	RV51.2BP										
		△	RVP51.2BB										
		△*	RV51.2BB										
M1.4×0.3	◎	RVP41.4CP	4P	G4	36	5		3	2.5	5	4	b	
	◎*	RV41.4CP											
	◎	RVP41.4CB											
	◎*	RV41.4CB											
		◎	RVP51.4CP	4P	G5	36	5		3	2.5	5	4	b
		◎*	RV51.4CP										
		◎	RVP51.4CB										
		◎*	RV51.4CB										
M1.6×0.35	○	RVP41.6DP	4P	G4	36	6		3	2.5	5	4	b	
	○*	RV41.6DP											
	○	RVP41.6DB											
		○*	RV41.6DB	2P	G4	36	8		3	2.5	5	3	p
		○	RVP51.6DP										
		○*	RV51.6DP										
		○	RVP51.6DB	4P	G5	36	6		3	2.5	5	4	b
		○*	RV51.6DB										
		○	RVP61.6DB										
	○*	RV51.6DB	2P	G5	36	8		3	2.5	5	3	p	
	△	RVP61.6DB											
	△	RVP61.6DB	2P	G6	36	6.3		3	2.5	5	4	b	
	△*	RV61.6DB											

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Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

R+V/R-V Thread Forming Taps, TiN coated

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type	
M1.7×0.35	○	RVP41.7DP	4P	G4	36	6	-	3	2.5	5	4	b	
	○*	RV41.7DP				8					3	p	
	○	RVP41.7DB	2P			6					4	b	
	○*	RV41.7DB				8					3	p	
	◎	RVP51.7DP	4P	G5		6					4	b	
	◎*	RV51.7DP				8					3	p	
	◎	RVP51.7DB	2P			6					4	b	
	◎*	RV51.7DB				8					3	p	
	△	RVP61.7DP	4P	G6		6					4	b	
	△*	RV61.7DP				8					3	p	
	△	RVP61.7DB	2P			6					4	b	
	△*	RV61.7DB				8					3	p	
M2×0.4	◎	RVP42.0EP	4P	G4	42	7	-	3	2.5	5	4	b	
	◎*	RV42.0EP				8					p		
	◎	RVP42.0EB	2P			7					b		
	◎*	RV42.0EB				8					p		
	◎	RVP52.0EP	4P	G5		7					b		
	◎*	RV52.0EP				8					p		
	◎	RVP52.0EB	2P			7					b		
	◎*	RV52.0EB				8					p		
	△	RVP62.0EP	4P	G6		7					b		
	△*	RV62.0EP				8					p		
	△	RVP62.0EB	2P			7					b		
	△*	RV62.0EB				8					p		
M2.3×0.4	△	RVP42.3EP	4P	G4	42	7	-	3	2.5	5	4	b	
	△*	RV42.3EP				9.5					p		
	△	RVP42.3EB	2P			7					b		
	△*	RV42.3EB				9.5					p		
	△	RVP52.3EP	4P	G5		7					b		
	△*	RV52.3EP				9.5					p		
	△	RVP52.3EB	2P			7					b		
	△*	RV52.3EB				9.5					p		
M2.5×0.45	○	RVP52.5FP	4P	G5	46	8	14	3	2.5	5	4	c	
	○*	RV52.5FP				44					9.5	-	p
	○	RVP52.5FB	2P			46					8	14	c
	○*	RV52.5FB				44					9.5	-	p
	△	RVP62.5FP	4P	G6		46					8	14	c
	△*	RV62.5FP				44					9.5	-	p
	△	RVP62.5FB	2P			46					8	14	c
	△*	RV62.5FB				44					9.5	-	p
M2.6×0.45	◎	RVP52.6FP	4P	G5	46	8	14	3	2.5	5	4	c	
	◎*	RV52.6FP				44					9.5	-	p

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Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

R+V/R-V Thread Forming Taps, TiN coated

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
M2.6x0.45	◎	RVP52.6FB	2P	G5	46	8	14	3	2.5	5	4	c
	◎*	RV52.6FB				9.5	-					p
	○	RVP62.6FP	4P	G6		8	14					c
	○*	RV62.6FP				9.5	-					p
	○	RVP62.6FB	2P	G6		8	14					c
	○*	RV62.6FB				9.5	-					p
M3x0.5	◎	RVP53.0GP	4P	G5	46	9	14	4	3.2	6	4	c
	◎*	RV53.0GP				11	-					p
	◎	RVP53.0GB	2P	G5		9	14					c
	◎*	RV53.0GB				11	-					p
	◎	RVP63.0GP	4P	G6		9	14					c
	◎*	RV63.0GP				11	-					p
	◎	RVP63.0GB	2P	G6		9	14					c
	◎*	RV63.0GB				11	-					p
	○	RVP73.0GP	4P	G7		9	14					c
	○*	RV73.0GP				11	-					p
	○	RVP73.0GB	2P	G7		9	14					c
	○*	RV73.0GB				11	-					p
	△	RVP83.0GP	4P	G8		9	14					c
	M4x0.7	△	RVP54.0IP	4P		G5	52					11
△*		RV54.0IP	13		-			p				
△		RVP54.0IB	2P	G6	11	17		c				
◎		RVP64.0IP	4P		G6	13		-	p			
◎*		RV64.0IP		2P		G6		11	17	c		
◎*		RV64.0IB	13		-			p				
○		RVP74.0IP	4P	G7	11	17		c				
○*		RV74.0IP			13	-		p				
○		RVP74.0IB	2P	G7	11	17		c				
○*		RV74.0IB			13	-		p				
△		RVP84.0IP	4P	G8	11	17		c				
△		RVP84.0IB	2P		G8	11		17	c			
M5x0.8	△	RVP55.0KP	4P	G5	60	13	22	5.5	4.5	7	4	c
	△*	RV55.0KP				16	-					p
	△	RVP55.0KB	2P	G6		13	22					c
	○	RVP65.0KP	4P			G6	16					-
	○*	RV65.0KP		2P			G6					13
	○	RVP65.0KB	16			-						p
	○*	RV65.0KB	4P	G7		13	22					c
	○	RVP75.0KP				16	-					p
	○*	RV75.0KP	2P	G7		13	22					c
	○	RVP75.0KB				13	22					c

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R+V/R-V Thread Forming Taps, TiN coated

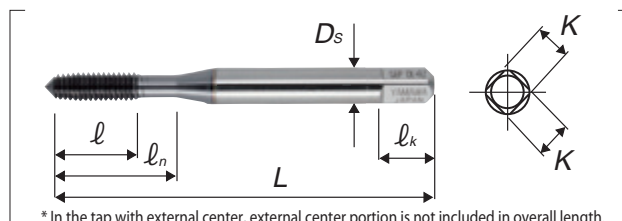
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
M5×0.8	○*	RV75.0KB	2P	G7	60	16	-	5.5	4.5	7	4	p
	△	RVP85.0KP	4P	G8		13	22					c
	△*	RV85.0KP				16	-					p
	△	RVP85.0KB	13	22		c						
	△*	RV85.0KB	2P	16		-	p					
M6×1	○	RVP66.0MP	4P	G6	62	15	26	6	4.5	7	4	c
	○*	RV66.0MP				19	-					p
	○	RVP66.0MB	2P	15		26	c					
	○*	RV66.0MB		19		-	p					
	○	RVP76.0MP	4P	G7		15	26					c
	○*	RV76.0MP				19	-					p
	○	RVP76.0MB	2P	G7		15	26					c
	○*	RV76.0MB				19	-					p
	△*	RV86.0MP	4P	G8		19	-					p
	△*	RV86.0MB	2P			G8	19					-

The products having *mark in the stock column will be available as long as they last.

OL+RZ/OL-RZ Thread Forming Taps for Dry Tapping, TiCN Coated



Segment : 1J



* In the tap with external center, external center portion is not included in overall length.

Number of oil grooves : Non

OL+RZ/OL-RZ is the forming taps enabling dry tapping under following condition : Tapping of the sizes smaller than M6, thin steel sheets having burring operation, and steel parts with rather shorter length.

Recommended Class

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type		
For Metric Threads														
M1×0.25	△	OLRZP41.0BP	4P	G4	36	4.5	-	3	2.5	5	4	a		
	△*	OLRZ41.0BP			32	5.5					3	p		
M1.2×0.25	○	OLRZP41.2BP	4P	G4	36	4.5	-	3	2.5	5	4	a		
	○*	OLRZ41.2BP			32	5.5					3	p		
M1.4×0.3	◎	OLRZP41.4CP	4P	G4	36	5	-	3	2.5	5	4	b		
	◎*	OLRZ41.4CP			7	-					3	p		
M1.6×0.35	○	OLRZP41.6DP	4P	G4	36	6	-	3	2.5	5	4	b		
	○*	OLRZ41.6DP			8	-					3	p		
M1.7×0.35	◎	OLRZP41.7DP	4P	G4	36	6	-	3	2.5	5	4	b		
	◎*	OLRZ41.7DP			8	-					3	p		
M2×0.4	◎	OLRZP42.0EP	4P	G4	42	7	-	3	2.5	5	4	b		
	◎*	OLRZ42.0EP				8						-	3	p
	◎	OLRZP52.0EP				G5						7	-	3

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

OL+RZ/OL-RZ Thread Forming Taps for Dry Tapping, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type	
M2x0.4	◎*	OLRZ52.0EP	4P	G5	42	8	-	3	2.5	5	4	p	
M2.3x0.4	○	OLRZP42.3EP	4P	G4	42	7	-	3	2.5	5	4	b	
	◎*	OLRZ42.3EP				9.5						p	
	○	OLRZP52.3EP		G5		7						b	
	◎*	OLRZ52.3EP				9.5						p	
M2.5x0.45	○	OLRZP52.5FP	4P	G5	46	8	14	3	2.5	5	4	c	
	◎*	OLRZ52.5FP				9.5						p	
	○	OLRZP62.5FP		G6		8						14	c
	◎*	OLRZ62.5FP				9.5						-	p
M2.6x0.45	○	OLRZP52.6FP	4P	G5	46	8	14	3	2.5	5	4	c	
	◎*	OLRZ52.6FP				9.5						-	p
	○	OLRZP62.6FP		G6		8						14	c
	◎*	OLRZ62.6FP				9.5						-	p
M3x0.5	◎	OLRZP53.0GP	4P	G5	46	9	14	4	3.2	6	4	c	
	◎*	OLRZ53.0GP				11						-	p
	◎	OLRZP63.0GP		G6		9						14	c
	◎*	OLRZ63.0GP				11						-	p
M3.5x0.6	△	OLRZP53.5HP	4P	G5	52	11	16	5	4	7	4	c	
	△*	OLRZ53.5HP				13						-	p
	○	OLRZP63.5HP		G6		11						16	c
M4x0.7	◎	OLRZP64.0IP	4P	G6	52	11	17	5	4	7	4	c	
	◎*	OLRZ64.0IP				13						-	p
	○	OLRZP74.0IP		G7		11						17	c
	◎*	OLRZ74.0IP				13						-	p
M5x0.8	○	OLRZP65.0KP	4P	G6	60	13	22	5.5	4.5	7	4	c	
	◎*	OLRZ65.0KP				16						-	p
	○	OLRZP75.0KP		G7		13						22	c
	◎*	OLRZ75.0KP				16						-	p
M6x1	○	OLRZP66.0MP	4P	G6	62	15	26	6	4.5	7	4	c	
	◎*	OLRZ66.0MP				19						-	p
	○	OLRZP76.0MP		G7		15						26	c
	◎*	OLRZ76.0MP				19						-	p

For Unified Threads

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
No.2-56UNC	△	OLRZM4UN2EP	4P	G4	42	8.1	-	3	2.5	5	4	b
	△*	OLRZ4UN2EP				9.5						p
	△	OLRZM5UN2EP		G5		8.1						b
	△*	OLRZ5UN2EP				9.5						p
No.2-64UNF	△	OLRZM4UN2DP	4P	G4	42	8.1	-	3	2.5	5	4	b
	△*	OLRZ4UN2DP				9.5						p
No.3-48UNC	△	OLRZM4UN3FP	4P	G4	46	8.1	14	3	2.5	5	4	c

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OL+RZ/OL-RZ Thread Forming Taps for Dry Tapping, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
No.3-48UNC	△*	OLRZ4UN3FP	4P	G4	44	9.5	-	3	2.5	5	4	p
	△	OLRZM4UN3EP			46	8.1	14	3	2.5	5		c
No.3-56UNF	△*	OLRZ4UN3EP	4P	G4	44	9.5	-	3	2.5	5	4	p
	△	OLRZM4UN3EP			46	8.1	14	3	2.5	5		c
No.4-40UNC	○	OLRZM5UN4HP	4P	G5	46	9	14	4	3.2	6	4	c
	○*	OLRZ5UN4HP			44	11	-	3	2.5	5		p
	○	OLRZM6UN4HP			G6	46	9	14	4	3.2		6
○*	OLRZ6UN4HP	44	11	-		3	2.5	5	p			
No.4-48UNF	△	OLRZM5UN4FP	4P	G5	46	9	14	4	3.2	6	4	c
	△*	OLRZ5UN4FP			44	11	-	3	2.5	5		p
No.5-40UNC	△	OLRZM5UN5HP	4P	G5	52	11	16	5	4	7	4	c
	△*	OLRZ5UN5HP			46	11	-	4	3.2	6		p
No.5-44UNF	△	OLRZM5UN5GP	4P	G5	52	11	16	5	4	7	4	c
	△*	OLRZ5UN5GP			46	11	-	4	3.2	6		p
No.6-32UNC	△	OLRZM5UN6JP	4P	G5	52	11	16	5	4	7	4	c
	△*	OLRZ5UN6JP			48	13	-	4	3.2	6		p
	○	OLRZM6UN6JP		G6	52	11	16	5	4	7		c
	○*	OLRZ6UN6JP			48	13	-	4	3.2	6		p
No.6-40UNF	△	OLRZM5UN6HP	4P	G5	52	11	16	5	4	7	4	c
	△*	OLRZ5UN6HP			48	13	-	4	3.2	6		p
No.8-32UNC	△	OLRZM6UN8JP	4P	G6	60	13	21	5.5	4.5	7	4	c
	△*	OLRZ6UN8JP			52		-	5	4			p
	△	OLRZM7UN8JP		G7	60	21	5.5	4.5	c			
	△*	OLRZ7UN8JP			52	-	5	4	p			
No.8-36UNF	△	OLRZM6UN8IP	4P	G6	60	13	21	5.5	4.5	7	4	c
	△*	OLRZ6UN8IP			52	-	5	4	p			
No.10-24UNC	△	OLRZM6UNAMP	4P	G6	60	13	22	5.5	4.5	7	4	c
	△*	OLRZ6UNAMP				16	-					p
	△	OLRZM7UNAMP		G7		13	22					c
	△*	OLRZ7UNAMP				16	-					p
No.10-32UNF	△	OLRZM6UNAJP	4P	G6	60	13	22	5.5	4.5	7	4	c
	△*	OLRZ6UNAJP				16	-					p
	△	OLRZM7UNAJP		G7		13	22					c
	△*	OLRZ7UNAJP				16	-					p
No.12-24UNC	△	OLRZM6UNCMP	4P	G6	62	15	26	6	4.5	7	4	c
	△*	OLRZ6UNCMP			60	17	-	5.5				p
No.12-28UNF	△	OLRZM6UNCKP	4P	G6	62	15	26	6	4.5	7	4	c
	△*	OLRZ6UNCKP			60	17	-	5.5				p
1/4-20UNC	△	OLRZM7U04NP	4P	G7	62	15	26	6	4.5	7	4	c
	△*	OLRZ7U04NP				19	-					p
1/4-28UNF	△	OLRZM7U04KP	4P	G7	62	15	26	6	4.5	7	4	c
	△*	OLRZ7U04KP				19	-					p

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

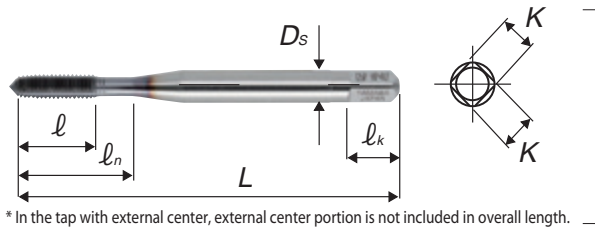
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HP+RZ/HP-RZ

High Performance Thread Forming Taps, TiCN Coated



Segment : 1J



Number of oil grooves : Metric thread : M2.6 and smaller=non, M3~M7=2, M8=3, M10 and larger=4
Unified thread : No.4 and smaller=non, No.5 and larger=2

HP+RZ/HP-RZ is suitable for steels (lower than 35HRC) and light alloys, and applicable to the high speed tapping (20-50m/min.).

Recommended Class

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Lobe	Type								
For Metric Threads																				
M1×0.25	○	HRZP41.0BB	2P	G4	36	4.5	-	3	2.5	5	4	a								
	○*	HRZ41.0BB										3	p							
M1.2×0.25	○	HRZP41.2BB	2P	G4	36	4.5	-	3	2.5	5	4	a								
	○*	HRZ41.2BB										3	p							
M1.4×0.3	○	HRZP41.4CB	2P	G4	36	5	-	3	2.5	5	4	b								
	○*	HRZ41.4CB										3	p							
M1.6×0.35	○	HRZP41.6DB	2P	G4	36	6	-	3	2.5	5	4	b								
	○*	HRZ41.6DB										3	p							
M1.7×0.35	○	HRZP41.7DB	2P	G4	36	6	-	3	2.5	5	4	b								
	○*	HRZ41.7DB										3	p							
M2×0.4	◎	HRZP42.0EB	2P	G4	42	7	-	3	2.5	5	4	b								
	◎*	HRZ42.0EB										8	p							
	◎	HRZP52.0EB		G5		7						b								
	◎*	HRZ52.0EB				8						p								
M2.3×0.4	○	HRZP42.3EB	2P	G4	42	7	-	3	2.5	5	4	b								
	○*	HRZ42.3EB										9.5	p							
	○	HRZP52.3EB		G5		7						b								
	○*	HRZ52.3EB				9.5						p								
M2.5×0.45	◎	HRZP52.5FB	2P	G5	46	8	-	3	2.5	5	4	c								
	◎*	HRZ52.5FB										9.5	p							
	○	HRZP62.5FB		G6		8						c								
	○*	HRZ62.5FB				9.5						p								
M2.6×0.45	○	HRZP52.6FB	2P	G5	46	8	-	3	2.5	5	4	c								
	○*	HRZ52.6FB										9.5	p							
	○	HRZP62.6FB		G6		8						c								
	○*	HRZ62.6FB				9.5						p								
M3×0.5	◎	HRZP53.0GP	4P	G5	46	9	-	4	3.2	6	4	c								
	◎*	HRZ53.0GP										11	p							
	◎	HRZP53.0GB	2P			9						c								
	◎*	HRZ53.0GB				11						p								
	○	HRZP63.0GP	4P			G6						9	14	-	-	-	-	-	c	
	○*	HRZ63.0GP																	11	p
	○	HRZP63.0GB																	2P	9

The products having *mark in the stock column will be available as long as they last.

HP+RZ/HP-RZ High Performance Thread Forming Taps, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type	
M3×0.5	○*	HRZ63.0GB	2P	G6	46	11	-	4	3.2	6	4	p	
	△	HRZP53.5HP	4P	G5	52	11	16	5	4	7	4	c	
△*	HRZ53.5HP	4P	48		13	-	4	3.2	6	p			
M3.5×0.6	△	HRZP53.5HB	2P		52	11	16	5	4	7		c	
	△*	HRZ53.5HB			48	13	-	4	3.2	6		p	
	△	HRZP63.5HP	4P	G6	52	11	16	5	4	7	c		
	△*	HRZ63.5HP			48	13	-	4	3.2	6	p		
	M4×0.7	△	HRZP63.5HB	2P	G6	52	11	16	5	4	7	c	
		△*	HRZ63.5HB			48	13	-	4	3.2	6	p	
M5×0.8		○	HRZP64.0IP	4P	G6	52	11	17	5	4	7	4	c
		○*	HRZ64.0IP				13	-					p
		○	HRZP64.0IB	2P	11		17	c					
		○*	HRZ64.0IB		13		-	p					
		○	HRZP74.0IP	4P	G7		11	17					c
		○*	HRZ74.0IP				13	-					p
	○	HRZP74.0IB	2P	11	17		c						
	○*	HRZ74.0IB		13	-		p						
M6×1	○	HRZP65.0KP	4P	G6	60	13	22	5.5	4.5	7	4	c	
	○*	HRZ65.0KP				16	-					p	
	○	HRZP65.0KB	2P	13		22	c						
	○*	HRZ65.0KB		16		-	p						
	○	HRZP75.0KP	4P	G7		13	22					c	
	○*	HRZ75.0KP				16	-					p	
	○	HRZP75.0KB	2P	13		22	c						
	○*	HRZ75.0KB		16		-	p						
M8×1.25	○	HRZP66.0MP	4P	G6	62	15	26	6	4.5	7	4	c	
	○*	HRZ66.0MP				19	-					p	
	○	HRZP66.0MB	2P	15		26	c						
	○*	HRZ66.0MB		19		-	p						
	○	HRZP76.0MP	4P	G7		15	26					c	
	○*	HRZ76.0MP				19	-					p	
	○	HRZP76.0MB	2P	15		26	c						
	○*	HRZ76.0MB		19		-	p						
M10×1.5	○	HRZM78.0NP	4P	G7	70	19	-	6.2	5	8	6	e	
	○*	HRZ78.0NP				18							
	○	HRZM78.0NB	2P	19									
	○*	HRZ78.0NB		18									
	○	HRZM88.0NP	4P	G8		19							
	○*	HRZ88.0NP				18							
	○	HRZM88.0NB	2P	19									
	○*	HRZ88.0NB		18									
M10×1.5	○	HRZM7010OP	4P	G7	75	23	-	7	5.5	8	8	e	

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HP+RZ/HP-RZ High Performance Thread Forming Taps, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
M10x1.5	○*	HRZ7010OP	4P	G7	75	21		7	5.5	8	8	e
	○	HRZM7010OB	2P			23						
	○*	HRZ7010OB				21						
	△	HRZM8010OP	4P	G8		23						
	△*	HRZ8010OP				21						
	△	HRZM8010OB	2P			23						
	△*	HRZ8010OB				21						
M10x1.25	○	HRZM7010NP	4P	G7	75	23		7	5.5	8	8	e
	○*	HRZ7010NP				21						
	○	HRZM7010NB	2P			23						
	○*	HRZ7010NB		21								
	△	HRZM8010NP	4P	G8		23						
	△*	HRZ8010NP				21						
	△	HRZM8010NB	2P			23						
△*	HRZ8010NB		21									
M12x1.75	△	HRZM8012PP	4P	G8	82	26		8.5	6.5	9	8	e
	△*	HRZ8012PP				25						
	△	HRZM8012PB	2P			26						
	△*	HRZ8012PB		25								
	△	HRZM9012PP	4P	G9		26						
	△*	HRZ9012PP				25						
	△	HRZM9012PB	2P			26						
△*	HRZ9012PB		25									
M12x1.5	○	HRZM8012OP	4P	G8	82	26		8.5	6.5	9	8	e
	○*	HRZ8012OP				25						
	○	HRZM8012OB	2P			26						
	○*	HRZ8012OB		25								
	△	HRZM9012OP	4P	G9		26						
	△*	HRZ9012OP				25						
	△	HRZM9012OB	2P			26						
△*	HRZ9012OB		25									
M12x1.25	△	HRZM8012NP	4P	G8	82	26		8.5	6.5	9	8	e
	△*	HRZ8012NP				25						
	△	HRZM8012NB	2P			26						
	△*	HRZ8012NB		25								
	△	HRZM9012NP	4P	G9		26						
	△*	HRZ9012NP				25						
	△	HRZM9012NB	2P			26						
△*	HRZ9012NB		25									
M14x1.5	△	HRZM9014OP	4P	G9	88	26		10.5	8	11	8	e
	△*	HRZ9014OP										
	△	HRZM9014OB	2P									

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HP+RZ/HP-RZ High Performance Thread Forming Taps, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
M14x1.5	△*	HRZ9014OB	2P	G9	88	26	-	10.5	8	11	8	e
M16x1.5	△	HRZM9016OP	4P	G9	95	26	-	12.5	10	13	8	e
	△*	HRZ9016OP										
	△	HRZM9016OB										
	△*	HRZ9016OB										
M18x1.5	△	HRZM9018OP	4P	G9	100	33	-	14	11	14	8	e
	△*	HRZ9018OP										
	△	HRZM9018OB										
	△*	HRZ9018OB										
M20x1.5	△	HRZM9020OP	4P	G9	105	33	-	15	12	15	8	e
	△*	HRZ9020OP										
	△	HRZM9020OB										
	△*	HRZ9020OB										
For Unified Threads												
Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
No.2-56UNC	△	HRZM4UN2EB	2P	G4	42	8.1	-	3	2.5	5	4	b
	△*	HRZ4UN2EB										
	△	HRZM5UN2EB		G5								
	△*	HRZ5UN2EB										
No.2-64UNF	△	HRZM4UN2DB	2P	G4	42	8.1	-	3	2.5	5	4	b
	△*	HRZ4UN2DB										
No.3-48UNC	△	HRZM4UN3FB	2P	G4	46	8.1	14	3	2.5	5	4	c
	△*	HRZ4UN3FB			44	9.5	-					
No.3-56UNF	△	HRZM4UN3EB	2P	G4	46	8.1	14	3	2.5	5	4	c
	△*	HRZ4UN3EB			44	9.5	-					
No.4-40UNC	○	HRZM5UN4HB	2P	G5	46	9	14	4	3.2	6	4	c
	○*	HRZ5UN4HB			44	11	-					
	○	HRZM6UN4HB		G6	46	9	14	4	3.2	6		
	○*	HRZ6UN4HB			44	11	-					3
No.4-48UNF	△	HRZM5UN4FB	2P	G5	46	9	14	4	3.2	6	4	c
	△*	HRZ5UN4FB			44	11	-					
No.5-40UNC	△	HRZM5UN5HP	4P	G5	52	11	16	5	4	7	4	c
	△*	HRZ5UN5HP			46		-					
	△	HRZM5UN5HB	2P		52		16	5	4	7		
	△*	HRZ5UN5HB			46		-	4	3.2	6		
No.5-44UNF	△	HRZM5UN5GP	4P	G5	52	11	16	5	4	7	4	c
	△*	HRZ5UN5GP			46		-					
	△	HRZM5UN5GB	2P		52		16	5	4	7		
	△*	HRZ5UN5GB			46		-	4	3.2	6		
No.6-32UNC	△	HRZM5UN6JP	4P	G5	52	11	16	5	4	7	4	c
	△*	HRZ5UN6JP			48		13					

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

HP+RZ/HP-RZ High Performance Thread Forming Taps, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type	
No.6-32UNC	△	HRZM5UN6JB	2P	G5	52	11	16	5	4	7	4	c	
	△*	HRZ5UN6JB			48	13	-	4	3.2	6		p	
	△	HRZM6UN6JP	4P	G6	52	11	16	5	4	7		c	
	△*	HRZ6UN6JP			48	13	-	4	3.2	6		p	
	△	HRZM6UN6JB	2P	G6	52	11	16	5	4	7		c	
	△*	HRZ6UN6JB			48	13	-	4	3.2	6		p	
No.6-40UNF	△	HRZM5UN6HP	4P	G5	52	11	16	5	4	7	4	c	
	△*	HRZ5UN6HP			48	13	-	4	3.2	6		p	
	△	HRZM5UN6HB	2P	G5	52	11	16	5	4	7		c	
	△*	HRZ5UN6HB			48	13	-	4	3.2	6		p	
No.8-32UNC	△	HRZM6UN8JP	4P	G6	60	13	21	5.5	4.5	7	4	c	
	△*	HRZ6UN8JP			52		-	5	4			p	
	△	HRZM6UN8JB	2P	G6	60		21	5.5	4.5			c	
	△*	HRZ6UN8JB			52		-	5	4			p	
	△	HRZM7UN8JP	4P	G7	60		21	5.5	4.5			c	
	△*	HRZ7UN8JP			52		-	5	4			p	
	△	HRZM7UN8JB	2P	G7	60		21	5.5	4.5			c	
	△*	HRZ7UN8JB			52		-	5	4			p	
No.8-36UNF	△	HRZM6UN8IP	4P	G6	60	13	21	5.5	4.5	7	4	c	
	△*	HRZ6UN8IP			52		-	5	4			p	
	△	HRZM6UN8IB	2P	G6	60		21	5.5	4.5			c	
	△*	HRZ6UN8IB			52		-	5	4			p	
No.10-24UNC	△	HRZM6UNAMP	4P	G6	60	13	22	5.5	4.5	7	4	c	
	△*	HRZ6UNAMP				16	-					p	
	△	HRZM6UNAMB	2P	G6		13	22					c	
	△*	HRZ6UNAMB				16	-					p	
	△	HRZM7UNAMP	4P	G7		13	22					c	
	△*	HRZ7UNAMP				16	-					p	
	△	HRZM7UNAMB	2P	G7		13	22					c	
	△*	HRZ7UNAMB				16	-					p	
No.10-32UNF	△	HRZM6UNAJP	4P	G6	60	13	22	5.5	4.5	7	4	c	
	△*	HRZ6UNAJP				16	-					p	
	△	HRZM6UNAJB	2P	G6		13	22					c	
	△*	HRZ6UNAJB				16	-					p	
	△	HRZM7UNAJP	4P	G7		13	22					c	
	△*	HRZ7UNAJP				16	-					p	
	△	HRZM7UNAJB	2P	G7		13	22					c	
	△*	HRZ7UNAJB				16	-					p	
No.12-24UNC	△	HRZM6UNCMP	4P	G6	62	15	26	6	4.5	7	4	c	
	△*	HRZ6UNCMP			60	17	-	5.5				p	
	△	HRZM6UNCMB	2P		G6	62	15	26				6	c
	△*	HRZ6UNCMB				60	17	-				5.5	p

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HP+RZ/HP-RZ High Performance Thread Forming Taps, TiCN Coated

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
No.12-28UNF	△	HRZM6UNCKP	4P	G6	62	15	26	6	4.5	7	4	c
	△*	HRZ6UNCKP				17	-	5.5				p
	△	HRZM6UNCKB	2P			15	26	6				c
	△*	HRZ6UNCKB				17	-	5.5				p
1/4-20UNC	△	HRZM7U04NP	4P	G7	62	15	26	6	4.5	7	4	c
	△*	HRZ7U04NP				19	-					p
	△	HRZM7U04NB	2P			15	26					c
	△*	HRZ7U04NB				19	-					p
1/4-28UNF	△	HRZM7U04KP	4P	G7	62	15	26	6	4.5	7	4	c
	△*	HRZ7U04KP				19	-					p
	△	HRZM7U04KB	2P			15	26					c
	△*	HRZ7U04KB				19	-					p

The products having *mark in the stock column will be available as long as they last.

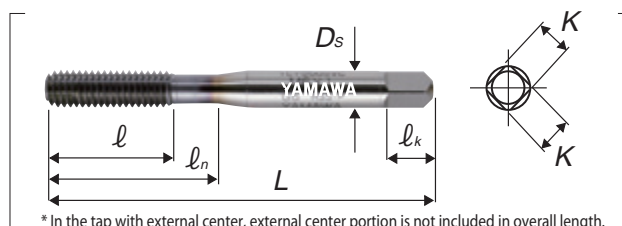
SC-TL-RZ Torqueless Thread Forming Taps with Short Chamfer



Segment : 1J

Number of oil grooves : Metric thread : M2.6 and smaller=non, M3 and larger=2

Having 1 thread chamfer and special lobe design, SC-TL-RZ is the forming taps enabling low torque tapping.



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	Class	L (mm)	ℓ (mm)	ℓ _n (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Lobe	Type
For Metric Threads												
M1×0.25	△	SRZM41.0B1	1P	G4	36	4.5	-	3	2.5	5	3	a
	△*	SRZ41.0B1				5.5						p
M1.2×0.25	△	SRZM41.2B1	1P	G4	36	4.5	-	3	2.5	5	3	a
	△*	SRZ41.2B1				5.5						p
M1.4×0.3	△	SRZM41.4C1	1P	G4	36	5.4	-	3	2.5	5	3	b
	△*	SRZ41.4C1				7						p
M1.4×0.2	△	SRZM31.4A1	1P	G3	36	3.6	-	3	2.5	5	3	b
	△*	SRZ31.4A1				7						p
M1.6×0.35	△	SRZM41.6D1	1P	G4	36	6.3	-	3	2.5	5	3	b
	△*	SRZ41.6D1				8						p
M1.6×0.2	△	SRZM31.6A1	1P	G3	36	3.6	-	3	2.5	5	3	b
	△*	SRZ31.6A1				8						p
M1.7×0.35	△	SRZM41.7D1	1P	G4	36	6.3	-	3	2.5	5	3	b
	△*	SRZ41.7D1				8						p
M2×0.4	△	SRZM42.0E1	1P	G4	42	7.2	-	3	2.5	5	4	b
	△*	SRZ42.0E1				8						p
M2.5×0.45	△	SRZM52.5F1	1P	G5	46	8.1	14	3	2.5	5	4	c

The products having *mark in the stock column will be available as long as they last.

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SC-TL-RZ Torqueless Thread Forming Taps with Short Chamfer

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l_n (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
M2.5x0.45	△*	SRZ52.5F1	1P	G5	44	9.5	-	3	2.5	5	4	p
M2.6x0.45	△	SRZM52.6F1	1P	G5	46	8.1	14	3	2.5	5	4	c
	△*	SRZ52.6F1			44	9.5	-					p
M3x0.5	△	SRZM53.0G1	1P	G5	46	9	14	4	3.2	6	4	c
	△*	SRZ53.0G1				11	18					p
M4x0.7	△	SRZM64.0I1	1P	G6	52	11	17	5	4	7	4	c
	△*	SRZ64.0I1				13	20					p
M5x0.8	△	SRZM65.0K1	1P	G6	60	13	22	5.5	4.5	7	4	c
	△*	SRZ65.0K1				16	25					p
M6x1	△	SRZM66.0M1	1P	G6	62	15	26	6	4.5	7	4	c
	△*	SRZ66.0M1				19	28					p

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

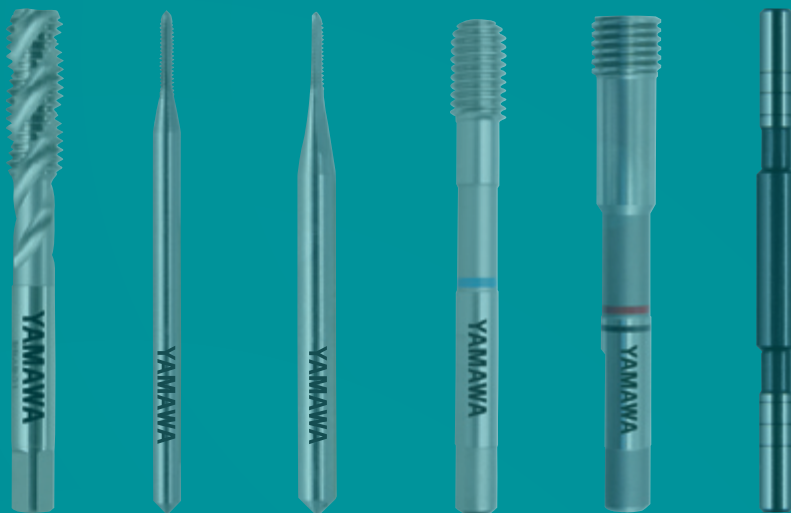
Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

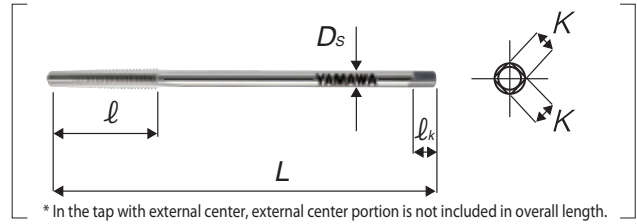
Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Special Thread Taps Simple measuring tools



NT	etc-1
MS+RS/MS-RS	etc-2
MS-TF	etc-2
MS+TR/MS-TR	etc-3
HT Tripod	etc-3
SP(N-SP) Tripod	etc-4
HT Camera Release	etc-4
HT Tire Valve	etc-5
HT Bicycle Tire Valve	etc-5
HT Conduit Tube	etc-6
HT Thick Conduit Tube	etc-6
CPC-S	etc-7
CPC-T	etc-8
Check Pins for Bored Holes for R-Y	etc-9
SMT	etc-9
SMTD	etc-10

NT Nut Taps



Segment : 1I

* In the tap with external center, external center portion is not included in overall length.

NT is the nut taps with straight flutes to be mainly used on nut tapping machine.

Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Metric Threads												
M2×0.4	△	NH22.0E	28P	II b	75	14	-	1.4	-	-	3	n
M2.3×0.4	△	NH22.3E	28P	II b	80	14	-	1.7	-	-	3	n
M2.5×0.45	△	NH22.5F	24P	II b	85	15	-	2	-	-	3	n
M2.6×0.45	△	NH22.6F	24P	II b	85	15	-	2	-	-	3	n
M3×0.5	◎	NH23.0G	30P	II b	90	20	-	2.1	-	-	3	n
M4×0.7	◎	NH24.0I	27P	II b	100	25	-	2.8	-	-	3	n
M5×0.8	◎	NH25.0K	29P	II b	110	30	-	3.6	2.8	6	3	n
M6×1	◎	NH26.0M	26P	II b	120	35	-	4.5	3.5	6	3	n
M6×0.75	△	NH26.0J	31P	II	115	30	-	4.5	3.5	6	3	n
M8×1.25	◎	NH28.0N	24P	II b	140	40	-	6.2	5	8	3	n
M8×1	△	NH28.0M	30P	II	130	40	-	6.2	5	8	3	n
M8×0.75	△	NH28.0J	31P	II	120	30	-	6.2	5	8	3	n
M10×1.5	○	NH2010O	25P	II b	160	50	-	7.8	6	9	3	n
M10×1.25	△	NH2010N	27P	II	150	45	-	7.8	6	9	3	n
M10×1	△	NH2010M	30P	II	140	40	-	7.8	6	9	3	n
M12×1.75	○	NH2012P	26P	II b	170	60	-	9	7	10	3	n
M12×1.5	△	NH2012O	27P	II	160	55	-	9	7	10	3	n
M12×1.25	△	NH2012N	27P	II	160	45	-	9	7	10	3	n
M12×1	△	NH2012M	30P	II	150	40	-	9	7	10	3	n
M14×2	△	NH2014Q	25P	II b	190	65	-	11	9	12	3	n
M14×1.5	△	NH2014O	27P	II	170	55	-	11	9	12	3	n
M16×2	○	NH2016Q	27P	II b	200	70	-	13	10	13	3	n
M16×1.5	△	NH2016O	27P	II	180	55	-	13	10	13	3	n
M18×2.5	△	NH2018R	24P	II b	220	80	-	14	11	14	3	n
M18×1.5	△	NH2018O	27P	II	190	55	-	14	11	14	3	n
M20×2.5	△	NH2020R	26P	II b	230	85	-	16	12	15	3	n
M20×1.5	△	NH2020O	30P	II	200	60	-	16	12	15	3	n
M22×2.5	△	NH2022R	27P	II b	250	90	-	18	14	17	3	n
M24×3	△	NH2024S	25P	II b	260	100	-	19	15	18	3	n
M24×1.5	△	NH2024O	30P	II	220	60	-	19	15	18	3	n
M26×1.5	△	NH2026O	30P	II	230	60	-	21	17	20	3	n
M27×3	△	NH2027S	28P	II b	280	110	-	22	17	20	4	n
M30×3.5	△	NH2030T	26P	II b	300	120	-	24	19	22	4	n
M30×1.5	△	NH2030O	30P	II	240	60	-	24	19	22	4	n

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

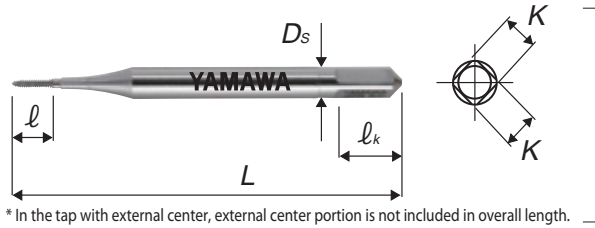
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

MS+RS/MS-RS

Thread Forming Taps for Miniature Screw Threads



Segment : 1J



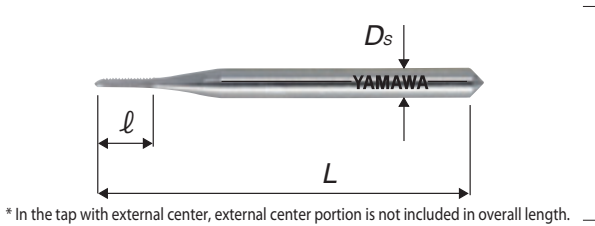
Size	Stock	Code	Chamfer	Class	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Lobe	Type
For Miniature Screw Threads											
S0.6×0.15	△	MSP20.6-B	2P	GS2	36	2.5	3	2.5	5	4	a
	△	RS30.6-B		G3	18		1.5	-	-	3	p
S0.7×0.175	△	MSP30.7-B	2P	GS3	36	2.5	3	2.5	5	4	a
	△	RS30.7-B		G3	25	3.5	1.5	-	-	3	p
S0.8×0.2	△	MSP30.8-B	2P	GS3	36	3	3	2.5	5	4	a
	△	RS40.8-B		G4	25	3.5	1.5	-	-	3	p
S0.9×0.225	△	MSP40.9-B	2P	GS4	36	3	3	2.5	5	4	a
	△	RS40.9-B		G4	25	3.5	1.5	-	-	3	p

MS-TF

Thread Cutting&Forming Taps for Miniature Screw Threads



Segment : 1A



Size	Stock	Code	Chamfer	L (mm)	l (mm)	D_s (mm)	Flute	Type
For Miniature Screw Threads								
S0.5×0.125	△	GMHF0.5-3	3P	18	2.5	1.5	2	p
S0.6×0.15	△	GMHF0.6-3	3P	18	2.5	1.5	3	p
S0.7×0.175	△	GMHF0.7-3	3P	25	3.5	1.5	3	p
S0.8×0.2	△	GMHF0.8-3	3P	25	3.5	1.5	3	p
S0.9×0.225	△	GMHF0.9-3	3P	25	3.5	1.5	3	p

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

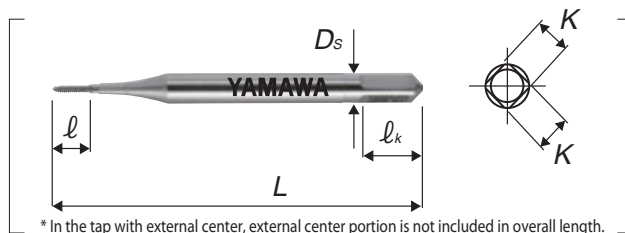
Centering Tools

MS+TR/MS-TR

Thread Cutting Taps for Miniature Screw Threads



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Miniature Screw Threads										
S0.6×0.15	△	GMHRP0.6-3	3P	36	2.5	3	2.5	5	3	a
	△*	GMHR0.6-3		18		1.5	-	-		
S0.7×0.175	△	GMHRP0.7-3	3P	36	2.5	3	2.5	5	3	a
	△*	GMHR0.7-3		25	3.5	1.5	-	-		
S0.8×0.2	△	GMHRP0.8-3	3P	36	3	3	2.5	5	3	a
	△*	GMHR0.8-3		25	3.5	1.5	-	-		
S0.9×0.225	△	GMHRP0.9-3	3P	36	3	3	2.5	5	3	a
	△*	GMHR0.9-3		25	3.5	1.5	-	-		

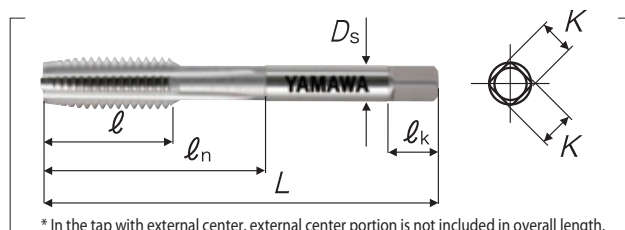
The products having *mark in the stock column will be available as long as they last.

HT

Hand Taps for Tripod Threads



Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Taps for camera tripod threads. Their thread size is oversized

Size	Stock	Code	Chamfer	L (mm)	l (mm)	l _n (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Unified Threads											
1/4-20UNC	△*	TRIMU04N9	9P	62	15	26	6	4.5	7	3	c
	△*	TRIU04N9			19	30					
	△	TRIMU04N5	3P		15	26					
	△*	TRIU04N5			19	30					
	△	TRIMU04N1	1.5P		15	26					
	△*	TRIU04N1			19	30					

The products having *mark in the stock column will be available as long as they last.

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

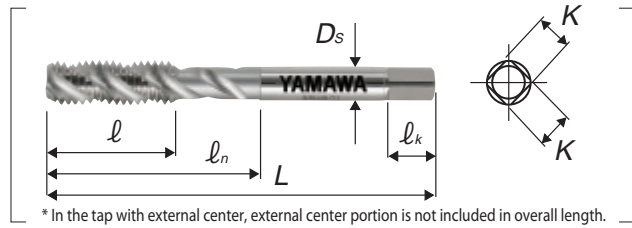
Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

SP(N-SP)

Spiral Fluted Taps for Tripod Threads



Segment : 1C



Taps for camera tripod threads. Their thread size is oversized.

Size	Stock	Code	Chamfer	L (mm)	ℓ (mm)	ℓ_n (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Unified Threads											
1/4-20UNC	\triangle	SPRIU04N	2.5P	62	15	26	6	4.5	7	3	c
	\triangle^*	SNRIU04N			19	30					

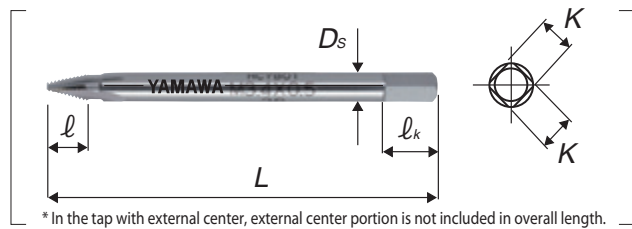
The products having *mark in the stock column will be available as long as they last.

HT

Taps for Camera Release Threads



Segment : 1A



Taps for screws installing camera release.

Size	Stock	Code	Chamfer	L (mm)	ℓ (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type	
For Metric Threads											
3.4x0.5x28°	\triangle	QH-3.4G	-	52	5.25	4	3.2	6	3	-	

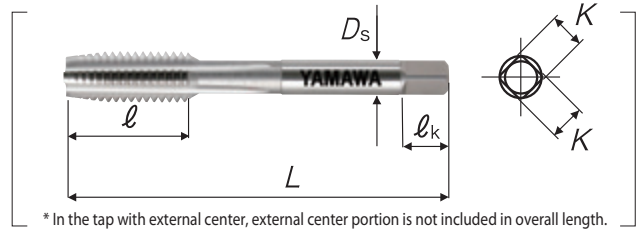
Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

HT

Hand Taps for Tire Valve Threads

HSS

Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

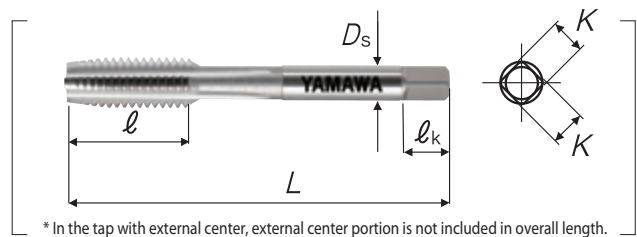
Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Tire Valve Threads											
5V1	△	TV5.0A1	1.5P	62	15	26	6	4.5	7	3	c
8V1	△	TV8.0B1	1.5P	70	19	-	6.2	5	8	3	e
8V2	△	TV8.0H1	1.5P	70	19	-	6.2	5	8	3	e
9V1	△	TV9.0B1	1.5P	75	23	-	7	5.5	8	4	e
10V1	△	TV010G1	1.5P	75	23	-	7	5.5	8	4	e
10V2	△	TV010D1	1.5P	82	26	-	8.5	6.5	9	4	e
11V1	△	TV011H1	1.5P	82	26	-	8.5	6.5	9	4	e
12V1	△	TV012F1	1.5P	88	26	-	10.5	8	11	4	e
13V1	△	TV013H1	1.5P	88	26	-	10.5	8	11	4	e
13V2	△	TV013B1	1.5P	88	26	-	10.5	8	11	4	e
15V1	△	TV015G1	1.5P	95	26	-	12.5	10	13	4	e
16V1	△	TV016E1	1.5P	95	26	-	12.5	10	13	4	e
17V1	△	TV017G1	1.5P	100	18	-	14	11	14	4	e
17V2	△	TV017H1	1.5P	100	18	-	14	11	14	4	e
17V3	△	TV017J1	1.5P	100	33	-	14	11	14	4	e
19V1	△	TV019J1	1.5P	105	33	-	15	12	15	4	e
20V1	△	TV020G1	1.5P	115	19	-	17	13	16	4	e

HT

Hand Taps for Bicycle Tire Valve Threads

HSS

Segment : 1A



* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	L (mm)	l (mm)	ln (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Bicycle Tire Valve Threads											
CTV5-36	△	TCV5.0A1	1.5P	62	15	26	6	4.5	7	3	c
CTV5-24	△	TCV5.0H1	1.5P	62	15	26	6	4.5	7	3	c
CTV8-32	△	TCV8.0B1	1.5P	70	19	-	6.2	5	8	3	e
CTV8-30	△	TCV8.0C1	1.5P	70	19	-	6.2	5	8	3	e

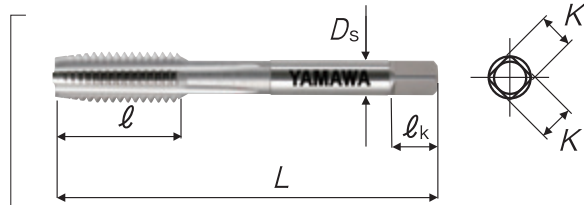
Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	D_s	K	ℓ_k

HT

Hand Taps for Steel Conduit Threads

HSS



Segment : 1A

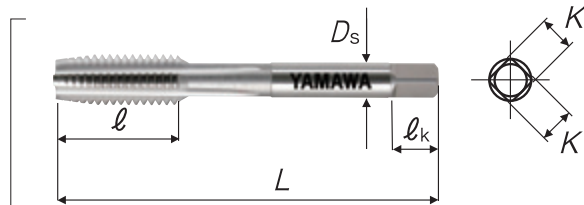
* In the tap with external center, external center portion is not included in overall length.

Size	Stock	Code	Chamfer	L (mm)	ℓ (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Steel Conduit Tube Threads										
CTC19-16	△	TCC019P5	5P	105	33	15	12	15	4	e
CTC25-16	△	TCC025P5	5P	130	39	20	15	18	4	e
CTC31-16	△	TCC031P5	5P	135	45	24	19	22	4	e
CTC39-16	△	TCC039P5	5P	135	45	30	23	26	4	e
CTC51-16	△	TCC051P5	5P	145	45	40	32	35	4	e
CTC63-16	△	TCC063P5	5P	160	45	48	38	42	4	e
CTC75-16	△	TCC075P5	5P	170	45	58	46	50	4	e

HT

Hand Taps for Thick Steel Conduit Threads

HSS



Segment : 1A

* In the tap with external center, external center portion is not included in overall length.

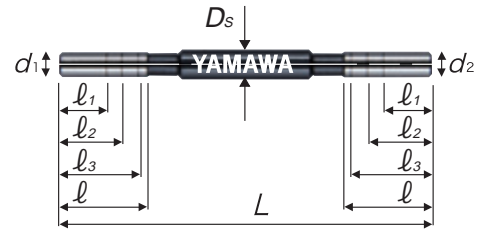
Size	Stock	Code	Chamfer	L (mm)	ℓ (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Thick Steel Conduit Tube Threads										
CTG16-14	△	TCG016Q5	5P	115	33	17	13	16	4	e
CTG22-14	△	TCG022Q5	5P	130	39	20	15	18	4	e
CTG28-11	△	TCG028U5	5P	135	45	26	21	24	4	e
CTG36-11	△	TCG036U5	5P	135	45	32	26	30	4	e
CTG42-11	△	TCG042U5	5P	140	45	38	29	32	4	e
CTG54-11	△	TCG054U5	5P	155	48	46	35	38	4	e
CTG70-11	△	TCG070U5	5P	170	48	58	46	50	4	e
CTG82-11	△	TCG082U5	5P	180	51	60	46	50	6	e
CTG92-11	△	TCG092U5	5P	190	54	65	50	52	6	e
CTG104-11	△	TCG104U5	5P	200	57	70	54	58	6	e

CPC-S

Check Pins for Bored Hole in Thread Cut Tapping (Straight Type)

HSS

Segment : 7C



CPC-S consisting of 5 piece set enables checking of several kinds of bored hole dia. and checking of depth of bored hole. CPC-S is made from wear resistant HSS material and is applicable for both through hole and blind hole.

Size	Code	L (mm)	ℓ (mm)	d ₁ (Thread engagement ratio)	d ₂ (Thread engagement ratio)	ℓ ₁ (mm)	ℓ ₂ (mm)	ℓ ₃ (mm)	D _s (mm)
For Metric Threads									
M2×0.4	CPCS2.0EA	41.5	5.5	1.567 (100%)	1.610 (90%)	3	4	5	3
	CPCS2.0EB			1.589 (95%)	1.632 (85%)				
	CPCS2.0EC			1.610 (90%)	1.654 (80%)				
	CPCS2.0ED			1.632 (85%)	1.675 (75%)				
	CPCS2.0EE			1.654 (80%)	1.697 (70%)				
	CPCS2.0ES			※ 5 piece set					
M2.5×0.45	CPCS2.5FA	45	7.5	2.013 (100%)	2.062 (90%)	3.8	5	6.3	3
	CPCS2.5FB			2.037 (95%)	2.086 (85%)				
	CPCS2.5FC			2.062 (90%)	2.110 (80%)				
	CPCS2.5FD			2.086 (85%)	2.135 (75%)				
	CPCS2.5FE			2.110 (80%)	2.159 (70%)				
	CPCS2.5FS			※ 5 piece set					
M3×0.5	CPCS3.0GA	49	9	2.459 (100%)	2.513 (90%)	4.5	6	7.5	4
	CPCS3.0GB			2.486 (95%)	2.540 (85%)				
	CPCS3.0GC			2.513 (90%)	2.567 (80%)				
	CPCS3.0GD			2.540 (85%)	2.594 (75%)				
	CPCS3.0GE			2.567 (80%)	2.621 (70%)				
	CPCS3.0GS			※ 5 piece set					
M4×0.7	CPCS4.0IA	57	11	3.242 (100%)	3.318 (90%)	6	8	10	5
	CPCS4.0IB			3.280 (95%)	3.356 (85%)				
	CPCS4.0IC			3.318 (90%)	3.394 (80%)				
	CPCS4.0ID			3.356 (85%)	3.432 (75%)				
	CPCS4.0IE			3.394 (80%)	3.470 (70%)				
	CPCS4.0IS			※ 5 piece set					
M5×0.8	CPCS5.0KA	65	14	4.134 (100%)	4.221 (90%)	7.5	10	12.5	5.5
	CPCS5.0KB			4.177 (95%)	4.264 (85%)				
	CPCS5.0KC			4.221 (90%)	4.307 (80%)				
	CPCS5.0KD			4.264 (85%)	4.350 (75%)				
	CPCS5.0KE			4.307 (80%)	4.394 (70%)				
	CPCS5.0KS			※ 5 piece set					
M6×1	CPCS6.0MA	73	16.5	4.917 (100%)	5.026 (90%)	9	12	15	6
	CPCS6.0MB			4.972 (95%)	5.080 (85%)				
	CPCS6.0MC			5.026 (90%)	5.134 (80%)				
	CPCS6.0MD			5.080 (85%)	5.188 (75%)				

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread engagement ratio 1	Thread engagement ratio 2	Shank dia.	Size of square	Length of square
L	l	d_1	d_2	D_s	K	l_k

CPC-S Check Pins for Bored Hole in Thread Cut Tapping (Straight Type)

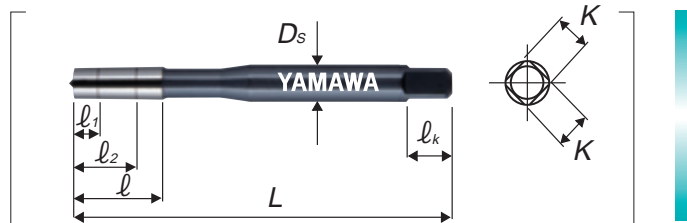
Size	Code	L (mm)	l (mm)	d_1 (Thread engagement ratio)	d_2 (Thread engagement ratio)	l_1 (mm)	l_2 (mm)	l_3 (mm)	D_s (mm)
M6×1	CPCS6.0ME	73	16.5	5.134 (80%)	5.242 (70%)	9	12	15	6
	CPCS6.0MS			※ 5 piece set					
M8×1.25	CPCS8.0NA	99	22	6.647 (100%)	6.782 (90%)	12	16	20	8
	CPCS8.0NB			6.714 (95%)	6.850 (85%)				
	CPCS8.0NC			6.782 (90%)	6.917 (80%)				
	CPCS8.0ND			6.850 (85%)	6.985 (75%)				
	CPCS8.0NE			6.917 (80%)	7.053 (70%)				
	CPCS8.0NS			※ 5 piece set					
M10×1.5	CPCS010OA	110	27.5	8.376 (100%)	8.538 (90%)	15	20	25	10
	CPCS010OB			8.457 (95%)	8.620 (85%)				
	CPCS010OC			8.538 (90%)	8.701 (80%)				
	CPCS010OD			8.620 (85%)	8.782 (75%)				
	CPCS010OE			8.701 (80%)	8.863 (70%)				
	CPCS010OS			※ 5 piece set					
M12×1.75	CPCS012PA	121	33	10.105 (100%)	10.295 (90%)	18	24	30	12
	CPCS012PB			10.200 (95%)	10.390 (85%)				
	CPCS012PC			10.295 (90%)	10.484 (80%)				
	CPCS012PD			10.390 (85%)	10.579 (75%)				
	CPCS012PE			10.484 (80%)	10.674 (70%)				
	CPCS012PS			※ 5 piece set					

CPC-T

Check Pins for Bored Holes in Thread Cut Tapping (Taper Type)

HSS

Segment : 7C



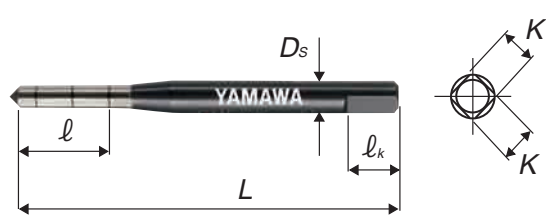
A CPC-T enables simple checking of bored hole dia. CPC-T is made from wear resistant HSS material and is applicable for both through hole and blind hole with enough space in the bottom.

Size	Code	L (mm)	l (mm)	d_1 (Thread engagement ratio)	d_2 (Thread engagement ratio)	l_1 (mm)	l_2 (mm)	D_s (mm)	K (mm)	l_k (mm)	Type
For Metric Threads											
M2×0.4	CPCT2.0E	42	7	1.567 (100%)	1.679 (74%)	1	6	3	2.5	5	t
M2.5×0.45	CPCT2.5F	46	8	2.013 (100%)	2.138 (74%)	1.5	6.5	3	2.5	5	t
M3×0.5	CPCT3.0G	46	8.5	2.459 (100%)	2.599 (74%)	1.5	7	4	3.2	6	t
M4×0.7	CPCT4.0I	52	11	3.242 (100%)	3.422 (76%)	2.3	8.3	5	4	7	t
M5×0.8	CPCT5.0K	59.5	13	4.134 (100%)	4.334 (77%)	2.5	10	5.5	4.5	7	t
M6×1	CPCT6.0M	61.5	17	4.917 (100%)	5.153 (78%)	3.8	12.8	6	4.5	7	t
M8×1.25	CPCT8.0N	90	19.4	6.647 (100%)	6.912 (80%)	4.7	14.7	8	6	9	u
M10×1.5	CPCT010O	100	23.4	8.376 (100%)	8.676 (82%)	6.7	16.7	10	8	11	u
M12×1.75	CPCT012P	110	27.4	10.106 (100%)	10.441 (82%)	7.7	19.7	12	9	12	u

Check Pins for Bored Holes for R-Y

HSS

Segment : 1J



Check pins for R-Y is the pin to check the bored hole dia. for R-Y forming taps.

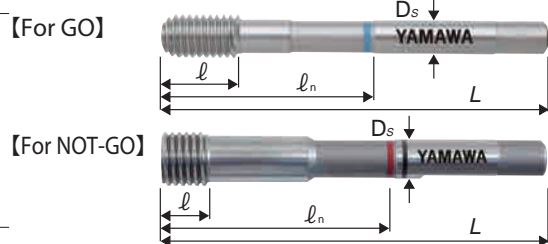
Size	Stock	Code	L (mm)	l (mm)	Thread engagement ratio 90%	Thread engagement ratio 75%	Thread engagement ratio 60%	D (mm)	K (mm)	l _k (mm)	Type
For Metric Threads											
M2	○	RYC2.0	42	9	1.83	1.86	1.89	3	2.5	5	t
M2.5	○	RYC2.5	44	10	2.31	2.34	2.37	3	2.5	5	t
M2.6	○	RYC2.6	44	10	2.41	2.44	2.47	3	2.5	5	t
M3	○	RYC3.0	46	13	2.78	2.83	2.87	4	3.2	6	t
M4	○	RYC4.0	52	16	3.69	3.75	3.81	5	4	7	t
M5	○	RYC5.0	60	16	4.65	4.71	4.77	5.5	4.5	7	t
M6	○	RYC6.0	62	19	5.55	5.63	5.70	6	4.5	7	t
M8	○	RYC8.0	70	25	7.42	7.53	7.63	6.2	5	8	u

SMT

Simple Thread Measuring Tools(For 6H)

HSS

Segment : 7B



Step screw on thread end reduces the labor of inspection and increases the inspection efficiency. HSS material adopted drastically extends the tool life. SMT is available individually, for through hole and for blind hole. Adopting colored package and mark, SMT is easy for stock control.

Size	Class	Stock	Code	L (mm)	l (mm)	l _n (mm)	D _s (mm)
For Metric Threads							
M2×0.4	For GO	6H	△	MTM62.0EG	42	5.3	12
	For NOT-GO	6H	△	MTM62.0EN		4.5	3
M3×0.5	For GO	6H	△	MTM63.0GG	46	5.5	14
	For NOT-GO	6H	△	MTM63.0GN		4.5	4
M4×0.7	For GO	6H	△	MTM64.0IG	52	7.4	17
	For NOT-GO	6H	△	MTM64.0IN		6	5
M5×0.8	For GO	6H	△	MTM65.0KG	60	9.6	22
	For NOT-GO	6H	△	MTM65.0KN		6	5.5
M6×1	For GO	6H	△	MTM66.0MG	62	10	26
	For NOT-GO	6H	△	MTM66.0MN		6	6
M8×1.25	For GO	6H	△	MTM68.0NG	70	14.5	-
	For NOT-GO	6H	△	MTM68.0NN		10	6.2
M10×1.5	For GO	6H	△	MTM6010OG	75	15	-
	For NOT-GO	6H	△	MTM6010ON		10	7

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SMT Simple Thread Measuring Tools

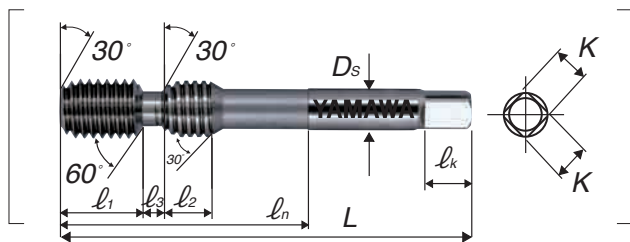
Size	Class	Stock	Code	L (mm)	l (mm)	l_n (mm)	D_s (mm)
M10×1.25	For GO	6H	△	75	14.5	-	7
	For NOT-GO	6H	△		10		
M12×1.75	For GO	6H	△	82	19.5	-	8.5
	For NOT-GO	6H	△		10		
M12×1.5	For GO	6H	△	82	19	-	8.5
	For NOT-GO	6H	△		10		
M12×1.25	For GO	6H	△	82	14.5	-	8.5
	For NOT-GO	6H	△		10		

SMTD

Simple Thread Measuring Tools, Tandem Type(For 6H)

HSS

Segment : 7B



SMTD simultaneously enables "simple measuring of internal threads" and "clearing of internal threads". Clearance flutes put in the passing portion can remove debris. Simple thread measuring tools are the measuring tools enabling the mechanical measuring by attaching them to measuring machine.

Size	Class	Stock	Code	L (mm)	l_n (mm)	l_1 (mm)	l_2 (mm)	l_3 (mm)	D_s (mm)	K (mm)	l_k (mm)
For Metric Threads											
M2×0.4	6H	△	MTDM62.0E	42	12	4	2	1.2	3	2.5	5
M2×0.25	6H	△	MTDM62.0B	42	12	4.9	1.3	1	3	2.5	5
M2.5×0.45	6H	△	MTDM62.5N	46	14	4.4	2.3	1.4	3	2.5	5
M2.5×0.35	6H	△	MTDM62.5D	46	14	5.2	1.8	1.1	3	2.5	5
M3×0.5	6H	△	MTDM63.0G	46	14	5	2.5	1.5	4	3.2	6
M3×0.35	6H	△	MTDM63.0D	46	14	6.1	1.8	1.1	4	3.2	6
M3.5×0.6	6H	△	MTDM63.5H	52	17	6.2	3	1.8	5	4	7
M3.5×0.35	6H	△	MTDM63.5D	52	17	8.1	1.8	1.1	5	4	7
M4×0.7	6H	△	MTDM64.0I	52	17	5.4	3.5	2.1	5	4	7
M4×0.5	6H	△	MTDM64.0G	52	17	7	2.5	1.5	5	4	7
M4.5×0.75	6H	△	MTDM64.5J	60	21	6.9	3.8	2.3	5.5	4.5	7
M4.5×0.5	6H	△	MTDM64.5G	60	21	9	2.5	1.5	5.5	4.5	7
M5×0.8	6H	△	MTDM65.0K	60	22	6.6	4	2.4	5.5	4.5	7
M5×0.5	6H	△	MTDM65.0G	60	22	9	2.5	1.5	5.5	4.5	7
M6×1	6H	△	MTDM66.0M	62	26	7	5	3	6	4.5	7
M6×0.75	6H	△	MTDM66.0J	62	26	8.9	3.8	2.3	6	4.5	7
M7×1	6H	△	MTDM67.0M	70	-	11	5	3	6.2	5	8
M7×0.75	6H	△	MTDM67.0J	70	-	12.9	3.8	2.3	6.2	5	8
M8×1.25	6H	△	MTDM68.0N	70	-	8.9	6.3	3.8	6.2	5	8
M8×1	6H	△	MTDM68.0M	70	-	11	5	3	6.2	5	8
M8×0.75	6H	△	MTDM68.0J	70	-	12.9	3.8	2.3	6.2	5	8
M9×1.25	6H	△	MTDM69.0N	75	-	13.9	6.3	3.8	7	5.5	8

SMTD Simple Thread Measuring Tools, Tandem Type

Size	Class	Stock	Code	L (mm)	ℓ _n (mm)	ℓ ₁ (mm)	ℓ ₂ (mm)	ℓ ₃ (mm)	D _s (mm)	K (mm)	ℓ _k (mm)
M9×1	6H	△	MTDM69.0M	75	-	16	5	3	7	5.5	8
M9×0.75	6H	△	MTDM69.0J	75	-	17.9	3.8	2.3	7	5.5	8
M10×1.5	6H	△	MTDM6010O	75	-	11	7.5	4.5	7	5.5	8
M10×1.25	6H	△	MTDM6010N	75	-	12.9	6.3	3.8	7	5.5	8
M10×1	6H	△	MTDM6010M	75	-	15	5	3	7	5.5	8
M10×0.75	6H	△	MTDM6010J	75	-	16.9	3.8	2.3	7	5.5	8
M11×1.5	6H	△	MTDM6011O	82	-	14	7.5	4.5	8.5	6.5	9
M11×1	6H	△	MTDM6011M	82	-	18	5	3	8.5	6.5	9
M11×0.75	6H	△	MTDM6011J	82	-	18	3.8	2.3	8.5	6.5	9
M12×1.75	6H	△	MTDM6012P	82	-	11.9	8.8	5.3	8.5	6.5	9
M12×1.5	6H	△	MTDM6012O	82	-	14	7.5	4.5	8.5	6.5	9
M12×1.25	6H	△	MTDM6012N	82	-	15.9	6.3	3.8	8.5	6.5	9
M12×1	6H	△	MTDM6012M	82	-	18	5	3	8.5	6.5	9
M14×2	6H	△	MTDM6014Q	88	-	10	10	6	10.5	8	11
M14×1.5	6H	△	MTDM6014O	88	-	14	7.5	4.5	10.5	8	11
M14×1.25	6H	△	MTDM6014N	88	-	15.9	6.3	3.8	10.5	8	11
M14×1	6H	△	MTDM6014M	88	-	18	5	3	10.5	8	11
M16×2	6H	△	MTDM6016Q	95	-	10	10	6	12.5	10	13
M16×1.5	6H	△	MTDM6016O	95	-	14	7.5	4.5	12.5	10	13
M16×1	6H	△	MTDM6016M	95	-	18	5	3	12.5	10	13
M18×2.5	6H	△	MTDM6018R	100	-	13	12.5	7.5	14	11	14
M18×2	6H	△	MTDM6018Q	100	-	17	10	6	14	11	14
M18×1.5	6H	△	MTDM6018O	100	-	21	7.5	4.5	14	11	14
For Unified Threads											
Size	Class	Stock	Code	L (mm)	ℓ (mm)	ℓ ₁ (mm)	ℓ ₂ (mm)	ℓ ₃ (mm)	D _s (mm)	K (mm)	ℓ _k (mm)
No.2-56UNC	6H	△	MTDM2UN2E	42	12	4.4	2.3	1.4	3	2.5	5
No.2-64UNF	6H	△	MTDM2UN2D	42	12	4.9	2	1.2	3	2.5	5
No.3-48UNC	6H	△	MTDM2UN3F	46	14	3.9	2.6	1.6	3	2.5	5
No.3-56UNF	6H	△	MTDM2UN3E	46	14	4.4	2.3	1.4	3	2.5	5
No.4-40UNC	6H	△	MTDM2UN4H	46	14	3.9	3.2	1.9	4	3.2	6
No.4-48UNF	6H	△	MTDM2UN4F	46	14	4.8	2.6	1.6	4	3.2	6
No.5-40UNC	6H	△	MTDM2UN5H	52	16	5.9	3.2	1.9	5	4	7
No.5-44UNF	6H	△	MTDM2UN5G	52	16	6.4	2.9	1.7	5	4	7
No.6-32UNC	6H	△	MTDM2UN6J	52	16	4.6	4	2.4	5	4	7
No.6-40UNF	6H	△	MTDM2UN6H	52	16	5.9	3.2	1.9	5	4	7
No.8-32UNC	6H	△	MTDM2UN8J	60	21	6.6	4	2.4	5.5	4.5	7
No.8-36UNF	6H	△	MTDM2UN8I	60	21	7.4	3.5	2.1	5.5	4.5	7
No.10-24UNC	6H	△	MTDM2UNAM	60	26	4.5	5.3	3.2	5.5	4.5	7
No.10-32UNF	6H	△	MTDM2UNAJ	60	26	6.6	4	2.4	5.5	4.5	7
No.12-24UNC	6H	△	MTDM2UNCM	62	26	6.5	5.3	3.2	6	4.5	7
No.12-28UNF	6H	△	MTDM2UNCK	62	26	7.8	4.5	2.7	6	4.5	7

Spiral Fluted Taps
(for blind hole)Spiral Fluted Taps
(for through hole)Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Thread+Neck length	Shank dia.	Size of square	Length of square
L	l	l_n	D_s	K	l_k

SMTD Simple Thread Measuring Tools, Tandem Type

Size	Class	Stock	Code	L (mm)	l_n (mm)	l_1 (mm)	l_2 (mm)	l_3 (mm)	D_s (mm)	K (mm)	l_k (mm)
1/4-20UNC	6H	△	MTDM2U04N	62	26	4.8	6.4	3.8	6	4.5	7
1/4-28UNF	6H	△	MTDM2U04K	62	26	7.8	4.5	2.7	6	4.5	7
5/16-18UNC	6H	△	MTDM2U05O	70	-	7.7	7.1	4.2	6.2	5	8
5/16-24UNF	6H	△	MTDM2U05M	70	-	10.5	5.3	3.2	6.2	5	8
3/8-16UNC	6H	△	MTDM2U06P	75	-	10.8	7.9	4.8	7	5.5	8
3/8-24UNF	6H	△	MTDM2U06M	75	-	15	5.3	3.2	7	5.5	8
7/16-14UNC	6H	△	MTDM2U07Q	82	-	12.3	9.1	5.4	8.5	6.5	9
7/16-20UNF	6H	△	MTDM2U07N	82	-	16.6	6.4	3.8	8.5	6.5	9
1/2-13UNC	6H	△	MTDM2U08R	88	-	11.3	9.8	5.9	10.5	8	11
1/2-20UNF	6H	△	MTDM2U08N	88	-	16.8	6.4	3.8	10.5	8	11

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Pipe Tap Series



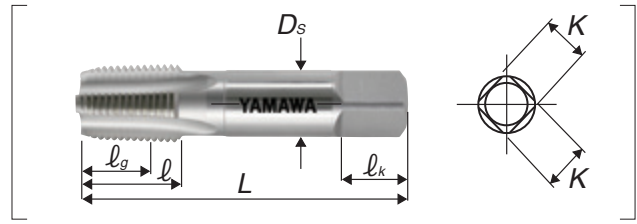
Rc	Pipe-1	SU-SP-PT	Pipe-12	CT-PF	Pipe-23
PT	Pipe-1	SU-SP-S-PT	Pipe-12	NPT	Pipe-24
PT(LH)	Pipe-2	FC-PT	Pipe-13	S-NPT	Pipe-24
PT-X	Pipe-2	FC-S-PT	Pipe-13	LS-NPT	Pipe-25
S-PT	Pipe-3	CT-PT	Pipe-14	SP-NPT	Pipe-25
S-PT(LH)	Pipe-3	CT-S-PT	Pipe-14	LS-SP-S-NPT	Pipe-26
LS-PT	Pipe-4	Rp	Pipe-15	INT-NPT	Pipe-26
LS-S-PT	Pipe-4	PS	Pipe-15	INT-S-NPT	Pipe-27
SP-PT	Pipe-5	PS(LH)	Pipe-16	NPTF	Pipe-27
SP-S-PT	Pipe-6	LS-PS	Pipe-17	LS-NPTF	Pipe-28
SP-PT-X	Pipe-6	SP-PS	Pipe-17	NPS	Pipe-28
LS-SP-PT	Pipe-7	LS-SP-PS	Pipe-18	NPSF	Pipe-29
LS-SP-S-PT	Pipe-7	CT-PS	Pipe-18		
INT-PT	Pipe-8	G	Pipe-19		
INT-S-PT	Pipe-8	PF	Pipe-19		
LS-INT-PT	Pipe-9	PF(LH)	Pipe-20		
LS-INT-S-PT	Pipe-9	LS-PF	Pipe-21		
LC-PT	Pipe-10	SP-PF	Pipe-21		
LC-S-PT	Pipe-10	LS-SP-PF	Pipe-22		
SU-PT	Pipe-11	SU-PF	Pipe-22		
SU-S-PT	Pipe-11	FC-PF	Pipe-23		

Rc

For Taper Pipe Threads



Segment : 1G



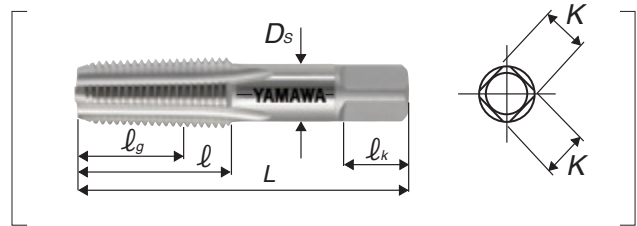
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Pipe Threads													
1/16-28	○	TH2RC01K	2.5P	II	7.723	59	14	10.1	8	6	9	4	i
1/8-28	○	TH2RC02K	2.5P	II	9.728	59	15	10.1	8	6	9	4	i
1/4-19	○	TH2RC04-	2.5P	II	13.157	67	19	15	11	9	12	4	i
3/8-19	○	TH2RC06-	2.5P	II	16.662	75	21	15.4	14	11	14	4	i
1/2-14	○	TH2RC08Q	2.5P	II	20.955	87	26	20.5	18	14	17	4	i
3/4-14	○	TH2RC12Q	2.5P	II	26.441	96	28	21.8	23	17	20	4	i
1'-11	○	TH2RC16U	2.5P	II	33.249	109	33	26	26	21	24	5	i
1 1/4-11	○	TH2RC20U	2.5P	II	41.910	119	36	28.3	32	26	30	5	i
1 1/2-11	○	TH2RC24U	2.5P	II	47.803	125	37	28.3	38	29	32	6	i
2'-11	○	TH2RC32U	2.5P	II	59.614	140	41	32.7	46	35	38	6	i

PT

For PT Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Pipe Threads													
1/16-28	◎	TH2T01K-8	2.5P	II	7.723	55	19	13	8	6	9	4	i
1/8-28	◎	TH2T02K	2.5P	II	9.728	55	19	13	8	6	9	4	h
1/4-19	◎	TH2T04-	2.5P	II	13.157	62	28	21	11	9	12	4	h
3/8-19	◎	TH2T06-	2.5P	II	16.662	65	28	21	14	11	14	4	h
1/2-14	◎	TH2T08Q	2.5P	II	20.955	80	35	25	18	14	17	4	h
5/8-14	△	TH2T10Q	2.5P	II	22.911	82	35	25	19	15	18	4	h
3/4-14	◎	TH2T12Q	2.5P	II	26.441	85	35	25	23	17	20	4	h
7/8-14	△	TH2T14Q	2.5P	II	30.201	90	40	28	24	19	22	4	h
1'-11	◎	TH2T16U	2.5P	II	33.249	95	45	32	26	21	24	5	h
1 1/8-11	△	TH2T18U	2.5P	II	37.897	100	45	32	28	21	24	5	h
1 1/4-11	◎	TH2T20U	2.5P	II	41.910	105	45	32	32	26	30	5	h
1 1/2-11	◎	TH2T24U	2.5P	II	47.803	110	45	32	38	29	32	6	h
1 3/4-11	△	TH2T28U	2.5P	II	53.746	115	45	35	42	32	35	6	h
2'-11	◎	TH2T32U	2.5P	II	59.614	120	50	35	46	35	38	6	h

Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Spiral Pointed Taps | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps Simple measuring tools | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_g	D_s	K	ℓ_k

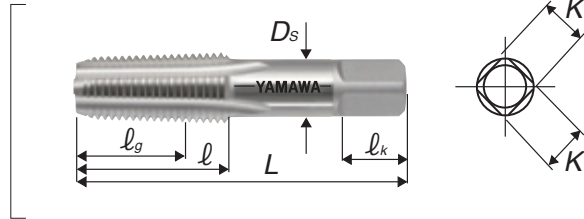
PT For PT Threads

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ_g (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
2'1/4-11	△	TH2T36U	2.5P	II	65.710	145	65	50	50	38	42	6	h
2'1/2-11	△	TH2T40U	2.5P	II	75.184	145	65	50	55	41	44	8	h
3'-11	△	TH2T48U	2.5P	II	87.844	155	65	52	65	50	52	8	h
3'1/2-11	△	TH2T56U	2.5P	II	100.330	165	68	52	70	54	58	8	h
4'-11	△	TH2T64U	2.5P	II	113.030	170	70	55	75	58	62	10	h

PT(LH) For PT Left Hand Threads



Segment : 1G

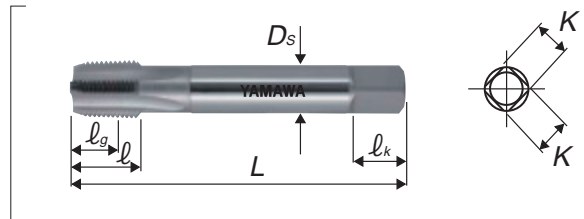


Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ_g (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TH2T02K--L	2.5P	II	9.728	55	19	13	8	6	9	4	h
1/4-19	△	TH2T04--L	2.5P	II	13.157	62	28	13	11	9	12	4	h
3/8-19	△	TH2T06--L	2.5P	II	16.662	65	28	21	14	11	14	4	h
1/2-14	△	TH2T08Q--L	2.5P	II	20.955	80	35	21	18	14	17	4	h
3/4-14	△	TH2T12Q--L	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	△	TH2T16U--L	2.5P	II	33.249	95	45	25	26	21	24	5	h
1'1/4-11	△	TH2T20U--L	2.5P	II	41.910	105	45	32	32	26	30	5	h
1'1/2-11	△	TH2T24U--L	2.5P	II	47.803	110	45	32	38	29	32	6	h
2'-11	△	TH2T32U--L	2.5P	II	59.614	120	50	35	46	35	38	6	h

PT-X X Series, for PT Threads Short (lg) Type



Segment : 1G



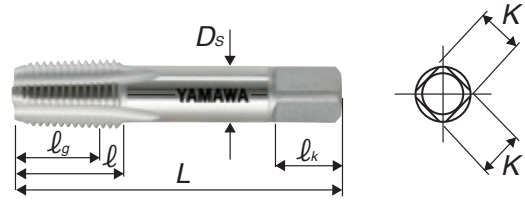
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ_g (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Pipe Threads													
1/16-28	○	THX2T01K-8	2.5P	II	7.723	75	13.5	10.5	8	6	9	4	i
1/8-28	○	THX2T02K	2.5P	II	9.728	75	13.5	10.5	8	6	9	4	i
1/4-19	○	THX2T04-	2.5P	II	13.157	85	16.5	12.5	11	9	12	4	i
3/8-19	○	THX2T06-	2.5P	II	16.662	95	18	14	14	11	14	4	i
1/2-14	○	THX2T08Q	2.5P	II	20.955	105	22.5	17	18	14	17	4	i

S-PT

For PT Threads Short (lg) Type



Segment : 1G



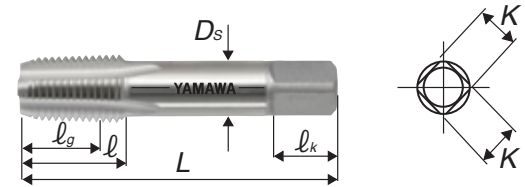
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/16-28	○	TSPT01K-8	2.5P	II	7.723	55	16.5	10.5	8	6	9	4	i
1/8-28	◎	TSPT02K	2.5P	II	9.728	55	16.5	10.5	8	6	9	4	h
1/4-19	◎	TSPT04-	2.5P	II	13.157	62	19.5	12.5	11	9	12	4	h
3/8-19	◎	TSPT06-	2.5P	II	16.662	65	21	14	14	11	14	4	h
1/2-14	◎	TSPT08Q	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	◎	TSPT12Q	2.5P	II	26.441	85	29	19	23	17	20	4	h
1'-11	◎	TSPT16U	2.5P	II	33.249	95	35	22	26	21	24	5	h
1'1/4-11	○	TSPT20U	2.5P	II	41.910	105	37.5	24.5	32	26	30	5	h
1'1/2-11	○	TSPT24U	2.5P	II	47.803	110	38.5	25.5	38	29	32	6	h
1'3/4-11	△	TSPT28U	2.5P	II	53.746	115	39.5	26.5	42	32	35	6	h
2'-11	○	TSPT32U	2.5P	II	59.614	120	42.5	27.5	46	35	38	6	h
2'1/2-11	△	TSPT40U	2.5P	II	75.184	145	47	32	55	41	44	8	h
3'-11	△	TSPT48U	2.5P	II	87.844	155	51	36	65	50	52	8	h

S-PT(LH)

For PT Left Hand Threads Short (lg) Type



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TSPT02K--L	2.5P	II	9.728	55	16.5	10.5	8	6	9	4	h
1/4-19	△	TSPT04---L	2.5P	II	13.157	62	19.5	12.5	11	9	12	4	h
3/8-19	△	TSPT06---L	2.5P	II	16.662	65	21	14	14	11	14	4	h
1/2-14	△	TSPT08Q--L	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	△	TSPT12Q--L	2.5P	II	26.441	85	29	19	23	17	20	4	h
1'-11	△	TSPT16U--L	2.5P	II	33.249	95	35	22	26	21	24	5	h
1'1/4-11	△	TSPT20U--L	2.5P	II	41.910	105	37.5	24.5	32	26	30	5	h
1'1/2-11	△	TSPT24U--L	2.5P	II	47.803	110	38.5	25.5	38	29	32	6	h
2'-11	△	TSPT32U--L	2.5P	II	59.614	120	42.5	27.5	46	35	38	6	h

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

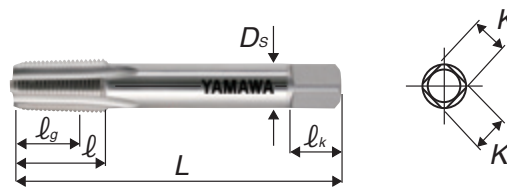
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

LS-PT

Long Shank Taps, for PT Threads



Segment : 1G



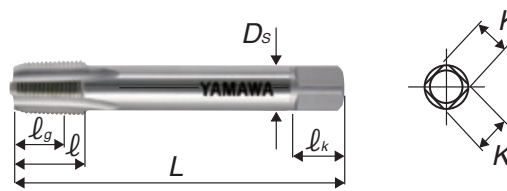
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/16-28	△	L10T01K-8	2.5P	II	7.723	100	19	13	8	6	9	4	i
	○	L10T02K											
1/8-28	○	L15T02K	2.5P	II	9.728	150	19	13	8	6	9	4	h
	△	L20T02K											
1/4-19	○	L10T04-	2.5P	II	13.157	100	28	21	11	9	12	4	h
	○	L15T04-											
	△	L20T04-											
3/8-19	○	L10T06-	2.5P	II	16.662	100	28	21	14	11	14	4	h
	△	L12T06-											
	○	L15T06-											
	△	L20T06-											
1/2-14	○	L15T08Q	2.5P	II	20.955	150	35	25	18	14	17	4	h
	△	L20T08Q											
3/4-14	○	L15T12Q	2.5P	II	26.441	150	35	25	23	17	20	4	h
	△	L20T12Q											
1'-11	○	L15T16U	2.5P	II	33.249	150	45	32	26	21	24	5	h
	△	L20T16U											
1'-1/4-11	△	-	2.5P	II	41.910	200	45	32	32	26	30	5	h
1'-1/2-11	△	-	2.5P	II	47.803	200	45	32	32	26	30	5	h

LS-S-PT

Long Shank Taps, for PT Threads Short (lg) Type



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/8-28	○	TSPT02KL10	2.5P	II	9.728	100	16.5	10.5	8	6	9	4	h
	○	TSPT02KL15											
	△	TSPT02KL20											
1/4-19	○	TSPT04-L10	2.5P	II	13.157	100	19.5	12.5	11	9	12	4	h
	○	TSPT04-L15											

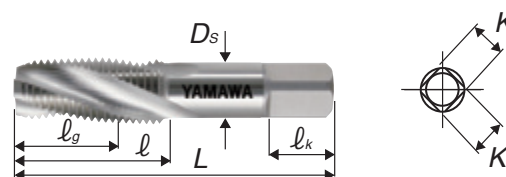
LS-S-PT Long Shank Taps, for PT Threads Short (lg) Type

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ _g (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1/4-19	△	TSPT04-L20	2.5P	II	13.157	200	19.5	12.5	11	9	12	4	h
3/8-19	○	TSPT06-L10	2.5P	II	16.662	100	21	14	14	11	14	4	h
	△	TSPT06-L12				120							
	○	TSPT06-L15				150							
	△	TSPT06-L20				200							
1/2-14	○	TSPT08QL15	2.5P	II	20.955	150	27	17	18	14	17	4	h
	△	TSPT08QL20				200							
3/4-14	○	TSPT12QL15	2.5P	II	26.441	150	29	19	23	17	20	4	h
	△	TSPT12QL20				200							
1'-11	○	TSPT16UL15	2.5P	II	33.249	150	35	22	26	21	24	5	h
	△	TSPT16UL20				200							

SP-PT Spiral Fluted Taps, for PT Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ _g (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Pipe Threads													
1/16-28	△	SH2T01K-8	2.5P	II	7.723	55	19	13	8	6	9	3	i
1/8-28	◎	SH2T02K	2.5P	II	9.728	55	19	13	8	6	9	3	h
1/4-19	◎	SH2T04-	2.5P	II	13.157	62	28	21	11	9	12	3	h
3/8-19	◎	SH2T06-	2.5P	II	16.662	65	28	21	14	11	14	3	h
1/2-14	○	SH2T08Q	2.5P	II	20.955	80	35	25	18	14	17	4	h
3/4-14	○	SH2T12Q	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	○	SH2T16U	2.5P	II	33.249	95	45	32	26	21	24	4	h
1'1/4-11	△	SH2T20U	2.5P	II	41.910	105	45	32	32	26	30	4	h
1'1/2-11	△	SH2T24U	2.5P	II	47.803	110	45	32	38	29	32	4	h
2'-11	△	SH2T32U	2.5P	II	59.614	120	50	35	46	35	38	4	h

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Spiral Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

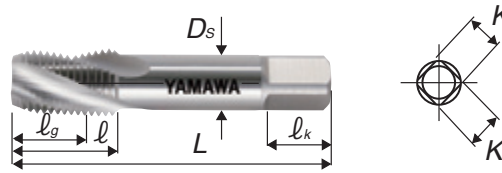
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_g	D_s	K	ℓ_k

SP-S-PT

Spiral Fluted Taps, for PT Threads Short (lg) Type



Segment : 1G



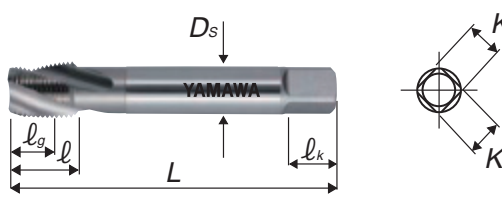
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ_g (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	○	SSPT02K	2.5P	II	9.728	55	16.5	10.5	8	6	9	3	h
1/4-19	○	SSPT04-	2.5P	II	13.157	62	19.5	12.5	11	9	12	3	h
3/8-19	○	SSPT06-	2.5P	II	16.662	65	21	14	14	11	14	3	h
1/2-14	○	SSPT08Q	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	○	SSPT12Q	2.5P	II	26.441	85	29	19	23	17	20	4	h
1'-11	○	SSPT16U	2.5P	II	33.249	95	35	22	26	21	24	4	h
1'1/4-11	△	SSPT20U	2.5P	II	41.910	105	37.5	24.5	32	26	30	4	h
1'1/2-11	△	SSPT24U	2.5P	II	47.803	110	38.5	25.5	38	29	32	4	h
2'-11	△	SSPT32U	2.5P	II	59.614	120	42.5	27.5	46	35	38	4	h

SP-PT-X

X Series Spiral Fluted Taps, for PT Threads Short (lg) Type



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ_g (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Pipe Threads													
1/16-28	○	SHX2T01K-8	2.5P	II	7.723	75	13.5	10.5	8	6	9	3	i
1/8-28	○	SHX2T02K	2.5P	II	9.728	75	13.5	10.5	8	6	9	3	i
1/4-19	○	SHX2T04-	2.5P	II	13.157	85	16.5	12.5	11	9	12	3	i
3/8-19	○	SHX2T06-	2.5P	II	16.662	95	18	14	14	11	14	3	i
1/2-14	○	SHX2T08Q	2.5P	II	20.955	105	22.5	17	18	14	17	4	i

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Taps

Pointed Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

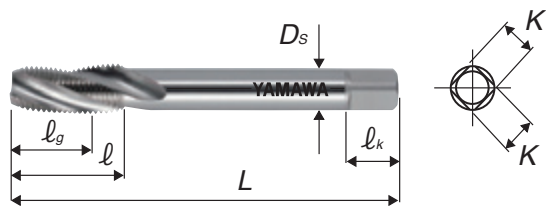
Centering Tools

LS-SP-PT

Long Shank Spiral Fluted Taps, for PT Threads



Segment : 1G



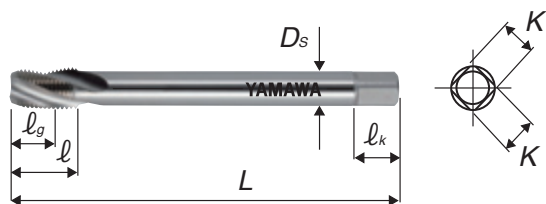
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	SH2T02KL10	2.5P	II	9.728	100	19	13	8	6	9	3	h
	△	SH2T02KL12				120							
	△	SH2T02KL15				150							
1/4-19	△	SH2T04-L10	2.5P	II	13.157	100	28	21	11	9	12	3	h
	△	SH2T04-L12				120							
	△	SH2T04-L15				150							
3/8-19	△	SH2T06-L12	2.5P	II	16.662	120	28	21	14	11	14	3	h
	△	SH2T06-L15				150							
1/2-14	△	SH2T08QL15	2.5P	II	20.955	150	35	25	18	14	17	4	h
3/4-14	△	SH2T12QL15	2.5P	II	26.441	150	35	25	23	17	20	4	h
1'-11	△	SH2T16UL15	2.5P	II	33.249	150	45	32	26	21	24	4	h
	△	SH2T16UL20				200							

LS-SP-S-PT

Long Shank Spiral Fluted Taps, for PT Threads Short (lg) Type



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	SSPT02KL10	2.5P	II	9.728	100	16.5	10.5	8	6	9	3	h
	△	SSPT02KL12				120							
	△	SSPT02KL15				150							
1/4-19	△	SSPT04-L10	2.5P	II	13.157	100	19.5	12.5	11	9	12	3	h
	△	SSPT04-L12				120							
	△	SSPT04-L15				150							
3/8-19	△	SSPT06-L12	2.5P	II	16.662	120	21	14	14	11	14	3	h
	△	SSPT06-L15				150							
1/2-14	△	SSPT08QL15	2.5P	II	20.955	150	27	17	18	14	17	4	h
3/4-14	△	SSPT12QL15	2.5P	II	26.441	150	29	19	23	17	20	4	h
1'-11	△	SSPT16UL15	2.5P	II	33.249	150	35	22	26	21	24	4	h
	△	SSPT16UL20				200							

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

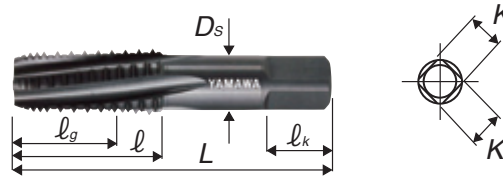
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

INT-PT

Interrupted Spiral Fluted Taps (LH spiral flutes),
for PT threads, for Ductile Materials



Segment : 1G



INT-PT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque.
INT-PT is suitable for such sticky material as stainless steels and chrome molybdenum steels.

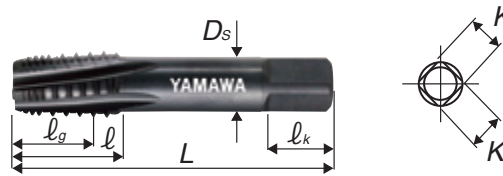
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/16-28	△	TINT01K-8	3P	II	7.723	55	19	13	8	6	9	3	i
1/8-28	○	TINT02K	3P	II	9.728	55	19	13	8	6	9	5	h
1/4-19	○	TINT04-	3P	II	13.157	62	28	21	11	9	12	5	h
3/8-19	○	TINT06-	3P	II	16.662	65	28	21	14	11	14	5	h
1/2-14	○	TINT08Q	3P	II	20.955	80	35	25	18	14	17	5	h
3/4-14	○	TINT12Q	3P	II	26.441	85	35	25	23	17	20	5	h
1'-11	○	TINT16U	3P	II	33.249	95	45	32	26	21	24	5	h
1'1/4-11	○	TINT20U	3P	II	41.910	105	45	32	32	26	30	5	h
1'1/2-11	○	TINT24U	3P	II	47.803	110	45	32	38	29	32	7	h
2'-11	△	TINT32U	3P	II	59.614	120	50	35	46	35	38	7	h

INT-S-PT

Interrupted Spiral Fluted Taps (LH spiral flutes),
for PT Threads Short (lg) Type, for Ductile Materials



Segment : 1G



INT-PT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque.
INT-PT is suitable for such sticky material as stainless steels and chrome molybdenum steels.

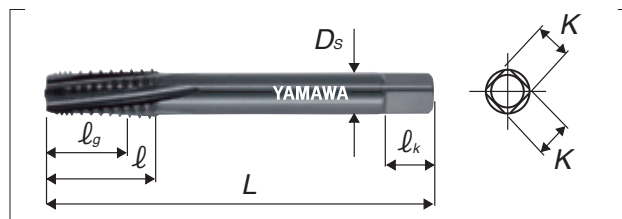
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads													
1/16-28	△	TIST01K-8	3P	II	7.723	55	16.5	10.5	8	6	9	3	i
1/8-28	○	TIST02K	3P	II	9.728	55	16.5	10.5	8	6	9	5	h
1/4-19	○	TIST04-	3P	II	13.157	62	19.5	12.5	11	9	12	5	h
3/8-19	○	TIST06-	3P	II	16.662	65	21	14	14	11	14	5	h
1/2-14	○	TIST08Q	3P	II	20.955	80	27	17	18	14	17	5	h
3/4-14	○	TIST12Q	3P	II	26.441	85	29	19	23	17	20	5	h
1'-11	○	TIST16U	3P	II	33.249	95	35	22	26	21	24	5	h
1'1/4-11	○	TIST20U	3P	II	41.910	105	37.5	24.5	32	26	30	5	h
1'1/2-11	○	TIST24U	3P	II	47.803	110	38.5	25.5	38	29	32	7	h
2'-11	△	TIST32U	3P	II	59.614	120	42.5	27.5	46	35	38	7	h

LS-INT-PT

Long Shank Interrupted Spiral Fluted Taps (LH spiral flutes), for PT Threads, for Ductile Materials



Segment : 1G



INT-PT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque. INT-PT is suitable for such sticky material as stainless steels and chrome molybdenum steels.

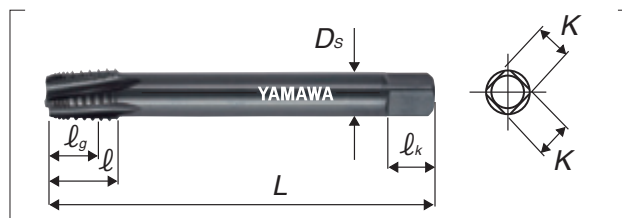
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TINT02KL10	3P	II	9.728	100	19	13	8	6	9	5	h
	△	TINT02KL12				120							
	△	TINT02KL15				150							
1/4-19	△	TINT04-L10	3P	II	13.157	100	28	21	11	9	12	5	h
	△	TINT04-L12				120							
	△	TINT04-L15				150							
3/8-19	△	TINT06-L10	3P	II	16.662	100	28	21	14	11	14	5	h
	△	TINT06-L12				120							
	△	TINT06-L15				150							
1/2-14	△	TINT08QL15	3P	II	20.955	150	35	25	18	14	17	5	h
3/4-14	△	TINT12QL15	3P	II	26.441	150	35	25	23	17	20	5	h
1'-11	△	TINT16UL15	3P	II	33.249	150	45	32	26	21	24	5	h
	△	TINT16UL20				200							

LS-INT-S-PT

Long Shank Interrupted Spiral Fluted Taps (LH spiral flutes), for PT Threads Short (lg) Type, for Ductile Materials



Segment : 1G



INT-PT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque. INT-PT is suitable for such sticky material as stainless steels and chrome molybdenum steels.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TIST02KL10	3P	II	9.728	100	16.5	10.5	8	6	9	5	h
	△	TIST02KL12				120							
	△	TIST02KL15				150							
1/4-19	△	TIST04-L10	3P	II	13.157	100	19.5	12.5	11	9	12	5	h
	△	TIST04-L12				120							
	△	TIST04-L15				150							
3/8-19	△	TIST06-L10	3P	II	16.662	100	21	14	14	11	14	5	h
	△	TIST06-L12				120							
	△	TIST06-L15				150							

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

LS-INT-S-PT Long Shank Interrupted Spiral Fluted Taps (LH spiral flutes), for PT Threads Short (lg) Type, for Ductile Materials

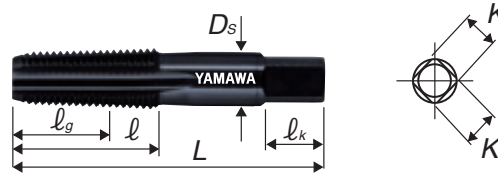
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1/2-14	△	TIST08QL15	3P	II	20.955	150	27	17	18	14	17	5	h
3/4-14	△	TIST12QL15	3P	II	26.441	150	29	19	23	17	20	5	h
1'-11	△	TIST16UL15	3P	II	33.249	150	35	22	26	21	24	5	h
	△	TIST16UL20				200							

LC-PT

For PT Threads, for Low Carbon Steels



Segment : 1G



Suitable for such soft steels (Low Carbon Steels) as SS400 and S25C.

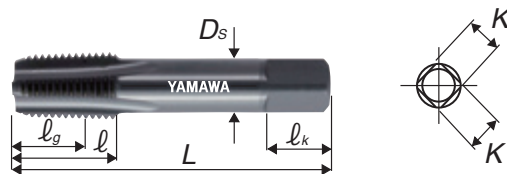
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	LCPT02K	2.5P	II	9.728	55	19	13	8	6	9	4	h
1/4-19	△	LCPT04-	2.5P	II	13.157	62	28	21	11	9	12	4	h
3/8-19	△	LCPT06-	2.5P	II	16.662	65	28	21	14	11	14	4	h
1/2-14	△	LCPT08Q	2.5P	II	20.955	80	35	25	18	14	17	4	h
3/4-14	△	LCPT12Q	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	△	LCPT16U	2.5P	II	33.249	95	45	32	26	21	24	5	h
1'1/4-11	△	LCPT20U	2.5P	II	41.910	105	45	32	32	26	30	5	h
1'1/2-11	△	LCPT24U	2.5P	II	47.803	110	45	32	38	29	32	6	h
2'-11	△	LCPT32U	2.5P	II	59.614	120	50	35	46	35	38	6	h

LC-S-PT

For PT Threads Short (lg), for Low Carbon Steels



Segment : 1G



Suitable for such soft steels (Low Carbon Steels) as SS400 and S25C.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	LCSPT02K	2.5P	II	9.728	55	16.5	10.5	8	6	9	4	h
1/4-19	△	LCSPT04-	2.5P	II	13.157	62	19.5	12.5	11	9	12	4	h
3/8-19	△	LCSPT06-	2.5P	II	16.662	65	21	14	14	11	14	4	h
1/2-14	△	LCSPT08Q	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	△	LCSPT12Q	2.5P	II	26.441	85	29	19	23	17	20	4	h

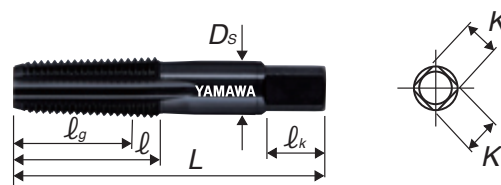
LC-S-PT For PT Threads Short (lg), for Low Carbon Steels

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ _g (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
1'-11	△	LCSPT16U	2.5P	II	33.249	95	35	22	26	21	24	5	h

SU-PT For PT Threads, for Stainless Steels



Segment : 1G



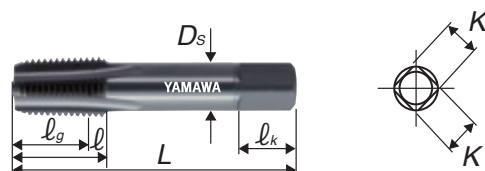
SU-PT is suitable for stainless steels, chrome steels and chrome molybdenum steels.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ _g (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TU2T02K	2.5P	II	9.728	55	19	13	8	6	9	4	h
1/4-19	△	TU2T04-	2.5P	II	13.157	62	28	21	11	9	12	4	h
3/8-19	△	TU2T06-	2.5P	II	16.662	65	28	21	14	11	14	4	h
1/2-14	△	TU2T08Q	2.5P	II	20.955	80	35	25	18	14	17	4	h
3/4-14	△	TU2T12Q	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	△	TU2T16U	2.5P	II	33.249	95	45	32	26	21	24	4	h
1'1/4-11	△	TU2T20U	2.5P	II	41.910	105	45	32	32	26	30	5	h
1'1/2-11	△	TU2T24U	2.5P	II	47.803	110	45	32	38	29	32	6	h

SU-S-PT For PT Threads Short (lg) Type, for Stainless Steels



Segment : 1G



SU-PT is suitable for stainless steels, chrome steels and chrome molybdenum steels.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	ℓ _g (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TUST02K	2.5P	II	9.728	55	16.5	10.5	8	6	9	4	h
1/4-19	△	TUST04-	2.5P	II	13.157	62	19.5	12.5	11	9	12	4	h
3/8-19	△	TUST06-	2.5P	II	16.662	65	21	14	14	11	14	4	h
1/2-14	△	TUST08Q	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	△	TUST12Q	2.5P	II	26.441	85	29	19	23	17	20	4	h
1'-11	△	TUST16U	2.5P	II	33.249	95	35	22	26	21	24	4	h
1'1/4-11	△	TUST20U	2.5P	II	41.910	105	37.5	24.5	32	26	30	5	h
1'1/2-11	△	TUST24U	2.5P	II	47.803	110	38.5	25.5	38	29	32	6	h

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

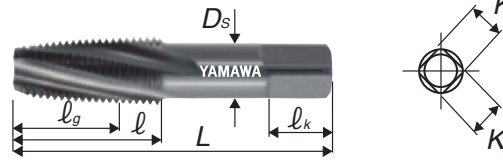
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

SU-SP-PT

Spiral Fluted Taps for PT Threads, for Stainless Steels



Segment : 1G



SU-PT is suitable for stainless steels, chrome steels and chrome molybdenum steels.

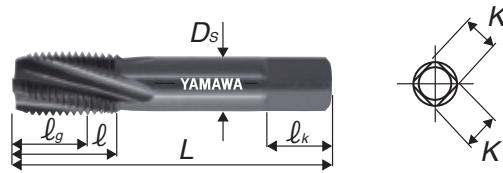
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	-	2.5P	II	9.728	55	19	13	8	6	9	3	h
1/4-19	△	-	2.5P	II	13.157	62	28	21	11	9	12	3	h
3/8-19	△	-	2.5P	II	16.662	65	28	21	14	11	14	3	h
1/2-14	△	-	2.5P	II	20.955	80	35	25	18	14	17	4	h
3/4-14	△	-	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	△	-	2.5P	II	33.249	95	45	32	26	21	24	4	h

SU-SP-S-PT

Spiral Fluted Taps for PT Threads Short (lg) Type, for Stainless Steels



Segment : 1G



SU-PT is suitable for stainless steels, chrome steels and chrome molybdenum steels.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	-	2.5P	II	9.728	55	16.5	10.5	8	6	9	3	h
1/4-19	△	-	2.5P	II	13.157	62	19.5	12.5	11	9	12	3	h
3/8-19	△	-	2.5P	II	16.662	65	21	14	14	11	14	3	h
1/2-14	△	-	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	△	-	2.5P	II	26.441	85	29	19	23	17	20	4	h
1'-11	△	-	2.5P	II	33.249	95	35	22	26	21	24	4	h

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Fluted Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

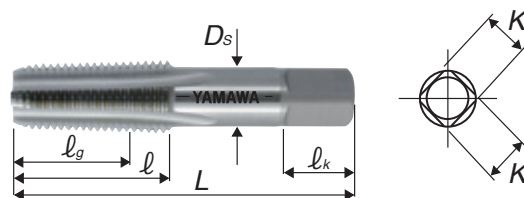
Centering Tools

FC-PT

For PT Threads, for Cast Irons



Segment : 1G



FC-PT is suitable for hard and abrasive materials such as cast irons.

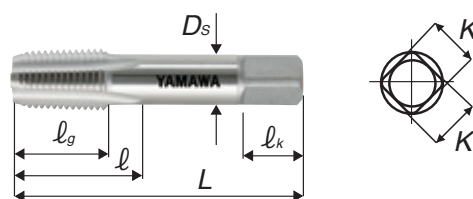
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Pipe Threads													
1/16-28	△	FCPT01K-8	2.5P	II	7.723	55	19	13	8	6	9	4	i
1/8-28	△	FCPT02K	2.5P	II	9.728	55	19	13	8	6	9	4	h
1/4-19	△	FCPT04-	2.5P	II	13.157	62	28	21	11	9	12	4	h
3/8-19	△	FCPT06-	2.5P	II	16.662	65	28	21	14	11	14	4	h
1/2-14	△	FCPT08Q	2.5P	II	20.955	80	35	25	18	14	17	4	h
3/4-14	△	FCPT12Q	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	△	FCPT16U	2.5P	II	33.249	95	45	32	26	21	24	5	h
1'1/4-11	△	FCPT20U	2.5P	II	41.910	105	45	32	32	26	30	5	h
1'1/2-11	△	FCPT24U	2.5P	II	47.803	110	45	32	38	29	32	6	h
2'-11	△	FCPT32U	2.5P	II	59.614	120	50	35	46	35	38	6	h

FC-S-PT

For PT Threads Short (lg) Type, for Cast Irons



Segment : 1G



FC-PT is suitable for hard and abrasive materials such as cast irons.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For Pipe Threads													
1/16-28	△	FCSPT01K-8	2.5P	II	7.723	55	16.5	10.5	8	6	9	4	i
1/8-28	△	FCSPT02K	2.5P	II	9.728	55	16.5	10.5	8	6	9	4	h
1/4-19	△	FCSPT04-	2.5P	II	13.157	62	19.5	12.5	11	9	12	4	h
3/8-19	△	FCSPT06-	2.5P	II	16.662	65	21	14	14	11	14	4	h
1/2-14	△	FCSPT08Q	2.5P	II	20.955	80	27	17	18	14	17	4	h
3/4-14	△	FCSPT12Q	2.5P	II	26.441	85	29	19	23	17	20	4	h
1'-11	△	FCSPT16U	2.5P	II	33.249	95	35	22	26	21	24	5	h
1'1/4-11	△	FCSPT20U	2.5P	II	41.910	105	37.5	24.5	32	26	30	5	h
1'1/2-11	△	FCSPT24U	2.5P	II	47.803	110	38.5	25.5	38	29	32	6	h
2'-11	△	FCSPT32U	2.5P	II	59.614	120	42.5	27.5	46	35	38	6	h

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

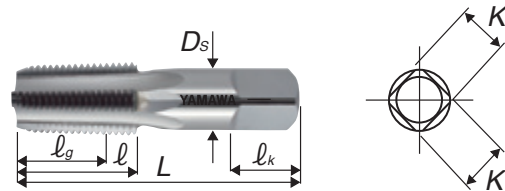
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

CT-PT

Cemented Carbide Pipe Taps for PT Threads, for Cast Irons



Segment : 1L



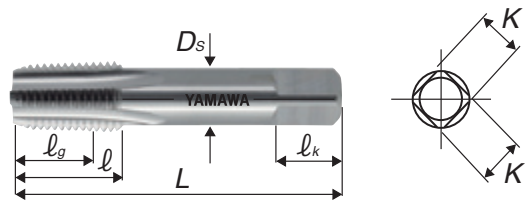
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TCPT02K	2.5P	II	9.728	55	19	13	8	6	9	4	h
1/4-19	△	TCPT04-	2.5P	II	13.157	62	28	21	11	9	12	4	h
3/8-19	△	TCPT06-	2.5P	II	16.662	65	28	21	14	11	14	4	h
1/2-14	△	TCPT08Q	2.5P	II	20.955	80	35	25	18	14	17	4	h
3/4-14	△	TCPT12Q	2.5P	II	26.441	85	35	25	23	17	20	4	h
1'-11	△	TCPT16U	2.5P	II	33.249	95	45	32	26	21	24	5	h

CT-S-PT

Cemented Carbide Pipe Taps for PT Threads Short (lg) Type, for Cast Irons



Segment : 1L



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads													
1/8-28	△	TCST02K	2.5P	II	9.728	55	16.5	10.5	8	6	9	4	h
1/4-19	△	TCST04-	2.5P	II	13.157	62	19.5	12.5	11	9	12	4	h
3/8-19	△	TCST06-	2.5P	II	16.662	65	21	14	14	11	14	4	h
1/2-14	△	TCST08Q	2.5P	II	20.955	80	27	17	18	14	17	4	h

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

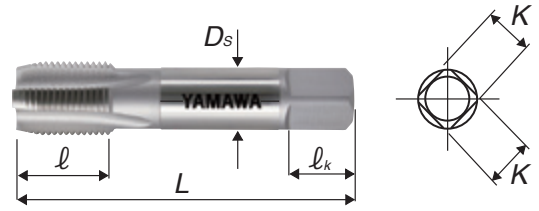
Centering Tools

Rp

For RP Threads



Segment : 1G



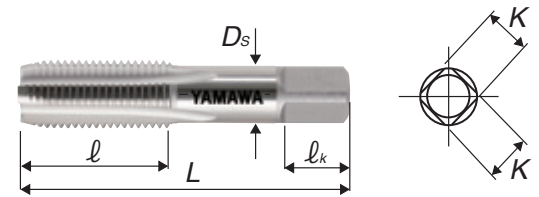
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/16-28	○	TH2RP01K	3.5P	II	7.723	59	14	8	6	9	4	e
1/8-28	○	TH2RP02K	3.5P	II	9.728	59	15	8	6	9	4	e
1/4-19	○	TH2RP04-	3.5P	II	13.157	67	19	11	9	12	4	e
3/8-19	○	TH2RP06-	3.5P	II	16.662	75	21	14	11	14	4	e
1/2-14	○	TH2RP08Q	3.5P	II	20.955	87	26	18	14	17	4	e
3/4-14	○	TH2RP12Q	3.5P	II	26.441	96	28	23	17	20	4	e
1'-11	○	TH2RP16U	3.5P	II	33.249	109	33	26	21	24	5	e
1'1/4-11	○	TH2RP20U	3.5P	II	41.910	119	36	32	26	30	5	e
1'1/2-11	○	TH2RP24U	3.5P	II	47.803	125	37	38	29	32	6	e
2'-11	○	TH2RP32U	3.5P	II	59.614	140	41	46	35	38	6	e

PS

For PS Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/16-28	△	TH2P01K-8	3.5P	II	7.723	55	19	8	6	9	4	v
1/8-28	◎	TH2P02K	3.5P	II	9.728	55	19	8	6	9	4	v
	△	TH2P02K1	1.5P									
1/4-19	◎	TH2P04-	3.5P	II	13.157	62	28	11	9	12	4	v
	△	TH2P04-1	1.5P									
3/8-19	◎	TH2P06-	3.5P	II	16.662	65	28	14	11	14	4	v
	△	TH2P06-1	1.5P									
1/2-14	◎	TH2P08Q	3.5P	II	20.955	80	35	18	14	17	4	v
	△	TH2P08Q1	1.5P									
5/8-14	△	TH2P10Q	3.5P	II	22.911	82	35	19	15	18	4	v
3/4-14	◎	TH2P12Q	3.5P	II	26.441	85	35	23	17	20	4	v
	△	TH2P12Q1	1.5P									
7/8-14	△	TH2P14Q	3.5P	II	30.201	90	40	24	19	22	4	v
1'-11	◎	TH2P16U	3.5P	II	33.249	95	45	26	21	24	5	v

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	l	D_s	K	l_k

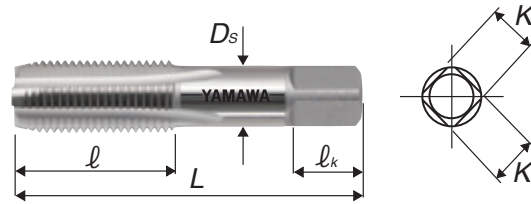
PS For PS Threads

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
1'-11	△	TH2P16U1	1.5P	II	33.249	95	45	26	21	24	5	v
1'1/4-11	○	TH2P20U	3.5P	II	41.910	105	45	32	26	30	5	v
	△	TH2P20U1	1.5P									
1'1/2-11	○	TH2P24U	3.5P	II	47.803	110	45	38	29	32	6	v
	△	TH2P24U1	1.5P									
2'-11	○	TH2P32U	3.5P	II	59.614	120	50	46	35	38	6	v
2'1/2-11	△	TH2P40U	3.5P	II	75.184	145	65	55	41	44	8	v
3'-11	△	TH2P48U	3.5P	II	87.844	155	65	65	50	52	8	v
4'-11	△	TH2P64U	3.5P	II	113.030	170	70	75	58	62	10	v

PS(LH) For PS Left Hand Threads



Segment : 1G



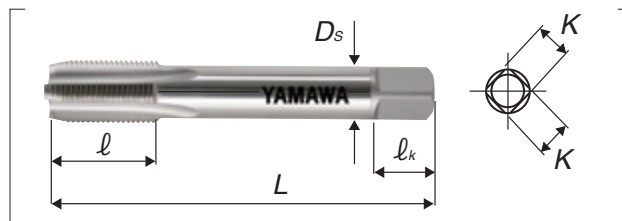
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	TH2P02K--L	3.5P	II	9.728	55	19	8	6	9	4	v
1/4-19	△	TH2P04--L	3.5P	II	13.157	62	28	11	9	12	4	v
3/8-19	△	TH2P06--L	3.5P	II	16.662	65	28	14	11	14	4	v
1/2-14	△	TH2P08Q--L	3.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	△	TH2P12Q--L	3.5P	II	26.441	85	35	23	17	20	4	v
1'-11	△	TH2P16U--L	3.5P	II	33.249	95	45	26	21	24	5	v
1'1/4-11	△	TH2P20U--L	3.5P	II	41.910	105	45	32	26	30	5	v
1'1/2-11	△	TH2P24U--L	3.5P	II	47.803	110	45	38	29	32	6	v
2'-11	△	TH2P32U--L	3.5P	II	59.614	120	50	46	35	38	6	v

LS-PS

Long Shank Taps for PS Threads



Segment : 1G



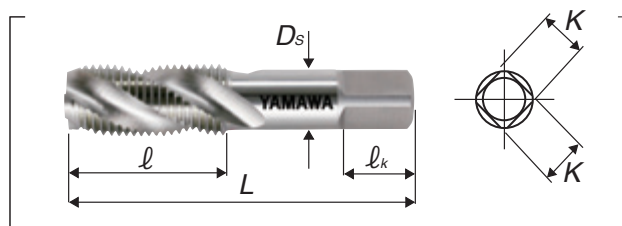
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/8-28	○	L10P02K	3.5P	II	9.728	100	19	8	6	9	4	v
	○	L15P02K				150						
	△	L20P02K				200						
1/4-19	○	L10P04-	3.5P	II	13.157	100	28	11	9	12	4	v
	○	L15P04-				150						
	△	L20P04-				200						
3/8-19	○	L10P06-	3.5P	II	16.662	100	28	14	11	14	4	v
	○	L15P06-				150						
	△	L20P06-				200						
1/2-14	○	L15P08Q	3.5P	II	20.955	150	35	18	14	17	4	v
	△	L20P08Q				200						
3/4-14	○	L15P12Q	3.5P	II	26.441	150	35	23	17	20	4	v
	△	L20P12Q				200						
1'-11	○	L15P16U	3.5P	II	33.249	150	45	26	21	24	5	v
	△	L20P16U				200						

SP-PS

Spiral Fluted Taps for PS Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/8-28	○	SH2P02K	2.5P	II	9.728	55	19	8	6	9	3	v
1/4-19	○	SH2P04-	2.5P	II	13.157	62	28	11	9	12	3	v
3/8-19	○	SH2P06-	2.5P	II	16.662	65	28	14	11	14	3	v
1/2-14	○	SH2P08Q	2.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	○	SH2P12Q	2.5P	II	26.441	85	35	23	17	20	4	v
1'-11	○	SH2P16U	2.5P	II	33.249	95	45	26	21	24	4	v
1'1/4-11	△	SH2P20U	2.5P	II	41.910	105	45	32	26	30	4	v
1'1/2-11	△	SH2P24U	2.5P	II	47.803	110	45	38	29	32	4	v
2'-11	△	SH2P32U	2.5P	II	59.614	120	50	46	35	38	4	v

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

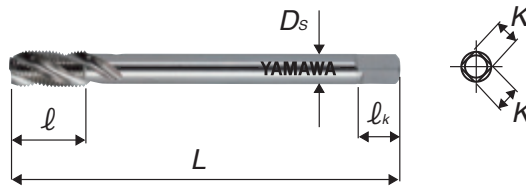
Overall length	Thread length	Shank dia.	Size of square	Length of square
L	l	D_s	K	l_k

LS-SP-PS

Long Shank Spiral Fluted Taps for PS Threads



Segment : 1G



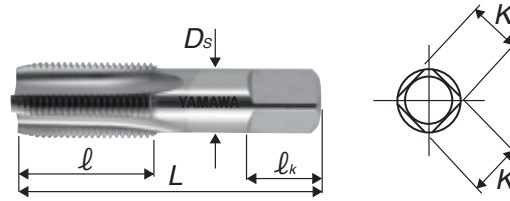
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	SH2P02KL10	2.5P	II	9.728	100	19	8	6	9	3	v
	△	SH2P02KL15				150						
1/4-19	△	SH2P04-L10	2.5P	II	13.157	100	28	11	9	12	3	v
	△	SH2P04-L15				150						
3/8-19	△	SH2P06-L15	2.5P	II	16.662	150	28	14	11	14	3	v
1/2-14	△	SH2P08QL15	2.5P	II	20.955	150	35	18	14	17	4	v
3/4-14	△	SH2P12QL15	2.5P	II	26.441	150	35	23	17	20	4	v
1'-11	△	SH2P16UL15	2.5P	II	33.249	150	45	26	21	24	4	v
	△	SH2P16UL20				200						

CT-PS

Cemented Carbide Taps for PS Threads



Segment : 1L



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	TCPS02K	3.5P	II	9.728	55	19	8	6	9	4	v
1/4-19	△	TCPS04-	3.5P	II	13.157	62	28	11	9	12	4	v
3/8-19	△	TCPS06-	3.5P	II	16.662	65	28	14	11	14	4	v
1/2-14	△	TCPS08Q	3.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	△	TCPS12Q	3.5P	II	26.441	85	35	23	17	20	4	v
1'-11	△	TCPS16U	3.5P	II	33.249	95	45	26	21	24	5	v

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps (simple measuring tools)

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

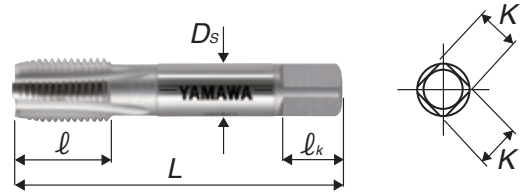
Centering Tools

G

For G Threads



Segment : 1G



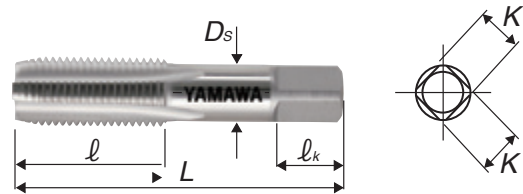
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/16-28	○	TH2G01K	3.5P	II	7.723	59	14	8	6	9	4	e
1/8-28	○	TH2G02K	3.5P	II	9.728	59	15	8	6	9	4	e
1/4-19	○	TH2G04-	3.5P	II	13.157	67	19	11	9	12	4	e
3/8-19	○	TH2G06-	3.5P	II	16.662	75	21	14	11	14	4	e
1/2-14	○	TH2G08Q	3.5P	II	20.955	87	26	18	14	17	4	e
3/4-14	○	TH2G12Q	3.5P	II	26.441	96	28	23	17	20	4	e
1'-11	○	TH2G16U	3.5P	II	33.249	109	33	26	21	24	4	e
1'1/4-11	○	TH2G20U	3.5P	II	41.910	119	36	32	26	30	4	e
1'1/2-11	○	TH2G24U	3.5P	II	47.803	125	37	38	29	32	6	e
2'-11	○	TH2G32U	3.5P	II	59.614	140	41	46	35	38	6	e

PF

For PF Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/16-28	△	TH2F01K-8	3.5P	II	7.723	55	19	8	6	9	4	v
1/8-28	◎	TH2F02K	3.5P	II	9.728	55	19	8	6	9	4	v
	△	TH2F02K1	1.5P									
1/4-19	◎	TH2F04-	3.5P	II	13.157	62	28	11	9	12	4	v
	△	TH2F04-1	1.5P									
3/8-19	◎	TH2F06-	3.5P	II	16.662	65	28	14	11	14	4	v
	△	TH2F06-1	1.5P									
1/2-14	◎	TH2F08Q	3.5P	II	20.955	80	35	18	14	17	4	v
	△	TH2F08Q1	1.5P									
5/8-14	△	TH2F10Q	3.5P	II	22.911	82	35	19	15	18	4	v
3/4-14	◎	TH2F12Q	3.5P	II	26.441	85	35	23	17	20	4	v
	△	TH2F12Q1	1.5P									
7/8-14	△	TH2F14Q	3.5P	II	30.201	90	40	24	19	22	4	v
1'-11	◎	TH2F16U	3.5P	II	33.249	95	45	26	21	24	4	v

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	D_s	K	ℓ_k

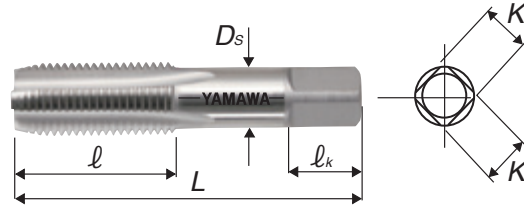
PF For PF Threads

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
1'-11	△	TH2F16U1	1.5P	II	33.249	95	45	26	21	24	4	v
1'1/4-11	○	TH2F20U	3.5P	II	41.910	105	45	32	26	30	4	v
	△	TH2F20U1	1.5P									
1'1/2-11	○	TH2F24U	3.5P	II	47.803	110	45	38	29	32	6	v
	△	TH2F24U1	1.5P									
2'-11	○	TH2F32U	3.5P	II	59.614	120	50	46	35	38	6	v
	△	TH2F32U1	1.5P									
2'1/2-11	△	TH2F40U	3.5P	II	75.184	145	65	55	41	44	8	v
3'-11	△	TH2F48U	3.5P	II	87.844	155	65	65	50	52	8	v
3'1/2-11	△	TH2F56U	3.5P	II	100.330	165	68	70	54	58	8	v
4'-11	△	TH2F64U	3.5P	II	113.030	170	70	75	58	62	10	v

PF(LH) For PF Left Hand Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	TH2F02K--L	3.5P	II	9.728	55	19	8	6	9	4	v
1/4-19	△	TH2F04--L	3.5P	II	13.157	62	28	11	9	12	4	v
3/8-19	△	TH2F06--L	3.5P	II	16.662	65	28	14	11	14	4	v
1/2-14	△	TH2F08Q--L	3.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	△	TH2F12Q--L	3.5P	II	26.441	85	35	23	17	20	4	v
1'-11	△	TH2F16U--L	3.5P	II	33.249	95	45	26	21	24	4	v
1'1/4-11	△	TH2F20U--L	3.5P	II	41.910	105	45	32	26	30	4	v
1'1/2-11	△	TH2F24U--L	3.5P	II	47.803	110	45	38	29	32	6	v
2'-11	△	TH2F32U--L	3.5P	II	59.614	120	50	46	35	38	6	v

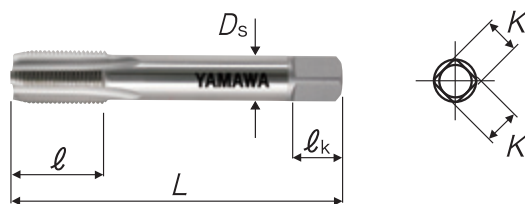
Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

LS-PF

Long Shank Taps for PF Threads



Segment : 1G



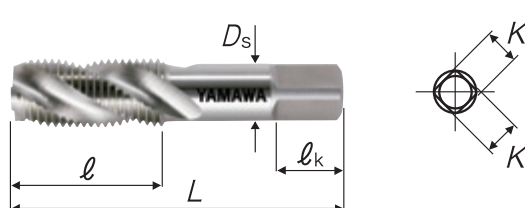
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/8-28	○	L10F02K	3.5P	II	9.728	100	19	8	6	9	4	v
	○	L15F02K				150						
	△	L20F02K				200						
1/4-19	○	L10F04-	3.5P	II	13.157	100	28	11	9	12	4	v
	○	L15F04-				150						
	△	L20F04-				200						
3/8-19	○	L10F06-	3.5P	II	16.662	100	28	14	11	14	4	v
	○	L15F06-				150						
	△	L20F06-				200						
1/2-14	○	L15F08Q	3.5P	II	20.955	150	35	18	14	17	4	v
	△	L20F08Q				200						
3/4-14	○	L15F12Q	3.5P	II	26.441	150	35	23	17	20	4	v
	△	L20F12Q				200						
1'-11	○	L15F16U	3.5P	II	33.249	150	45	26	21	24	4	v
	△	L20F16U				200						

SP-PF

Spiral Fluted Taps for PF Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/8-28	○	SH2F02K	2.5P	II	9.728	55	19	8	6	9	3	v
1/4-19	○	SH2F04-	2.5P	II	13.157	62	28	11	9	12	3	v
3/8-19	○	SH2F06-	2.5P	II	16.662	65	28	14	11	14	3	v
1/2-14	○	SH2F08Q	2.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	○	SH2F12Q	2.5P	II	26.441	85	35	23	17	20	4	v
1'-11	○	SH2F16U	2.5P	II	33.249	95	45	26	21	24	4	v
1'1/4-11	△	SH2F20U	2.5P	II	41.910	105	45	32	26	30	4	v
1'1/2-11	△	SH2F24U	2.5P	II	47.803	110	45	38	29	32	4	v
2'-11	△	SH2F32U	2.5P	II	59.614	120	50	46	35	38	4	v

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

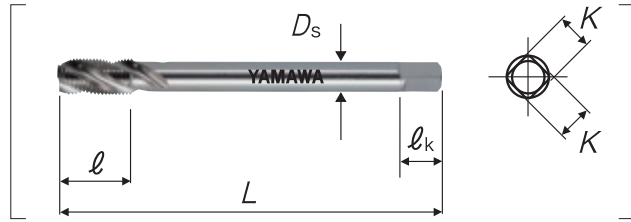
Overall length	Thread length	Shank dia.	Size of square	Length of square
L	l	D_s	K	l_k

LS-SP-PF

Long Shank Spiral Fluted Taps for PF Threads



Segment : 1G



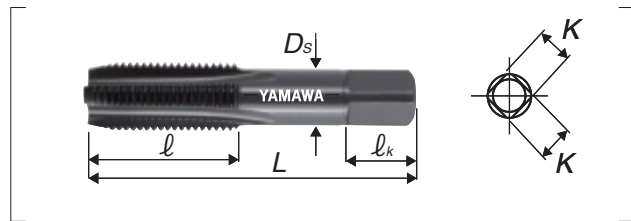
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	SH2F02KL10	2.5P	II	9.728	100	19	8	6	9	3	v
	△	SH2F02KL12				120						
	△	SH2F02KL15				150						
1/4-19	△	SH2F04-L10	2.5P	II	13.157	100	28	11	9	12	3	v
	△	SH2F04-L12				120						
	△	SH2F04-L15				150						
3/8-19	△	SH2F06-L12	2.5P	II	16.662	120	28	14	11	14	3	v
	△	SH2F06-L15				150						
1/2-14	△	SH2F08QL15	2.5P	II	20.955	150	35	18	14	17	4	v
3/4-14	△	SH2F12QL15	2.5P	II	26.441	150	35	23	17	20	4	v
1'-11	△	SH2F16UL15	2.5P	II	33.249	150	45	26	21	24	4	v
	△	SH2F16UL20				200						

SU-PF

For PF Threads, for Stainless Steels



Segment : 1G



SU-PF is suitable for stainless steels, chrome steels and chrome molybdenum steels.

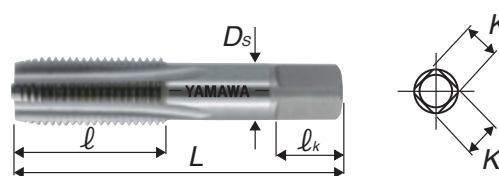
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	TU2F02K	3.5P	II	9.728	55	19	8	6	9	4	v
1/4-19	△	TU2F04-	3.5P	II	13.157	62	28	11	9	12	4	v
3/8-19	△	TU2F06-	3.5P	II	16.662	65	28	14	11	14	4	v
1/2-14	△	TU2F08Q	3.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	△	TU2F12Q	3.5P	II	26.441	85	35	23	17	20	4	v
1'-11	△	TU2F16U	3.5P	II	33.249	95	45	26	21	24	4	v

FC-PF

For PF Threads, for Cast Irons



Segment : 1G



FC-PF is suitable for hard and abrasive materials such as cast irons.

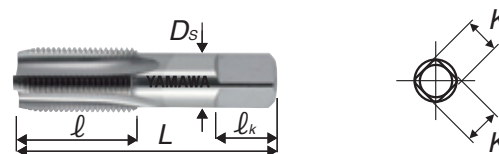
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	FCPF02K	3.5P	II	9.728	55	19	8	6	9	4	v
1/4-19	△	FCPF04-	3.5P	II	13.157	62	28	11	9	12	4	v
3/8-19	△	FCPF06-	3.5P	II	16.662	65	28	14	11	14	4	v
1/2-14	△	FCPF08Q	3.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	△	FCPF12Q	3.5P	II	26.441	85	35	23	17	20	4	v
1'-11	△	FCPF16U	3.5P	II	33.249	95	45	26	21	24	4	v
1'1/4-11	△	FCPF20U	3.5P	II	41.910	105	45	32	26	30	4	v
1'1/2-11	△	FCPF24U	3.5P	II	47.803	110	45	38	29	32	6	v
2'-11	△	FCPF32U	3.5P	II	59.614	120	50	46	35	38	6	v

CT-PF

Cemented Carbide Taps for PF Threads



Segment : 1L



CT-PF is suitable for hard and abrasive materials such as cast irons.

Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For Pipe Threads												
1/8-28	△	TCPF02K	3.5P	II	9.728	55	19	8	6	9	4	v
1/4-19	△	TCPF04-	3.5P	II	13.157	62	28	11	9	12	4	v
3/8-19	△	TCPF06-	3.5P	II	16.662	65	28	14	11	14	4	v
1/2-14	△	TCPF08Q	3.5P	II	20.955	80	35	18	14	17	4	v
3/4-14	△	TCPF12Q	3.5P	II	26.441	85	35	23	17	20	4	v
1'-11	△	TCPF16U	3.5P	II	33.249	95	45	26	21	24	4	v

Spiral Fluted Taps (for blind hole) | Spiral Fluted Taps (for through hole) | Spiral Pointed Taps | Hand Taps | Cemented Carbide Taps | Roll Taps | Special Thread Taps Simple measuring tools | Pipe Taps | MC Helical Thread Mills | Dies | Center Drills | Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

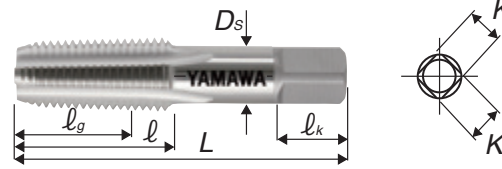
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

NPT

For NPT Threads



Segment : 1G



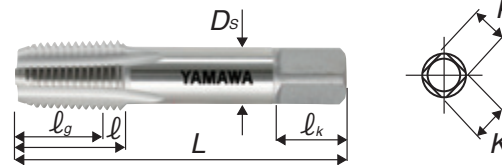
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For American Pipe Threads													
1/16-27	○	TNPT01L	3P	ANSI G	7.770	54	17	12.00	8	6	9	4	i
1/8-27	○	TNPT02L	3P	ANSI G	10.117	55	19	12.05	8	6	9	4	h
1/4-18	○	TNPT04O	3P	ANSI G	13.426	62	28	17.45	11	9	12	4	h
3/8-18	○	TNPT06O	3P	ANSI G	16.866	65	28	17.65	14	11	14	4	h
1/2-14	○	TNPT08Q	3P	ANSI G	20.980	80	35	22.85	18	14	17	4	h
3/4-14	○	TNPT12Q	3P	ANSI G	26.325	85	35	22.95	23	17	20	4	h
1'-11.5	○	TNPT16T	3P	ANSI G	32.934	95	45	27.40	26	21	24	5	h
1'1/4-11.5	△	TNPT20T	3P	ANSI G	41.689	105	45	28.10	32	26	30	5	h
1'1/2-11.5	△	TNPT24T	3P	ANSI G	47.760	110	45	28.40	38	29	32	6	h
2'-11.5	△	TNPT32T	3P	ANSI G	59.797	120	50	28.00	46	35	38	6	h
2'1/2-8	△	TNPT40X	3P	ANSI G	72.273	145	65	40.80	55	41	44	8	h
3'-8	△	TNPT48X	3P	ANSI G	88.184	155	65	42.95	65	50	52	8	h

S-NPT

For NPT Threads Short Type



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For American Pipe Threads													
1/16-27	△	TSNPT01L	3P	ANSI G	7.770	54	14	10.10	8	6	9	4	i
1/8-27	△	TSNPT02L	3P	ANSI G	10.117	55	16.5	10.50	8	6	9	4	h
1/4-18	△	TSNPT04O	3P	ANSI G	13.426	62	19.5	12.50	11	9	12	4	h
3/8-18	△	TSNPT06O	3P	ANSI G	16.866	65	21	14.00	14	11	14	4	h
1/2-14	△	TSNPT08Q	3P	ANSI G	20.980	80	27	17.00	18	14	17	4	h
3/4-14	△	TSNPT12Q	3P	ANSI G	26.325	85	29	19.00	23	17	20	4	h
1'-11.5	△	TSNPT16T	3P	ANSI G	32.934	95	35	22.00	26	21	24	5	h
1'1/4-11.5	△	TSNPT20T	3P	ANSI G	41.689	105	37.5	24.50	32	26	30	5	h
1'1/2-11.5	△	TSNPT24T	3P	ANSI G	47.760	110	38.5	25.50	38	29	32	6	h
2'-11.5	△	TSNPT32T	3P	ANSI G	59.797	120	42.5	27.50	46	35	38	6	h

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented
Carbide Taps
Roll Taps
Special Thread Taps
Simple measuring tools
Pipe Taps
MC Helical
Thread Mills
Dies
Center Drills
Centering Tools

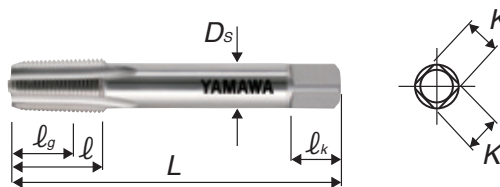
LS-NPT

Long Shank Taps for NPT Threads

HSS



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For American Pipe Threads													
1/16-27	△	TNPT01LL10	3P	ANSI G	7.770	100	17	12.00	8	6	9	4	i
1/8-27	△	TNPT02LL10	3P	ANSI G	10.117	100	19	12.05	8	6	9	4	h
	△	TNPT02LL15				150							
1/4-18	△	TNPT04OL10	3P	ANSI G	13.426	100	28	17.45	11	9	12	4	h
	△	TNPT04OL15				150							
3/8-18	△	TNPT06OL10	3P	ANSI G	16.866	100	28	17.65	14	11	14	4	h
	△	TNPT06OL15				150							
1/2-14	△	TNPT08QL15	3P	ANSI G	20.980	150	35	22.85	18	14	17	4	h
3/4-14	△	TNPT12QL15	3P	ANSI G	26.325	150	35	22.95	23	17	20	4	h
1'-11.5	△	TNPT16TL15	3P	ANSI G	32.934	150	45	27.40	26	21	24	5	h

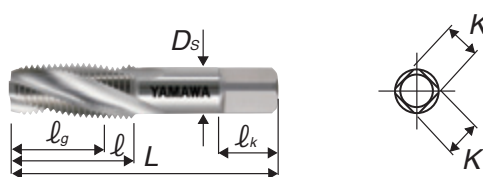
SP-NPT

Spiral Fluted Taps for NPT Threads

HSS



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l _g (mm)	D _s (mm)	K (mm)	l _k (mm)	Flute	Type
For American Pipe Threads													
1/16-27	△	SNPT01L	2.5P	ANSI G	7.770	54	17	12.00	8	6	9	3	i
1/8-27	△	SNPT02L	2.5P	ANSI G	10.117	55	19	12.05	8	6	9	3	h
1/4-18	△	SNPT04O	2.5P	ANSI G	13.426	62	28	17.45	11	9	12	3	h
3/8-18	△	SNPT06O	2.5P	ANSI G	16.866	65	28	17.65	14	11	14	3	h
1/2-14	△	SNPT08Q	2.5P	ANSI G	20.980	80	35	22.85	18	14	17	4	h
3/4-14	△	SNPT12Q	2.5P	ANSI G	26.325	85	35	22.95	23	17	20	4	h
1'-11.5	△	SNPT16T	2.5P	ANSI G	32.934	95	45	27.40	26	21	24	4	h

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

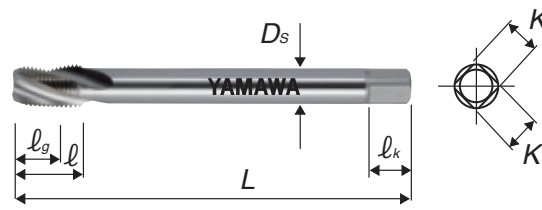
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

LS-SP-S-NPT

Long Shank Spiral Fluted Taps for NPT Threads Short Type



Segment : 1G



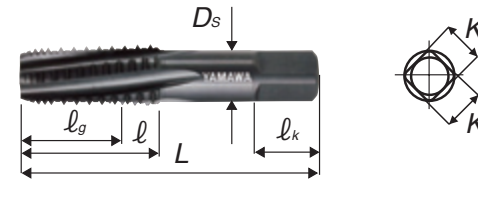
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For American Pipe Threads													
1/8-27	△	SSNPT02LL10	2.5P	ANSI G	10.117	100	16.5	10.50	8	6	9	3	h
1/4-18	△	SSNPT04OL15	2.5P	ANSI G	13.426	150	19.5	12.50	11	9	12	3	h
3/8-18	△	SSNPT06OL15	2.5P	ANSI G	16.866	150	21	14.00	14	11	14	3	h
1/2-14	△	SSNPT08QL15	2.5P	ANSI G	20.980	150	27	17.00	18	14	17	4	h
3/4-14	△	SSNPT12QL15	2.5P	ANSI G	26.325	150	29	19.00	23	17	20	4	h

INT-NPT

Interrupted Spiral Fluted Taps (LH spiral flutes) for NPT Threads



Segment : 1G



INT-NPT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque. INT-NPT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

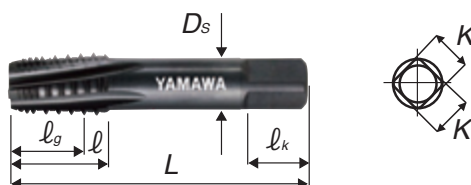
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For American Pipe Threads													
1/16-27	△	TINPT01L	3P	ANSI G	7.770	54	17	12.00	8	6	9	5	i
1/8-27	△	TINPT02L	3P	ANSI G	10.117	55	19	12.05	8	6	9	5	h
1/4-18	△	TINPT04O	3P	ANSI G	13.426	62	28	17.45	11	9	12	5	h
3/8-18	△	TINPT06O	3P	ANSI G	16.866	65	28	17.65	14	11	14	5	h
1/2-14	△	TINPT08Q	3P	ANSI G	20.980	80	35	22.85	18	14	17	5	h
3/4-14	△	TINPT12Q	3P	ANSI G	26.325	85	35	22.95	23	17	20	5	h
1'-11.5	△	TINPT16T	3P	ANSI G	32.934	95	45	27.40	26	21	24	5	h
1'1/4-11.5	△	TINPT20T	3P	ANSI G	41.689	105	45	28.10	32	26	30	5	h
1'1/2-11.5	△	TINPT24T	3P	ANSI G	47.760	110	45	28.40	38	29	32	7	h
2'-11.5	△	TINPT32T	3P	ANSI G	59.797	120	50	28.00	46	35	38	6	h

INT-S-NPT

Interrupted Spiral Fluted Taps (LH spiral flutes) for NPT Threads Short Type



Segment : 1G



INT-S-NPT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque. INT-S-NPT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

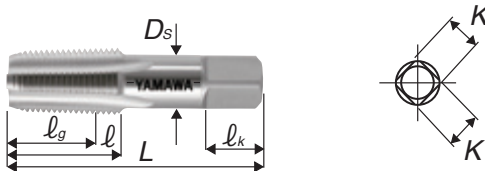
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For American Pipe Threads													
1/16-27	△	TISNT01L	3P	ANSI G	7.770	54	14	10.10	8	6	9	3	i
1/8-27	△	TISNT02L	3P	ANSI G	10.117	55	16.5	10.50	8	6	9	5	h
1/4-18	△	TISNT04O	3P	ANSI G	13.426	62	19.5	12.50	11	9	12	5	h
3/8-18	△	TISNT06O	3P	ANSI G	16.866	65	21	14.00	14	11	14	5	h
1/2-14	△	TISNT08Q	3P	ANSI G	20.980	80	27	17.00	18	14	17	5	h
3/4-14	△	TISNT12Q	3P	ANSI G	26.325	85	29	19.00	23	17	20	5	h
1'-11.5	△	TISNT16T	3P	ANSI G	32.934	95	35	22.00	26	21	24	5	h
1'1/4-11.5	△	TISNT20T	3P	ANSI G	41.689	105	37.5	24.50	32	26	30	5	h
1'1/2-11.5	△	TISNT24T	3P	ANSI G	47.760	110	38.5	25.50	38	29	32	7	h
2'-11.5	△	TISNT32T	3P	ANSI G	59.797	120	42.5	27.50	46	35	38	7	h

NPTF

For NPTF Dryseal Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	lg (mm)	Ds (mm)	K (mm)	lk (mm)	Flute	Type
For American Pipe Threads													
1/16-27	○	TNTF01L	3P	ANSI G	7.770	54	17	12.00	8	6	9	4	i
1/8-27	○	TNTF02L	3P	ANSI G	10.117	55	19	12.05	8	6	9	4	h
1/4-18	○	TNTF04O	3P	ANSI G	13.426	62	28	17.45	11	9	12	4	h
3/8-18	○	TNTF06O	3P	ANSI G	16.866	65	28	17.65	14	11	14	4	h
1/2-14	○	TNTF08Q	3P	ANSI G	20.980	80	35	22.85	18	14	17	4	h
3/4-14	○	TNTF12Q	3P	ANSI G	26.325	85	35	22.95	23	17	20	4	h
1'-11.5	○	TNTF16T	3P	ANSI G	32.934	95	45	27.40	26	21	24	5	h
1'1/4-11.5	△	TNTF20T	3P	ANSI G	41.689	105	45	28.10	32	26	30	5	h
1'1/2-11.5	△	TNTF24T	3P	ANSI G	47.760	110	45	28.40	38	29	32	6	h
2'-11.5	△	TNTF32T	3P	ANSI G	59.797	120	50	28.00	46	35	38	6	h

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

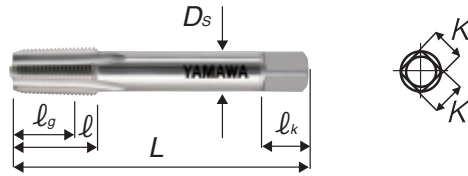
Overall length	Thread length	Basic dia. position	Shank dia.	Size of square	Length of square
L	l	l_g	D_s	K	l_k

LS-NPTF

Long Shank Taps for NPTF Dryseal Threads



Segment : 1G



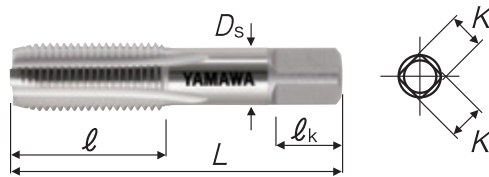
Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	l_g (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For American Pipe Threads													
1/16-27	△	TNTF01LL10	3P	ANSI G	7.770	100	17	12.00	8	6	9	4	i
1/8-27	△	TNTF02LL10	3P	ANSI G	10.117	100	19	12.05	8	6	9	4	h
	△	TNTF02LL15				150							
1/4-18	△	TNTF04OL10	3P	ANSI G	13.426	100	28	17.45	11	9	12	4	h
	△	TNTF04OL15				150							
3/8-18	△	TNTF06OL10	3P	ANSI G	16.866	100	28	17.65	14	11	14	4	h
	△	TNTF06OL15				150							
1/2-14	△	TNTF08QL15	3P	ANSI G	20.980	150	35	22.85	18	14	17	4	h
3/4-14	△	TNTF12QL15	3P	ANSI G	26.325	150	35	22.95	23	17	20	4	h
1'-11.5	△	TNTF16TL15	3P	ANSI G	32.934	150	45	27.40	26	21	24	5	h

NPS

For NPS Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	l (mm)	D_s (mm)	K (mm)	l_k (mm)	Flute	Type
For American Pipe Threads												
1/16-27	△	TNPS01L	5P	ANSI G	7.770	54	17	8	6	9	4	v
1/8-27	△	TNPS02L	5P	ANSI G	10.117	55	19	8	6	9	4	v
1/4-18	△	TNPS04O	5P	ANSI G	13.426	62	28	11	9	12	4	v
3/8-18	△	TNPS06O	5P	ANSI G	16.866	65	28	14	11	14	4	v
1/2-14	△	TNPS08Q	5P	ANSI G	20.980	80	35	18	14	17	4	v
3/4-14	△	TNPS12Q	5P	ANSI G	26.325	85	35	23	17	20	4	v
1'-11.5	△	TNPS16T	5P	ANSI G	32.934	95	45	26	21	24	5	v
1'1/4-11.5	△	TNPS20T	5P	ANSI G	41.689	105	45	32	26	30	5	v
1'1/2-11.5	△	TNPS24T	5P	ANSI G	47.760	110	45	38	29	32	6	v
2'-11.5	△	TNPS32T	5P	ANSI G	59.797	120	50	46	35	38	6	v

Concerning specification, please refer to spec.dwg.P81 of technical information.
For improvement, Spec may change without advance notice.

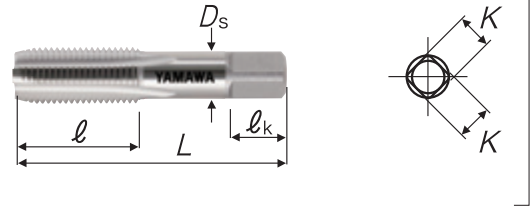
Overall length	Thread length	Shank dia.	Size of square	Length of square
L	ℓ	D_s	K	ℓ_k

NPSF

For NPSF Dryseal Threads



Segment : 1G



Size	Stock	Code	Chamfer	Class	Basic Major Dia (mm)	L (mm)	ℓ (mm)	D_s (mm)	K (mm)	ℓ_k (mm)	Flute	Type
For American Pipe Threads												
1/16-27	△	TNSF01L	5P	ANSIG	7.770	54	17	8	6	9	4	v
1/8-27	△	TNSF02L	5P	ANSIG	10.117	55	19	8	6	9	4	v
1/4-18	△	TNSF04O	5P	ANSIG	13.426	62	28	11	9	12	4	v
3/8-18	△	TNSF06O	5P	ANSIG	16.866	65	28	14	11	14	4	v
1/2-14	△	TNSF08Q	5P	ANSIG	20.980	80	35	18	14	17	4	v
3/4-14	△	TNSF12Q	5P	ANSIG	26.325	85	35	23	17	20	4	v
1'-11.5	△	TNSF16T	5P	ANSIG	32.934	95	45	26	21	24	5	v
1'1/4-11.5	△	TNSF20T	5P	ANSIG	41.689	105	45	32	26	30	5	v
1'1/2-11.5	△	TNSF24T	5P	ANSIG	47.760	110	45	38	29	32	6	v
2'-11.5	△	TNSF32T	5P	ANSIG	59.797	120	50	46	35	38	6	v

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

MC-Helical Thread Mills



MC-CSLC
MC-HLC

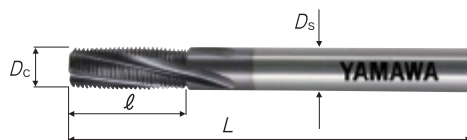
MC-1
MC-3

MC-CSLC

Cemented Carbide MC Helical Thread Mills



Segment : 1L



MC-CSLC is the tools cutting threads by using helical interpolating process. One MC-CSLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

Size	Outside Diameter D_c (mm)	Pitch	Stock	Code	L (mm)	l (mm)	D_s (mm)	Number of Flutes	Min. Hole Size	Type
For Metric Threads										
035083N080M	3.5	0.8	△	CSLCN3.5K	50	8	6	3	5	q
035083N075M	3.5	0.75	△	CSLCN3.5J	50	8	6	3	5	q
040123N100M	4	1	△	CSLCN4.0M	60	12	6	3	6	q
060163N125M	6	1.25	○	CSLCN6.0N	70	16	8	3	8	q
060163N100M	6	1	○	CSLCN6.0M	70	16	8	3	8	q
060163N050M	6	0.5	○	CSLCN6.0G	70	16	8	3	8	q
075203N150M	7.5	1.5	○	CSLCN7.5O	70	20	8	3	10	q
075203N125M	7.5	1.25	△	CSLCN7.5N	70	20	8	3	10	q
080203N100M	8	1	△	CSLCN8.0M	70	20	8	3	12	q
080203N050M	8	0.5	△	CSLCN8.0G	70	20	8	3	12	q
090244N175M	9	1.75	○	CSLCN9.0P	90	24	10	4	12	q
090244N125M	9	1.25	○	CSLCN9.0N	90	24	10	4	12	q
100254N200M	10	2	○	CSLCN010Q	90	25	10	4	14	q
100254N150M	10	1.5	○	CSLCN010O	90	25	10	4	14	q
100254N100M	10	1	○	CSLCN010M	90	25	10	4	14	q
100254N050M	10	0.5	○	CSLCN010G	90	25	10	4	14	q
120304N200M	12	2	○	CSLCN012Q	100	30	12	4	17	q
120304N150M	12	1.5	○	CSLCN012O	100	30	12	4	17	q
120304N100M	12	1	○	CSLCN012M	100	30	12	4	17	q
160404N250M	16	2.5	○	CSLCN016R	110	40	16	4	23	q
160404N200M	16	2	○	CSLCN016Q	110	40	16	4	23	q
160404N150M	16	1.5	○	CSLCN016O	110	40	16	4	23	q
200505N300M	20	3	○	CSLCN020S	140	50	20	5	28	q
200505N200M	20	2	○	CSLCN020Q	140	50	20	5	28	q
200505N150M	20	1.5	○	CSLCN020O	140	50	20	5	28	q

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

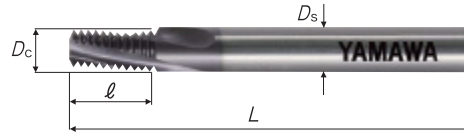
Overall length	Thread length	Shank dia.
L	ℓ	D_s

MC-CSLC

Cemented Carbide MC Helical Thread Mills



Segment : 1L



MC-CSLC is the tools cutting threads by using helical interpolating process. One MC-CSLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

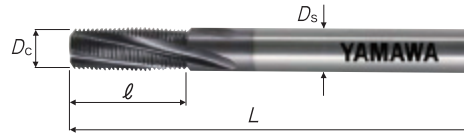
Size	Outside Diameter D_c (mm)	Number of Threads	Stock	Code	L (mm)	ℓ (mm)	D_s (mm)	Number of Flutes	Processable thread size	Type
For PT Threads										
065103X28R	6.5	28	○	CSLCX6.5KR	70	10	8	3	1/8	s
080153X19R	8	19	○	CSLCX8.0-R	70	15	8	3	1/4 • 3/8	s
120204X14R	12	14	○	CSLCX012QR	80	20	12	4	1/2 • 3/4	s
160264X11R	16	11	○	CSLCX016UR	90	26	16	4	1'~	s
200305X11R	20	11	○	CSLCX020UR	110	30	20	5	1'~	s

MC-CSLC

Cemented Carbide MC Helical Thread Mills



Segment : 1L



MC-CSLC is the tools cutting threads by using helical interpolating process. One MC-CSLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

Size	Outside Diameter D_c (mm)	Number of Threads	Stock	Code	L (mm)	ℓ (mm)	D_s (mm)	Number of Flutes	Processable thread size	Type
For PF Threads										
065103X28G	6.5	28	○	CSLCX6.5KG	70	10	8	3	1/8	q
080153X19G	8	19	○	CSLCX8.0-G	70	15	8	3	1/4 • 3/8	q
120204X14G	12	14	○	CSLCX012QG	80	20	12	4	1/2 • 3/4	q
160264X11G	16	11	○	CSLCX016UG	90	26	16	4	1'~	q
200305X11G	20	11	○	CSLCX020UG	110	30	20	5	1'~	q

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

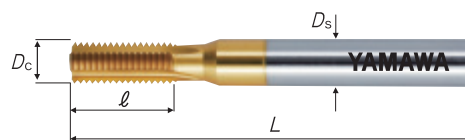
Centering Tools

MC-HLC

MC Helical Thread Mills

HSS-Co

TiN



Segment : 57

MC-HLC is the tools cutting threads by using helical interpolating process. One MC-HLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

Size	Outside Diameter D_c (mm)	Pitch	Stock	Code	L (mm)	l (mm)	D_s (mm)	Number of Flutes	Min. Hole Size	Type
For Metric Threads										
10204N150M	10	1.5	△	HLCN010O	90	20	10	4	14	r
10204N100M	10	1	△	HLCN010M	90	20	10	4	14	r
12254N200M	12	2	△	HLCN012Q	100	25	12	4	17	r
12254N150M	12	1.5	△	HLCN012O	100	25	12	4	17	r
12254N100M	12	1	△	HLCN012M	100	25	12	4	17	r
16304N250M	16	2.5	△	HLCN016R	110	30	16	4	23	r
16304N200M	16	2	△	HLCN016Q	110	30	16	4	23	r
16304N150M	16	1.5	△	HLCN016O	110	30	16	4	23	r
16304N100M	16	1	△	HLCN016M	110	30	16	4	23	r
20505N350M	20	3.5	△	HLCN020T	140	50	20	5	28	r
20505N300M	20	3	△	HLCN020S	140	50	20	5	28	r
20505N200M	20	2	△	HLCN020Q	140	50	20	5	28	r
20505N150M	20	1.5	△	HLCN020O	140	50	20	5	28	r
20505N100M	20	1	△	HLCN020M	140	50	20	5	28	r
25506N350M	25	3.5	△	HLCN025T	160	50	20	6	36	r
25506N300M	25	3	△	HLCN025S	160	50	20	6	36	r
25506N200M	25	2	△	HLCN025Q	160	50	20	6	36	r
25506N150M	25	1.5	△	HLCN025O	160	50	20	6	36	r
25506N100M	25	1	△	HLCN025M	160	50	20	6	36	r
32506N300M	32	3	△	HLCN032S	200	50	25	6	45	r
32506N200M	32	2	△	HLCN032Q	200	50	25	6	45	r
32506N150M	32	1.5	△	HLCN032O	200	50	25	6	45	r

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

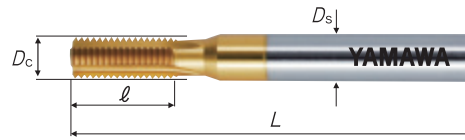
Centering Tools

Concerning specification, please refer to spec dwg. P81 of technical information.
For improvement, Spec may change without advance notice.

Overall length	Thread length	Shank dia.
L	ℓ	D_s

MC-HLC

MC Helical Thread Mills



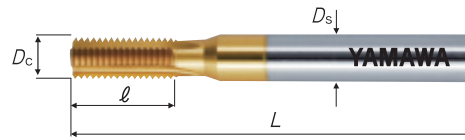
Segment : 57

MC-HLC is the tools cutting threads by using helical interpolating process. One MC-HLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

Size	Outside Diameter D_c (mm)	Number of Threads	Stock	Code	L (mm)	ℓ (mm)	D_s (mm)	Number of Flutes	Processable thread size	Type
For PT Threads										
10154X19R	10	19	△	HLCX010-R	70	15	10	4	3/8	s
12204X14R	12	14	△	HLCX012QR	80	20	12	4	1/2 · 3/4	s
20305X11R	20	11	△	HLCX020UR	100	30	20	5	1' · 2'	s
32506X11R	32	11	△	HLCX032UR	200	50	25	6	2' 1/2 ~ 6'	s

MC-HLC

MC Helical Thread Mills



Segment : 57

MC-HLC is the tools cutting threads by using helical interpolating process. One MC-HLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

Size	Outside Diameter D_c (mm)	Number of Threads	Stock	Code	L (mm)	ℓ (mm)	D_s (mm)	Number of Flutes	Processable thread size	Type
For PF Threads										
10154X19G	10	19	△	HLCX010-G	70	15	10	4	3/8	r
12204X14G	12	14	△	HLCX012QG	80	20	12	4	1/2 · 3/4	r
20305X11G	20	11	△	HLCX020UG	100	30	20	5	1' · 2'	r
32506X11G	32	11	△	HLCX032UG	200	50	25	6	2' 1/2 ~ 6'	r

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps (single measuring tools)

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Dies



SD-Y	Di-1	AR-D PT	Di-19
AR-D	Di-1	AR-D PT HSS	Di-19
AR-D(LH)	Di-7	AR-D PT(LH)	Di-19
AD-S ST	Di-9	AR-D PS	Di-20
AD-S BR	Di-11	AR-D PS(LH)	Di-20
AR-D HSS	Di-12	AR-D PF	Di-20
AR-D HSS(LH)	Di-14	AR-D PF HSS	Di-21
HS-D	Di-14	AR-D PF(LH)	Di-21
MS-RS-D/RS-D	Di-16	SR-D NPT	Di-21
N-RSD	Di-17	AR-D NPT	Di-22
SP-D	Di-17	SR-D NPTF	Di-22
PO-D	Di-17	AR-D NPTF	Di-22
SR-D PT	Di-18	AR-D NPSM	Di-23
SR-D PT HSS	Di-18	RD-DH	Di-23
SR-D PT(LH)	Di-18	RD-DC	Di-23

SD-Y

Solid Round Dies



※when no recess in the rear face.



Segment : 32

*SD-Y are available while supplies last

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Threads								
M2x0.4	○	DDG2.0E	6G	16	7	3	○	Da
M3x0.5	○	DEG3.0G	6G	20	7	3		Da
M4x0.7	○	DEG4.0I	6G	20	7	3		Da
M5x0.8	○	DEG5.0K	6G	20	7	4		Da
M6x1	○	DEG6.0M	6G	20	7	4		Da
M8x1.25	○	DGG8.0N	6G	25	9	4		Da
M10x1.5	○	DGG010O	6G	25	9	4		Da
M12x1.75	○	DJG012P	6G	38	13	4		Da
M16x2	○	DMG016Q	6G	50	16	4		Da
M20x2.5	○	DMG020R	6G	50	16	5		Da

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M1.1x0.25	△	GD21.1B	II	16	5	3	○	Db
	△	GE21.1B		20	7		○	Dc
M1.2x0.25	○	GD21.2B	II	16	5	3	○	Db
	○	GE21.2B		20	7		○	Dc
M1.2x0.2	△	GD21.2A	II	16	5	3	○	Db
	△	GE21.2A		20	7		○	Dc
M1.4x0.3	○	GD21.4C	II	16	5	3	○	Db
	○	GE21.4C		20	7		○	Dc
M1.4x0.2	△	GD21.4A	II	16	5	3	○	Db
	△	GE21.4A		20	7		○	Dc
M1.6x0.35	○	GD21.6D	II	16	5	3	○	Db
	○	GE21.6D		20	7		○	Dc
M1.6x0.2	△	GD21.6A	II	16	5	3	○	Db
	△	GE21.6A		20	7		○	Dc
M1.7x0.35	○	GD21.7D	II	16	5	3	○	Db
	○	GE21.7D		20	7		○	Dc
M1.7x0.2	△	GD21.7A	II	16	5	3	○	Db
	△	GE21.7A		20	7		○	Dc
M1.8x0.35	△	GD21.8D	II	16	5	3	○	Db
	△	GE21.8D		20	7		○	Dc
M1.8x0.2	△	GD21.8A	II	16	5	3	○	Db
	△	GE21.8A		20	7		○	Dc
M2x0.4	○	GD22.0E	II	16	5	3	○	Db
	◎	GE22.0E		20	7		○	Dc
	△	GG22.0E		25	9		○	Dc
M2x0.25	△	GD22.0B	II	16	5	3	○	Db
	△	GE22.0B		20	7		○	Dc
M2.2x0.45	△	GD22.2F	II	16	5	3	○	Db
	△	GE22.2F		20	7		○	Dc
M2.2x0.25	△	GD22.2B	II	16	5	3	○	Db
	△	GE22.2B		20	7		○	Dc
M2.3x0.4	△	GD22.3E	II	16	5	3	○	Db
	○	GE22.3E		20	7		○	Dc
M2.3x0.25	△	GD22.3B	II	16	5	3	○	Db
	△	GE22.3B		20	7		○	Dc
M2.5x0.45	△	GD22.5F	II	16	5	3	○	Db
	◎	GE22.5F		20	7		○	Dc
	△	GG22.5F		25	9		○	Dc
M2.5x0.35	△	GD22.5D	II	16	5	3	○	Db
	△	GE22.5D		20	7		○	Dc
M2.6x0.45	△	GD22.6F	II	16	5	3	○	Db
	◎	GE22.6F		20	7		○	Dc

AR-D

Adjustable Thread Cutting Round Dies



※when no recess in the rear face.



Segment : 35

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Threads								
M1x0.25	○	GD21.0B	II	16	5	3	○	Db
	○	GE21.0B		20	7		○	Dc
M1x0.2	△	GD21.0A	II	16	5	3	○	Db
	△	GE21.0A		20	7		○	Dc

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type	Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M2.6×0.45	△	GG22.6F	II	25	9	3	○	Dc	M5.5×0.9	△	GG25.5L	II	25	9	4		Dc
M2.6×0.35	△	GD22.6D	II	16	5	3	○	Db	M5.5×0.75	△	GE25.5J	II	20	7	4		Dc
	△	GE22.6D		20	7		○	Dc	M5.5×0.5	△	GE25.5G	II	20	7	4	○	Dc
M3×0.5	△	GD23.0G	II	16	5	3		Db	△	GG25.5G	25		9	○			
	◎	GE23.0G		20	7		○	Dc	◎	GE26.0M	20	7					
	○	GG23.0G		25	9		○		◎	GG26.0M	25	9	4	○	Dc		
3M0.6	△	GJ23.0G	II	38	13		○		○	GJ26.0M	38	13		○			
	△	GD23.0H		16	5	3		Db	△	GM26.0M	50	16		○			
	△	GE23.0H		20	7		○	Dc	○	GE26.0J	20	7					
△	GG23.0H	25	9	○			○	GG26.0J	25	9	4		Dc				
M3×0.35	○	GE23.0D	II	20	7	3	○		△	GJ26.0J	38	13		○			
	△	GG23.0D		25	9		○	Dc	M6×0.5	○	GE26.0G	20	7	4		Dc	
M3.5×0.6	△	GD23.5H	II	16	5	4		Db	○	GG26.0G	25	9	○				
	○	GE23.5H		20	7		3		Dc	○	GG27.0M	25	9				
	△	GG23.5H		25	9			○		△	GJ27.0M	38	13	4	○	Dc	
M3.5×0.5	△	GE23.5G	II	20	7	3		Dc	△	GM27.0M	50	16		○			
M3.5×0.35	○	GE23.5D	II	20	7	3	○		M7×0.75	○	GG27.0J	II	25	9	4		Dc
	△	GG23.5D		25	9		○	Dc	M7×0.5	○	GG27.0G	II	25	9	4	○	Dc
M4×0.7	△	GD24.0I	II	16	5	4		Db	◎	GG28.0N	25	9					
	◎	GE24.0I		20	7		3		Dc	◎	GJ28.0N	38	13	4		Dc	
	◎	GG24.0I		25	9					○	GM28.0N	50	16				
	△	GJ24.0I		38	13		4	○		○	GG28.0M	25	9				
4M0.75	△	GD24.0J	II	16	5	4		Db	○	GJ28.0M	38	13	4		Dc		
	○	GE24.0J		20	7		3		Dc	△	GM28.0M	50	16				
	△	GG24.0J		25	9					M8×0.75	○	GG28.0J	25	9	4		Dc
M4×0.5	○	GE24.0G	II	20	7	3		Dc	△	GJ28.0J	38	13	○				
	△	GG24.0G		25	9		○		M8×0.5	○	GG28.0G	25	9	4	○	Dc	
M4×0.35	△	GE24.0D	II	20	7	3	○		△	GJ28.0G	38	13	○				
	△	GE24.5J		20	7		4		Dc	△	GG29.0N	25	9	5			
M4.5×0.75	△	GG24.5J	25	9	3			Dc	△	GJ29.0N	38	13	4			Dc	
	△	GE24.5G	20	7	4		Dc	△	GM29.0N	50	16						
M4.5×0.5	△	GG24.5G	25	9		3	○			○	GG29.0M	25	9	5		Dc	
	◎	GE25.0K	20	7	4			△	GJ29.0M	38	13	4					
	◎	GG25.0K	25	9		3		Dc	○	GG29.0J	25	9	5		Dc		
M5×0.8	△	GJ25.0K	II	38	13	4	○		△	GJ29.0J	38	13	4	○			
	△	GE25.0L		20	7		4		Dc	○	GG29.0G	25	9	5	○		
5M0.9	△	GG25.0L	II	25	9	3			Dc	△	GJ29.0G	38	13	4	○		
	△	GE25.0J		20	7		4		Dc	◎	GG2010O	25	9	5			
M5×0.75	△	GG25.0J	25	9	3			Dc	◎	GJ2010O	38	13	4			Dc	
	○	GE25.0G	20	7	4		Dc	○	GM2010O	50	16						
M5×0.5	○	GG25.0G	25	9		3	○			○	GG2010N	25	9	5		Dc	
	△	GE25.5L	II	20	7	4		Dc	○	GJ2010N	38	13	4				

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Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M10x1.25	△	GM2010N	II	50	16	4		Dc
	○	GG2010M		25	9	5		
M10x1	○	GJ2010M	II	38	13	4		Dc
	△	GM2010M		50	16	4		
M10x0.75	○	GG2010J	II	25	9	5		
	○	GJ2010J		38	13	4	○	Dc
M10x0.5	△	GM2010J	II	50	16	4	○	
	○	GG2010G		25	9	5	○	Dc
M10x0.5	△	GJ2010G	II	38	13	4	○	
	△	GJ2011O		II	38	13	4	
M11x1.5	△	GM2011O	II		50	16	4	
	△	GJ2011N		II	38	13	4	
M11x1.25	△	GM2011N	II		50	16	4	
	○	GJ2011M		II	38	13	4	
M11x1	△	GM2011M	II		50	16	4	
	○	GJ2011J		II	38	13	4	○
M11x0.75	△	GJ2011G	II		38	13	4	○
	◎	GJ2012P		II	38	13	4	○
M12x1.75	○	GM2012P	II		50	16	4	
	○	GJ2012O		II	38	13	4	
M12x1.5	△	GM2012O	II		50	16	4	
	○	GJ2012N		II	38	13	4	
M12x1.25	△	GM2012N	II		50	16	4	
	○	GJ2012M		II	38	13	4	
M12x1	△	GM2012M	II		50	16	4	
	○	GJ2012J		II	38	13	4	○
M12x0.75	○	GJ2012G	II		38	13	4	○
	△	GJ2013P		II	38	13	5	
M13x1.75	△	GJ2013O	II		38	13	5	
	△	GJ2013N		II	38	13	5	
M13x1.25	△	GJ2013M	II		38	13	5	
	△	GJ2013J		II	38	13	5	○
M13x0.75	△	GJ2013G	II		38	13	5	○
	○	GJ2014Q		II	38	13	5	
M14x2	○	GM2014Q	II		50	16	4	
	○	GJ2014O		II	38	13	5	
M14x1.5	△	GM2014O	II		50	16	4	
	○	GJ2014N		II	38	13	5	
M14x1.25	△	GM2014N	II		50	16	4	
	○	GJ2014M		II	38	13	5	
M14x1	△	GM2014M	II		50	16	4	
	△	GJ2014J		II	38	13	5	○

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M14x0.5	△	GJ2014G	II	38	13	5	○	Dc
	△	GJ2015Q		II	38	13	5	
M15x2	△	GM2015Q	II		50	16	4	
	△	GJ2015O		II	38	13	5	
M15x1.5	△	GM2015O	II		50	16	4	
	△	GJ2015N		II	38	13	5	
M15x1.25	○	GJ2015M	II		38	13	5	
	△	GM2015M		II	50	16	4	
M15x1	△	GJ2015J	II		38	13	5	○
	△	GJ2015G		II	38	13	5	○
M16x2	◎	GJ2016Q	II		38	13	5	
	◎	GM2016Q		II	50	16	4	
M16x1.5	○	GJ2016O	II		38	13	5	
	○	GM2016O		II	50	16	4	
M16x1.25	△	GJ2016N	II		38	13	5	
	△	GM2016N		II	50	16	4	
M16x1	○	GJ2016M	II		38	13	5	
	○	GM2016M		II	50	16	4	
M16x0.75	△	GJ2016J	II		38	13	5	○
	△	GM2016J		II	50	16	4	○
M16x0.5	△	GJ2016G	II		38	13	5	○
	△	GM2016G		II	50	16	4	○
M17x2	△	GM2017Q	II		50	16	5	
	△	GM2017O		II	50	16	5	
M17x1.5	△	GM2017N	II		50	16	5	
	○	GM2017M		II	50	16	5	
M17x1	△	GM2017G	II		50	16	5	○
	○	GM2018R		II	50	16	5	
M18x2.5	△	GM2018Q	II		50	16	5	
	○	GM2018O		II	50	16	5	
M18x1.5	△	GM2018N	II		50	16	5	
	○	GM2018M		II	50	16	5	
M18x1	△	GM2018J	II		50	16	5	○
	△	GM2018G		II	50	16	5	○
M18x0.5	△	GM2019R	II		50	16	5	
	△	GM2019Q		II	50	16	5	
M19x2	△	GM2019O	II		50	16	5	
	△	GM2019N		II	50	16	5	
M19x1.5	△	GM2019M	II		50	16	5	
	△	GM2019G		II	50	16	5	○
M19x1.25	△	GM2019G	II		50	16	5	○
	◎	GM2020R		II	50	16	5	
M20x2.5	◎	GM2020Q	II		50	16	5	
	○	GM2020Q		II	50	16	5	

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Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type	Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
M20×1.5	○	GM2020O	II	50	16	5		Dc	M30×1.5	○	GR2030O	II	63	20	6		Dc
M20×1.25	△	GM2020N	II	50	16	5		Dc		△	GU2030O		75	25	5		Dc
M20×1	○	GM2020M	II	50	16	5		Dc	M30×1	△	GR2030M	II	63	20	6		Dc
M20×0.75	△	GM2020J	II	50	16	5	○	Dc	M32×3	△	GR2032S	II	63	20	6		Dc
M20×0.5	△	GM2020G	II	50	16	5	○	Dc	M32×2	△	GR2032Q	II	63	20	6		Dc
M21×1.5	△	GM2021O	II	50	16	5		Dc	M32×1.5	△	GR2032O	II	63	20	6		Dc
M21×1	△	GM2021M	II	50	16	5		Dc		△	GU2032O		75	25			Dc
M21×0.5	△	GM2021G	II	50	16	5	○	Dc	M32×1	△	GR2032M	II	63	20	6		Dc
M22×2.5	○	GM2022R	II	50	16	6		Dc	M33×3.5	△	GR2033T	II	63	20	6		Dc
M22×2	△	GM2022Q	II	50	16	6		Dc		△	GU2033T		75	25			Dc
M22×1.5	○	GM2022O	II	50	16	6		Dc	M33×3	△	GR2033S	II	63	20	6		Dc
M22×1.25	△	GM2022N	II	50	16	6		Dc		△	GU2033S		75	25			Dc
M22×1	○	GM2022M	II	50	16	6		Dc	M33×2	△	GR2033Q	II	63	20	6		Dc
M22×0.5	△	GM2022G	II	50	16	6	○	Dc		△	GU2033Q		75	25			Dc
M23×1.5	△	GM2023O	II	50	16	6		Dc	M33×1.5	△	GR2033O	II	63	20	6		Dc
M23×1	△	GM2023M	II	50	16	6		Dc		△	GU2033O		75	25			Dc
M24×3	○	GM2024S	II	50	16	6		Dc	M33×1	△	GR2033M	II	63	20	6		Dc
M24×2	○	GM2024Q	II	50	16	6		Dc		△	GU2033M		75	25			Dc
M24×1.5	○	GM2024O	II	50	16	6		Dc	M34×3	△	GU2034S	II	75	25	6		Dc
M24×1.25	△	GM2024N	II	50	16	6		Dc	M34×2	△	GU2034Q	II	75	25	6		Dc
M24×1	○	GM2024M	II	50	16	6		Dc	M34×1.5	△	GU2034O	II	75	25	6		Dc
M24×0.5	△	GM2024G	II	50	16	6	○	Dc	M34×1	△	GU2034M	II	75	25	6		Dc
M25×3	△	GM2025S	II	50	16	6		Dc	M35×3	△	GU2035S	II	75	25	6		Dc
M25×2	△	GM2025Q	II	50	16	6		Dc	M35×2	△	GU2035Q	II	75	25	6		Dc
M25×1.5	○	GM2025O	II	50	16	6		Dc	M35×1.5	△	GU2035O	II	75	25	6		Dc
M25×1.25	△	GM2025N	II	50	16	6		Dc	M35×1	△	GU2035M	II	75	25	6		Dc
M25×1	△	GM2025M	II	50	16	6		Dc	M36×4	△	GU2036U	II	75	25	6		Dc
M26×2	△	GR2026Q	II	63	20	6		Dc	M36×3	△	GU2036S	II	75	25	6		Dc
M26×1.5	○	GR2026O	II	63	20	6		Dc	M36×2	△	GU2036Q	II	75	25	6		Dc
M26×1	△	GR2026M	II	63	20	6		Dc	M36×1.5	△	GU2036O	II	75	25	6		Dc
M27×3	○	GR2027S	II	63	20	6		Dc	M36×1	△	GU2036M	II	75	25	6		Dc
M27×2	△	GR2027Q	II	63	20	6		Dc	M37×1	△	GU2037M	II	75	25	6		Dc
M27×1.5	○	GR2027O	II	63	20	6		Dc	M38×4	△	GU2038U	II	75	25	6		Dc
M27×1	△	GR2027M	II	63	20	6		Dc	M38×2	△	GU2038Q	II	75	25	6		Dc
M28×2	△	GR2028Q	II	63	20	6		Dc	M38×1.5	△	GU2038O	II	75	25	6		Dc
M28×1.5	△	GR2028O	II	63	20	6		Dc	M38×1	△	GU2038M	II	75	25	6		Dc
M28×1	△	GR2028M	II	63	20	6		Dc	M39×4	△	GU2039U	II	75	25	6		Dc
M30×3.5	○	GR2030T	II	63	20	6		Dc	M39×3	△	GU2039S	II	75	25	6		Dc
	△	GU2030T		75	25	5		Dc	M39×2	△	GU2039Q	II	75	25	6		Dc
M30×3	△	GR2030S	II	63	20	6		Dc	M39×1.5	△	GU2039O	II	75	25	6		Dc
M30×2	△	GR2030Q	II	63	20	6		Dc	M39×1	△	GU2039M	II	75	25	6		Dc
	△	GU2030Q		75	25	5		Dc	M40×3	△	GU2040S	II	75	25	8		Dc

Spiral Fluted Taps (for blind hole)
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Special Thread Taps (simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M40x2	△	GU2040Q	II	75	25	8		Dc
M40x1.5	△	GU2040O	II	75	25	8		Dc
M40x1	△	GU2040M	II	75	25	8		Dc
M42x4.5	△	GU2042V	II	75	25	8		Dc
M42x3	△	GU2042S	II	75	25	8		Dc
M42x2	△	GU2042Q	II	75	25	8		Dc
M42x1.5	△	GU2042O	II	75	25	8		Dc
M42x1	△	GU2042M	II	75	25	8		Dc
M44x1.5	△	GU2044O	II	75	25	8		Dc
M45x4.5	△	GU2045V	II	75	25	8		Dc
M45x3	△	GU2045S	II	75	25	8		Dc
M45x2	△	GU2045Q	II	75	25	8		Dc
M45x1.5	△	GU2045O	II	75	25	8		Dc
M48x5	△	GU2048W	II	75	25	8		Dc
M48x1.5	△	GU2048O	II	75	25	8		Dc
For Unified Threads								
Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
NO.0-80UNF	△	GD2UN0B	II	16	5	3	○	Db
	△	GE2UN0B		20	7		○	Dc
NO.1-64UNC	△	GD2UN1D	II	16	5	3	○	Db
NO.1-72UNF	△	GD2UN1C	II	16	5	3	○	Db
	△	GE2UN1C		20	7		○	Dc
NO.2-56UNC	△	GD2UN2E	II	16	5	3	○	Db
	△	GE2UN2E		20	7		○	Dc
NO.2-64UNF	△	GD2UN2D	II	16	5	3	○	Db
	△	GE2UN2D		20	7		○	Dc
NO.3-48UNC	△	GD2UN3F	II	16	5	3	○	Db
	△	GE2UN3F		20	7		○	Dc
NO.3-56UNF	△	GD2UN3E	II	16	5	3	○	Db
	△	GE2UN3E		20	7		○	Dc
NO.4-40UNC	△	GD2UN4H	II	16	5	3		Db
	○	GE2UN4H		20	7		○	Dc
NO.4-48UNF	△	GD2UN4F	II	16	5	3		Db
	△	GE2UN4F		20	7		○	Dc
NO.5-40UNC	△	GE2UN5H	II	20	7	3		Dc
NO.5-44UNF	△	GE2UN5G	II	20	7	3		Dc
NO.6-32UNC	○	GE2UN6J	II	20	7	3		Dc
NO.6-40UNF	△	GE2UN6H	II	20	7	3		Dc
NO.8-32UNC	○	GE2UN8J	II	20	7	3		Dc
NO.8-36UNF	△	GE2UN8I	II	20	7	3		Dc
NO.10-24UNC	△	GE2UNAM	II	20	7	4		Dc

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
NO.10-32UNF	○	GE2UNAJ	II	20	7	4		Dc
NO.12-24UNC	△	GE2UNCM	II	20	7	4		Dc
NO.12-28UNF	△	GE2UNCK	II	20	7	4		Dc
NO.12-32UNEF	△	GE2UNCJ	II	20	7	4		Dc
1/4-20UNC	○	GE2U04N	II	20	7	4		Dc
	△	GG2U04N		25	9			
	△	GJ2U04N		38	13		○	
1/4-28UNF	○	GE2U04K	II	20	7	4		Dc
	△	GG2U04K		25	9			
1/4-32UNEF	△	GE2U04J	II	20	7	4		Dc
	△	GG2U04J		25	9			
5/16-18UNC	△	GG2U05O	II	25	9	4		Dc
	△	GJ2U05O		38	13			
5/16-24UNF	○	GG2U05M	II	25	9	4		Dc
	△	GJ2U05M		38	13			
5/16-32UNEF	△	GG2U05J	II	25	9	4		Dc
3/8-16UNC	○	GG2U06P	II	25	9	5		Dc
	△	GJ2U06P		38	13		4	
	△	GM2U06P		50	16			
3/8-24UNF	○	GG2U06M	II	25	9	5		Dc
	○	GJ2U06M		38	13		4	
3/8-32UNEF	△	GG2U06J	II	25	9	5		Dc
	△	GJ2U06J		38	13		4	
7/16-14UNC	△	GJ2U07Q	II	38	13	4		Dc
	△	GM2U07Q		50	16			
7/16-20UNF	○	GJ2U07N	II	38	13	4		Dc
	△	GM2U07N		50	16			
7/16-24UN	△	GJ2U07M	II	38	13	4		Dc
7/16-28UNEF	△	GJ2U07K	II	38	13	4	○	Dc
1/2-13UNC	○	GJ2U08R	II	38	13	4		Dc
	△	GM2U08R		50	16			
1/2-20UNF	○	GJ2U08N	II	38	13	4		Dc
	△	GM2U08N		50	16			
1/2-28UNEF	△	GJ2U08K	II	38	13	4	○	Dc
9/16-12UNC	△	GJ2U09S	II	38	13	5		Dc
	△	GM2U09S		50	16		4	
9/16-18UNF	○	GJ2U09O	II	38	13	5		Dc
	△	GM2U09O		50	16		4	
9/16U24UNEF	△	GJ2U09M	II	38	13	5	○	Dc
	△	GM2U09M		50	16		4	

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
5/8-11UNC	△	GJ2U10U	II	38	13	5		Dc
	△	GM2U10U		50	16	4		
5/8-18UNF	△	GJ2U100	II	38	13	5		Dc
	△	GM2U100		50	16	4		
5/8-24UNEF	△	GJ2U10M	II	38	13	5		Dc
	△	GM2U10M		50	16	4		
3/4-10UNC	△	GM2U12V	II	50	16	5		Dc
3/4-16UNF	○	GM2U12P	II	50	16	5		Dc
3/4-20UNEF	△	GM2U12N	II	50	16	5		Dc
7/8-9UNC	△	GM2U14W	II	50	16	6		Dc
7/8-14UNF	○	GM2U14Q	II	50	16	6		Dc
7/8-20UNEF	△	GM2U14N	II	50	16	6		Dc
1'-8UNC	△	GM2U16X	II	50	16	6		Dc
1'-12UNF	△	GM2U16S	II	50	16	6		Dc
1'-14UNS	△	GM2U16Q	II	50	16	6		Dc
1'-20UNEF	△	GM2U16N	II	50	16	6		Dc
1'1/8-7UNC	△	GR2U18Y	II	63	20	6		Dc
1'1/8U12UNF	△	GR2U18S	II	63	20	6		Dc
1'1/4-7UNC	△	GR2U20Y	II	63	20	6		Dc
1'1/4-12UNF	△	GR2U20S	II	63	20	6		Dc
1'3/8-6UNC	△	GU2U22Z	II	75	25	6		Dc
1'3/8-12UNF	△	GU2U22S	II	75	25	6		Dc
1'1/2-6UNC	△	GU2U24Z	II	75	25	6		Dc
1'3/4-5UNC	△	GU2U280	II	75	25	8		Dc
2'U4.5UNC	△	GU2U329	II	75	25	8		Dc
For Whitworth Threads								
Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
1/8W40	○	GEPW02H	II	20	7	3		Dc
	△	GGPW02H		25	9		○	
5/32W32	○	GEPW2HJ	II	20	7	3		Dc
	△	GGPW2HJ		25	9			
3/16W24	○	GEPW03M	II	20	7	4		Dc
	△	GGPW03M		25	9	3		
7/32W24	△	GEPW3HM	II	20	7	4		Dc
1/4W20	○	GEPW04N	II	20	7			Dc
	△	GGPW04N		25	9	4		
	△	GJPW04N		38	13		○	
5/16W18	○	GGPW05O	II	25	9	4		Dc
	△	GMPW05O		50	16		○	
3/8W16	○	GGPW06P	II	25	9	5		Dc
	○	GJPW06P		38	13	4		

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
3/8W16	△	GMPW06P	II	50	16	4		Dc
7/16W14	△	GJPW07Q	II	38	13	4		Dc
	△	GMPW07Q		50	16			
1/2W12	○	GJPW08S	II	38	13	4		Dc
	△	GMPW08S		50	16			
9/16W12	△	GJPW09S	II	38	13	5		Dc
	△	GMPW09S		50	16	4		
5/8W11	○	GJPW10U	II	38	13	5		Dc
	○	GMPW10U		50	16	4		
3/4W10	○	GMPW12V	II	50	16	5		Dc
7/8W9	○	GMPW14W	II	50	16	6		Dc
1'W8	○	GMPW16X	II	50	16	6		Dc
1'1/8W7	△	GRPW18Y	II	63	20	6		Dc
	△	GUPW18Y		75	25			
1'1/4W7	△	GRPW20Y	II	63	20	6		Dc
	△	GUPW20Y		75	25			
1'3/8W6	△	GUPW22Z	II	75	25	6		Dc
1'1/2W6	△	GUPW24Z	II	75	25	6		Dc

For Screw Threads used on Sewing Machines

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
1/16SM80	△	GE2S04B	II	20	7	3	○	Dc
5/64SM64	△	GD2S05D	II	16	5	3	○	Db
	△	GE2S05D		20	7		○	Dc
3/32SM56	△	GD2S06E	II	16	5	3	○	Db
	△	GE2S06E		20	7		○	Dc
3/32SM100	△	GD2S06A	II	16	5	3	○	Db
1/8SM40	△	GE2S08H	II	20	7	3		Dc
1/8SM44	△	GE2S08G	II	20	7	3		Dc
	△	GG2S08G		25	9		○	
1/8SM48	△	GE2S08F	II	20	7	3		Dc
9/64SM40	△	GE2S09H	II	20	7	3		Dc
	△	GG2S09H		25	9			
11/64SM40	△	GE2S11H	II	20	7	4		Dc
	△	GG2S11H		25	9	3		
3/16SM24	△	GE2S12M	II	20	7	4		Dc
3/16SM28	△	GE2S12K	II	20	7	4		Dc
	△	GG2S12K		25	9	3		
3/16SM32	△	GE2S12J	II	20	7	4		Dc
	△	GG2S12J		25	9	3		
7/32SM32	△	GE2S14J	II	20	7	4		Dc
15/64SM28	△	GE2S15K	II	20	7	4		Dc

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

AR-D Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
15/64SM28	△	GG2S15K	II	25	9	4		Dc
1/4SM24	△	GE2S16M	II	20	7	4		Dc
1/4SM40	△	GE2S16H	II	20	7	4		Dc
	△	GG2S16H		25	9			

AR-D(LH) Adjustable Thread Cutting Round Dies for Left Hand Threads

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
3M0.6	△	GE23.0H-L	II	20	7	3		Dc
M3×0.35	△	GE23.0D-L	II	20	7	3	○	Dc
M3.5×0.6	△	GE23.5H-L	II	20	7	3		Dc
M3.5×0.35	△	GE23.5D-L	II	20	7	3	○	Dc
M4×0.7	○	GE24.0I-L	II	20	7	3		Dc
	○	GG24.0I-L		25	9			
4M0.75	△	GE24.0J-L	II	20	7	3		Dc
M4×0.5	△	GE24.0G-L	II	20	7	3		Dc
M4.5×0.75	△	GE24.5J-L	II	20	7	4		Dc
M5×0.8	○	GE25.0K-L	II	20	7	4		Dc
	○	GG25.0K-L		25	9	3		
5M0.9	△	GE25.0L-L	II	20	7	4		Dc
	△	GG25.0L-L		25	9	3		
M5×0.75	△	GE25.0J-L	II	20	7	4		Dc
M5×0.5	△	GE25.0G-L	II	20	7	4		Dc
M5.5×0.5	△	GE25.5G-L	II	20	7	4		Dc
	○	GE26.0M-L		20	7			
M6×1	○	GG26.0M-L	II	25	9	4		Dc
	△	GJ26.0M-L		38	13	○		
	△	GE26.0J-L		20	7	4		
△	GG26.0J-L	25	9					
M6×0.75	△	GE26.0G-L	II	20	7	4		Dc
M6×0.5	△	GE26.0G-L	II	20	7	4		Dc
M7×1	△	GG27.0M-L	II	25	9	4		Dc
	△	GJ27.0M-L		38	13			
M7×0.75	△	GG27.0J-L	II	25	9	4		Dc
M7×0.5	△	GG27.0G-L	II	25	9	4	○	Dc
M8×1.25	○	GG28.0N-L	II	25	9	4		Dc
	○	GJ28.0N-L		38	13			
M8×1	△	GG28.0M-L	II	25	9	4		Dc
M8×0.75	△	GG28.0J-L	II	25	9	4		Dc
M8×0.5	△	GG28.0G-L	II	25	9	4	○	Dc
M9×1.25	△	GG29.0N-L	II	25	9	5		Dc
M9×1	△	GG29.0M-L	II	25	9	5		Dc
M9×0.75	△	GG29.0J-L	II	25	9	5		Dc
M9×0.5	△	GG29.0G-L	II	25	9	5	○	Dc
	○	GG20100-L		25	9	5		
	○	GJ20100-L		38	13	4		
M10×1.5	△	GM20100-L	II	50	16			Dc
	△	GG2010N-L		25	9			
M10×1.25	△	GG2010N-L	II	38	13	4		Dc
	△	GJ2010N-L		25	9			
M10×1	△	GG2010M-L	II	25	9	5		Dc
	△	GJ2010M-L		38	13			

AR-D(LH)

Adjustable Thread Cutting Round Dies for Left Hand Threads



Segment : 35

※when no recess in the rear face.



Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Left Hand Threads								
M1×0.25	△	GD21.0B-L	II	16	5	3	○	Db
	△	GE21.0B-L		20	7			Dc
M1.2×0.25	△	GD21.2B-L	II	16	5	3	○	Db
	△	GE21.4C-L		16	5			○
M1.4×0.3	△	GE21.4C-L	II	20	7	3	○	Dc
	△	GD21.4C-L		16	5			○
M1.6×0.35	△	GD21.6D-L	II	16	5	3	○	Db
	△	GE21.6D-L		20	7			○
M1.7×0.35	△	GD21.7D-L	II	16	5	3	○	Db
	△	GE21.7D-L		20	7			○
M2×0.4	△	GD22.0E-L	II	16	5	3	○	Db
	△	GE22.0E-L		20	7			○
M2×0.25	△	GE22.0B-L	II	20	7	3	○	Dc
M2.2×0.45	△	GE22.2F-L	II	20	7	3	○	Dc
M2.3×0.4	△	GD22.3E-L	II	16	5	3	○	Db
	△	GE22.3E-L		20	7			○
M2.5×0.45	△	GD22.5F-L	II	16	5	3	○	Db
	△	GE22.5F-L		20	7			○
M2.6×0.45	△	GD22.6F-L	II	16	5	3	○	Db
	△	GE22.6F-L		20	7			○
M2.6×0.35	△	GE22.6D-L	II	20	7	3	○	Dc
M3×0.5	○	GE23.0G-L	II	20	7	3		Dc
	△	GG23.0G-L		25	9			3

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AR-D(LH) Adjustable Thread Cutting Round Dies for Left Hand Threads

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
M10×0.75	△	GG2010J-L	II	25	9	5		Dc
M10×0.5	△	GG2010G-L	II	25	9	5	○	Dc
M11×1.5	△	GJ2011O-L	II	38	13	4		Dc
M11×1.25	△	GJ2011N-L	II	38	13	4		Dc
M11×1	△	GJ2011M-L	II	38	13	4		Dc
M12×1.75	○	GJ2012P-L	II	38	13	4		Dc
	△	GM2012P-L		50	16			
M12×1.5	△	GJ2012O-L	II	38	13	4		Dc
M12×1.25	△	GJ2012N-L	II	38	13	4		Dc
M12×1	△	GJ2012M-L	II	38	13	4		Dc
M12×0.75	△	GJ2012J-L	II	38	13	4	○	Dc
M12×0.5	△	GJ2012G-L	II	38	13	4	○	Dc
M14×2	△	GJ2014Q-L	II	38	13	5		Dc
	△	GM2014Q-L		50	16	4		
M14×1.5	△	GJ2014O-L	II	38	13	5		Dc
	△	GM2014O-L		50	16	4		
M14×1.25	△	GJ2014N-L	II	38	13	5		Dc
M14×1	△	GJ2014M-L	II	38	13	5		Dc
M15×1.5	△	GJ2015O-L	II	38	13	5		Dc
M15×1	△	GJ2015M-L	II	38	13	5		Dc
M16×2	○	GJ2016Q-L	II	38	13	5		Dc
	○	GM2016Q-L		50	16	4		
M16×1.5	△	GJ2016O-L	II	38	13	5		Dc
	△	GM2016O-L		50	16	4		
M16×1	△	GJ2016M-L	II	38	13	5		Dc
	△	GM2016M-L		50	16	4		
M18×2.5	△	GM2018R-L	II	50	16	5		Dc
M18×2	△	GM2018Q-L	II	50	16	5		Dc
M18×1.5	△	GM2018O-L	II	50	16	5		Dc
M18×1	△	GM2018M-L	II	50	16	5		Dc
M20×2.5	○	GM2020R-L	II	50	16	5		Dc
M20×2	△	GM2020Q-L	II	50	16	5		Dc
M20×1.5	△	GM2020O-L	II	50	16	5		Dc
M20×1	△	GM2020M-L	II	50	16	5		Dc
M22×2.5	△	GM2022R-L	II	50	16	6		Dc
M22×2	△	GM2022Q-L	II	50	16	6		Dc
M22×1.5	△	GM2022O-L	II	50	16	6		Dc
M22×1	△	GM2022M-L	II	50	16	6		Dc
M24×3	△	GM2024S-L	II	50	16	6		Dc
M24×2	△	GM2024Q-L	II	50	16	6		Dc
M24×1.5	△	GM2024O-L	II	50	16	6		Dc
M24×1	△	GM2024M-L	II	50	16	6		Dc

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
M25×1.5	△	GM2025O-L	II	50	16	6		Dc
M26×1.5	△	GR2026O-L	II	63	20	6		Dc
M27×3	△	GR2027S-L	II	63	20	6		Dc
M27×1.5	△	GR2027O-L	II	63	20	6		Dc
M28×1.5	△	GR2028O-L	II	63	20	6		Dc
M30×3.5	△	GR2030T-L	II	63	20	6		Dc
M30×1.5	△	GR2030O-L	II	63	20	6		Dc
M36×4	△	GU2036U-L	II	75	25	6		Dc
M48×5	△	GU2048W-L	II	75	25	8		Dc

For Unified Left Hand Threads

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
1/4-20UNC	△	GE2U04N-L	II	20	7	4		Dc
	△	GG2U04N-L		25	9			
1/4-28UNF	△	GE2U04K-L	II	20	7	4		Dc
	△	GG2U04K-L		25	9			
5/16-18UNC	△	GG2U05O-L	II	25	9	4		Dc
	△	GJ2U05O-L		38	13			
5/16-24UNF	△	GG2U05M-L	II	25	9	4		Dc
	△	GJ2U05M-L		38	13			
3/8-16UNC	△	GG2U06P-L	II	25	9	5		Dc
	△	GJ2U06P-L		38	13			
3/8-24UNF	△	GG2U06M-L	II	25	9	5		Dc
	△	GJ2U06M-L		38	13			
7/16-20UNF	△	GJ2U07N-L	II	38	13	4		Dc
1/2-13UNC	△	GJ2U08R-L	II	38	13	4		Dc
1/2-20UNF	△	GJ2U08N-L	II	38	13	4		Dc
9/16-12UNC	△	GJ2U09S-L	II	38	13	5		Dc
9/16-18UNF	△	GJ2U09O-L	II	38	13	5		Dc
5/8-18UNF	△	GM2U10O-L	II	50	16	4		Dc
3/4-10UNC	△	GM2U12V-L	II	50	16	5		Dc
3/4-16UNF	△	GM2U12P-L	II	50	16	5		Dc
7/8-9UNC	△	GM2U14W-L	II	50	16	6		Dc

For Whitworth Left Hand Threads

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Recess	Type
1/8W40	△	GGPW02H-L	II	25	9	3	○	Dc
3/16W24	△	GEPW03M-L	II	20	7	4		Dc
	△	GGPW03M-L		25	9			
1/4W20	△	GEPW04N-L	II	20	7	4		Dc
	△	GGPW04N-L		25	9			
	△	GJPW04N-L		38	13			

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

AR-D(LH) Adjustable Thread Cutting Round Dies for Left Hand Threads **AD-S ST Solid Dies for Auto Lathe, for Steels**

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
5/16W18	△	GGPW050-L	II	25	9	4		Dc
	△	GJPW050-L		38	13			
3/8W16	△	GGPW06P-L	II	25	9	5		Dc
	△	GJPW06P-L		38	13			
	△	GMPW06P-L		50	16			
7/16W14	△	GJPW07Q-L	II	38	13	4		Dc
	△	GMPW07Q-L		50	16			
1/2W12	△	GJPW08S-L	II	38	13	4		Dc
	△	GMPW08S-L		50	16			
5/8W11	△	GMPW10U-L	II	50	16	4		Dc
3/4W10	△	GMPW12V-L	II	50	16	5		Dc
7/8W9	△	GMPW14W-L	II	50	16	6		Dc
1"W8	△	GMPW16X-L	II	50	16	6		Dc
1"1/4W7	△	GRPW20Y-L	II	63	20	6		Dc

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M1.2x0.25	△	FDQ1.2B	P2	16	5	3	○	Da
	△	FBP1.4C	P1	10	3		○	Da
M1.4x0.3	△	FDP1.4C		16	5			
	△	FBQ1.4C	P2	10	3	3	○	Da
	△	FDQ1.4C		16	5			
M1.6x0.35	△	FBP1.6D	P1	10	3	3	○	Da
	△	FDP1.6D		16	5			
	△	FBQ1.6D	P2	10	3			
	△	FDQ1.6D		16	5			
M1.7x0.35	△	FBP1.7D	P1	10	3	3	○	Da
	△	FDP1.7D		16	5			
	△	FBQ1.7D	P2	10	3			
	△	FDQ1.7D		16	5			
M1.8x0.35	△	FBP1.8D	P1	10	3	3	○	Da
	△	FDP1.8D		16	5			
	△	FBQ1.8D	P2	10	3			
	△	FDQ1.8D		16	5			
M2x0.4	△	FBP2.0E	P1	10	3	3	○	Da
	△	FDP2.0E		16	5			
	△	FEP2.0E		20	7			
	△	FBQ2.0E	P2	10	3			
	△	FDQ2.0E		16	5			
M2x0.25	△	FBP2.0B	P1	10	3	3	○	Da
	△	FDP2.0B		16	5			
	△	FBQ2.0B	P2	10	3			
△	FDQ2.0B	16		5				
M2.2x0.45	△	FBP2.2F	P1	10	3	3	○	Da
	△	FDP2.2F		16	5			
	△	FEP2.2F		20	7			
	△	FBQ2.2F	P2	10	3			
	△	FDQ2.2F		16	5			
M2.3x0.4	△	FBP2.3E	P1	10	3	3	○	Da
	△	FDP2.3E		16	5			
	△	FEP2.3E		20	7			
	△	FBQ2.3E	P2	10	3			
	△	FDQ2.3E		16	5			
M2.5x0.45	△	FBP2.5F	P1	10	3	3	○	Da
	△	FDP2.5F		16	5			
	△	FEP2.5F		20	7			

AD-S ST

Solid Dies for Auto Lathe, for Steels



Segment : 36

※when no recess in the rear face.



Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Threads								
M1x0.25	△	FBP1.0B	P1	10	3	3	○	Da
	△	FDP1.0B		16	5			
	△	FBQ1.0B	P2	10	3			
	△	FDQ1.0B		16	5			
M1.1x0.25	△	FBP1.1B	P1	10	3	3	○	Da
	△	FDP1.1B		16	5			
	△	FBQ1.1B	P2	10	3			
	△	FDQ1.1B		16	5			
M1.2x0.25	△	FBP1.2B	P1	10	3	3	○	Da
	△	FDP1.2B		16	5			
	△	FBQ1.2B	P2	10	3			

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AD-S ST Solid Dies for Auto Lathe, for Steels

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type	Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M2.5×0.45	△	FBQ2.5F	P2	10	3	3	○	Da	M5×0.8	△	FEQ5.0K	P2	20	7	4		Da
	△	FDQ2.5F		16	5		○		M5×0.5	△	FEP5.0G	P1	20	7	4		Da
	△	FEQ2.5F		20	7		○										
M2.5×0.35	△	FBP2.5D	P1	10	3	3	○	Da	M5.5×0.5	△	FEP5.5G	P1	20	7	4		Da
	△	FDP2.5D		16	5		○		M6×1	△	FEP6.0M	P1	20	7	4		Da
	△	FBQ2.5D	P2	10	3		○		M6×1	△	FEQ6.0M	P2	20	7	4		Da
	△	FDQ2.5D		16	5		○										
M2.6×0.45	△	FBP2.6F	P1	10	3	3	○	Da	M6×0.75	△	FEP6.0J	P1	20	7	4		Da
	△	FDP2.6F		16	5		○		M6×0.75	△	FEQ6.0J	P2	20	7	4		Da
	△	FEP2.6F		20	7		○										
	△	FBQ2.6F	P2	10	3		○		M6×0.5	△	FEP6.0G	P1	20	7	4		Da
	△	FDQ2.6F		16	5		○		M6×0.5	△	FEQ6.0G	P2	20	7	4		Da
	△	FEQ2.6F		20	7		○										
M2.6×0.35	△	FBP2.6D	P1	10	3	3	○	Da	M7×0.75	△	FEP7.0J	P1	20	7	4		Da
	△	FDP2.6D		16	5		○		M7×0.75	△	FEQ7.0J	P2	20	7	4		Da
	△	FBQ2.6D	P2	10	3		○		M7×0.5	△	FEP7.0G	P1	20	7	4		Da
	△	FDQ2.6D		16	5		○		M7×0.5	△	FEQ7.0G	P2	20	7	4		Da
M3×0.5	△	FDP3.0G	P1	16	5	3		Da	M8×1.25	△	FEP8.0N	P1	20	7	5		Da
	△	FEP3.0G		20	7												
	△	FDQ3.0G	P2	16	5												
	△	FEQ3.0G		20	7												
M3×0.35	△	FDP3.0D	P1	16	5	3	○	Da	M8×1	△	FEP8.0M	P1	20	7	5		Da
	△	FEP3.0D		20	7		○										
	△	FDQ3.0D	P2	16	5		○										
	△	FEQ3.0D		20	7		○										
M3.5×0.6	△	FDP3.5H	P1	16	5	3		Da	M8×0.75	△	FEP8.0J	P1	20	7	5		Da
	△	FEP3.5H		20	7												
	△	FDQ3.5H	P2	16	5												
	△	FEQ3.5H		20	7												
M3.5×0.35	△	FDP3.5D	P1	16	5	3	○	Da	M8×0.5	△	FEQ8.0G	P2	20	7	5		Da
	△	FEP3.5D		20	7												
	△	FDQ3.5D	P2	16	5												
	△	FEQ3.5D		20	7												
M4×0.7	△	FDP4.0I	P1	16	5	4		Da	M9×1	△	FEP9.0M	P1	20	7	5		Da
	△	FEP4.0I		20	7		3										
	△	FDQ4.0I	P2	16	5		4										
	△	FEQ4.0I		20	7		3										
M4×0.5	△	FDP4.0G	P1	16	5	4		Da	M9×0.75	△	FEQ9.0J	P2	20	7	5		Da
	△	FEP4.0G		20	7		3										
	△	FDQ4.0G	P2	16	5		4										
	△	FEQ4.0G		20	7		3										
M5×0.8	△	FEP5.0K	P1	20	7	4		Da	M10×1.5	△	FGP0100	P1	25	9	5		Da
									M10×1.5	△	FGQ0100	P2	25	9	5		Da
									M10×1	△	FGP010M	P1	25	9	5		Da
									M11×1	△	FGP011M	P1	25	9	5		Da
									M12×1.75	△	FGP012P	P1	25	9	6		Da
									M12×1	△	FGP012M	P1	25	9	6		Da

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Taps
Spiral Pointed
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

AD-S BR

Solid Dies for Auto Lathe, for Brass



Segment : 36

※when no recess in the rear face.



AD-S BR Solid Dies for Auto Lathe, for Brass

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M2×0.4	△	EEP2.0E	P1	20	7	3	○	Da
	△	EBQ2.0E	P2	10	3		○	
	△	EDQ2.0E		16	5		○	
	△	EEQ2.0E	20	7	○			
M2×0.25	△	EBP2.0B	P1	10	3	3	○	Da
	△	EBQ2.0B	P2	16	5		○	
	△	EDP2.0B	P1				○	
	△	EDQ2.0B	P2	○				
M2.2×0.45	△	EBP2.2F	P1	10	3	3	○	Da
	△	EDP2.2F		16	5			
	△	EEP2.2F	20	7				
	△	EBQ2.2F	P2	10	3			
	△	EDQ2.2F		16	5			
△	EEQ2.2F	20	7					
M2.3×0.4	△	EBP2.3E	P1	10	3	3	○	Da
	△	EDP2.3E		16	5			
	△	EEP2.3E	20	7				
	△	EBQ2.3E	P2	10	3			
	△	EDQ2.3E		16	5			
△	EEQ2.3E	20	7					
M2.5×0.45	△	EBP2.5F	P1	10	3	3	○	Da
	△	EDP2.5F		16	5			
	△	EEP2.5F	20	7				
	△	EBQ2.5F	P2	10	3			
	△	EDQ2.5F		16	5			
△	EEQ2.5F	20	7					
M2.5×0.35	△	EBP2.5D	P1	10	3	3	○	Da
	△	EDP2.5D		16	5			
	△	EBQ2.5D	P2	10	3			
△	EDQ2.5D	16		5				
M2.6×0.45	△	EBP2.6F	P1	10	3	3	○	Da
	△	EDP2.6F		16	5			
	△	EEP2.6F	20	7				
	△	EBQ2.6F	P2	10	3			
	△	EDQ2.6F		16	5			
△	EEQ2.6F	20	7					
M2.6×0.35	△	EBP2.6D	P1	10	3	3	○	Da
	△	EDP2.6D		16	5			
	△	EBQ2.6D	P2	10	3			
	△	EDQ2.6D		16	5			
M3×0.5	△	EDP3.0G	P1	16	5	3	○	Da
	△	EEP3.0G		20	7			

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Threads								
M1×0.25	△	EBP1.0B	P1	10	3	3	○	Da
	△	EDP1.0B		16	5			
	△	EBQ1.0B	P2	10	3			
	△	EDQ1.0B		16	5			
M1.1×0.25	△	EBP1.1B	P1	10	3	3	○	Da
	△	EDP1.1B		16	5			
	△	EBQ1.1B	P2	10	3			
	△	EDQ1.1B		16	5			
M1.2×0.25	△	EBP1.2B	P1	10	3	3	○	Da
	△	EDP1.2B		16	5			
	△	EBQ1.2B	P2	10	3			
	△	EDQ1.2B		16	5			
M1.4×0.3	△	EBP1.4C	P1	10	3	3	○	Da
	△	EDP1.4C		16	5			
	△	EBQ1.4C	P2	10	3			
	△	EDQ1.4C		16	5			
M1.6×0.35	△	EBP1.6D	P1	10	3	3	○	Da
	△	EDP1.6D		16	5			
	△	EBQ1.6D	P2	10	3			
	△	EDQ1.6D		16	5			
M1.7×0.35	△	EBP1.7D	P1	10	3	3	○	Da
	△	EDP1.7D		16	5			
	△	EBQ1.7D	P2	10	3			
	△	EDQ1.7D		16	5			
M1.8×0.35	△	EBP1.8D	P1	10	3	3	○	Da
	△	EDP1.8D		16	5			
	△	EBQ1.8D	P2	10	3			
	△	EDQ1.8D		16	5			
M2×0.4	△	EBP2.0E	P1	10	3	3	○	Da
	△	EDP2.0E		16	5			

Spiral Fluted Taps (for blind hole)

Spiral Fluted Taps (for through hole)

Spiral Pointed Taps

Hand Taps

Cemented Carbide Taps

Roll Taps

Special Thread Taps Simple measuring tools

Pipe Taps

MC Helical Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AD-S BR Solid Dies for Auto Lathe, for Brass

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M3x0.5	△	EDQ3.0G	P2	16	5	3		Da
	△	EEQ3.0G		20	7			
M3x0.35	△	EDP3.0D	P1	16	5	3	○	Da
	△	EEP3.0D		20	7		○	
	△	EDQ3.0D	P2	16	5		○	
	△	EEQ3.0D		20	7			
M3.5x0.6	△	EDP3.5H	P1	16	5	3		Da
	△	EEP3.5H		20	7			
	△	EDQ3.5H	P2	16	5			
	△	EEQ3.5H		20	7			
M3.5x0.35	△	EDQ3.5D	P2	16	5	3	○	Da
	△	EEQ3.5D		20	7			
M4x0.7	△	EDP4.0I	P1	16	5	4		Da
	△	EEP4.0I		20	7		3	
	△	EDQ4.0I	P2	16	5		4	
	△	EEQ4.0I		20	7		3	
M4x0.5	△	EDP4.0G	P1	16	5	4		Da
	△	EEP4.0G		20	7		3	
	△	EDQ4.0G	P2	16	5		4	
	△	EEQ4.0G		20	7		3	
M5x0.8	△	EEP5.0K	P1	20	7	4		Da
	△	EEQ5.0K	P2					
M5x0.5	△	EEP5.0G	P1	20	7	4		Da
	△	EEQ5.0G	P2					
M6x1	△	EEP6.0M	P1	20	7	4		Da
	△	EEQ6.0M	P2					
M6x0.75	△	EEP6.0J	P1	20	7	4		Da
	△	EEQ6.0J	P2					
M6x0.5	△	EEP6.0G	P1	20	7	4		Da
	△	EEQ6.0G	P2					
M7x1	△	EEP7.0M	P1	20	7	4		Da
	△	EEQ7.0M	P2					
M7x0.75	△	EEP7.0J	P1	20	7	4		Da
	△	EEQ7.0J	P2					
M7x0.5	△	EEP7.0G	P1	20	7	4		Da
	△	EEQ7.0G	P2					
M8x1.25	△	EEP8.0N	P1	20	7	5		Da
	△	EGP8.0N		25	9	4		
	△	EEQ8.0N	P2	20	7	5		
	△	EGQ8.0N		25	9	4		
M8x1	△	EEP8.0M	P1	20	7	5		Da
	△	EEQ8.0M	P2					

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M8x0.75	△	EEP8.0J	P1	20	7	5		Da
	△	EEQ8.0J	P2					
M8x0.5	△	EEP8.0G	P1	20	7	5		Da
	△	EEQ8.0G	P2					
M9x1	△	EEP9.0M	P1	20	7	5		Da
	△	EEQ9.0M	P2					
M9x0.75	△	EEP9.0J	P1	20	7	5		Da
	△	EEQ9.0J	P2					
M9x0.5	△	EEP9.0G	P1	20	7	5		Da
M10x1.5	△	EGP010O	P1	25	9	5		Da
	△	EGQ010O	P2					
M10x1.25	△	EGP010N	P1	25	9	5		Da
M10x1	△	EGP010M	P1	25	9	5		Da
M10x0.75	△	EGP010J	P1	25	9	5		Da
M11x1	△	EGP011M	P1	25	9	5		Da
M11x0.75	△	EGP011J	P1	25	9	5		Da
M11x0.5	△	EGP011G	P1	25	9	5		Da
M12x1.75	△	EGP012P	P1	25	9	6		Da
M12x1.25	△	EGP012N	P1	25	9	6		Da
M12x1	△	EGP012M	P1	25	9	6		Da

AR-D HSS HSS Adjustable Thread Cutting Round Dies



Segment : 31

*when no recess in the rear face.



Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Threads								
M1x0.25	△	HD21.0B	II	16	5	3	○	Db
M1.2x0.25	△	HD21.2B	II	16	5	3	○	Db
M1.4x0.3	△	HD21.4C	II	16	5	3	○	Db
M1.6x0.35	△	HD21.6D	II	16	5	3	○	Db
M1.7x0.35	△	HD21.7D	II	16	5	3	○	Db
M2x0.4	△	HD22.0E	II	16	5	3	○	Db

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

AR-D HSS HSS Adjustable Thread Cutting Round Dies

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type		
M2×0.4	△	HE22.0E	II	20	7	3	○	Dc		
	△	HG22.0E		25	9		○			
M2×0.25	△	HD22.0B	II	16	5	3	○	Db		
M2.3×0.4	△	HD22.3E	II	16	5	3	○	Db		
	△	HE22.3E		20	7		○		Dc	
M2.5×0.45	△	HD22.5F	II	16	5	3	○	Db		
	△	HE22.5F		20	7		○		Dc	
	△	HG22.5F		25	9		○		Dc	
M2.6×0.45	△	HD22.6F	II	16	5	3	○	Db		
	△	HE22.6F		20	7		○		Dc	
	△	HG22.6F		25	9		○		Dc	
M3×0.5	△	HD23.0G	II	16	5	3	○	Db		
	△	HE23.0G		20	7		○		Dc	
	△	HG23.0G		25	9		○		Dc	
M3×0.35	△	HE23.0D	II	20	7	3	○	Dc		
M3.5×0.35	△	HE23.5D	II	20	7	3	○	Dc		
M4×0.7	△	HE24.0I	II	20	7	3	○	Dc		
	△	HG24.0I		25	9		○		Dc	
	△	HJ24.0I		38	13		4		○	Dc
M4×0.5	△	HE24.0G	II	20	7	3	○	Dc		
M5×0.8	△	HE25.0K	II	20	7	4	○	Dc		
	△	HG25.0K		25	9		3		○	Dc
	△	HJ25.0K		38	13		4		○	Dc
M5×0.5	△	HE25.0G	II	20	7	4	○	Dc		
M6×1	△	HE26.0M	II	20	7	4	○	Dc		
	△	HG26.0M		25	9		4		○	Dc
	△	HJ26.0M		38	13		○		Dc	
M6×0.75	△	HE26.0J	II	20	7	4	○	Dc		
M8×1.25	△	HG28.0N	II	25	9	4	○	Dc		
	△	HJ28.0N		38	13		○		Dc	
M8×1	△	HG28.0M	II	25	9	4	○	Dc		
	△	HJ28.0M		38	13		○		Dc	
M8×0.75	△	HG28.0J	II	25	9	4	○	Dc		
	△	HJ28.0J		38	13		○		Dc	
M10×1.5	△	HG2010O	II	25	9	5	○	Dc		
	△	HJ2010O		38	13		4		○	Dc
M10×1.25	△	HG2010N	II	25	9	5	○	Dc		
	△	HJ2010N		38	13		4		○	Dc
M10×1	△	HG2010M	II	25	9	5	○	Dc		
	△	HJ2010M		38	13		4		○	Dc
M12×1.75	△	HJ2012P	II	38	13	4	○	Dc		
	△	HM2012P		50	16		○		Dc	
M12×1.5	△	HJ2012O	II	38	13	4	○	Dc		

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M12×1.25	△	HJ2012N	II	38	13	4	○	Dc
M12×1	△	HJ2012M	II	38	13	4	○	Dc
M14×2	△	HJ2014Q	II	38	13	5	○	Dc
	△	HM2014Q		50	16	4	○	
M14×1.5	△	HJ2014O	II	38	13	5	○	Dc
	△	HM2014O		50	16	4	○	
M14×1	△	HJ2014M	II	38	13	5	○	Dc
M15×1	△	HJ2015M	II	38	13	5	○	Dc
M16×2	△	HJ2016Q	II	38	13	5	○	Dc
	△	HM2016Q		50	16	4	○	
M16×1.5	△	HJ2016O	II	38	13	5	○	Dc
	△	HM2016O		50	16	4	○	
M18×2.5	△	HM2018R	II	50	16	5	○	Dc
M18×1.5	△	HM2018O	II	50	16	5	○	Dc
M20×2.5	△	HM2020R	II	50	16	5	○	Dc
M20×1.5	△	HM2020O	II	50	16	5	○	Dc
M22×2.5	△	HM2022R	II	50	16	6	○	Dc
M22×1.5	△	HM2022O	II	50	16	6	○	Dc
M24×3	△	HM2024S	II	50	16	6	○	Dc
M24×1.5	△	HM2024O	II	50	16	6	○	Dc

For Whitworth Threads

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
1/4W20	△	HJPW04N	II	38	13	4	○	Dc
5/16W18	△	HJPW05O	II	38	13	4	○	Dc
3/8W16	△	HJPW06P	II	38	13	4	○	Dc
	△	HMPW06P		50	16		○	
1/2W12	△	HJPW08S	II	38	13	4	○	Dc
	△	HMPW08S		50	16		○	
5/8W11	△	HJPW10U	II	38	13	5	○	Dc
	△	HMPW10U		50	16		4	
3/4W10	△	HMPW12V	II	50	16	5	○	Dc
7/8W9	△	HMPW14W	II	50	16	6	○	Dc
1"W8	△	HMPW16X	II	50	16	6	○	Dc

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
D	T

AR-D HSS(LH)

HSS Adjustable Thread Cutting Round Dies for Left Hand Threads



Segment : 31

※when no recess in the rear face.



HS-D

HSS Dies for Hard-to-Machine Materials



Segment : 32



Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Left Hand Threads								
M2.6×0.45	△	HE22.6F-L	II	20	7	3	○	Dc
M3×0.5	△	HE23.0G-L	II	20	7	3	○	Dc
	△	HG23.0G-L		25	9			
M4×0.7	△	HE24.0I-L	II	20	7	3		Dc
	△	HG24.0I-L		25	9			
M5×0.8	△	HE25.0K-L	II	20	7	4		Dc
	△	HG25.0K-L		25	9	3		
M6×1	△	HE26.0M-L	II	20	7	4		Dc
	△	HG26.0M-L		25	9			
M8×1.25	△	HG28.0N-L	II	25	9	4		Dc
	△	HJ28.0N-L		38	13			
M10×1.5	△	HG2010O-L	II	25	9	5		Dc
	△	HJ2010O-L		38	13	4		
M12×1.75	△	HJ2012P-L	II	38	13	4		Dc
M14×2	△	HJ2014Q-L	II	38	13	5		Dc
M16×2	△	HJ2016Q-L	II	38	13	5		Dc
	△	HM2016Q-L		50	16	4		
M18×2.5	△	HM2018R-L	II	50	16	5		Dc
M20×2.5	△	HM2020R-L	II	50	16	5		Dc
M24×3	△	HM2024S-L	II	50	16	6		Dc

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type	
For Metric Threads									
M1×0.25	△	HDP1.0B	P1	16	5	3	○	Da	
	△	HBQ1.0B	P2	10	3				
	△	HDQ1.0B		16	5				
M1.1×0.25	△	HDP1.1B	P1	16	5	3	○	Da	
	△	HDQ1.1B	P2						
M1.2×0.25	△	HBP1.2B	P1	10	3	3	○	Da	
	△	HDP1.2B		16	5				
	△	HBQ1.2B		10	3				
M1.4×0.3	△	HBP1.4C	P1	10	3	3	○	Da	
	△	HDP1.4C		16	5				
	△	HDQ1.4C		P2					
M1.6×0.35	△	HBP1.6D	P1	10	3	3	○	Da	
	△	HDP1.6D		16	5				
	△	HDQ1.6D		P2					
M1.7×0.35	△	HBP1.7D	P1	10	3	3	○	Da	
	△	HDP1.7D		16	5				
	△	HBQ1.7D		P2	10				3
	△	HDQ1.7D			16				5
M1.8×0.35	△	HBP1.8D	P1	10	3	3	○	Da	
	△	HDP1.8D		16	5				
	△	HDQ1.8D		P2					
M2×0.4	○	HDP2.0E	P1	16	5	4	○	Da	
	○	HEP2.0E		20	7				
	△	HBQ2.0E		P2	10				3
	△	HDQ2.0E			16				5
M2×0.25	△	HBP2.0B	P1	10	3	3	○	Da	
	△	HDP2.0B		16	5				
	△	HBQ2.0B		P2	10				3
M2×0.4	△	HEQ2.0E		20	7	4	○		

HS-D HSS Dies for Hard-to-Machine Materials

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M2x0.25	△	HDQ2.0B	P2	16	5	4	○	Da
M2.2x0.45	△	HDP2.2F	P1	16	5	4	○	Da
	△	HDQ2.2F	P2				○	
M2.3x0.4	△	HDP2.3E	P1	16	5	4	○	Da
	△	HBQ2.3E	P2	10	3	3	○	
	△	HDQ2.3E		16	5	4	○	
M2.5x0.45	△	HDP2.5F	P1	16	5	4	○	Da
	△	HEP2.5F		20	7		○	
	△	HDQ2.5F	P2	16	5	○		
	△	HEQ2.5F		20	7	○		
M2.5x0.35	△	HBP2.5D	P1	10	3	3	○	Da
	△	HDP2.5D		16	5	4	○	
	△	HBQ2.5D	P2	10	3	3	○	
	△	HDQ2.5D		16	5	4	○	
M2.6x0.45	△	HDP2.6F	P1	16	5	4	○	Da
	△	HEP2.6F		20	7		○	
	△	HBQ2.6F	P2	10	3	3	○	
	△	HDQ2.6F		16	5	○		
	△	HEQ2.6F		20	7	○		
M2.6x0.35	△	HBP2.6D	P1	10	3	3	○	Da
	△	HDP2.6D		16	5	4	○	
	△	HBQ2.6D	P2	10	3	3	○	
	△	HDQ2.6D		16	5	4	○	
M3x0.5	○	HDP3.0G	P1	16	5	4	○	Da
	○	HEP3.0G		20	7		○	
	△	HDQ3.0G	P2	16	5	○		
	△	HEQ3.0G		20	7	○		
M3x0.35	△	HDP3.0D	P1	16	5	4	○	Da
	△	HEP3.0D		20	7		○	
	△	HDQ3.0D	P2	16	5	○		
	△	HEQ3.0D		20	7	○		
M3.5x0.6	△	HDP3.5H	P1	16	5	4	○	Da
	△	HEP3.5H		20	7		○	
	△	HDQ3.5H	P2	16	5	○		
	△	HEQ3.5H		20	7	○		
M4x0.7	○	HDP4.0I	P1	16	5	4	○	Da
	○	HEP4.0I		20	7		○	
	△	HDQ4.0I	P2	16	5	○		
	△	HEQ4.0I		20	7	○		
M4x0.5	△	HDP4.0G	P1	16	5	4	○	Da
	△	HEP4.0G		20	7		○	
	△	HDQ4.0G	P2	16	5	○		

Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
M4x0.5	△	HEQ4.0G	P2	20	7	4	○	Da
M5x0.8	○	HEP5.0K	P1	20	7	4	○	Da
	△	HEQ5.0K	P2				○	
M5x0.5	△	HEP5.0G	P1	20	7	4	○	Da
	△	HEQ5.0G	P2				○	
M6x1	○	HEP6.0M	P1	20	7	4	○	Da
	△	HEQ6.0M	P2				○	
M6x0.75	△	HEP6.0J	P1	20	7	4	○	Da
	△	HEQ6.0J	P2				○	
M6x0.5	△	HEP6.0G	P1	20	7	4	○	Da
	△	HEQ6.0G	P2				○	
M7x0.75	△	HEP7.0J	P1	20	7	4	○	Da
	△	HEQ7.0J	P2				○	
M7x0.5	△	HEP7.0G	P1	20	7	4	○	Da
	△	HEQ7.0G	P2				○	
M8x1.25	△	HEP8.0N	P1	20	7	5	○	Da
	○	HGP8.0N		25	9	4	○	
	△	HEQ8.0N	P2	20	7	5	○	
	△	HGQ8.0N		25	9	4	○	
M8x1	△	HEP8.0M	P1	20	7	5	○	Da
	△	HGP8.0M		25	9	4	○	
	△	HEQ8.0M	P2	20	7	5	○	
	△	HGQ8.0M		25	9	4	○	
M8x0.75	△	HEP8.0J	P1	20	7	5	○	Da
	△	HGP8.0J		25	9	4	○	
	△	HEQ8.0J	P2	20	7	5	○	
	△	HGQ8.0J		25	9	4	○	
M8x0.5	△	HEP8.0G	P1	20	7	5	○	Da
	△	HEQ8.0G	P2				○	
M9x1	△	HEP9.0M	P1	20	7	5	○	Da
	△	HEQ9.0M	P2				○	
M9x0.75	△	HEP9.0J	P1	20	7	5	○	Da
	△	HEQ9.0J	P2				○	
M10x1.5	○	HGP010O	P1	25	9	5	○	Da
	△	HGQ010O	P2				○	
M10x1.25	△	HGP010N	P1	25	9	5	○	Da
	△	HGQ010N	P2				○	
M10x1	△	HGP010M	P1	25	9	5	○	Da
	△	HGQ010M	P2				○	

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

MS-RS-D/RS-D

Rolling Dies



Segment : 34

Due to the threading through material deformation, the die produces no chips. And having no chipping trouble, the die produces threads of high precision with clean surface (for miniature sizes).



MS-RS-D/RS-D Rolling Dies

Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Type		
M2×0.4	△	RDR2.0E	R3	16	5	Df		
	△	RDS2.0E	R4					
M2×0.25	△	RDR2.0B	R3	16	5	Df		
	△	RDS2.0B	R4					
M2.3×0.4	△	RDQ2.3E	R2	16	5	Df		
	△	RDR2.3E	R3					
	△	RDS2.3E	R4					
M2.3×0.25	△	RDR2.3B	R3	16	5	Df		
M2.5×0.45	△	RDQ2.5F	R2	16	5	Df		
	△	REQ2.5F		20	7			
	△	RDS2.5F	R4	16	5			
	△	RES2.5F		20	7			
	△	RDT2.5F	R5	16	5			
	△	RET2.5F		20	7			
M2.5×0.35	△	RDQ2.5D	R2	16	5	Df		
	△	RDR2.5D	R3					
M2.6×0.45	△	RDS2.5D	R4	16	5	Df		
	△	RDQ2.6F	R2				20	7
	△	REQ2.6F					R4	16
	△	RDS2.6F	R5					20
	△	RES2.6F					R5	16
	△	RDT2.6F	20					7
M2.6×0.35	△	RDS2.6D	R4	16	5	Df		
M3×0.5	△	REQ3.0G	R2	20	7	Df		
	△	RES3.0G	R4					
M3×0.35	△	REQ3.0D	R2	20	7	Df		
	△	RES3.0D	R4					
	△	RET3.0D	R5					
M3.5×0.35	△	RES3.5D	R4	20	7	Df		
	△	RET3.5D	R5					
M4×0.5	△	RET4.0G	R5	20	7	Df		
	△	REU4.0G	R6					
M5×0.5	△	RES5.0G	R3	20	7	Df		
	△	RES5.0G	R4					
	△	RET5.0G	R5					
	△	REU5.0G	R6					

Size	Stock	Code	<i>D</i> (mm)	<i>T</i> (mm)	Type	
For Miniature Screw Threads						
S0.5×0.125	△	RA20.5-	6	2	Df	
S0.6×0.15	△	RA20.6-	6	2	Df	
S0.7×0.175	△	RA20.7-	6	2	Df	
S0.8×0.2	△	RO20.8-	8	3	Df	
For Metric Threads						
Size	Stock	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Type
M1×0.25	△	RBQ1.0B	R2	10	3.5	Df
	△	RBR1.0B	R3			
	△	RBS1.0B	R4			
M1.1×0.25	△	RBR1.1B	R3	10	3.5	Df
M1.2×0.25	△	RBQ1.2B	R2	10	3.5	Df
	△	RBR1.2B	R3			
	△	RBS1.2B	R4			
M1.4×0.3	△	RBQ1.4C	R2	10	3.5	Df
	△	RDQ1.4C		16	5	
	△	RBR1.4C	R3	10	3.5	
	△	RDR1.4C		16	5	
	△	RBS1.4C	R4	10	3.5	
	△	RDS1.4C		16	5	
M1.6×0.35	△	RDQ1.6D	R2	16	5	Df
	△	RDR1.6D	R3			
	△	RDS1.6D	R4			
M1.7×0.35	△	RDQ1.7D	R2	16	5	Df
	△	RDR1.7D	R3			
	△	RDS1.7D	R4			
M1.8×0.35	△	RDR1.8D	R3	16	5	Df
M2×0.4	△	RDQ2.0E	R2	16	5	Df

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps (Simple measuring tools)
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

N-RSD

New Rolling Dies

HSS

Segment : 34



Size	Stock	Code	Class	D (mm)	T (mm)	Type
M3x0.5	△	NRG53.0G	R4	25	9	Df
M4x0.7	△	NRG54.0I	R4	25	9	Df
M5x0.8	△	NRGT5.0K	R5	25	9	Df
M6x1	△	NRHT6.0M	R5	30	11	Df
M8x1.25	△	NRJU8.0N	R6	38	13	Df

PO-D

Spiral Pointed Dies

HSS

Front Face 1~1.5
Rear Face 2~2.5

Segment : 32

Spiral pointed flute is only in front face.
Chips are ejected forward the die.



Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Type
For Metric Threads							
M3x0.5	△	PEP3.0G	P1	20	7	3	Da
M4x0.7	△	PEP4.0I	P1	20	7	3	Da
M5x0.8	△	PEP5.0K	P1	20	7	4	Da
M6x1	△	PEP6.0M	P1	20	7	4	Da
M8x1.25	△	PEP8.0N	P1	20	7	4	Da
M8x1.25	△	PGP8.0N	P1	25	9	4	Da

SP-D

HSS Spiral Fluted Dies

HSS
Front Face 1~1.5

Segment : 32

Having helix cutting edge, SP-D continuously ejects curled chips forward or backward depending on the hand of chip clearance room helix.



Size	Stock	Code	Class	D (mm)	T (mm)	Clearance Holes	Recess	Type
For Metric Threads								
M3x0.5	△	SEP3.0G	P1	20	7	3	○	Da
M4x0.7	△	SEP4.0I	P1	20	7	3	○	Da
M5x0.8	△	SEP5.0K	P1	20	7	4	○	Da
M6x1	△	SEP6.0M	P1	20	7	4	○	Da
M8x1.25	△	SGP8.0N	P1	25	9	4	○	Da

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness	Basic dia. position
D	T	l_g

SR-D PT

Solid Thread Cutting Round Dies



Segment : 37



SR-D PT HSS

HSS Solid Thread Cutting Round Dies



Segment : 31



Size	Stock	Code	D (mm)	T (mm)	l_g (mm)	Clearance Holes	Type
For PT Threads							
PT1/16-28	△	DGST01K	25	11	6	4	De
	△	DJST01K	38				
PT1/8-28	△	DGST02K	25	11	6	5	De
	○	DJST02K	38				
	△	DMST02K	50				
PT1/4-19	○	DJST04-	38	16	8	5	De
	△	DMST04-	50				
PT3/8-19	△	DJST06-	38	16	8	6	De
	○	DMST06-	50				
PT1/2-14	○	DMST08Q	50	22	12	6	De
PT5/8-14	△	DRST10Q	63	22	12	6	De
PT3/4-14	△	DMST12Q	50	24	12.5	8	De
	○	DRST12Q	63				
PT7/8-14	△	DUST14Q	75	25	12.5	6	De
PT1'-11	○	DUST16U	75	28	15	6	De
PT1'1/4-11	△	DUST20U	75	30	15	6	De
PT1'1/2-11	△	DUST24U	75	30	15	6	De
	△	DYST24U	105				
PT2'-11	△	DYST32U	105	36	17	10	De

Size	Stock	Code	D (mm)	T (mm)	l_g (mm)	Clearance Holes	Type
For PT Threads							
PT1/8-28	△	HJPT02K	38	11	6	4	De
PT1/4-19	△	HJPT04-	38	16	8	5	De
PT3/8-19	△	HMPT06-	50	18	10	5	De
PT1/2-14	△	HMPT08Q	50	22	12	6	De
PT3/4-14	△	HRPT12Q	63	24	12.5	6	De
PT1'-11	△	HUPT16U	75	28	15	6	De

SR-D PT(LH)

Solid Thread Cutting Round Dies for Left Hand Threads



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	l_g (mm)	Clearance Holes	Type
For PT Left Hand Threads							
PT1/8-28	△	DJST02K-L	38	11	6	4	De
PT1/4-19	△	DJST04-L	38	16	8	5	De
PT3/8-19	△	DMST06-L	50	18	10	5	De
PT1/2-14	△	DMST08Q-L	50	22	12	6	De
PT1'-11	△	DUST16U-L	75	28	15	6	De

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

AR-D PT

Adjustable Thread Cutting Round Dies



Segment : 37



AR-D PT HSS

HSS Adjustable Thread Cutting Round Dies



Segment : 31



Size	Stock	Code	D (mm)	T (mm)	ℓ _g (mm)	Clearance Holes	Recess	Type
For PT Threads								
PT1/16-28	△	GGST01K	25	9	5	4	○	Dd
	△	GJST01K	38	13				
PT1/8-28	△	GGST02K	25	9	5	4	○	Dd
	◎	GJST02K	38	13				
	△	GMST02K	50	16				
PT1/4-19	◎	GJST04-	38	13	7	5	○	Dd
	△	GMST04-	50	16				
PT3/8-19	△	GJST06-	38	13	7	6	○	Dd
	◎	GMST06-	50	16				
PT1/2-14	◎	GMST08Q	50	16	9.5	6		Dd
PT5/8-14	△	GMST10Q	50	16	9.5	8		Dd
PT3/4-14	△	GMST12Q	50	16	9.5	8	○	Dd
	◎	GRST12Q	63	20				
PT1'-11	◎	GUST16U	75	25	12.5	6		Dd
PT1'/4-11	△	GUST20U	75	25	10	6		Dd
PT1'/2-11	△	GWST24U	105	30	15	8		Dd

Size	Stock	Code	D (mm)	T (mm)	ℓ _g (mm)	Clearance Holes	Recess	Type
For PT Threads								
PT1/8-28	△	HJPT02K-A	38	13	5	4	○	Dd
PT1/4-19	△	HJPT04--A	38	13	7	5		Dd
PT3/8-19	△	HMPT06--A	50	16	7	5		Dd
PT1/2-14	△	HMPT08Q-A	50	16	9.5	6		Dd
PT3/4-14	△	HRPT12Q-A	63	20	9.5	6		Dd
PT1'-11	△	HUPT16U-A	75	25	12.5	6		Dd

AR-D PT(LH)

Adjustable Thread Cutting Round Dies for Left Hand Threads



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	ℓ _g (mm)	Clearance Holes	Recess	Type
For PT Left Hand Threads								
PT1/8-28	△	GJST02K-L	38	13	5	4	○	Dd
PT1/4-19	△	GJST04--L	38	13	7	5		Dd
PT3/8-19	△	GMST06--L	50	16	7	5		Dd
PT1/2-14	△	GMST08Q-L	50	16	9.5	6		Dd
PT3/4-14	△	GRST12Q-L	63	20	9.5	6		Dd
PT1'-11	△	GUST16U-L	75	25	12.5	6		Dd

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness	Basic dia. position
D	T	l_g

AR-D PS

Adjustable Thread Cutting Round Dies



Segment : 37



AR-D PS(LH)

Adjustable Thread Cutting Round Dies for Left Hand Threads



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	Clearance Holes	Type
For PS Threads						
PS1/8-28	△	GGSP02K	25	9	5	Dd
	○	GJSP02K	38	13	4	
PS1/4-19	○	GJSP04-	38	13	5	Dd
	△	GMSP04-	50	16	4	
PS3/8-19	△	GJSP06-	38	13	6	Dd
	○	GMSP06-	50	16	5	
PS1/2-14	○	GMSP08Q	50	16	5	Dd
PS5/8-14	△	GMSP10Q	50	16	6	Dd
PS3/4-14	△	GMSP12Q	50	16	6	Dd
	△	GRSP12Q	63	20		
PS7/8-14	△	GRSP14Q	63	20	6	Dd
PS1'-11	△	GUSP16U	75	25	6	Dd
PS1'1/4-11	△	GUSP20U	75	25	8	Dd
PS1'1/2-11	△	GYP24U	105	28	6	Dd
PS2'-11	△	GYP32U	105	28	8	Dd

Size	Stock	Code	D (mm)	T (mm)	Clearance Holes	Type
For PS Left Hand Threads						
PS1/4-19	△	GJSP04--L	38	13	5	Dd
PS3/8-19	△	GMSP06--L	50	16	5	Dd
PS1/2-14	△	GMSP08Q--L	50	16	5	Dd
PS3/4-14	△	GRSP12Q--L	63	20	6	Dd

AR-D PF

Adjustable Thread Cutting Round Dies



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	Clearance Holes	Type
For PF Threads						
PF1/16-28	△	GGSF01K	25	9	4	Dd
	△	GGSF02K	25	9	5	
PF1/8-28	○	GJSF02K	38	13	4	Dd
	○	GJSF04-	38	13	5	
PF1/4-19	△	GMSF04-	50	16	4	Dd
	△	GJSF06-	38	13	6	
PF3/8-19	○	GMSF06-	50	16	5	Dd
	○	GMSF08Q	50	16	5	
PF1/2-14	○	GMSF08Q	50	16	5	Dd
PF5/8-14	△	GMSF10Q	50	16	6	Dd
PF3/4-14	△	GMSF12Q	50	16	6	Dd

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

AR-D PF Adjustable Thread Cutting Round Dies

Size	Stock	Code	D (mm)	T (mm)	Clearance Holes	Type
PF3/4-14	○	GRSF12Q	63	20	6	Dd
PF7/8-14	△	GUSF14Q	75	25	5	Dd
PF1'-11	○	GUSF16U	75	25	6	Dd
PF1'1/4-11	△	GUSF20U	75	25	8	Dd
	△	GUSF24U	75	25	8	Dd
PF1'1/2-11	△	GYSF24U	105	28	6	Dd
PF2'-11	△	GYSF32U	105	28	8	Dd

AR-D PF(LH)

Adjustable Thread Cutting Round Dies for Left Hand Threads



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	Clearance Holes	Type
For PF Left Hand Threads						
PF1/8-28	△	GJSF02K-L	38	13	4	Dd
PF1/4-19	△	GJSF04-L	38	13	5	Dd
PF3/8-19	△	GMSF06-L	50	16	5	Dd
PF1/2-14	△	GMSF08Q-L	50	16	5	Dd
PF3/4-14	△	GRSF12Q-L	63	20	6	Dd
PF1'-11	△	GUSF16U-L	75	25	6	Dd

AR-D PF HSS

HSS Adjustable Thread Cutting Round Dies



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	Clearance Holes	Type
For PF Threads						
PF1/8-28	△	HJSF02K	38	13	4	Dd
PF1/4-19	△	HJSF04-	38	13	5	Dd
PF3/8-19	△	HMSF06-	50	16	5	Dd
PF1/2-14	△	HMSF08Q	50	16	5	Dd
PF3/4-14	△	HMSF12Q	50	16	6	Dd

SR-D NPT

Solid Thread Cutting Round Dies



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	ℓ _g (mm)	Clearance Holes	Type
For NPT Threads							
NPT1/16-27	△	DJNT01L	38	11	5	4	De
NPT1/8-27	○	DJNT02L	38	11	5	4	De
NPT1/4-18	○	DJNT04O	38	16	8	5	De
NPT3/8-18	△	DMNT06O	50	16	8	5	De
NPT1/2-14	△	DMNT08Q	50	22	10	6	De
NPT3/4-14	△	DRNT12Q	63	22	10	6	De
NPT1'-11.5	△	DUNT16T	75	28	12.5	6	De
NPT1'1/4-11.5	△	DUNT20T	75	28	13.5	6	De

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness	Basic dia. position
D	T	l_g

AR-D NPT

Adjustable Thread Cutting Round Dies



Segment : 37



AR-D NPTF

Adjustable Thread Cutting Round Dies



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	l_g (mm)	Clearance Holes	Recess	Type
For NPT Threads								
NPT1/16-27	△	GJNT01L	38	13	5	4	○	Dd
NPT1/8-27	△	GJNT02L	38	13	5	4	○	Dd
NPT1/4-18	△	GJNT04O	38	13	8	5		Dd
NPT3/8-18	△	GJNT06O	38	13	8	6		Dd
	△	GMNT06O	50	16		5		
NPT1/2-14	△	GMNT08Q	50	16	10	6		Dd

Size	Stock	Code	D (mm)	T (mm)	l_g (mm)	Clearance Holes	Recess	Type
For NPTF Dryseal Threads								
NPTF1/16-27	△	GJNF01L	38	13	5	4	○	Dd
NPTF1/8-27	△	GJNF02L	38	13	5	4	○	Dd
NPTF1/4-18	△	GJNF04O	38	13	8	5		Dd
NPTF3/8-18	△	GMNF06O	50	16	8	5		Dd
NPTF1/2-14	△	GMNF08Q	50	16	10	6		Dd
NPTF3/4-14	△	GRNF12Q	63	20	10	6		Dd
NPTF1'-11.5	△	GUNF16T	75	25	12.5	6		Dd

SR-D NPTF

Solid Thread Cutting Round Dies



Segment : 37



Size	Stock	Code	D (mm)	T (mm)	l_g (mm)	Clearance Holes	Type
For NPTF Dryseal Threads							
NPTF1/16-27	△	DJNF01L	38	11	5	4	Dd
NPTF1/8-27	△	DJNF02L	38	11	5	4	Dd
NPTF1/4-18	△	DJNF04O	38	16	8	5	Dd
NPTF3/8-18	△	DMNF06O	50	16	8	5	Dd
NPTF1/2-14	△	DMNF08Q	50	22	10	6	Dd
NPTF3/4-14	△	DRNF12Q	63	22	10	6	Dd
NPTF1'-11.5	△	DUNF16T	75	28	12.5	6	Dd
NPTF1'1/4-11.5	△	DUNF20T	75	28	13	6	Dd

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Concerning specification, please refer to spec dwg. P84 of technical information.
For improvement, Spec may change without advance notice.

Outside diameter	Thickness
<i>D</i>	<i>T</i>

AR-D NPSM

Adjustable Thread Cutting Round Dies



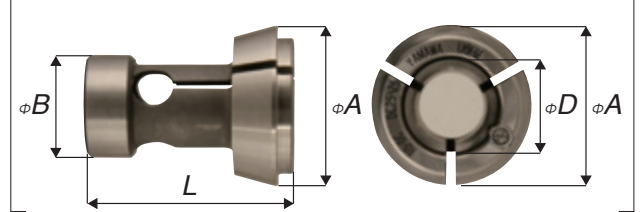
Segment : 37



RD-DC

Die Collets for Die Holders

Segment : 3A



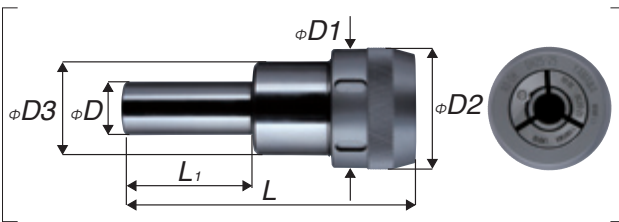
Size	Stock	Code	<i>D</i> (mm)	<i>T</i> (mm)	Clearance Holes	Type
For NPSM Threads						
NPSM1/16-27	△	GJNM01L	38	13	4	Dd
NPSM1/8-27	△	GJNM02L	38	13	4	Dd
NPSM1/4-18	△	GJNM04O	38	13	5	Dd
NPSM3/8-18	△	GMNM06O	50	16	5	Dd
NPSM1/2-14	△	GMNM08Q	50	16	5	Dd
NPSM3/4-14	△	GRNM12Q	63	20	6	Dd
NPSM1'-11.5	△	GUNM16T	75	25	6	Dd

Name	Stock	Code	Die OD	ϕD	ϕA	ϕB	<i>L</i> (mm)	Adaptive Holder	Weight (kg)
RD-DC	○	DC10-20	10	10	23	18	35	DH16-20	0.05
	○	DC16-20	16	16				DH16-20	
RD-DC	○	DC20-25	20	20	40	26	52	DH25-25	0.13
	○	DC25-25	25	25				DH25-25	
RD-DC	○	DC38-32	38	38	62	34	60	DH50-32	0.32
	○	DC50-32	50	50				DH50-32	

RD-DH

Die Holders for Solid Dies

Segment : 3A



Name	Stock	Code	Die OD	ϕD	$\phi D1$	$\phi D2$	$\phi D3$	<i>L</i> (mm)	<i>L</i> ₁ (mm)	Adaptive Collet	Weight (kg)
RD-DH	○	DH16-20	10	20	39	40	27.7	81	40	DC10-20	0.3
	○		16							DC16-20	
RD-DH	○	DH25-25	20	25	55	56	43.6	131	60	DC20-25	0.8
	○		25							DC25-25	
RD-DH	○	DH50-32	38	32	78	80	48	150	70	DC38-32	1.6
	○		50							DC50-32	

Spiral Fluted Taps (for blind hole)
Spiral Fluted Taps (for through hole)
Spiral Pointed Taps
Hand Taps
Cemented Carbide Taps
Roll Taps
Special Thread Taps Simple measuring tools
Pipe Taps
MC Helical Thread Mills
Dies
Center Drills
Centering Tools

Center Drills/Centering Tools



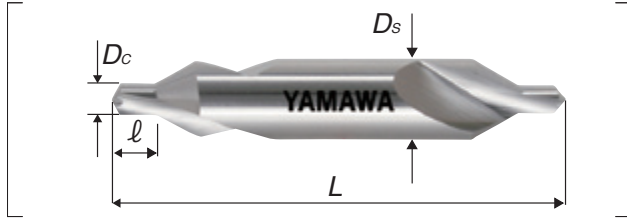
CESA	CE-1	CD-R	CE-9	NC-SD-V	CE-17
CE-S	CE-1	CESB	CE-10	NC-SD	CE-18
CE-S(I)	CE-1	CE-S(II)	CE-10	CS-Q	CE-18
CD-S	CE-2	CD-S(II)	CE-10	CS-QM	CE-18
CD-S(I)	CE-2	CESC	CE-11	CS-G	CE-19
CD-S(LH)	CE-2	JO-CES	CE-11		
CE-S-V	CE-3	JO-CESV	CE-11		
CE-S-V(I)	CE-3	JO-CDS	CE-12		
C-CD-S	CE-3	JO-CDSV	CE-12		
CE-SL	CE-4	JO-CDS	CE-12		
CD-SL	CE-4	JO-C-CDS	CE-12		
CE-SL-V	CE-5	JO-PEQ	CE-13		
CD-SL-V	CE-5	JO-PEQV	CE-13		
C-CD-SL	CE-5	JO-C-PEQV	CE-13		
CEQA	CE-6	JO-NCSDV	CE-13		
CE-Q	CE-6	JO-CSQM	CE-14		
CD-Q	CE-6	HOLDER	CE-14		
CD-Q(LH)	CE-7	PE-Q	CE-15		
CE-Q-V	CE-7	PE-Q-V	CE-15		
CD-Q-V	CE-7	C-PE-Q-V	CE-15		
C-CD-Q	CE-8	PE-QL-V	CE-16		
CE-QL	CE-8	PE-S	CE-16		
CE-QL-V	CE-8	PE-S-V	CE-16		
C-CD-QL	CE-9	C-PE-S-V	CE-17		
CEIR	CE-9	PE-SL-V	CE-17		

CESA

High Helix Center Drills-JIS Type A 60°

HSS

Segment : 51



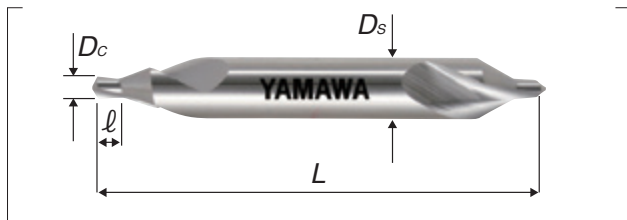
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
0.5×60°×3.15	◎	CEA0.5	3.15	31.5	0.8	Ca
0.63×60°×3.15	◎	CEA0.63	3.15	31.5	1	Ca
0.8×60°×3.15	◎	CEA0.8	3.15	31.5	1.2	Ca
1×60°×3.15	◎	CEA1.0	3.15	31.5	1.5	Ca
1.25×60°×3.15	◎	CEA1.25	3.15	31.5	1.9	Ca
1.6×60°×4	◎	CEA1.6	4	35.5	2.4	Ca
2×60°×5	◎	CEA2.0	5	40	3	Ca
2.5×60°×6.3	◎	CEA2.5	6.3	45	3.8	Ca
3.15×60°×8	◎	CEA3.15	8	50	4.8	Ca
4×60°×10	◎	CEA4.0	10	56	6	Ca
5×60°×12.5	◎	CEA5.0	12.5	63	7.5	Ca
6.3×60°×16	◎	CEA6.3	16	71	9.2	Ca
8×60°×20	◎	CEA8.0	20	80	11.5	Ca
10×60°×25	◎	CEA010	25	100	14.2	Ca

CE-S

High Helix Center Drills-Type A 60°

HSS

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
0.3×60°×3	△	(CE0.3)	3	35	0.3	Cf

CE-S High Helix Spiral Fluted Center Drills-Type A 60°

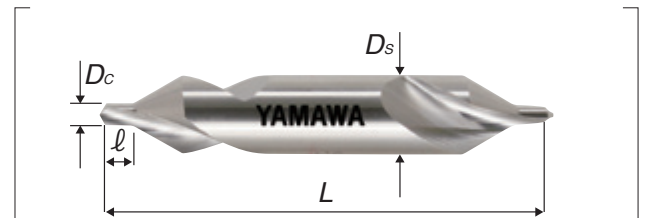
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
0.4×60°×3	△	(CE0.4)	3	35	0.4	Cf
0.5×60°×3.5	○	CE0.5	3.5	35	0.5	Cf
0.6×60°×3.5	○	CE0.6	3.5	35	0.6	Cf
0.7×60°×3.5	○	CE0.7	3.5	35	0.7	Cf
0.8×60°×3.5	○	CE0.8	3.5	35	0.8	Cf
0.9×60°×4	○	CE0.9	4	35	0.9	Cf
1×60°×4	○	CE1.0	4	35	1	Cf
1.2×60°×5	○	CE1.2	5	40	1.2	Cf
1.5×60°×5	○	CE1.5	5	40	1.5	Cf
2×60°×6	○	CE2.0	6	45	2	Cf
2.5×60°×7.7	○	CE2.5	7.7	50	2.5	Cf
3×60°×7.7	○	CE3.0	7.7	55	3	Cf
3×60°×8	○	CE3.0-8	8	55	3	Cf
4×60°×10	○	CE4.0	10	65	4.5	Cf
5×60°×11	○	CE5.0	11	78	5.5	Cf
5×60°×12	○	CE5.0-12	12	78	5.5	Cf
6×60°×16	○	CE6.0-16	16	90	6.5	Cf
6×60°×18	○	CE6.0	18	90	6.5	Cf
8×60°×18	○	CE8.0	18	100	8.5	Cf
10×60°×18	○	CE010	18	100	11	Cf
12×60°×25	○	CE012	25	120	13	Cf

CE-S(I)

High Helix Center Drills-Type A 60°, (Old JIS Type 1)

HSS

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
2.5×60°×8	○	CE12.5	8	50	3.5	Cf
3×60°×10	○	CE13.0	10	55	4	Cf
4×60°×12	○	CE14.0	12	66	5	Cf
5×60°×14	○	CE15.0	14	78	6.5	Cf

Product codes shown in () mean the products are of single edge.

Concerning specification, please refer to spec dwg. P83 of technical information. For improvement, spec may change without advance notice.

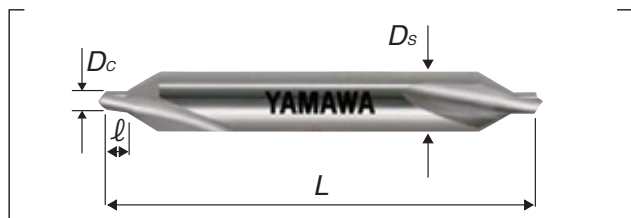
◎=Standard ○=Below standard △=Made to order

CD-S

Low Helix Center Drills-Type A 60°

HSS

Segment : 51



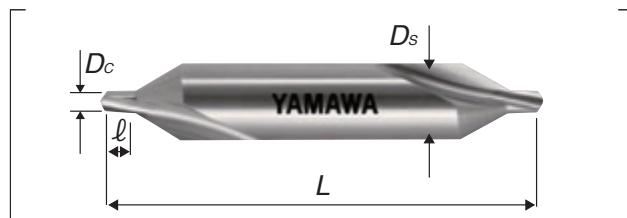
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
0.3×60°×3	△	CY0.3	3	35	0.3	Cf
0.4×60°×3	△	(CY0.4)	3	35	0.4	Cf
0.5×60°×3.5	○	CY0.5	3.5	35	0.5	Cf
0.6×60°×3.5	○	CY0.6	3.5	35	0.6	Cf
0.7×60°×3.5	△	CY0.7	3.5	35	0.7	Cf
0.8×60°×3.5	○	CY0.8	3.5	35	0.8	Cf
0.9×60°×4	△	CY0.9	4	35	0.9	Cf
1×60°×4	○	CY1.0	4	35	1	Cf
1.2×60°×5	○	CY1.2	5	40	1.2	Cf
1.5×60°×5	○	CY1.5	5	40	1.5	Cf
2×60°×6	○	CY2.0	6	45	2	Cf
2.5×60°×7.7	○	CY2.5	7.7	50	2.5	Cf
3×60°×7.7	○	CY3.0	7.7	55	3	Cf
3×60°×8	○	CY3.0-8	8	55	3	Cf
4×60°×10	○	CY4.0	10	65	4.5	Cf
5×60°×11	○	CY5.0	11	78	5.5	Cf
6×60°×16	○	CY6.0-16	16	90	6.5	Cf
6×60°×18	○	CY6.0	18	90	6.5	Cf

CD-S(I)

Low Helix Center Drills-Type A 60°, (Old JIS Type 1)

HSS

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
2.5×60°×8	○	C12.5	8	50	3.5	Cf
3×60°×10	○	C13.0	10	55	4	Cf
4×60°×12	○	C14.0	12	66	5	Cf
5×60°×14	○	C15.0	14	78	6.5	Cf

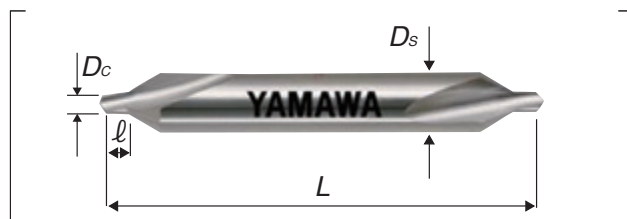
CD-S(LH)

Low Helix Center Drills-Type A 60°, Left Hand Cut

HSS



Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
0.5×60°×3.5	△	CY0.5-L	3.5	35	0.5	Cf
0.7×60°×3.5	△	CY0.7-L	3.5	35	0.7	Cf
0.8×60°×3.5	△	CY0.8-L	3.5	35	0.8	Cf
0.9×60°×4	△	CY0.9-L	4	35	0.9	Cf
1×60°×4	△	CY1.0-L	4	35	1	Cf
1.5×60°×5	△	CY1.5-L	5	40	1.5	Cf
2×60°×6	△	CY2.0-L	6	45	2	Cf
2.5×60°×7.7	△	CY2.5-L	7.7	50	2.5	Cf
3×60°×7.7	△	CY3.0-L	7.7	55	3	Cf
4×60°×10	△	CY4.0-L	10	65	4.5	Cf
5×60°×11	△	CY5.0-L	11	78	5.5	Cf

CD-S(LH) Low Helix Center Drills-Type A 60°, Left Hand Cut

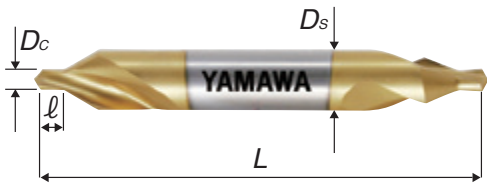
Size Dc × θ × Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
6×60°×16	△	CY6.0-L16	16	90	6.5	Cf
6×60°×18	△	CY6.0-L	18	90	6.5	Cf

CE-S-V

High Helix Center Drills-Type A 60°, TiN Coated



Segment : 51



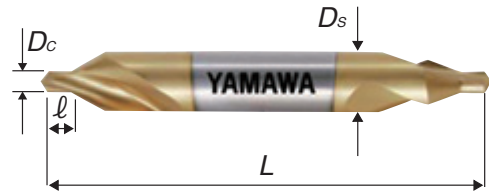
Size Dc × θ × Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×60°×4	○	VCE1.0	4	35	1	Cf
1.5×60°×5	○	VCE1.5	5	40	1.5	Cf
2×60°×6	○	VCE2.0	6	45	2	Cf
2.5×60°×7.7	○	VCE2.5	7.7	50	2.5	Cf
3×60°×7.7	○	VCE3.0	7.7	55	3	Cf
4×60°×10	○	VCE4.0	10	65	4.5	Cf
5×60°×11	○	VCE5.0	11	78	5.5	Cf
6×60°×18	○	VCE6.0	18	90	6.5	Cf

CE-S-V(I)

High Helix Center Drills-Type A 60°, TiN Coated, (Old JIS Type 1)



Segment : 51



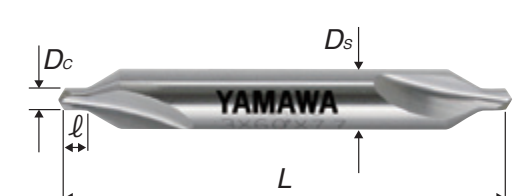
Size Dc × θ × Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
2.5×60°×8	△	VCE12.5	8	50	3.2	Cf
3×60°×10	△	VCE13.0	10	55	4	Cf
4×60°×12	△	VCE14.0	12	66	5	Cf
5×60°×14	△	VCE15.0	14	78	6.5	Cf

C-CD-S

Cemented Carbide Center Drills-Type A 60°



Segment : 52



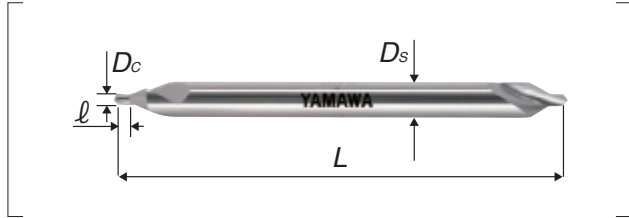
Size Dc × θ × Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×60°×4	◎	CCD1.0	4	35	1	Cf
1.2×60°×5	△	CCD1.2	5	40	1.2	Cf
1.5×60°×5	◎	CCD1.5	5	40	1.5	Cf
2×60°×6	◎	CCD2.0	6	45	2	Cf
2.5×60°×7.7	◎	CCD2.5	7.7	50	2.5	Cf
2.5×60°×8	△	CCD2.5-8	8	50	2.5	Cf
3×60°×7.7	◎	CCD3.0	7.7	55	3	Cf
3×60°×8	△	CCD3.0-8	8	55	3	Cf
4×60°×10	◎	CCD4.0	10	65	4.5	Cf
5×60°×11	○	CCD5.0	11	78	5.5	Cf
5×60°×12	△	CCD5.0-12	12	78	5.5	Cf
6×60°×18	△	CCD6.0	18	90	6.5	Cf

CE-SL

Long Shank High Helix Center Drills-Type A 60°

HSS

Segment : 51

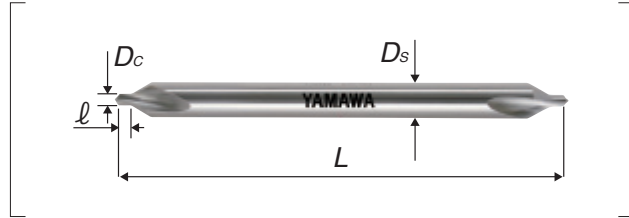


CD-SL

Long Shank Low Helix Center Drills-Type A 60°

HSS

Segment : 51



Size $D_c \times \theta \times D_s$	Stock	Code	D_s (mm)	L (mm)	l (mm)	Type
1×60°×4	◎	CEL1.0	4	100	1	Cf
	○	CEM1.0		150		
1.5×60°×5	◎	CEL1.5	5	100	1.5	Cf
	○	CEM1.5		150		
2×60°×6	◎	CEL2.0	6	100	2	Cf
	◎	CEM2.0		150		
2.5×60°×8	◎	CEL2.5	8	100	2.5	Cf
	◎	CEM2.5		150		
3×60°×8	◎	CEL3.0	8	100	3	Cf
	◎	CEM3.0		150		
	△	CEN3.0		200		
4×60°×10	◎	CEL4.0	10	100	4.5	Cf
	◎	CEM4.0		150		
	△	CEN4.0		200		
5×60°×12	◎	CEL5.0	12	100	5.5	Cf
	◎	CEM5.0		150		
	△	CEN5.0		200		

Size $D_c \times \theta \times D_s$	Stock	Code	D_s (mm)	L (mm)	l (mm)	Type
1×60°×4	○	CDL1.0	4	100	1	Cf
	○	CDM1.0		150		
1.5×60°×5	○	CDL1.5	5	100	1.5	Cf
	○	CDM1.5		150		
2×60°×6	◎	CDL2.0	6	100	2	Cf
	○	CDM2.0		150		
2.5×60°×8	◎	CDL2.5	8	100	2.5	Cf
	○	CDM2.5		150		
3×60°×8	◎	CDL3.0	8	100	3	Cf
	○	CDM3.0		150		
	△	CDN3.0		200		
4×60°×10	◎	CDL4.0	10	100	4.5	Cf
	○	CDM4.0		150		
	△	CDN4.0		200		
5×60°×12	○	CDL5.0	12	100	5.5	Cf
	○	CDM5.0		150		
	△	CDN5.0		200		

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

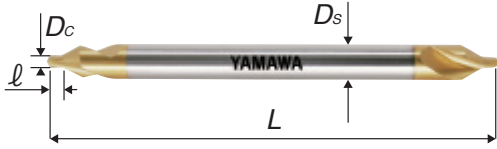
Centering Tools

CE-SL-V

Long Shank High Helix Center Drills-Type A 60°, TiN Coated

HSS TiN

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×60°×4	○	VCCEL1.0	4	100	1	Cf
	○	VCCEM1.0				
1.5×60°×5	○	VCCEL1.5	5	100	1.5	Cf
	○	VCCEM1.5				
2×60°×6	◎	VCCEL2.0	6	100	2	Cf
	○	VCCEM2.0				
2.5×60°×8	○	VCCEL2.5	8	100	2.5	Cf
	○	VCCEM2.5				
3×60°×8	◎	VCCEL3.0	8	100	3	Cf
	○	VCCEM3.0				
4×60°×10	○	VCCEL4.0	10	100	4.5	Cf
	○	VCCEM4.0				
5×60°×12	○	VCCEL5.0	12	100	5.5	Cf
	○	VCCEM5.0				

CD-SL-V Long Shank Low Helix Center Drills-Type A 60°, TiN Coated

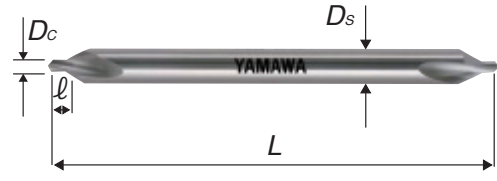
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×60°×4	△	VCDM1.0	4	150	1	Cf
1.5×60°×5	△	VCDL1.5	5	100	1.5	Cf
	△	VCDM1.5		150		
2×60°×6	△	VCDL2.0	6	100	2	Cf
	△	VCDM2.0		150		
2.5×60°×8	△	VCDL2.5	8	100	2.5	Cf
	△	VCDM2.5		150		
3×60°×8	△	VCDL3.0	8	100	3	Cf
	△	VCDM3.0		150		
4×60°×10	△	VCDL4.0	10	100	4.5	Cf
	△	VCDM4.0		150		
5×60°×12	△	VCDL5.0	12	100	5.5	Cf

C-CD-SL

Long Shank Cemented Carbide Center Drills-Type A 60°

HF

Segment : 52



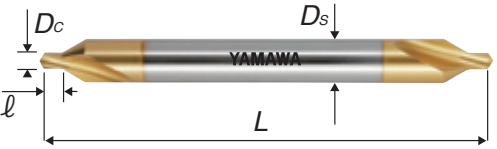
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×60°×4	△	CCDL1.0	4	100	1	Cf
1.5×60°×5	△	CCDL1.5	5	100	1.5	Cf
2×60°×6	△	CCDL2.0	6	100	2	Cf
	△	CCDM2.0		150		
2.5×60°×8	△	CCDL2.5	8	100	2.5	Cf
	△	CCDM2.5		150		
3×60°×8	△	CCDL3.0	8	100	3	Cf
	△	CCDM3.0		150		
4×60°×10	△	CCDL4.0	10	100	4.5	Cf
	△	CCDM4.0		150		
5×60°×12	△	CCDL5.0	12	100	5.5	Cf
	△	CCDM5.0		150		

CD-SL-V

Long Shank Low Helix Center Drills-Type A 60°, TiN Coated

HSS TiN

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×60°×4	△	VCDL1.0	4	100	1	Cf

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

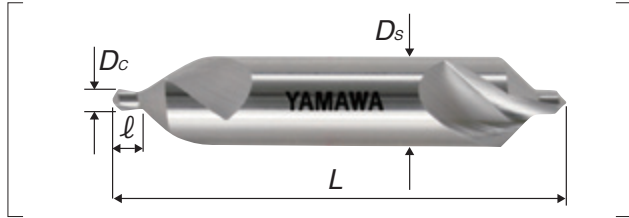
Centering Tools

CEQA

High Helix Center Drills-JIS Type A 90°

HSS

Segment : 51



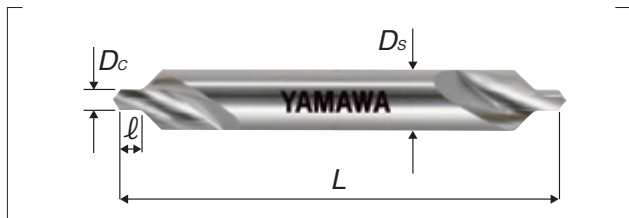
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×90°×4	◎	CEA1.0Q	4	35.5	1.1	Ca
1.25×90°×5	◎	CEA1.25Q	5	40	1.4	Ca
1.6×90°×6.3	◎	CEA1.6Q	6.3	45	1.8	Ca
2×90°×8	◎	CEA2.0Q	8	50	2.2	Ca
2.5×90°×10	◎	CEA2.5Q	10	56	2.8	Ca
3.15×90°×11.2	◎	CEA3.15Q	11.2	60	3.6	Ca
4×90°×12.5	◎	CEA4.0Q	12.5	63	4.5	Ca
5×90°×16	◎	CEA5.0Q	16	71	5.6	Ca
6.3×90°×20	◎	CEA6.3Q	20	80	7.1	Ca
8×90°×25	◎	CEA8.0Q	25	100	9	Ca
10×90°×31.5	◎	CEA010Q	31.5	125	11.2	Ca
12.5×90°×35.5	◎	CEA12.5Q	35.5	140	14	Ca

CE-Q

High Helix Center Drills-Type A 90°

HSS

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
0.5×90°×3.5	△	CY0.5Z	3.5	35	0.5	Cf
0.6×90°×3.5	△	CY0.6Z	3.5	35	0.6	Cf
0.7×90°×3.5	○	CY0.7Z	3.5	35	0.7	Cf

CE-Q High Helix Center Drills-Type A 90°

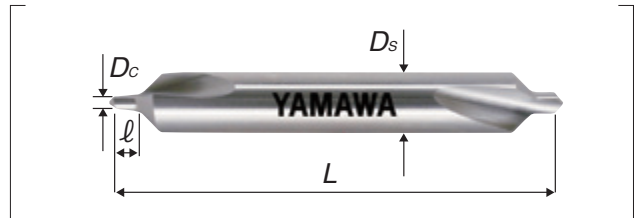
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
0.8×90°×3.5	○	CY0.8Z	3.5	35	0.8	Cf
0.9×90°×4	△	CY0.9Z	4	35	0.9	Cf
1×90°×4	○	CY1.0Z	4	35	1	Cf
1.2×90°×5	△	CY1.2Z	5	40	1.2	Cf
1.5×90°×5	○	CY1.5Z	5	40	1.5	Cf
2×90°×6	○	CY2.0Z	6	45	2	Cf
2.5×90°×7.7	○	CY2.5Z	7.7	50	2.5	Cf
3×90°×7.7	○	CY3.0Z	7.7	55	3	Cf
4×90°×10	○	CY4.0Z	10	65	4.5	Cf
5×90°×11	○	CY5.0Z	11	78	5.5	Cf
6×90°×16	○	CY6.0Z-16	16	90	6.5	Cf
6×90°×18	○	CY6.0Z	18	90	6.5	Cf

CD-Q

Low Helix Center Drills-Type A 90°

HSS

Segment : 51



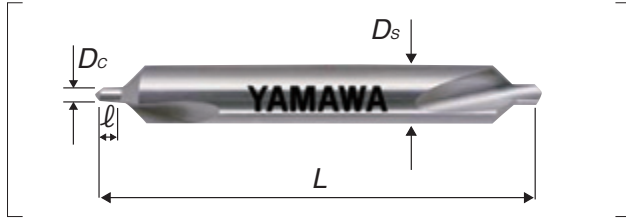
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×90°×4	○	CY1.0Q	4	35	1	Cf
1.5×90°×5	○	CY1.5Q	5	40	1.5	Cf
2×90°×6	○	CY2.0Q	6	45	2	Cf
2.5×90°×7.7	○	CY2.5Q	7.7	50	2.5	Cf
3×90°×7.7	○	CY3.0Q	7.7	55	3	Cf
4×90°×10	○	CY4.0Q	10	65	4.5	Cf
5×90°×11	○	CY5.0Q	11	78	5.5	Cf
6×90°×16	△	CY6.0Q-16	16	90	6.5	Cf
6×90°×18	△	CY6.0Q	18	90	6.5	Cf

CD-Q(LH)

Low Helix Center Drills - Type A 90°, Left Hand Cut



Segment : 51



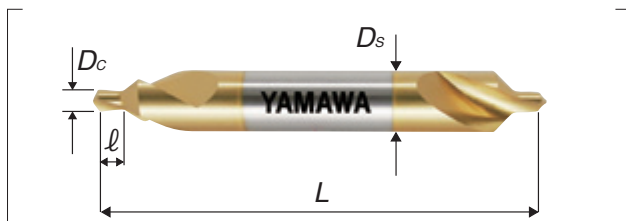
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
1×90°×4	△	CY1.0Q-L	4	35	1	Cf
1.2×90°×5	△	CY1.2Q-L	5	40	1.2	Cf
1.5×90°×5	△	CY1.5Q-L	5	40	1.5	Cf
2×90°×6	△	CY2.0Q-L	6	45	2	Cf
2.5×90°×7.7	△	CY2.5Q-L	7.7	50	2.5	Cf
2.5×90°×8	△	CY2.5Q8L	8	50	2.5	Cf
3×90°×7.7	△	CY3.0Q-L	7.7	55	3	Cf
3×90°×8	△	CY3.0Q8L	8	55	3	Cf
4×90°×10	△	CY4.0Q-L	10	65	4.5	Cf
5×90°×12	△	CY5.0Q12L	12	78	5.5	Cf
6×90°×18	△	CY6.0Q-L	18	90	6.5	Cf

CE-Q-V

High Helix Center Drills-Type A 90°, TiN Coated



Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
1×90°×4	○	VCY1.0Z	4	35	1	Cf
1.5×90°×5	○	VCY1.5Z	5	40	1.5	Cf
2×90°×6	○	VCY2.0Z	6	45	2	Cf
2.5×90°×7.7	○	VCY2.5Z	7.7	50	2.5	Cf

CE-Q-V High Helix Center Drills-Type A 90°, TiN Coated

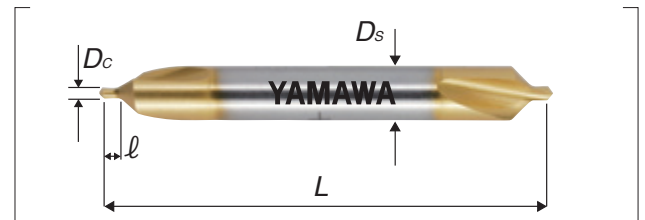
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
3×90°×7.7	○	VCY3.0Z	7.7	55	3	Cf
4×90°×10	○	VCY4.0Z	10	65	4.5	Cf
5×90°×11	○	VCY5.0Z	11	78	5.5	Cf
6×90°×18	○	VCY6.0Z	18	90	6.5	Cf

CD-Q-V

Low Helix Center Drills-Type A 90°, TiN Coated



Segment : 51



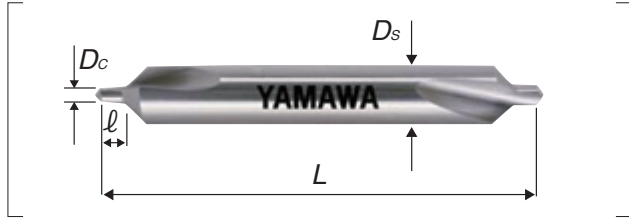
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
1×90°×4	△	VCY1.0Q	4	35	1	Cf
1.5×90°×5	△	VCY1.5Q	5	40	1.5	Cf
2×90°×6	△	VCY2.0Q	6	45	2	Cf
2.5×90°×7.7	△	VCY2.5Q	7.7	50	2.5	Cf
3×90°×7.7	△	VCY3.0Q	7.7	55	3	Cf
4×90°×10	△	VCY4.0Q	10	65	4.5	Cf
5×90°×11	△	VCY5.0Q	11	78	5.5	Cf
6×90°×18	△	VCY6.0Q	18	90	6.5	Cf

C-CD-Q

Cemented Carbide Center Drills-Type A 90°

HF

Segment : 52



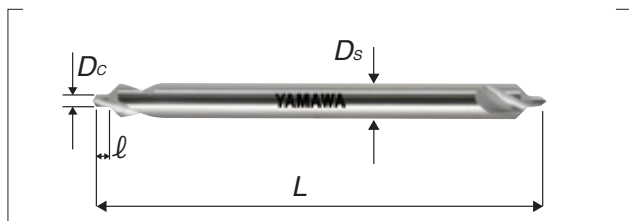
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
1×90°×4	△	CC1.0Q	4	35	1	Cf
1.5×90°×5	△	CC1.5Q	5	40	1.5	Cf
2×90°×6	△	CC2.0Q	6	45	2	Cf
2.5×90°×7.7	△	CC2.5Q	7.7	50	2.5	Cf
2.5×90°×8	△	CC2.5Q-8	8	50	2.5	Cf
3×90°×7.7	△	CC3.0Q	7.7	55	3	Cf
3×90°×8	△	CC3.0Q-8	8	55	3	Cf
4×90°×10	△	CC4.0Q	10	65	4.5	Cf
5×90°×11	△	CC5.0Q	11	78	5.5	Cf
5×90°×12	△	CC5.0Q-12	12	78	5.5	Cf
6×90°×18	△	CC6.0Q	18	90	6.5	Cf

CE-QL

Long Shank Low Helix Center Drills-Type A 90°

HSS

Segment : 51



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
1×90°×4	◎	CL1.0Z	4	100	1	Cf
	△	CM1.0Z				
1.5×90°×5	◎	CL1.5Z	5	100	1.5	Cf
	○	CM1.5Z				

CE-QL Long Shank Low Helix Center Drills-Type A 90°

Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
2×90°×6	◎	CL2.0Z	6	100	2	Cf
	○	CM2.0Z				
2.5×90°×8	◎	CL2.5Z	8	100	2.5	Cf
	○	CM2.5Z				
3×90°×8	◎	CL3.0Z	8	100	3	Cf
	○	CM3.0Z				
4×90°×10	◎	CL4.0Z	10	100	4.5	Cf
	○	CM4.0Z				
5×90°×12	◎	CL5.0Z	12	100	5.5	Cf
	○	CM5.0Z				

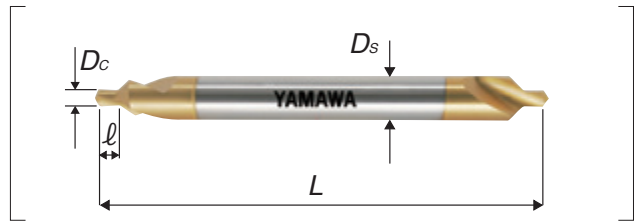
CE-QL-V

High Helix Center Drills-Type A 90°, TiN Coated

HSS

TiN

Segment : 51



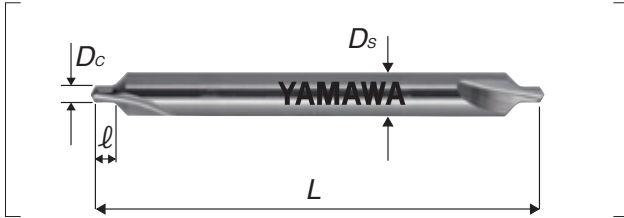
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	l (mm)	Type
1×90°×4	○	VCL1.0Z	4	100	1	Cf
	△	VCM1.0Z				
1.5×90°×5	○	VCL1.5Z	5	100	1.5	Cf
	△	VCM1.5Z				
2×90°×6	○	VCL2.0Z	6	100	2	Cf
	○	VCM2.0Z				
2.5×90°×8	○	VCL2.5Z	8	100	2.5	Cf
	○	VCM2.5Z				
3×90°×8	○	VCL3.0Z	8	100	3	Cf
	○	VCM3.0Z				
4×90°×10	○	VCL4.0Z	10	100	4.5	Cf
	○	VCM4.0Z				
5×90°×12	○	VCL5.0Z	12	100	5.5	Cf
	○	VCM5.0Z				

C-CD-QL

Long Shank Cemented Carbide Center Drills-Type A 90°

HF

Segment : 52



Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Type
1×90°×4	△	CCL1.0Q	4	100	1	Cf
1.5×90°×5	△	CCL1.5Q	5	100	1.5	Cf
2×90°×6	△	CCL2.0Q	6	100	2	Cf
	△	CCM2.0Q		150		
2.5×90°×8	△	CCL2.5Q	8	100	2.5	Cf
	△	CCM2.5Q		150		
3×90°×8	△	CCL3.0Q	8	100	3	Cf
	△	CCM3.0Q		150		
4×90°×10	△	CCL4.0Q	10	100	4.5	Cf
	△	CCM4.0Q		150		
5×90°×12	△	CCL5.0Q	12	100	5.5	Cf
	△	CCM5.0Q		150		

CEIR High Helix Center Drills-JIS Type R

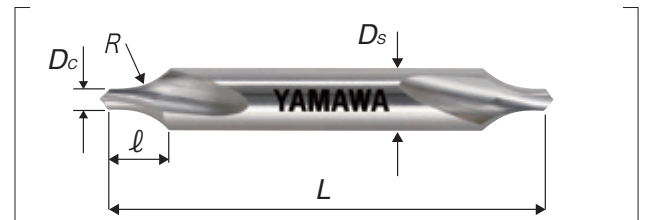
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Rmin (mm)	Type
2×R×5	◎	CE2.0RI	5	40	5.3	6.3	5	Ce
2.5×R×6.3	◎	CE2.5RI	6.3	45	6.7	8	6.3	Ce
3.15×R×8	◎	CE3.15RI	8	50	8.5	10	8	Ce
4×R×10	◎	CE4.0RI	10	56	10.6	12.5	10	Ce
5×R×12.5	◎	CE5.0RI	12.5	63	13.2	16	12.5	Ce
6.3×R×16	◎	CE6.3RI	16	71	17	20	16	Ce
8×R×20	◎	CE8.0RI	20	80	21.2	25	20	Ce
10×R×25	◎	CE10RI	25	100	26.5	31.5	25	Ce

CD-R

Low Helix Center Drills-Type R

HSS

Segment : 51



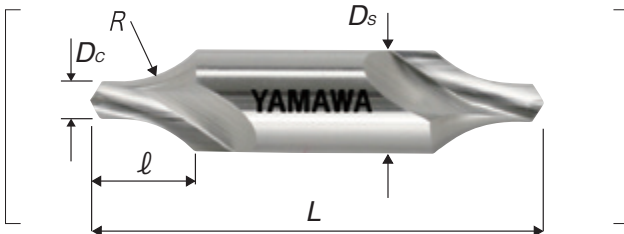
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Type
0.7×R×3.5	△	CY0.7R	3.5	35	2.5	2.5	Ce-1
0.8×R×3.5	△	CY0.8R	3.5	35	2.6	2.5	Ce-1
1×R×4	△	CY1.0R	4	35	3.25	3.15	Ce-1
1.5×R×5	○	CY1.5R	5	40	4.6	5	Ce-1
2×R×6	○	CY2.0R	6	45	5.75	6.3	Ce-1
2.5×R×7.7	○	CY2.5R	7.7	50	7.3	8	Ce-1
3×R×7.7	○	CY3.0R	7.7	55	8.3	10	Ce-1
4×R×10	○	CY4.0R	10	65	10.6	12.5	Ce-1
5×R×11	△	CY5.0R	11	78	12.4	16	Ce-1
6×R×16	△	CY6.0R-16	16	90	16.9	20	Ce-1
6×R×18	△	CY6.0R	18	90	17.8	20	Ce-1

CEIR

High Helix Center Drills-JIS Type R

HSS

Segment : 51



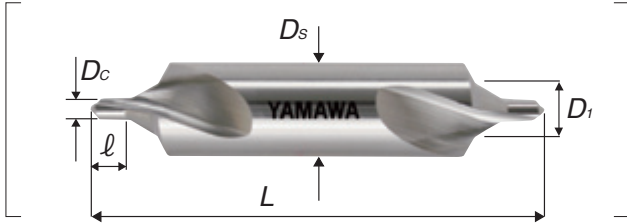
Size Dc x θ x Ds	Stock	Code	Ds (mm)	L (mm)	ℓ (mm)	Rmax (mm)	Rmin (mm)	Type
1×R×3.15	◎	CE1.0RI	3.15	31.5	3	3.15	2.5	Ce
1.25×R×3.15	◎	CE1.25RI	3.15	31.5	3.35	4	3.15	Ce
1.6×R×4	◎	CE1.6RI	4	35.5	4.25	5	4	Ce

CE-SB

High Helix Center Drills-JIS Type B 60°

HSS

Segment : 51



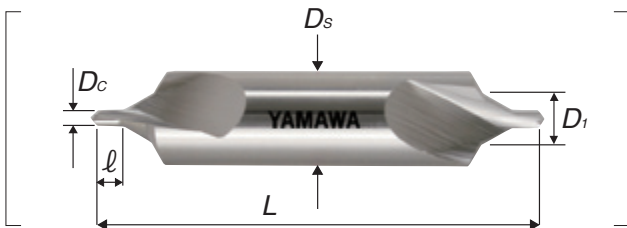
Size Dc × θ × Ds	Stock	Code	Ds (mm)	D1 (mm)	L (mm)	l (mm)	Type
0.5×60°×3.15	◎	CEB0.5	3.15	1.06	31.5	0.8	Cb
0.63×60°×3.15	◎	CEB0.63	3.15	1.32	31.5	1	Cb
0.8×60°×3.15	◎	CEB0.8	3.15	1.7	31.5	1.2	Cb
1×60°×4	◎	CEB1.0	4	2.12	35.5	1.5	Cb
1.25×60°×5	◎	CEB1.25	5	2.65	40	1.9	Cb
1.6×60°×6.3	◎	CEB1.6	6.3	3.35	45	2.4	Cb
2×60°×8	◎	CEB2.0	8	4.25	50	3	Cb
2.5×60°×10	◎	CEB2.5	10	5.3	56	3.8	Cb
3.15×60°×11.2	◎	CEB3.15	11.2	6.7	60	4.8	Cb
4×60°×14	◎	CEB4.0	14	8.5	67	6	Cb
5×60°×18	◎	CEB5.0	18	10.6	75	7.5	Cb
6.3×60°×20	◎	CEB6.3	20	13.2	80	9.2	Cb
8×60°×25	◎	CEB8.0	25	17	100	11.5	Cb
10×60°×31.5	◎	CEB10	31.5	21.2	125	14.2	Cb

CE-S(II)

High Helix Center Drills-Type B 60°, (Old JIS Type 2)

HSS

Segment : 51



Size Dc × θ × Ds	Stock	Code	Ds (mm)	D1 (mm)	L (mm)	l (mm)	Type
1×60°×6	○	CE21.0	6	2.5	45	1.5	Cg

CE-S(II) High Helix Center Drills-Type B 60°, (Old JIS Type 2)

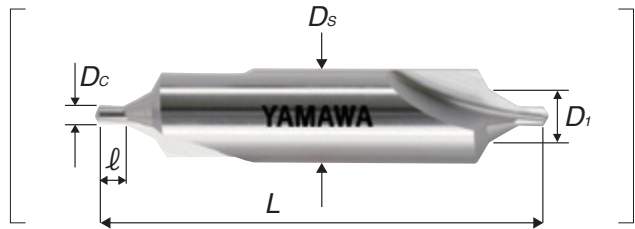
Size Dc × θ × Ds	Stock	Code	Ds (mm)	D1 (mm)	L (mm)	l (mm)	Type
1.5×60°×8	○	CE21.5	8	4	50	2	Cg
2×60°×10	○	CE22.0	10	5	55	3	Cg
2.5×60°×12	○	CE22.5	12	6.5	60	3.5	Cg
3×60°×14	○	CE23.0	14	8	65	4	Cg
4×60°×18	○	CE24.0	18	10	76	4.7	Cg
5×60°×22	○	CE25.0	22	12	88	6.5	Cg
6×60°×25	○	CE26.0	25	15	100	7.7	Cg

CD-S(II)

Low Helix Center Drills-Type B 60°, (Old JIS Type 2)

HSS

Segment : 51



Size Dc × θ × Ds	Stock	Code	Ds (mm)	D1 (mm)	L (mm)	l (mm)	Type
1×60°×6	○	C21.0	6	2.5	45	1.5	Cg
1.5×60°×8	○	C21.5	8	4	50	2	Cg
2×60°×10	○	C22.0	10	5	55	3	Cg
2.5×60°×12	○	C22.5	12	6.5	60	3.5	Cg
3×60°×14	○	C23.0	14	8	65	4	Cg
4×60°×18	○	C24.0	18	10	76	4.7	Cg
5×60°×22	○	C25.0	22	12	88	6.5	Cg
6×60°×25	○	C26.0	25	15	100	7.7	Cg

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

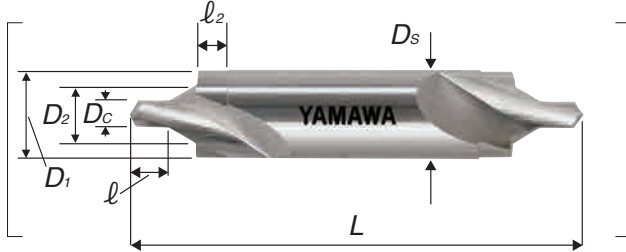
Centering Tools

CESC

High Helix Center Drills-JIS Type C 60°

HSS

Segment : 51

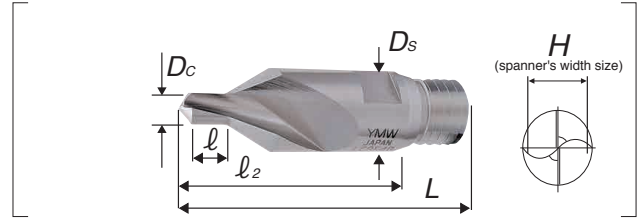


JO-CES

Joint- High Helix Center Drills, Type A 60°

HSS

Segment : 5C



Size Dc x θ x Ds	Stock	Code	Ds (mm)	D1 (mm)	D2 (mm)	L (mm)	l (mm)	l2 (mm)	Type
0.5×60°×3.15	○	CEC0.5	3.15	1.6	1.06	31.5	0.8	0.6	Cc
0.63×60°×3.15	○	CEC0.63	3.15	2	1.32	31.5	1	0.8	Cc
0.8×60°×3.15	○	CEC0.8	3.15	2.5	1.7	31.5	1.2	1	Cc
1×60°×3.15	○	CEC1.0	3.15	3.15	2.12	31.5	1.5	1.2	Cd
1.25×60°×4	○	CEC1.25	4	4	2.65	35.5	1.9	1.5	Cd
1.6×60°×5	○	CEC1.6	5	5	3.35	40	2.4	1.8	Cd
2×60°×6.3	○	CEC2.0	6.3	6.3	4.25	45	3	2.2	Cd
2.5×60°×8	○	CEC2.5	8	8	5.3	50	3.8	3	Cd
3.15×60°×10	○	CEC3.15	10	10	6.7	56	4.8	3.5	Cd
4×60°×12.5	○	CEC4.0	12.5	12.5	8.5	63	6	4.2	Cd
5×60°×16	○	CEC5.0	16	16	10.6	71	7.5	5.5	Cd
6.3×60°×18	○	CEC6.3	18	18	13.2	75	9.2	5.5	Cd
8×60°×22.4	○	CEC8.0	22.4	22.4	17	90	11.5	5.5	Cd
10×60°×28	○	CEC010	28	28	21.2	112	14.2	7	Cd

Size Dc x θ	Stock	Code	Ds (mm)	L (mm)	l (mm)	l2 (mm)	H (mm)	Applicable holder shank dia.
4×60°	○	JCE4.0	10	37.5	4.5	27.5	8	14
5×60°	○	JCE5.0	12	43.5	5.5	32.5	10	16
6×60°	○	JCE6.0	16	48.5	6.5	34.5	13	20

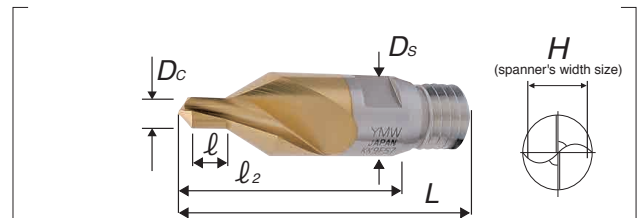
JO-CESV

Joint- High Helix Center Drills-Type A 60°, TiN Coated

HSS

TiN

Segment : 5C



Size Dc x θ	Stock	Code	Ds (mm)	L (mm)	l (mm)	l2 (mm)	H (mm)	Applicable holder shank dia.
4×60°	○	JVCE4.0	10	37.5	4.5	27.5	8	14
5×60°	○	JVCE5.0	12	43.5	5.5	32.5	10	16
6×60°	○	JVCE6.0	16	48.5	6.5	34.5	13	20

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

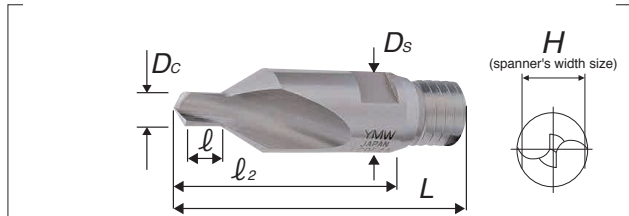
Centering Tools

JO-CDS

Joint- Low Helix Center Drills-Type A 60°

HSS

Segment : 5C



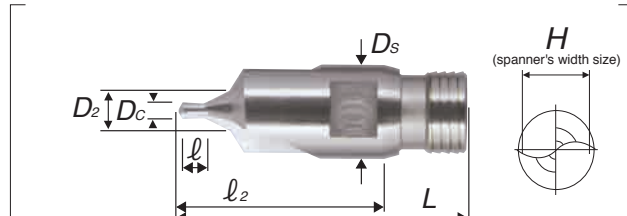
Size Dc × θ	Stock	Code	Ds (mm)	L (mm)	l (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
4×60°	○	JCY4.0	10	37.5	4.5	27.5	8	14
5×60°	○	JCY5.0	12	43.5	5.5	32.5	10	16
6×60°	○	JCY6.0	16	48.5	6.5	34.5	13	20

JO-CDS

Joint- Low Helix Center Drills-Type B 60°,
(Old JIS Type 2)

HSS

Segment : 5C



Size Dc × θ	Stock	Code	Ds (mm)	D ₂ (mm)	L (mm)	l (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
2×60°	○	JC22.0	10	5	37.5	3	27.5	8	14
2.5×60°	○	JC22.5	12	6.5	43.5	3.5	32.5	10	16
3×60°	○	JC23.0	16	8	48.5	4	34.5	13	20

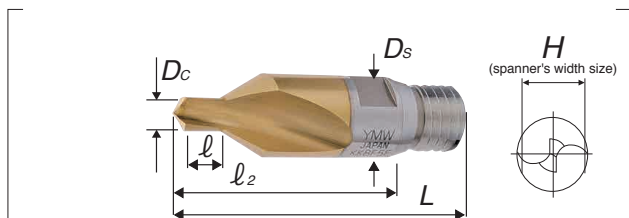
JO-CDSV

Joint- Low Helix Center Drills-Type A 60°, TiN Coated

HSS

TiN

Segment : 5C



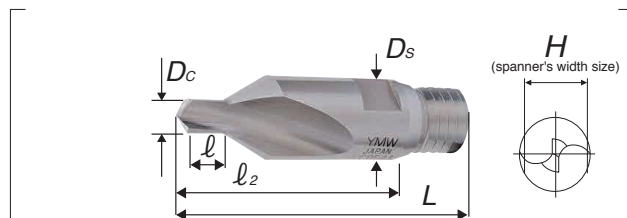
Size Dc × θ	Stock	Code	Ds (mm)	L (mm)	l (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
4×60°	○	JVCY4.0	10	37.5	4.5	27.5	8	14
5×60°	○	JVCY5.0	12	43.5	5.5	32.5	10	16
6×60°	○	JVCY6.0	16	48.5	6.5	34.5	13	20

JO-C-CDS

Joint- Cemented Carbide Center Drills-Type A 60°

HF

Segment : 5C



Size Dc × θ	Stock	Code	Ds (mm)	L (mm)	l (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
4×60°	○	JCCY4.0	10	37.5	4.5	27.5	8	14
5×60°	○	JCCY5.0	12	43.5	5.5	32.5	10	16
6×60°	○	JCCY6.0	16	48.5	6.5	34.5	13	20

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

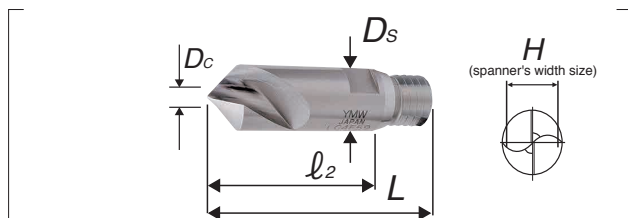
Centering Tools

JO-PEQ

Joint- Point Drills 90°

HSS

Segment : 5C



Size Ds x Dc	Stock	Code	Ds (mm)	Dc (mm)	L (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
10x3	○	JPE010Q	10	3	37.5	27.5	8	14
12x3.5	○	JPE012Q	12	3.5	43.5	32.5	10	16
16x4	○	JPE016Q	16	4	48.5	34.5	13	20

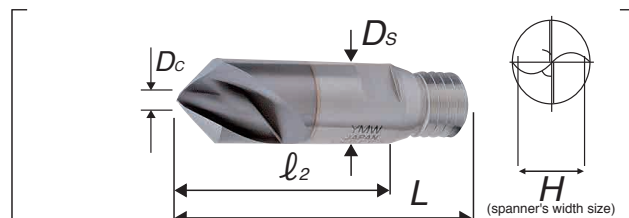
JO-C-PEQV

Joint- Cemented Carbide Point Drills 90°, TiAlN Coated

HF

TiAlN

Segment : 5C



Size Ds x Dc	Stock	Code	Ds (mm)	Dc (mm)	L (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
10x3	○	JVCPE010Q	10	3	37.5	27.5	8	14
12x3.5	○	JVCPE012Q	12	3.5	43.5	32.5	10	16
16x4	○	JVCPE016Q	16	4	48.5	34.5	13	20

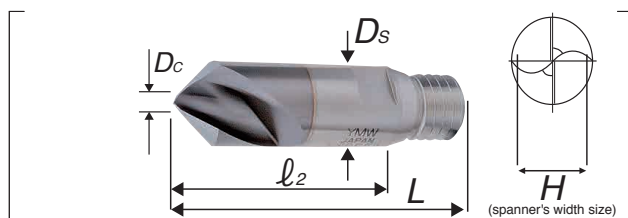
JO-PEQV

Joint- Point Drills 90°, TiCN Coated

HSS

TiCN

Segment : 5C



Size Ds x Dc	Stock	Code	Ds (mm)	Dc (mm)	L (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
10x3	○	JVPE010Q	10	3	37.5	27.5	8	14
12x3.5	○	JVPE012Q	12	3.5	43.5	32.5	10	16
16x4	○	JVPE016Q	16	4	48.5	34.5	13	20

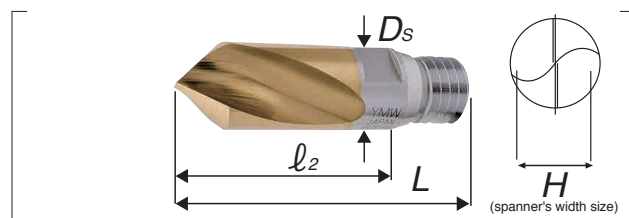
JO-NCSDV

Joint- NC Starting Drills for Beveling, TiN Coated

HSS

TiN

Segment : 5C



Size Ds x θ	Stock	Code	Ds (mm)	L (mm)	l ₂ (mm)	H (mm)	Applicable holder shank dia.
10x90°	○	JVCS-D010Q	10	37.5	27.5	8	14
12x90°	○	JVCS-D012Q	12	43.5	32.5	10	16
16x90°	○	JVCS-D016Q	16	48.5	34.5	13	20

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

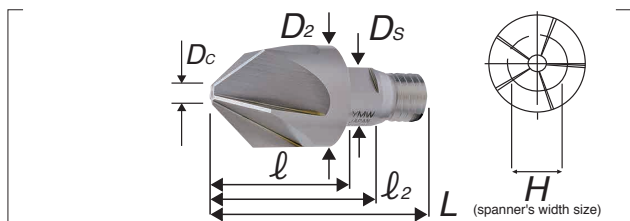
Centering Tools

JO-CSQM

Joint- Countersinks 90°, Multiple Cutting Edge Type, Drilling Machine Use

HSS

Segment : 5C



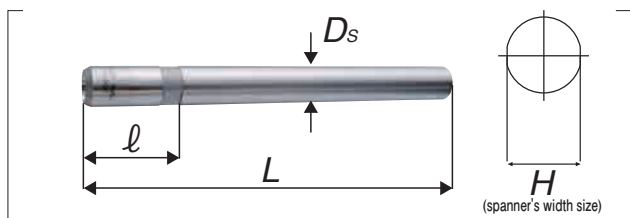
Size $D_2 \times \theta$	Stock	Code	D_s (mm)	D_c (mm)	L (mm)	l (mm)	l_2 (mm)	H (mm)	Applicable holder shank dia.
16×90°	○	JCS016QM9	10	3.2	37.5	20	27.5	8	14
20×90°	○	JCS020QM9	12	4	43.5	24	32.5	10	16

HOLDER

HOLDER for 150mm and for 200mm

alloy steel

Segment : 5A



Size	Type	Stock	Code	D_s (mm)	L (mm)	l (mm)	H (mm)	Applicable cutting edge shank dia.
Holder	for 150mm	○	JH1014M	14	122.5	36	12	10
		○	JH1216M	16	117.5	37	14	12
		○	JH1620M	20	115.5	41	17	16
Holder	for 200mm	○	JH1014N	14	172.5	36	12	10
		○	JH1216N	16	167.5	37	14	12
		○	JH1620N	20	165.5	41	17	16

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

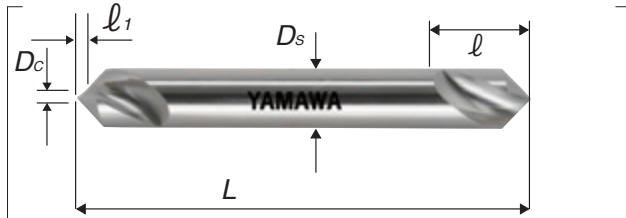
PE-Q

Point Drills 90°

HSS

Segment : 56

Having two edge angles, end angle of 125° and bevel angle of 90°, PE-Q makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
3×0.5×90°	○	PE3.0Q	40	0.13	6	0.5	3	2	Ch
4×1×90°	○	PE4.0Q	45	0.26	8	1	4	2	Ch
6×2×90°	○	PE6.0Q	55	0.52	10	2	6	2	Ch
8×2.5×90°	○	PE8.0Q	65	0.65	14	2.5	8	2	Ch
10×3×90°	○	PE10.0Q	75	0.78	15	3	10	2	Ch
12×3.5×90°	○	PE12.0Q	85	0.91	17	3.5	12	2	Ch
16×4×90°	○	PE16.0Q	90	1.04	21	4	16	2	Ch
20×5×90°	○	PE20.0Q	100	1.30	24	5	20	2	Ch

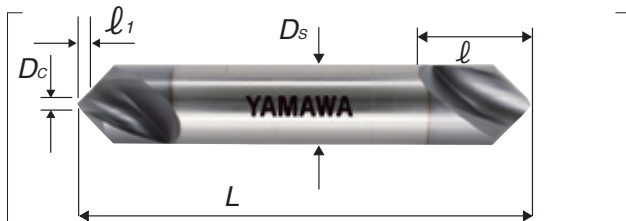
PE-Q-V

Point Drills 90°, TiCN Coated

HSS TiCN

Segment : 56

Having two edge angles, end angle of 125° and bevel angle of 90°, PE-Q-V makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
3×0.5×90°	○	VPE3.0Q	40	0.13	6	0.5	3	2	Ch
4×1×90°	○	VPE4.0Q	45	0.26	8	1	4	2	Ch
6×2×90°	○	VPE6.0Q	55	0.52	10	2	6	2	Ch

PE-Q-V Point Drills 90°, TiCN Coated

Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
8×2.5×90°	○	VPE8.0Q	65	0.65	14	2.5	8	2	Ch
10×3×90°	○	VPE10.0Q	75	0.78	15	3	10	2	Ch
12×3.5×90°	○	VPE12.0Q	85	0.91	17	3.5	12	2	Ch
16×4×90°	○	VPE16.0Q	90	1.04	21	4	16	2	Ch
20×5×90°	○	VPE20.0Q	100	1.30	24	5	20	2	Ch

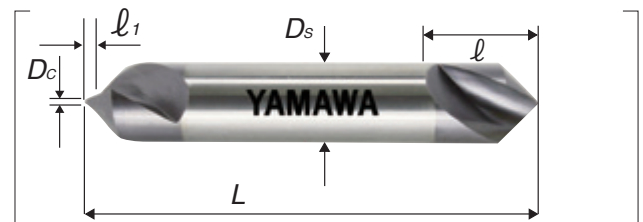
C-PE-Q-V

Cemented Carbide Point Drills 90°, TiAlN Coated

HF TiAlN

Segment : 52

Having two edge angles, end angle of 125° and bevel angle of 90°, C-PE-Q-V makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
3×0.5×90°	○	VCPE3.0Q	40	0.13	6	0.5	3	2	Ch
4×1×90°	○	VCPE4.0Q	45	0.26	8	1	4	2	Ch
6×2×90°	○	VCPE6.0Q	55	0.52	10	2	6	2	Ch
8×2.5×90°	○	VCPE8.0Q	65	0.65	14	2.5	8	2	Ch
10×3×90°	○	VCPE10.0Q	75	0.78	15	3	10	2	Ch
12×3.5×90°	○	VCPE12.0Q	85	0.91	17	3.5	12	2	Ch
16×4×90°	○	VCPE16.0Q	90	1.04	21	4	16	2	Ch

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

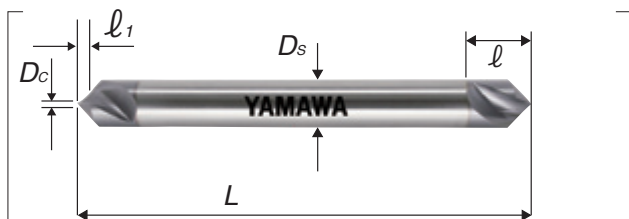
PE-QL-V

Long Shank Point Drills 90°, TiCN Coated

HSS TiCN

Segment : 56

Having two edge angles, end angle of 125° and bevel angle of 90°, PE-QL-V makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
4×1×90°	○	VPEL4.0Q	100	0.26	8	1	4	2	Ch
6×2×90°	○	VPEL6.0Q	100	0.52	10	2	6	2	Ch
8×2.5×90°	○	VPEL8.0Q	100	0.65	14	2.5	8	2	Ch
	○	VPEM8.0Q	150						
10×3×90°	○	VPEL10Q	100	0.78	15	3	10	2	Ch
	○	VPEM10Q	150						
12×3.5×90°	○	VPEL12Q	100	0.91	17	3.5	12	2	Ch
	○	VPEM12Q	150						
16×4×90°	○	VPEM016Q	150	1.04	21	4	16	2	Ch
20×5×90°	○	VPEM020Q	150	1.30	24	5	20	2	Ch

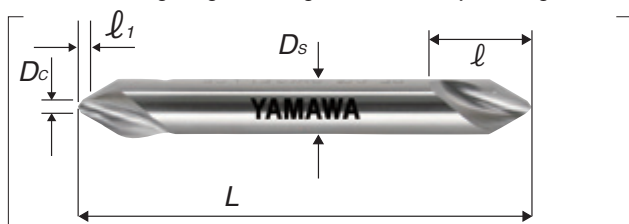
PE-S

Point Drills 60°

HSS

Segment : 56

Having two edge angles, end angle of 125° and bevel angle of 90°, PE-S makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
3×0.5×60°	○	PE3.0S	40	0.13	6	0.5	3	2	Ch

PE-S Point Drills 60°

Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
4×1×60°	○	PE4.0S	45	0.26	8	1	4	2	Ch
6×2×60°	○	PE6.0S	55	0.52	10	2	6	2	Ch
8×2.5×60°	○	PE8.0S	65	0.65	14	2.5	8	2	Ch
10×3×60°	○	PE010S	75	0.78	19	3	10	2	Ch
12×3.5×60°	○	PE012S	85	0.91	21	3.5	12	2	Ch
16×4×60°	○	PE016S	90	1.04	26	4	16	2	Ch
20×5×60°	○	PE020S	100	1.30	31	5	20	2	Ch

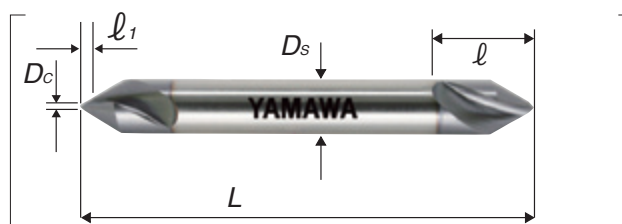
PE-S-V

Point Drills 60°, TiCN Coated

HSS TiCN

Segment : 56

Having two edge angles, end angle of 125° and bevel angle of 90°, PE-S-V makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds x Dc x θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
3×0.5×60°	○	VPE3.0S	40	0.13	6	0.5	3	2	Ch
4×1×60°	○	VPE4.0S	45	0.26	8	1	4	2	Ch
6×2×60°	○	VPE6.0S	55	0.52	10	2	6	2	Ch
8×2.5×60°	○	VPE8.0S	65	0.65	14	2.5	8	2	Ch
10×3×60°	○	VPE010S	75	0.78	19	3	10	2	Ch
12×3.5×60°	○	VPE012S	85	0.91	21	3.5	12	2	Ch
16×4×60°	○	VPE016S	90	1.04	26	4	16	2	Ch
20×5×60°	○	VPE020S	100	1.30	31	5	20	2	Ch

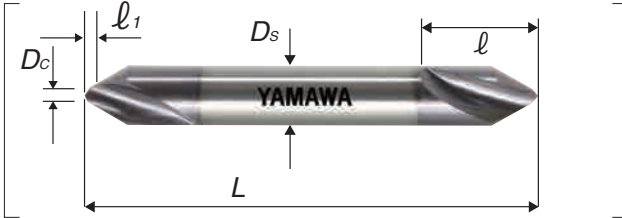
C-PE-S-V

Cemented Carbide Point Drills 60°, TiAlN Coated



Segment : 52

Having two edge angles, end angle of 125° and bevel angle of 90°, C-PE-S-V makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds × Dc × θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
6×2×60°	○	VCPE6.0S	55	0.52	10	2	6	2	Ch
8×2.5×60°	○	VCPE8.0S	65	0.68	14	2.5	8	2	Ch
10×3×60°	○	VCPE010S	75	0.78	19	3	10	2	Ch

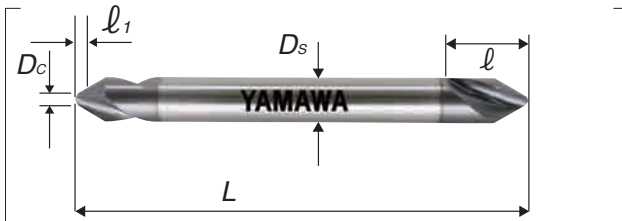
PE-SL-V

Long Shank Point Drills 60°, TiCN Coated



Segment : 56

Having two edge angles, end angle of 125° and bevel angle of 90°, PE-SL-V makes both centering and beveling simultaneously. High cutting accuracy is available owing to a good cutting-start due to 2 step flat design.



Size Ds × Dc × θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
4×1×60°	○	VPEL4.0S	100	0.26	8	1	4	2	Ch
6×2×60°	○	VPEL6.0S	100	0.52	10	2	6	2	Ch
8×2.5×60°	○	VPEL8.0S	100	0.65	14	2.5	8	2	Ch
	○	VPEM8.0S	150						
10×3×60°	○	VPEL010S	100	0.78	19	3	10	2	Ch
	○	VPEM010S	150						
12×3.5×60°	○	VPEL012S	100	0.91	21	3.5	12	2	Ch
	○	VPEM012S	150						

PE-SL-V Long Shank Point Drills 60°, TiCN Coated

Size Ds × Dc × θ	Stock	Code	L (mm)	l ₁ (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
16×4×60°	○	VPEM016S	150	1.04	26	4	16	2	Ch

NC-SD-V

NC Starting Drills for Center Positioning, TiN Coated



Segment : 56

Having a design of high toughness, NC-SD-V enables the stable positioning and beveling of high accuracy. With good cutting-start, NC-SD-V works well in positioning on curved face or inclined face which is difficult place to machine.



Size Dc × θ	Stock	Code	L (mm)	l (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
3×90°	○	VCS-D3.0Q	46	10	3	3	2	Ci
4×90°	○	VCS-D4.0Q	55	12	4	4	2	Ci
5×90°	○	VCS-D5.0Q	62	13	5	5	2	Ci
6×90°	◎	VCS-D6.0Q	66	15	6	6	2	Ci
8×90°	◎	VCS-D8.0Q	79	20	8	8	2	Ci
10×90°	◎	VCS-D010Q	89	23	10	10	2	Ci
12×90°	◎	VCS-D012Q	102	26	12	12	2	Ci
16×90°	○	VCS-D016Q	115	32	16	16	2	Ci
20×90°	○	VCS-D020Q	131	40	20	20	2	Ci
25×90°	○	VCS-D025Q	151	50	25	25	2	Ci

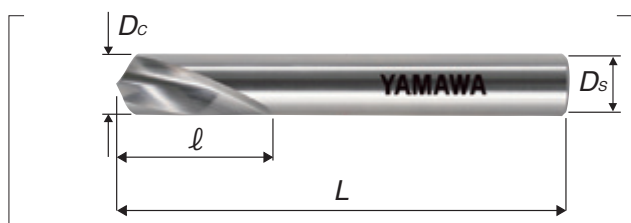
NC-SD

NC Starting Drills for Center Positioning

HSS-Co

Segment : 56

Having a design of high toughness, NC-SD enables the stable positioning and beveling of high accuracy. With good cutting-start, NC-SD works well in positioning on curved face or inclined face which is difficult place to machine.



Size Dc x θ	Stock	Code	L (mm)	l (mm)	Dc (mm)	Ds (mm)	Number of Flutes	Type
3×125°	○	CS-D3.0	46	10	3	3	2	Ci
4×125°	○	CS-D4.0	55	12	4	4	2	Ci
5×125°	○	CS-D5.0	62	13	5	5	2	Ci
6×125°	○	CS-D6.0	66	15	6	6	2	Ci
8×125°	○	CS-D8.0	79	20	8	8	2	Ci
10×125°	○	CS-D010	89	23	10	10	2	Ci
12×125°	○	CS-D012	102	26	12	12	2	Ci
16×125°	○	CS-D016	115	32	16	16	2	Ci
20×125°	○	CS-D020	131	40	20	20	2	Ci
25×125°	○	CS-D025	151	50	25	25	2	Ci

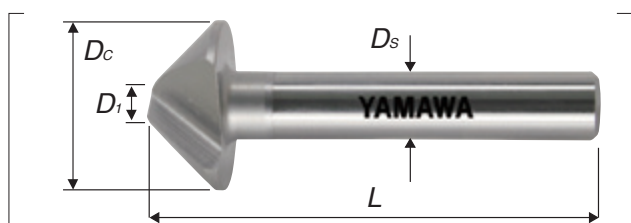
CS-Q

Countersinks 90°, Single Point Type, Machining Center Use

HSS

Segment : 53

CS-Q is suitable for the machining of high accuracy on the beveling of round hole and on the beveling of attaching face of screw bolts.



Size Dc x θ x Ds	Stock	Code	L (mm)	l (mm)	D1 (mm)	Ds (mm)	Number of Flutes	Type
4×90°×4	△	CS4.0Q	50	-	0.6	4	1	Cj

CS-Q

Countersinks 90°, Single Point Type, Machining Center Use

Size Dc x θ x Ds	Stock	Code	L (mm)	l (mm)	D1 (mm)	Ds (mm)	Number of Flutes	Type
6×90°×6	○	CS6.0Q	50	-	1	6	1	Cj
8×90°×8	○	CS8.0Q	50	-	1.3	8	1	Cj
10×90°×8	○	CS010Q	46	5.5	1.6	8	1	Ck
15×90°×10	○	CS015Q	56	7.5	3.2	10	1	Ck
20×90°×10	○	CS020Q	60	10	4	10	1	Ck
25×90°×10	○	CS025Q	65	11	7	10	1	Ck
30×90°×12	○	CS030Q	70	12.5	9	12	1	Ck
35×90°×12	○	CS035Q	75	15	11	12	1	Ck
40×90°×12	○	CS040Q	80	17	12.5	12	1	Ck
45×90°×12	○	CS045Q	85	18.5	14	12	1	Ck
50×90°×12	○	CS050Q	90	20	16	12	1	Ck
60×90°×16	○	CS060Q	100	24	20	16	1	Ck

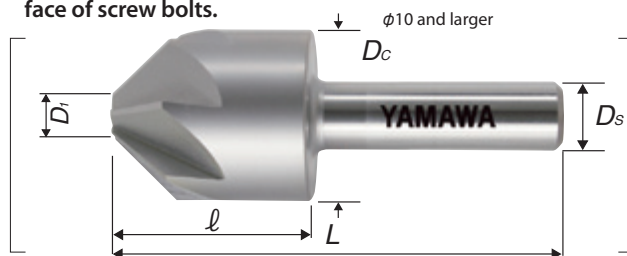
CS-QM

Countersinks 90° and 60°, Multiple Point Type, Drilling Machine Use

HSS

Segment : 53

CS-QM is suitable for the machining of high accuracy on the beveling of round hole and on the beveling of attaching face of screw bolts.



Size Dc x θ x Ds	Stock	Code	L (mm)	l (mm)	D1 (mm)	Ds (mm)	Number of Flutes	Type
6×90°×6	○	CS6.0QM9	42	-	1.2	6	3	Cm
8×90°×8	○	CS8.0QM9	44	-	1.6	8	3	Cm
10×90°×8	○	CS010QM9	46	14	2	8	3	Cn
12×90°×8	○	CS012QM9	48	16	2.5	8	5	Cn
16×90°×10	○	CS016QM9	56	20	3.2	10	5	Cn
20×90°×10	○	CS020QM9	60	24	4	10	5	Cn
25×90°×10	○	CS025QM9	65	29	7	10	7	Cn
30×90°×12	○	CS030QM9	68	32	9	12	7	Cn
35×90°×12	○	CS035QM9	70	34	11	12	7	Cn
40×90°×12	○	CS040QM9	71	35	12.5	12	7	Cn
6×60°×6	△	CS6.0QM6	46	-	1.2	6	3	Cm
8×60°×8	○	CS8.0QM6	48	-	1.6	8	3	Cm

CS-QM Countersinks 90° and 60°, Multiple Point Type, Drilling Machine Use

Size Dc × θ × Ds	Stock	Code	L (mm)	ℓ (mm)	D ₁ (mm)	D _s (mm)	Number of Flutes	Type
10×60°×8	△	CS010QM6	50	14	2	8	3	Cn
12×60°×8	△	CS012QM6	52	20	2.5	8	5	Cn
16×60°×10	○	CS016QM6	60	24	3.2	10	5	Cn
20×60°×10	○	CS020QM6	64	28	4	10	5	Cn
25×60°×10	○	CS025QM6	69	33	7	10	7	Cn
30×60°×12	△	CS030QM6	76	40	9	12	7	Cn
35×60°×12	△	CS035QM6	79	43	11	12	7	Cn
40×60°×12	△	CS040QM6	81	45	12.5	12	7	Cn

CS-G Submarine gate Cutter, 20°, 30°

Size Dc × θ × Ds	Stock	Code	L (mm)	ℓ (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
0.9×20°×6	△	CS-G0.92-LS	100	0.5	0.9	6	2	Cp
0.9×30°×6	△	CS-G0.93-LS	100	0.5	0.9	6	2	Cp
1×20°×6	△	CS-G1.02-J	57	0.5	1	6	2	Cp
1×20°×8	△	CS-G1.028J	57	0.5	1	8	2	Cp
1×30°×6	△	CS-G1.03-J	57	0.5	1	6	2	Cp
1×30°×8	△	CS-G1.038J	57	0.5	1	8	2	Cp
1×20°×8	△	CS-G1.028K	70	0.5	1	8	2	Cp
1×30°×8	△	CS-G1.038K	70	0.5	1	8	2	Cp
1×20°×6	△	CS-G1.02-LS	100	0.5	1	6	2	Cp
1×20°×8	△	CS-G1.028LS	100	0.5	1	8	2	Cp
1×30°×6	△	CS-G1.03-LS	100	0.5	1	6	2	Cp
1×30°×8	△	CS-G1.038LS	100	0.5	1	8	2	Cp
1.5×20°×8	△	CS-G1.52-K	70	0.5	1.5	8	2	Cp
1.5×30°×8	△	CS-G1.53-K	70	0.5	1.5	8	2	Cp
1.5×20°×8	△	CS-G1.52-LS	100	0.5	1.5	8	2	Cp
1.5×30°×8	△	CS-G1.53-LS	100	0.5	1.5	8	2	Cp
2×20°×8	△	CS-G2.02-K	70	0.5	2	8	2	Cp
2×30°×8	△	CS-G2.03-K	70	0.5	2	8	2	Cp
2×20°×8	△	CS-G2.02-LS	100	0.5	2	8	2	Cp
2×30°×8	△	CS-G2.03-LS	100	0.5	2	8	2	Cp

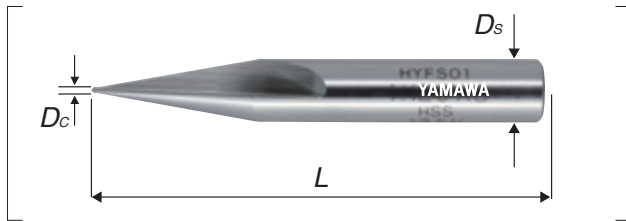
CS-G

Submarine gate Cutter, 20°, 30°



Segment : 54

CS-G is the special drill for making submarine gate (tunnel gate) on the die mold of plastic injection machine.



Size Dc × θ × Ds	Stock	Code	L (mm)	ℓ (mm)	D _c (mm)	D _s (mm)	Number of Flutes	Type
0.5×20°×6	△	CS-G0.52-J	57	0.5	0.5	6	2	Cp
0.5×30°×6	△	CS-G0.53-J	57	0.5	0.5	6	2	Cp
0.5×20°×6	△	CS-G0.52-LS	100	0.5	0.5	6	2	Cp
0.5×30°×6	△	CS-G0.53-LS	100	0.5	0.5	6	2	Cp
0.6×20°×6	△	CS-G0.62-J	57	0.5	0.6	6	2	Cp
0.6×30°×6	△	CS-G0.63-J	57	0.5	0.6	6	2	Cp
0.6×20°×6	△	CS-G0.62-LS	100	0.5	0.6	6	2	Cp
0.6×30°×6	△	CS-G0.63-LS	100	0.5	0.6	6	2	Cp
0.7×20°×6	△	CS-G0.72-J	57	0.5	0.7	6	2	Cp
0.7×30°×6	△	CS-G0.73-J	57	0.5	0.7	6	2	Cp
0.7×20°×6	△	CS-G0.72-LS	100	0.5	0.7	6	2	Cp
0.7×30°×6	△	CS-G0.73-LS	100	0.5	0.7	6	2	Cp
0.8×20°×6	△	CS-G0.82-J	57	0.5	0.8	6	2	Cp
0.8×30°×6	△	CS-G0.83-J	57	0.5	0.8	6	2	Cp
0.8×20°×6	△	CS-G0.82-LS	100	0.5	0.8	6	2	Cp
0.8×30°×6	△	CS-G0.83-LS	100	0.5	0.8	6	2	Cp

Table of recommend centering condition

Table of recommend centering condition for point drill

HSS (PE-Q PE-90°)

Workpiece Materials	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Stainless steels SUS304		Aluminum casting, aluminum die casting, zinc die casting AC4B	
Cutting speed (m/min)	30~40		22~30		20~25		10~15		70~100	
Diameter (mm)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)
3	3700	0.04~0.08	2750	0.04~0.08	2400	0.04~0.08	1350	0.04~0.08	9000	0.10~0.22
4	2800	0.05~0.10	2050	0.05~0.10	1800	0.05~0.10	1000	0.05~0.10	6750	0.12~0.26
6	1850	0.06~0.12	1400	0.06~0.12	1200	0.06~0.12	650	0.06~0.12	4500	0.15~0.30
8	1400	0.08~0.15	1050	0.08~0.15	900	0.08~0.15	500	0.08~0.15	3400	0.18~0.35
10	1100	0.10~0.18	850	0.10~0.18	700	0.10~0.18	400	0.10~0.18	2700	0.21~0.40
12	950	0.12~0.22	700	0.12~0.22	600	0.12~0.22	350	0.12~0.22	2250	0.25~0.45
16	700	0.16~0.26	500	0.16~0.26	450	0.16~0.26	250	0.16~0.26	1700	0.32~0.50
20	550	0.20~0.35	400	0.20~0.35	350	0.20~0.35	200	0.20~0.35	1350	0.40~0.60

HSS+TiCN (PE-Q-V PE-90°)

Workpiece Materials	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Heat treated steels SCM440 (30~35HRC)		Stainless steels SUS304		Aluminum casting, aluminum die casting, zinc die casting AC4B	
Cutting speed (m/min)	38~48		28~38		26~33		13~17		13~20		84~120	
Diameter (mm)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)
3	4550	0.04~0.08	3500	0.04~0.08	3150	0.04~0.08	1800	0.03~0.06	1750	0.04~0.08	10800	0.10~0.22
4	3400	0.05~0.10	2650	0.05~0.10	2350	0.05~0.10	1200	0.04~0.08	1300	0.05~0.10	8100	0.12~0.26
6	2300	0.06~0.12	1750	0.06~0.12	1550	0.06~0.12	800	0.05~0.10	900	0.06~0.12	5400	0.15~0.30
8	1700	0.08~0.15	1300	0.08~0.15	1150	0.08~0.15	600	0.06~0.12	650	0.08~0.15	4050	0.18~0.35
10	1350	0.10~0.18	1050	0.10~0.18	950	0.10~0.18	500	0.08~0.15	500	0.10~0.18	3250	0.21~0.40
12	1150	0.12~0.22	900	0.12~0.22	800	0.12~0.22	400	0.10~0.18	450	0.12~0.22	2700	0.25~0.45
16	850	0.16~0.26	650	0.16~0.26	600	0.16~0.26	300	0.12~0.22	350	0.16~0.26	2050	0.32~0.50
20	700	0.20~0.35	500	0.20~0.35	450	0.20~0.35	250	0.16~0.26	250	0.20~0.35	1600	0.40~0.60

Carbide+TiAlN (C-PE-Q-V PE-90°)

Workpiece Materials	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Heat treated steels SCM440 (30~35HRC)		Stainless steels SUS304		Aluminum casting, aluminum die casting, zinc die casting AC4B	
Cutting speed (m/min)	87~102		65~78		60~70		32~40		35~45		120~160	
Diameter (mm)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)
3	10050	0.04~0.08	7600	0.04~0.08	6900	0.04~0.08	3800	0.04~0.08	4250	0.04~0.08	14850	0.10~0.22
4	7500	0.05~0.10	5700	0.05~0.10	5150	0.05~0.10	2850	0.05~0.10	3200	0.05~0.10	11150	0.12~0.26
6	5000	0.06~0.12	3800	0.06~0.12	3450	0.06~0.12	1900	0.06~0.12	2100	0.06~0.12	7450	0.15~0.30
8	3750	0.08~0.15	2850	0.08~0.15	2600	0.08~0.15	1450	0.08~0.14	1800	0.08~0.15	5550	0.18~0.35
10	3000	0.10~0.18	2300	0.10~0.18	2050	0.10~0.18	1150	0.10~0.16	1250	0.10~0.18	4450	0.21~0.40
12	2500	0.12~0.22	1900	0.12~0.22	1700	0.12~0.22	950	0.10~0.18	1050	0.12~0.22	3700	0.25~0.45
16	1900	0.16~0.26	1400	0.16~0.26	1300	0.16~0.26	700	0.12~0.22	800	0.16~0.26	2800	0.32~0.50

1. Above Condition when using Water Soluble Oil.
2. 20% lower feed is recommended when centering on inclined place.
3. 20% lower feed is recommended when using long shank drills.

Table of recommend centering condition

■ Reference of drilling condition for Center drills (HSS)

Reference table of cutting speed and feed per revolution(when substrate is HSS)

· Cutting Speed Vc [m/min] (Diameter of cone at the larger end)

Workpiece Materials	Cutting speed
Low Carbon Steels	15~30
Carbon steels	15~30
Alloy steels	10~25
Stainless Steels	5~12
Cast irons	8~15

Drill diameter	Feed per revolution
1~ 3	0.02~0.07
3~ 4	0.04~0.12
4~ 6	0.06~0.17
6~ 8	0.10~0.20
8~10	0.14~0.23
10~12	0.18~0.26

■ Reference of drilling condition for Center drills (Cemented carbide)

Reference table of cutting speed and feed per revolution(when substrate is Cemented carbide)

· Cutting Speed Vc [m/min] (Diameter of cone at the larger end)

Workpiece Materials	Cutting speed
Low Carbon Steels	30~50
Carbon steels	30~50
Alloy steels	20~40
Stainless Steels	15~25
Cast irons	30~50

Drill diameter	Feed per revolution
1	0.01 ~0.03
2	0.01 ~0.035
3	0.015~0.05
4	0.02 ~0.06
5	0.03 ~0.07
6	0.04 ~0.07

■ Reference of drilling condition for NC-SD-V

Reference table of cutting speed and feed per revolution

· Cutting Speed Vc [m/min] (Tool Diameter)

Workpiece Materials	Cutting speed
Low Carbon Steels	25~40
Carbon steels	25~32
Alloy steels	15~25
Alloy tool steels	7~12
Stainless Steels	7~12
Cast irons	20~35
Aluminum	60~90

Tool diameter	Feed per revolution
3	0.03~0.06
4	0.05~0.10
6	0.08~0.15
8	0.10~0.18
10	0.15~0.20
12	0.15~0.25
16	0.15~0.30
20	0.20~0.30
25	0.20~0.30

■ Reference of drilling condition for Countersinks

Reference table of cutting speed and feed per revolution

· Cutting Speed Vc [m/min] (Tool Diameter)

Workpiece Materials	Cutting speed	
	Single edge	Multiple edges
Low Carbon Steels	18~25	20~27
Carbon steels	18~25	20~25
Alloy steels	8~16	8~15
Alloy tool steels	8~16	8~15
Stainless Steels	8~13	5~10
Cast irons	20~30	15~25
Aluminum	20~70	20~80

Tool diameter	Feed per revolution	
	Single edge	Multiple edges
4	0.02~0.04	0.03~0.10
6	0.03~0.05	0.05~0.12
8	0.05~0.07	0.07~0.15
10	0.06~0.09	0.10~0.16
12	0.07~0.10	0.10~0.20
16	0.08~0.13	0.10~0.20
20	0.09~0.15	0.10~0.25
25	0.10~0.16	0.15~0.30

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed
Taps

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple measuring tools

Pipe Taps

MC Helical
Thread Mills

Dies

Center Drills

Centering Tools

Products for USA market



ZELX SS

Spiral Fluted Taps for Stainless Steels



Segment : 1D



Suitable for stainless steels which are sticky and tend to work-harden as well as chrome steels and molybdenum steels, blind hole use.

ZELX SS Spiral Fluted Taps for Stainless Steels

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified Threads								
No.2-56UNC	Y84623	2.5P	GH2	1.75	0.157	0.141	2	Ua
	Y84623BR							
No.3-48UNC	Y84600	2.5P	GH2	1.81	0.197	0.141	2	Ua
	Y84600BR							
No.4-40UNC	Y84601	2.5P	GH2	1.88	0.236	0.141	2	Ua
	Y84601BR							
	Y84001	1.5P						
	Y84602	2.5P	GH3					
	Y84602BR							
	Y84002	1.5P						
	Y84629	2.5P	GH4					
	Y84629BR							
Y84634	GH5							
No.4-48UNF	Y84683	2.5P	GH2	1.88	0.236	0.141	2	Ua
No.5-40UNC	Y84603	2.5P	GH2	1.94	0.236	0.141	3	Ua
	Y84603BR							
No.6-32UNC	Y84604	2.5P	GH2	2.00	0.276	0.141	3	Ua
	Y84004	1.5P						
	Y84605	2.5P	GH3					
	Y84605BR							
	Y84005	1.5P						
	Y84636	2.5P	GH4					
	Y84636BR							
	Y84635	2.5P	GH5					
	Y84635BR							
	Y84659	2.5P	GH6					
	Y84659BR							
	Y84665	2.5P	GH7					
Y84665BR								
No.6-40UNF	Y84684	2.5P	GH2	2.00	0.276	0.141	3	Ua
	Y84685		GH3					
No.8-32UNC	Y84606	2.5P	GH2	2.13	0.276	0.168	3	Ua
	Y84607		GH3					
	Y84607BR							

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
No.8-32UNC	Y84007	1.5P	GH3	2.13	0.276	0.168	3	Ua
	Y84638		GH4					
	Y84637	2.5P	GH5					
	Y84660		GH6					
	Y84667		GH7					
No.8-36UNF	Y84687	2.5P	GH3	2.13	0.276	0.168	3	Ua
No.10-24UNC	Y84624	2.5P	GH2	2.38	0.354	0.194	3	Ua
	Y84609		GH3					
	Y84009	1.5P						
	Y84639	2.5P	GH5					
	Y84639BR		GH6					
	Y84690							
	Y84669							
No.10-32UNF	Y84611	2.5P	GH2	2.38	0.276	0.194	3	Ua
	Y84610		GH3					
	Y84610BR							
	Y84010	1.5P						
	Y84630	2.5P	GH4					
	Y84640		GH5					
	Y84640BR	2.5P						
	Y84040		1.5P					
Y84662	GH7							
Y84670								
No.12-24UNC	Y84688	2.5P	GH3	2.38	0.354	0.220	3	Ua
No.12-28UNF	Y84689	2.5P	GH3	2.38	0.276	0.220	3	Ua
1/4-20UNC	Y84613	2.5P	GH3	2.50	0.433	0.255	3	Ua
	Y84613BR							
	Y84013	1.5P						
	Y84643	2.5P	GH5					
	Y84643BR							
Y84043	1.5P							
Y84673	2.5P	GH7						
1/4-28UNF	Y84614	2.5P	GH3	2.50	0.354	0.255	3	Ua
	Y84614BR							
	Y84014	1.5P						
	Y84631	2.5P	GH4					
	Y84631BR							
	Y84644	2.5P	GH5					
	Y84644BR							
	Y84664							
	Y84664BR	GH7						
	Y84674							
Y84674BR								
5/16-18UNC	Y84615	2.5P	GH3	2.72	0.472	0.318	3	Ua
	Y84615BR							
	Y84015	1.5P						
	Y84645	2.5P	GH5					
Y84645BR								

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX SS Spiral Fluted Taps for Stainless Steels

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
5/16-18UNC	Y84045	1.5P	GH5	2.72	0.472	0.318	3	Ua
	Y84675	2.5P	GH7					
5/16-24UNF	Y84616	2.5P	GH3	2.72	0.394	0.318	3	Ua
	Y84016	1.5P						
	Y84632		GH4					
	Y84646	2.5P	GH5					
	Y84676		GH7					
3/8-16UNC	Y84617	2.5P	GH3	2.94	0.551	0.381	3	Ua
	Y84617BR							
	Y84017	1.5P						
	Y84647	2.5P	GH5					
	Y84647BR							
	Y84047	1.5P						
	Y84677	2.5P	GH7					
Y84077	1.5P							
3/8-24UNF	Y84618	2.5P	GH3	2.94	0.394	0.381	3	Ua
	Y84018	1.5P						
	Y84633	2.5P	GH4					
	Y84033	1.5P						
	Y84648	2.5P	GH5					
	Y84048	1.5P						
	Y84678	2.5P	GH7					
7/16-14UNC	Y84619	2.5P	GH3	3.16	0.591	0.323	3	Ub
	Y84019	1.5P						
	Y84649	2.5P	GH5					
	Y84049	1.5P						
	Y84679	2.5P	GH7					
7/16-20UNF	Y84620	2.5P	GH3	3.16	0.472	0.323	3	Ub
	Y84020	1.5P						
	Y84650	2.5P	GH5					
	Y84050	1.5P						
	Y84691	2.5P	GH6					
	Y84680		GH7					
1/2-13UNC	Y84621	2.5P	GH3	3.38	0.630	0.367	3	Ub
	Y84621BR							
	Y84021	1.5P						
	Y84651	2.5P	GH5					
	Y84651BR							
	Y84051	1.5P						
Y84681	2.5P	GH7						
1/2-20UNF	Y84622	2.5P	GH3	3.38	0.472	0.367	3	Ub
	Y84022	1.5P						
	Y84652	2.5P	GH5					
	Y84052	1.5P						
	Y84692	2.5P	GH6					
	Y84682		GH7					
9/16-12UNC	Y84653	2.5P	GH3	3.59	0.709	0.429	3	Ub
9/16-18UNF	Y84654	2.5P	GH3	3.59	0.512	0.429	3	Ub

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
9/16-18UNF	Y84654BR	2.5P	GH3	3.59	0.512	0.429	3	Ub
	Y84054	1.5P						
	Y84698	2.5P	GH5					
5/8-11UNC	Y84625	2.5P	GH3	3.81	0.748	0.480	3	Ub
	Y84025	1.5P						
	Y84655	2.5P	GH5					
	Y84655BR							
	Y84055	1.5P						
5/8-18UNF	Y84626	2.5P	GH3	3.81	0.512	0.480	3	Ub
	Y84656	2.5P	GH5					
	Y84056		1.5P					
	Y84672	2.5P	GH7					
3/4-10UNC	Y84627	2.5P	GH3	4.25	0.827	0.590	4	Ub
	Y84027	1.5P						
	Y84657	2.5P	GH5					
3/4-16UNF	Y84628	2.5P	GH3	4.25	0.591	0.590	4	Ub
	Y84628BR							
	Y84028	1.5P						
	Y84658	2.5P	GH5					
	Y84686		GH7					
7/8-9UNC	Y84695	2.5P	GH4	4.69	0.827	0.697	4	Ub
	Y84695BR							
7/8-14UNF	Y84696	2.5P	GH4	4.69	0.709	0.697	4	Ub
	Y84696BR							
	Y84694	GH6						
1-8UNC	Y84697	2.5P	GH4	5.13	0.984	0.800	4	Ub
	Y84697BR							
1-12UNF	Y84668	2.5P	GH4	5.13	0.709	0.800	4	Ub
1"1/8-7UNC	Y84701	2.5P	GH6	5.44	1.181	0.896	4	Ub
1"1/8-12UNF	Y84702	2.5P	GH5	5.44	0.787	0.896	4	Ub
1"1/4-7UNC	Y84703	2.5P	GH6	5.75	1.181	1.021	4	Ub
1"1/4-12UNF	Y84705	2.5P	GH5	5.75	0.787	1.021	4	Ub
1"3/8-6UNC	Y84706	2.5P	GH6	6.06	1.575	1.108	4	Ub
1"1/2-6UNC	Y84709	2.5P	GH6	6.38	1.575	1.233	4	Ub
1"1/2-12UNF	Y84711	2.5P	GH5	6.38	0.787	1.233	4	Ub
1"3/4-5UNC	Y84714	2.5P	GH7	7.00	1.772	1.430	4	Ub
2-4.5UNC	Y84715	2.5P	GH7	7.63	1.969	1.644	4	Ub

ZELX SS Spiral Fluted Taps for Stainless Steels

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Metric threads								
M3×0.5	Y74615	2.5P	D3	1.94	0.197	0.141	3	Ua
	Y74015	1.5P						
M3.5×0.6	Y74616	2.5P	D4	2.00	0.276	0.141	3	Ua
M4×0.7	Y74617	2.5P	D4	2.13	0.276	0.168	3	Ua
	Y74017	1.5P						
M5×0.8	Y74619	2.5P	D4	2.38	0.354	0.194	3	Ua
	Y74019	1.5P						
M6×1	Y74620	2.5P	D5	2.50	0.433	0.255	3	Ua
	Y74020	1.5P						
M7×1	Y74621	2.5P	D5	2.72	0.433	0.318	3	Ua
M8×1.25	Y74623	2.5P	D5	2.72	0.472	0.318	3	Ua
	Y74023	1.5P						
M8×1	Y74622	2.5P	D5	2.72	0.472	0.318	3	Ua
	Y74022	1.5P						
M10×1.5	Y74625	2.5P	D6	2.94	0.512	0.381	3	Ua
	Y74025	1.5P						
M10×1.25	Y74624	2.5P	D5	2.94	0.472	0.381	3	Ua
M12×1.75	Y74627	2.5P	D6	3.38	0.591	0.367	3	Ub
	Y74027	1.5P						
M12×1.25	Y74626	2.5P	D5	3.38	0.551	0.367	3	Ub
	Y74026	1.5P						
M14×2	Y74629	2.5P	D7	3.59	0.709	0.429	3	Ub
	Y74029	1.5P						
M14×1.5	Y74628	2.5P	D6	3.59	0.551	0.429	3	Ub
	Y74028	1.5P						
M16×2	Y74631	2.5P	D7	3.81	0.709	0.480	3	Ub
	Y74031	1.5P						
M16×1.5	Y74630	2.5P	D6	3.81	0.551	0.480	3	Ub
M18×2.5	Y74633	2.5P	D7	4.03	0.787	0.542	4	Ub
M18×1.5	Y74632	2.5P	D6	4.03	0.551	0.542	4	Ub
M20×2.5	Y74635	2.5P	D7	4.47	0.787	0.652	4	Ub
M24×3	Y74639	2.5P	D8	4.91	0.984	0.760	4	Ub

ZELX SS 6"

Long Shank Spiral Fluted Taps for Stainless Steels



Segment : 1D



Suitable for stainless steels which are sticky and tend to work-harden as well as chrome steels and molybdenum steels, blind hole use.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified Threads								
No.2-56UNC	Y84523	2.5P	GH2	6.00	0.157	0.141	2	Ua
No.3-48UNC	Y84500	2.5P	GH2	6.00	0.197	0.141	2	Ua
No.4-40UNC	Y84501	2.5P	GH2	6.00	0.236	0.141	2	Ua
No.6-32UNC	Y84505	2.5P	GH3	6.00	0.276	0.141	3	Ua
No.8-32UNC	Y84507	2.5P	GH3	6.00	0.276	0.168	3	Ua
No.10-24UNC	Y84509	2.5P	GH3	6.00	0.354	0.194	3	Ua
No.10-32UNF	Y84510	2.5P	GH3	6.00	0.276	0.194	3	Ua
1/4-20UNC	Y84513	2.5P	GH3	6.00	0.433	0.255	3	Ua
1/4-28UNF	Y84514	2.5P	GH3	6.00	0.354	0.255	3	Ua
5/16-18UNC	Y84515	2.5P	GH3	6.00	0.472	0.318	3	Ua
5/16-24UNF	Y84516	2.5P	GH3	6.00	0.394	0.318	3	Ua
3/8-16UNC	Y84517	2.5P	GH3	6.00	0.551	0.381	3	Ua
3/8-24UNF	Y84518	2.5P	GH3	6.00	0.394	0.381	3	Ua
7/16-14UNC	Y84519	2.5P	GH3	6.00	0.591	0.323	3	Ub
7/16-20UNF	Y84520	2.5P	GH3	6.00	0.472	0.323	3	Ub
1/2-13UNC	Y84521	2.5P	GH3	6.00	0.630	0.367	3	Ub
1/2-20UNF	Y84522	2.5P	GH3	6.00	0.472	0.367	3	Ub

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX NI

Spiral Fluted Taps for Nickel Base Alloys



Segment : 1D



ZELX NI is the tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and higher heat resistance than steels.

ZELX NI Spiral Fluted Taps for Nickel Base Alloys

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
No.10-32UNF	Y87570	3P	GH7	2.38	0.276	0.194	3	Ua
	Y87513	3P	GH3	2.50	0.433	0.255	3	Ua
1/4-20UNC	Y87013	1.5P	GH3					
	Y87543	3P	GH5					
	Y87043	1.5P	GH5					
1/4-28UNF	Y87514	3P	GH3	2.50	0.354	0.255	3	Ua
	Y87579	1.5P	GH3					
	Y87531	3P	GH4					
	Y87031	1.5P	GH4					
	Y87544	3P	GH5					
	Y87443	1.5P	GH5					
	Y87562	3P	GH6					
	Y87574	3P	GH7					
5/16-18UNC	Y87515	3P	GH3	2.72	0.472	0.318	3	Ua
	Y87545	3P	GH5					
	Y87045	1.5P	GH5					
5/16-24UNF	Y87516	3P	GH3	2.72	0.394	0.318	3	Ua
	Y87577	1.5P	GH3					
	Y87532	3P	GH4					
	Y87546	3P	GH5					
	Y87563	3P	GH6					
	Y87576	3P	GH7					
	Y87517	3P	GH3					
3/8-16UNC	Y87017	1.5P	GH3					
	Y87547	3P	GH5					
	Y87047	1.5P	GH5					
3/8-24UNF	Y87518	3P	GH3	2.94	0.394	0.381	3	Ua
	Y87533	3P	GH4					
	Y87033	1.5P	GH4					
	Y87548	3P	GH5					
	Y87564	3P	GH6					
	Y87578	3P	GH7					
7/16-14UNC	Y87519	3P	GH3	3.16	0.591	0.323	3	Ub
	Y87549	3P	GH5					
7/16-20UNF	Y87520	3P	GH3	3.16	0.472	0.323	3	Ub
	Y87573	1.5P	GH3					
	Y87550	3P	GH5					
	Y87050	1.5P	GH5					
1/2-13UNC	Y87521	3P	GH3	3.38	0.630	0.367	3	Ub
	Y87500	1.5P	GH3					
	Y87551	3P	GH5					
1/2-20UNF	Y87051	1.5P	GH5	3.38	0.472	0.367	3	Ub
	Y87581	3P	GH7					
	Y87522	3P	GH3					
5/8-11UNC	Y87022	1.5P	GH3	3.81	0.748	0.480	4	Ua
	Y87552	3P	GH5					
	Y87582	3P	GH7					
	Y87525	3P	GH3					

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type					
For Unified Threads													
No.2-56UNC	Y87523	3P	GH2	1.75	0.157	0.141	3	Ua					
	Y87501	3P	GH2	1.88	0.236	0.141	3	Ua					
No.4-40UNC	Y87502	3P	GH2										
	Y87002	1.5P	GH3										
	Y87583	1.5P	GH3										
No.5-40UNC	Y87512	3P	GH4						1.94	0.236	0.141	3	Ua
	Y87534	3P	GH5										
No.6-32UNC	Y87503	3P	GH2	2.00	0.276	0.141	3	Ua					
	Y87504	3P	GH2										
	Y87505	3P	GH2										
	Y87005	1.5P	GH3										
	Y87508	3P	GH4										
	Y87535	3P	GH4										
	Y87035	1.5P	GH5										
	Y87559	3P	GH6										
Y87565	3P	GH7											
No.8-32UNC	Y87506	3P	GH2	2.13	0.276	0.168	3	Ua					
	Y87507	3P	GH2										
	Y87580	1.5P	GH3										
	Y87529	3P	GH4										
	Y87537	3P	GH4										
	Y87037	1.5P	GH5										
	Y87560	3P	GH6										
	Y87567	3P	GH7										
No.10-24UNC	Y87509	3P	GH3	2.38	0.354	0.194	3	Ua					
	Y87009	1.5P	GH3										
	Y87539	3P	GH5										
No.10-32UNF	Y87511	3P	GH2	2.38	0.276	0.194	3	Ua					
	Y87510	3P	GH2										
	Y81556	1.5P	GH3										
	Y87530	3P	GH4										
	Y87540	3P	GH4										
	Y87040	1.5P	GH5										
Y87561	3P	GH6											

ZELX NI Spiral Fluted Taps for Nickel Base Alloys

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
5/8-11UNC	Y87555	3P	GH5	3.81	0.748	0.480	4	Ua
	Y87585		GH7					
5/8-18UNF	Y87526	3P	GH3	3.81	0.512	0.480	4	Ua
	Y87536		GH4					
	Y87556		GH5					
3/4-10UNC	Y87527	3P	GH3	4.25	0.827	0.590	4	Ua
	Y87027	1.5P						
	Y87557	3P						
3/4-16UNF	Y87528	3P	GH3	4.25	0.591	0.590	4	Ua
	Y87558		GH5					

For Metric threads

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M2.5x0.45	Y88320	3P	D3	1.81	0.157	0.141	3	Ua
M3x0.5	Y88321	3P	D3	1.94	0.197	0.141	3	Ua
M3.5x0.6	Y88322	3P	D4	2.00	0.276	0.141	3	Ua
M4x0.7	Y88323	3P	D4	2.13	0.276	0.168	3	Ua
M5x0.8	Y88324	3P	D4	2.38	0.354	0.194	3	Ua
M6x1	Y88325	3P	D5	2.50	0.433	0.255	3	Ua
M8x1.25	Y88328	3P	D5	2.72	0.472	0.318	3	Ua
M8x1	Y88327	3P	D5	2.72	0.472	0.318	3	Ua
M10x1.5	Y88330	3P	D6	2.94	0.512	0.381	3	Ua
M12x1.75	Y88332	3P	D6	3.38	0.591	0.367	3	Ub
M12x1.25	Y88331	3P	D5	3.38	0.551	0.367	3	Ub

ZELX NI STI STI Spiral Fluted Taps for Nickel Base Alloys

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
No.4-40UNC	Y87419	1.5P	GH3	2.00	0.276	0.141	3	Ua
	Y87408	3P	GH2					
No.6-32UNC	Y87008	1.5P	GH3	2.38	0.354	0.194	3	Ua
	Y87424	3P						
	Y87409	3P						
No.6-40UNF	Y87409	3P	GH2	2.13	0.276	0.168	3	Ua
	Y81409	3P	GH1					
	Y87410		GH2					
No.8-32UNC	Y87426	3P	GH3	2.38	0.354	0.220	3	Ua
	Y87412		GH2					
No.10-24UNC	Y87428	3P	GH3	2.50	0.433	0.255	3	Ua
	Y87028							
	Y87413	3P	GH2					
Y87429	GH3							
Y87029	1.5P		GH5					
Y87057		GH3						
1/4-20UNC	Y87448	3P	GH2	2.72	0.472	0.318	3	Ua
	Y87458		GH3					
	Y87058	1.5P						
1/4-28UNF	Y87449	3P	GH2	2.72	0.394	0.318	3	Ua
	Y87459		GH3					
5/16-18UNC	Y87460	3P	GH3	2.94	0.551	0.381	3	Ua
	Y87470		GH4					
5/16-24UNF	Y87451	3P	GH2	2.94	0.394	0.381	3	Ua
	Y87461		GH3					
	Y87061	1.5P						
3/8-16UNC	Y87462	3P	GH3	3.38	0.630	0.367	3	Ub
	Y87472		GH4					
3/8-24UNF	Y87453	3P	GH2	3.16	0.472	0.323	3	Ub
	Y87063	1.5P						
	Y87463	3P						
7/16-14UNC	Y87464	3P	GH3	3.59	0.709	0.429	3	Ub
7/16-20UNF	Y87465	3P	GH3	3.38	0.472	0.367	3	Ub
	Y87475		GH4					
1/2-13UNC	Y87466	3P	GH3	3.81	0.748	0.480	3	Ub
1/2-20UNF	Y87467	3P	GH3	3.59	0.512	0.429	3	Ub
	Y87067							

ZELX NI STI

STI Spiral Fluted Taps for Nickel Base Alloys



Segment : 1D



ZELX NI is the tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and higher heat resistance than steels.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y87400	3P	GH2	1.88	0.236	0.141	3	Ua
No.4-40UNC	Y87403	3P	GH1	2.00	0.276	0.141	3	Ua
	Y87404		GH2					
	Y87004	1.5P						
	Y87420	3P	GH3					

Overall length	Thread length	Shank dia.
L	ℓ	D _s

ZELX TI

Spiral Fluted Taps for Titanium Alloys



Segment : 1D



Suitable for titanium alloys which, including titanium as the main component, are tough, light and heat resistant.

ZELX TI Spiral Fluted Taps for Titanium Alloys

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
5/16-24UNF	Y87646	3P	GH5	2.72	0.394	0.318	3	Ua
	Y87663		GH6					
	Y87676		GH7					
3/8-16UNC	Y87617	3P	GH3	2.94	0.551	0.381	3	Ua
	Y87611	1.5P						
3/8-24UNF	Y87618	3P	GH3	2.94	0.394	0.381	3	Ua
	Y87018	1.5P						
	Y87633	3P	GH4					
	Y87648		GH5					
	Y87664		GH6					
	Y87678		GH7					
7/16-14UNC	Y87619	3P	GH3	3.16	0.591	0.323	3	Ub
	Y81629	1.5P						
7/16-20UNF	Y87620	3P	GH3	3.16	0.472	0.323	3	Ub
	Y87020	1.5P						
	Y87650	3P	GH5					
1/2-13UNC	Y87621	3P	GH3	3.38	0.630	0.367	3	Ub
	Y87626		GH5					
1/2-20UNF	Y87622	3P	GH3	3.38	0.472	0.367	3	Ub
	Y87023	1.5P						
	Y87652	3P						
For Metric threads								
Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M2.5×0.45	Y87700	3P	D3	1.81	0.295	0.141	3	Ua
M3×0.5	Y87701	3P	D3	1.94	0.197	0.141	3	Ua
M3.5×0.6	Y87702	3P	D4	2.00	0.276	0.141	3	Ua
M4×0.7	Y87703	3P	D4	2.13	0.276	0.168	3	Ua
M5×0.8	Y87704	3P	D4	2.38	0.354	0.194	3	Ua
M6×1	Y87705	3P	D5	2.50	0.433	0.255	3	Ua
M7×1	Y87706	3P	D5	2.72	0.433	0.318	3	Ua
M8×1.25	Y87708	3P	D5	2.72	0.472	0.318	3	Ua
M8×1	Y87707	3P	D5	2.72	0.472	0.318	3	Ua
M10×1.5	Y87710	3P	D6	2.94	0.512	0.381	3	Ua
M10×1.25	Y87709	3P	D5	2.94	0.472	0.381	3	Ua
M12×1.25	Y87711	3P	D5	3.38	0.551	0.367	3	Ub

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y87623	3P	GH2	1.75	0.157	0.141	3	Ua
No.4-40UNC	Y87601	3P	GH2	1.88	0.236	0.141	3	Ua
	Y87612		GH4					
	Y87001	1.5P						
No.6-32UNC	Y87605	3P	GH3	2.00	0.276	0.141	3	Ua
	Y87606	1.5P						
	Y87608	3P	GH4					
	Y87635		GH5					
No.8-32UNC	Y87607	3P	GH3	2.13	0.276	0.168	3	Ua
	Y87007	1.5P						
	Y87629	3P	GH4					
	Y87637		GH5					
	Y87660		GH6					
	Y87667		GH7					
No.10-24UNC	Y87609	3P	GH3	2.38	0.354	0.194	3	Ua
No.10-32UNF	Y87610	3P	GH3	2.38	0.276	0.194	3	Ua
	Y87010	1.5P						
	Y87630	3P	GH4					
	Y87640		GH5					
	Y87661		GH6					
	Y87670		GH7					
1/4-20UNC	Y87613	3P	GH3	2.50	0.433	0.255	3	Ua
	Y87628	1.5P						
1/4-28UNF	Y87614	3P	GH3	2.50	0.354	0.255	3	Ua
	Y87014	1.5P						
	Y87631	3P	GH4					
	Y87644		GH5					
	Y87662		GH6					
	Y87674		GH7					
5/16-18UNC	Y87615	3P	GH3	2.72	0.472	0.318	3	Ua
	Y87695	1.5P						
5/16-24UNF	Y87616	3P	GH3	2.72	0.394	0.318	3	Ua
	Y87016	1.5P						
	Y87632	3P	GH4					

ZELX FR

Spiral Fluted Taps for High Speed Tapping



Segment : 1D



ZELX FR can run in such high speed cutting as 20-30m/min. In low cutting speed range such as lower than 15m/min, chip shape and chip ejection tend to become poor and can cause tapping trouble.

ZELX AL

Spiral Fluted Taps for Non-Ferrous Materials



Segment : 1D



In tapping of aluminum die castings and aluminum castings, ZELX AL solves chip jamming and chip clogging trouble, and avoids torn threads.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.4-40UNC	Y84401	2.5P	GH2	1.88	0.236	0.141	3	Ua
No.5-40UNC	Y84403	2.5P	GH2	1.94	0.236	0.141	3	Ua
No.8-32UNC	Y84407	2.5P	GH3	2.13	0.276	0.168	3	Ua
No.10-24UNC	Y84409	2.5P	GH3	2.38	0.354	0.194	3	Ua
No.10-32UNF	Y84410	2.5P	GH3	2.38	0.276	0.194	3	Ua
1/4-20UNC	Y84413	2.5P	GH3	2.50	0.433	0.255	3	Ua
1/4-28UNF	Y84414	2.5P	GH3	2.50	0.354	0.255	3	Ua
5/16-18UNC	Y84415	2.5P	GH3	2.72	0.472	0.318	3	Ua
5/16-24UNF	Y84416	2.5P	GH3	2.72	0.394	0.318	3	Ua
3/8-16UNC	Y84417	2.5P	GH3	2.94	0.551	0.381	3	Ua
3/8-24UNF	Y84418	2.5P	GH3	2.94	0.394	0.381	3	Ua
7/16-14UNC	Y84419	2.5P	GH3	3.16	0.591	0.323	3	Ub
7/16-20UNF	Y84420	2.5P	GH3	3.16	0.472	0.323	3	Ub
1/2-13UNC	Y84421	2.5P	GH3	3.38	0.630	0.367	3	Ub
1/2-20UNF	Y84422	2.5P	GH3	3.38	0.472	0.367	3	Ub
5/8-11UNC	Y84425	2.5P	GH3	3.81	0.748	0.480	3	Ub
5/8-18UNF	Y84426	2.5P	GH3	3.81	0.512	0.480	3	Ub
3/4-10UNC	Y84427	2.5P	GH3	4.25	0.827	0.590	4	Ub
3/4-16UNF	Y84428	2.5P	GH3	4.25	0.591	0.590	4	Ub

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y86500	2.5P	GH2	1.77	0.276	0.141	2	Ua
No.4-40UNC	Y86501	2.5P	GH2	2.20	0.433	0.141	2	Ua
No.5-40UNC	Y86502	2.5P	GH2	2.20	0.433	0.141	3	Ua
No.6-32UNC	Y86503	2.5P	GH3	2.20	0.512	0.141	3	Ua
No.8-32UNC	Y86504	2.5P	GH3	2.48	0.512	0.168	3	Ua
No.10-24UNC	Y86505	2.5P	GH3	2.76	0.630	0.194	3	Ua
No.10-32UNF	Y86506	2.5P	GH3	2.76	0.630	0.194	3	Ua
1/4-20UNC	Y86507	2.5P	GH3	3.15	0.748	0.255	3	Ua
	Y86508		GH5					
1/4-28UNF	Y86509	2.5P	GH3	3.15	0.748	0.255	3	Ua
5/16-18UNC	Y86512	2.5P	GH3	3.54	0.866	0.318	3	Ua
3/8-16UNC	Y86516	2.5P	GH3	3.94	0.945	0.381	3	Ua
	Y86517		GH5					
3/8-24UNF	Y86518	2.5P	GH3	3.54	0.787	0.381	3	Ua
1/2-13UNC	Y86524	2.5P	GH3	4.33	1.142	0.367	3	Ub
	Y86525		GH5					
1/2-20UNF	Y86526	2.5P	GH3	3.94	0.866	0.367	3	Ub
For Metric threads								
M3×0.5	Y86528	2.5P	D3	2.20	0.433	0.141	3	Ua
M4×0.7	Y86530	2.5P	D4	2.48	0.512	0.168	3	Ua
M5×0.8	Y86531	2.5P	D4	2.76	0.630	0.194	3	Ua
M6×1	Y86532	2.5P	D5	3.15	0.748	0.255	3	Ua
M8×1.25	Y86535	2.5P	D5	3.54	0.866	0.318	3	Ua
M8×1	Y86534	2.5P	D5	3.54	0.866	0.318	3	Ua
M10×1.5	Y86537	2.5P	D6	3.94	0.945	0.381	3	Ua

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX ALS

Spiral Fluted Taps for Non-Ferrous Materials



Segment : 1D



In tapping of aluminum die castings and aluminum castings, ZELX ALS solves chip jamming and chip clogging trouble, and avoids torn threads.

HISP

Spiral Fluted Taps



Segment : 1C



Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y86400	2.5P	GH2	1.77	0.276	0.141	3	Ua
No.4-40UNC	Y86401	2.5P	GH2	2.20	0.433	0.141	3	Ua
No.6-32UNC	Y86403	2.5P	GH3	2.20	0.512	0.141	3	Ua
No.8-32UNC	Y86404	2.5P	GH3	2.48	0.512	0.168	3	Ua
No.10-32UNF	Y86406	2.5P	GH3	2.76	0.630	0.194	3	Ua
1/4-20UNC	Y86407	2.5P	GH3	3.15	0.748	0.255	3	Ua
	Y86408		GH5					
5/16-18UNC	Y86412	2.5P	GH3	3.54	0.866	0.318	3	Ua
5/16-24UNF	Y86414	2.5P	GH3	3.54	0.866	0.318	3	Ua
3/8-16UNC	Y86416	2.5P	GH3	3.94	0.945	0.381	3	Ua
	Y86417		GH5					
For Metric threads								
Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
M3×0.5	Y86428	2.5P	D3	2.20	0.433	0.141	3	Ua
M4×0.7	Y86430	2.5P	D4	2.48	0.512	0.168	3	Ua
M6×1	Y86432	2.5P	D5	3.15	0.748	0.255	3	Ua
M8×1.25	Y86435	2.5P	D5	3.54	0.866	0.318	3	Ua
M8×1	Y86434	2.5P	D5	3.54	0.866	0.318	3	Ua
M10×1.5	Y86437	2.5P	D6	3.94	0.945	0.381	3	Ua
M12×1.75	Y86440	2.5P	D6	4.33	1.142	0.367	3	Ub

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.3-48UNC	Y84060	3P	GH2	1.81	0.500	0.141	2	Ub
	Y84060BR							
	Y84061	1.5P						
	Y84061BR							
No.4-40UNC	Y84064	3P	GH2	1.88	0.560	0.141	2	Ub
	Y84064BR							
	Y84065	1.5P						
No.5-40UNC	Y84070	3P	GH2	1.94	0.630	0.141	2	Ub
	Y84070BR							
	Y84071	1.5P						
	Y84071BR							
No.6-32UNC	Y84124	3P	GH3	2.00	0.690	0.141	3	Ub
	Y84124BR						2	
	Y84125	1.5P					3	
	Y84125BR						2	
No.8-32UNC	Y84128	3P	GH3	2.13	0.750	0.168	3	Ub
	Y84128BR							
	Y84129	1.5P						
Y84129BR								
No.10-24UNC	Y84132	3P	GH3	2.38	0.880	0.194	3	Ub
	Y84132BR							
	Y84133	1.5P						
No.10-32UNF	Y84134	3P	GH3	2.38	0.880	0.194	3	Ub
	Y84134BR							
	Y84135	1.5P						
	Y84135BR							
No.12-24UNC	Y84136	3P	GH3	2.38	0.940	0.220	3	Ub
	Y84136BR							
	Y84137	1.5P						
	Y84137BR							
1/4-20UNC	Y84300	3P	GH3	2.50	1.000	0.255	3	Ub
	Y84300BR							
	Y84301	1.5P						
	Y84301BR							

HISP Spiral Fluted Taps

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
1/4-28UNF	Y84302	3P	GH3	2.50	1.000	0.255	3	Ub
	Y84302BR							
	Y84303	1.5P						
	Y84303BR							
5/16-18UNC	Y84304	3P	GH3	2.72	1.130	0.318	3	Ub
	Y84304BR							
	Y84305	1.5P						
	Y84305BR							
5/16-24UNF	Y84306	3P	GH3	2.72	1.130	0.318	3	Ub
	Y84306BR							
	Y84307	1.5P						
	Y84307BR							
3/8-16UNC	Y84308	3P	GH3	2.94	1.250	0.381	3	Ub
	Y84308BR							
	Y84309	1.5P						
	Y84309BR							
3/8-24UNF	Y84310	3P	GH3	2.94	1.250	0.381	3	Ub
	Y84310BR							
	Y84311	1.5P						
	Y84311BR							
7/16-14UNC	Y84312	3P	GH3	3.16	1.440	0.323	3	Ub
	Y84312BR							
	Y84313	1.5P						
	Y84313BR							
7/16-20UNF	Y84316	3P	GH3	3.16	1.440	0.323	3	Ub
	Y84316BR							
	Y84317	1.5P						
1/2-13UNC	Y84320	3P	GH3	3.38	1.660	0.367	3	Ub
	Y84320BR							
	Y84321	1.5P						
	Y84321BR							
1/2-20UNF	Y84324	3P	GH3	3.38	1.660	0.367	3	Ub
	Y84324BR							
	Y84325	1.5P						
	Y84325BR							
5/8-11UNC	Y84328	3P	GH3	3.81	1.810	0.480	3	Ub
	Y84328BR							
	Y84329	1.5P						
	Y84329BR							
5/8-18UNF	Y84332	3P	GH3	3.81	1.810	0.480	3	Ub
	Y84332BR							
	Y84333	1.5P						
	Y84333BR							
3/4-10UNC	Y84336	3P	GH3	4.25	2.000	0.590	4	Ub
	Y84336BR							
	Y84337	1.5P						
	Y84337BR							
3/4-16UNF	Y84340	3P	GH3	4.25	2.000	0.590	4	Ub

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
3/4-16UNF	Y84340BR	3P	GH3	4.25	2.000	0.590	4	Ub
	Y84341	1.5P						
	Y84341BR							
For Metric threads								
Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M3×0.5	Y78215	2.5P	D3	1.94	0.630	0.141	3	Ub
M3.5×0.6	Y78216	2.5P	D4	2.00	0.690	0.141	3	Ub
M4×0.7	Y78217	2.5P	D4	2.13	0.750	0.168	3	Ub
M4.5×0.75	Y78218	2.5P	D4	2.38	0.880	0.194	3	Ub
M5×0.8	Y78219	2.5P	D4	2.38	0.880	0.194	3	Ub
M6×1	Y78220	2.5P	D5	2.50	1.000	0.255	3	Ub
M7×1	Y78221	2.5P	D5	2.72	1.130	0.318	3	Ub
M8×1.25	Y78223	2.5P	D5	2.72	1.130	0.318	3	Ub
M8×1	Y78222	2.5P	D5	2.72	1.130	0.318	3	Ub
M10×1.5	Y78225	2.5P	D6	2.94	1.250	0.381	3	Ub
M10×1.25	Y78224	2.5P	D5	2.94	1.250	0.381	3	Ub
M12×1.75	Y78227	2.5P	D6	3.38	1.660	0.367	3	Ub
M12×1.25	Y78226	2.5P	D5	3.38	1.660	0.367	3	Ub
M14×2	Y78229	2.5P	D7	3.59	1.660	0.429	3	Ub
M14×1.5	Y78228	2.5P	D6	3.59	1.660	0.429	3	Ub
M16×2	Y78231	2.5P	D7	3.81	1.810	0.480	3	Ub
M16×1.5	Y78230	2.5P	D6	3.81	1.810	0.480	3	Ub
M18×2.5	Y78233	2.5P	D7	4.03	1.810	0.542	4	Ub
M18×1.5	Y78232	2.5P	D6	4.03	1.810	0.542	4	Ub

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

STI SP

Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts



Segment : 1C



ZELX TI LHSP

Spiral Fluted Taps for Titanium Alloys, through hole use (LH spiral fluted)



Segment : 1T



Suitable for Titanium Alloys which, including titanium as the main component, are tough, light and heat resistant.

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y84700	1.5P	GH2	1.88	0.563	0.141	2	Ub
No.4-40UNC	Y84704	1.5P	GH2	2.00	0.688	0.141	2	Ub
	Y84720		GH3					
	Y84736		GH4					
	Y84708		GH2					
No.6-32UNC	Y84724	1.5P	GH3	2.38	0.875	0.194	3	Ub
	Y84740		GH4					
No.8-32UNC	Y84710	1.5P	GH2	2.38	0.938	0.220	3	Ub
	Y84726		GH3					
	Y84742		GH4					
	Y84712	1.5P	GH2	2.50	1.000	0.255	3	Ub
	Y84728		GH3					
	Y84713	1.5P	GH2	2.50	1.000	0.255	3	Ub
Y84729	GH3							
No.10-32UNF	Y84745		GH4					
	Y84748	1.5P	GH2	2.72	1.125	0.318	3	Ub
1/4-20UNC	Y84758		GH3					
	Y84749	1.5P	GH2	2.72	1.125	0.318	3	Ub
Y84759	GH3							
1/4-28UNF	Y84769		GH4					
	Y84760	1.5P	GH3	2.94	1.250	0.381	3	Ub
5/16-18UNC								
5/16-24UNF	Y84761	1.5P	GH3	2.94	1.250	0.381	3	Ub
	Y84771		GH4					
3/8-16UNC	Y84762	1.5P	GH3	3.38	1.656	0.367	3	Ub
	Y84772		GH4					
3/8-24UNF	Y84753	1.5P	GH2	3.16	1.438	0.323	3	Ub
	Y84763		GH3					
7/16-14UNC	Y84764	1.5P	GH3	3.59	1.656	0.429	3	Ub
7/16-20UNF	Y84765	1.5P	GH3	3.38	1.656	0.367	3	Ub
	Y84775		GH4					
1/2-13UNC	Y84766	1.5P	GH3	3.81	1.810	0.480	3	Ub
1/2-20UNF	Y84767	1.5P	GH3	3.59	1.656	0.429	3	Ub

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y85623	5P	GH2	1.75	0.256	0.141	3	Ua
No.4-40UNC	Y85601	5P	GH2	1.88	0.335	0.141	3	Ua
No.5-40UNC	Y85603	5P	GH2	1.94	0.374	0.141	3	Ua
No.6-32UNC	Y85605	5P	GH3	2.00	0.413	0.141	3	Ua
	Y85635		GH5					
No.8-32UNC	Y85607	5P	GH3	2.13	0.453	0.168	3	Ua
	Y85629		GH4					
	Y85637		GH5					
	Y85660		GH6					
	Y85667		GH7		0.267			
	Y85609	5P	GH3	2.38	0.531	0.194	3	Ua
Y85639	GH5							
No.10-24UNC	Y85610	5P	GH3	2.38	0.531	0.194	3	Ua
	Y85630		GH4					
	Y85640		GH5					
	Y85661		GH6					
No.10-32UNF	Y85670		GH7		0.267			
	Y85613	5P	GH3	2.50	0.591	0.255	3	Ua
Y85643	GH5							
1/4-20UNC	Y85614	5P	GH3	2.50	0.591	0.255	3	Ua
	Y85631		GH4					
	Y85644		GH5					
	Y85662		GH6					
	Y85674		GH7					
	Y85615	5P	GH3	2.72	0.669	0.318	3	Ua
Y85645	GH5							
5/16-18UNC	Y85616	5P	GH3	2.72	0.669	0.318	3	Ua
	Y85632		GH4					
	Y85646		GH5					
	Y85663		GH6					
	Y85676		GH7		0.669			
	Y85617	5P	GH3	2.94	0.748	0.381	3	Ua
Y85647	GH5							
3/8-16UNC								
3/8-24UNF	Y85618	5P	GH3	2.94	0.748	0.381	3	Ua

ZELX TI LHSP Spiral Fluted Taps for Titanium Alloys, through hole use (LH spiral fluted)

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
3/8-24UNF	Y85633	5P	GH4	2.94	0.748	0.381	3	Ua
	Y85648		GH5					
	Y85664		GH6					
	Y85678		GH7					
7/16-14UNC	Y85619	5P	GH3	3.16	0.866	0.323	3	Ub
	Y85649		GH5					
7/16-20UNF	Y85620	5P	GH3	3.16	0.866	0.323	3	Ub
	Y85650		GH5		0.472			
1/2-13UNC	Y85621	5P	GH3	3.38	0.984	0.367	3	Ub
	Y85651		GH5		0.630			
1/2-20UNF	Y85622	5P	GH3	3.38	0.984	0.367	3	Ub
	Y85652		GH5		0.472			
5/8-11UNC	Y85625	5P	GH3	3.81	1.083	0.480	3	Ub
5/8-18UNF	Y85626	5P	GH3	3.81	1.083	0.480	3	Ub
3/4-10UNC	Y85627	5P	GH3	4.25	1.201	0.590	3	Ub
3/4-16UNF	Y85628	5P	GH3	4.25	1.201	0.590	3	Ub

For Metric threads

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M2.5×0.45	Y85700	5P	D3	1.81	0.295	0.141	3	Ua
M3×0.5	Y85701	5P	D3	1.94	0.374	0.141	3	Ua
M3.5×0.6	Y85702	5P	D4	2.00	0.413	0.141	3	Ua
M4×0.7	Y85703	5P	D4	2.13	0.453	0.168	3	Ua
M5×0.8	Y85704	5P	D4	2.38	0.531	0.194	3	Ua
M6×1	Y85705	5P	D5	2.50	0.591	0.255	3	Ua
M7×1	Y85706	5P	D5	2.72	0.669	0.318	3	Ua
M8×1.25	Y85708	5P	D5	2.72	0.669	0.318	3	Ua
M10×1.5	Y85710	5P	D6	2.94	0.748	0.381	3	Ua

ZELX FR LHSP

Spiral Fluted Taps for High Speed Tapping, through hole use (LH spiral fluted)



Segment : 15



ZELX FR LHSP can run in such high speed cutting as 20-30m/min. In low cutting speed range such as lower than 15m/min, chip shape and chip ejection tend to become poor and can cause tapping trouble.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.4-40UNC	Y84201	5P	GH2	1.88	0.335	0.141	3	Ua
No.5-40UNC	Y84203	5P	GH2	1.94	0.374	0.141	3	Ua
No.6-32UNC	Y84205	5P	GH3	2.00	0.413	0.141	3	Ua
No.8-32UNC	Y84207	5P	GH3	2.13	0.453	0.168	3	Ua
No.10-24UNC	Y84209	5P	GH3	2.38	0.531	0.194	3	Ua
No.10-32UNF	Y84210	5P	GH3	2.38	0.531	0.194	3	Ua
1/4-20UNC	Y84213	5P	GH3	2.50	0.591	0.255	3	Ua
1/4-28UNF	Y84214	5P	GH3	2.50	0.591	0.255	3	Ua
5/16-18UNC	Y84215	5P	GH3	2.72	0.669	0.318	3	Ua
5/16-24UNF	Y84216	5P	GH3	2.72	0.669	0.318	3	Ua
3/8-16UNC	Y84217	5P	GH3	2.94	0.748	0.381	3	Ua
3/8-24UNF	Y84218	5P	GH3	2.94	0.748	0.381	3	Ua
7/16-14UNC	Y84219	5P	GH3	3.16	0.866	0.323	3	Ub
7/16-20UNF	Y84220	5P	GH3	3.16	0.866	0.323	3	Ub
1/2-13UNC	Y84221	5P	GH3	3.38	0.984	0.367	3	Ub
1/2-20UNF	Y84222	5P	GH3	3.38	0.984	0.367	3	Ub
5/8-11UNC	Y84225	5P	GH3	3.81	1.083	0.480	3	Ub
5/8-18UNF	Y84226	5P	GH3	3.81	1.083	0.480	3	Ub
3/4-10UNC	Y84227	5P	GH3	4.25	1.201	0.590	4	Ub
3/4-16UNF	Y84228	5P	GH3	4.25	1.201	0.590	4	Ub

Overall length	Thread length	Shank dia.
L	ℓ	D _s

ZELX SS

Spiral Pointed Taps for Stainless Steels



Segment : 1F



Suitable for stainless steels which are sticky and tend to work-harden as well as chrome steels and molybdenum steels, through hole use.

ZELX SS Spiral Pointed Taps for Stainless Steels

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type	
No.10-24UNC	Y82669	5P	GH7	2.38	0.531	0.194	3	Ua	
	Y82611	5P	GH2	2.38	0.531	0.194	3	Ua	
	Y82610		GH3						
	Y82610BR		GH4						
	Y82630								
Y82630BR									
No.10-32UNF	Y82640	5P	GH5	2.38	0.531	0.194	3	Ua	
	Y82640BR	5P	GH6	2.38	0.531	0.194	3	Ua	
	Y82661								
	Y82661BR								
	Y82670		GH7						
Y82670BR									
No.12-24UNC	Y82688	5P	GH3	2.38	0.571	0.220	3	Ua	
No.12-28UNF	Y82689	5P	GH3	2.38	0.571	0.220	3	Ua	
1/4-20UNC	Y82613	5P	GH3	2.50	0.591	0.255	3	Ua	
	Y82613BR		GH5						
	Y82643								
	Y82643BR								
	Y82590								GH6
Y82673									
1/4-28UNF	Y82614	5P	GH3	2.50	0.591	0.255	3	Ua	
	Y82614BR		GH4						
	Y82631								
	Y82631BR		GH5						
	Y82644								
	Y82644BR								
	Y82662								GH6
	Y82662BR								
	Y82674								GH7
	Y82674BR								
5/16-18UNC	Y82615	5P		GH3	2.72	0.669	0.318	3	Ua
	Y82615BR		GH5						
	Y82645								
	Y82675								
5/16-24UNF	Y82616	5P	GH3	2.72	0.669	0.318	3	Ua	
	Y82616BR		GH4						
	Y82632								
	Y82646		GH5						
	Y82646BR								
	Y82663								
	Y82663BR		GH6						
	Y82676								
	Y82676BR		GH7						
Y82617	5P	GH3		2.94	0.748	0.381	3	Ua	
Y82617BR		GH5							
Y82647									
Y82647BR									
Y82668		GH7							
Y82668									

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y82623	5P	GH2	1.75	0.256	0.141	2	Ua
No.3-48UNC	Y82600	5P	GH2	1.81	0.295	0.141	2	Ua
No.4-40UNC	Y82601	5P	GH2	1.88	0.335	0.141	2	Ua
	Y82601BR		GH3					
	Y82602							
	Y82612		GH4					
	Y82612BR							
Y82634	GH5							
Y82634BR								
No.4-48UNF	Y82683	5P	GH2	1.88	0.335	0.141	2	Ua
No.5-40UNC	Y82603	5P	GH2	1.94	0.374	0.141	3	Ua
No.6-32UNC	Y82604	5P	GH2	2.00	0.413	0.141	3	Ua
	Y82605		GH3					
	Y82608							
	Y82608BR		GH4					
	Y82635							
	Y82635BR							
	Y82659							
	Y82665		GH7					
Y82665								
No.6-40UNF	Y82684	5P	GH2	2.00	0.413	0.141	3	Ua
	Y82642		GH3					
No.8-32UNC	Y82606	5P	GH2	2.13	0.453	0.168	3	Ua
	Y82607		GH3					
	Y82607BR							
	Y82629		GH4					
	Y82629BR							
	Y82637							
	Y82637BR		GH5					
	Y82660							
	Y82667		GH7					
Y82667								
No.8-36UNF	Y82686	5P	GH2	2.13	0.453	0.168	3	Ua
No.10-24UNC	Y82609	5P	GH3	2.38	0.531	0.194	3	Ua
	Y82609BR		GH5					
	Y82639							

ZELX SS Spiral Pointed Taps for Stainless Steels

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
3/8-24UNF	Y82618		GH3	2.94	0.748	0.381	3	Ua
	Y82618BR							
	Y82633							
	Y82633BR	5P	GH4					
	Y82648							
	Y82664		GH6					
	Y82664BR							
	Y82678		GH7					
Y82678BR								
7/16-14UNC	Y82619	5P	GH3	3.16	0.866	0.323	3	Ub
	Y82649		GH5					
7/16-20UNF	Y82620	5P	GH3	3.16	0.866	0.323	3	Ub
	Y82650		GH5					
	Y82650BR							
	Y82691		GH6					
	Y82691BR							
	Y82680							
1/2-13UNC	Y82621	5P	GH3	3.38	0.984	0.367	3	Ub
	Y82651		GH5					
	Y82681		GH7					
	Y82681BR							
1/2-20UNF	Y82622	5P	GH3	3.38	0.984	0.367	3	Ub
	Y82622BR							
	Y82652		GH5					
	Y82692							
	Y82692BR		GH6					
	Y82682							
	Y82682BR							
Y82685	GH9							
9/16-12UNC	Y82653	5P	GH3	3.59	0.984	0.429	3	Ub
9/16-18UNF	Y82654	5P	GH3	3.59	0.984	0.429	3	Ub
	Y82666		GH5					
5/8-11UNC	Y82625	5P	GH3	3.81	1.083	0.480	3	Ub
	Y82625BR							
	Y82655		GH5					
5/8-18UNF	Y82626	5P	GH3	3.81	1.083	0.480	3	Ub
	Y82626BR							
	Y82636		GH4					
	Y82656							
	Y82656BR		GH5					
	Y82694							
	Y82694BR							
	Y82591		GH6					
Y82591BR								
3/4-10UNC	Y82627	5P	GH3	4.25	1.201	0.590	3	Ub
	Y82627BR							
	Y82657		GH5					
3/4-16UNF	Y82628	5P	GH3	4.25	1.201	0.590	3	Ub

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
3/4-16UNF	Y82628BR	5P	GH3	4.25	1.201	0.590	3	Ub
	Y82658		GH5					
	Y82592							
7/8-9UNC	Y82695	5P	GH4	4.69	1.339	0.697	3	Ub
7/8-14UNF	Y82696	5P	GH4	4.69	1.339	0.697	3	Ub
	Y82696BR							
	Y82699		GH6					
1-8UNC	Y82697	5P	GH4	5.13	1.496	0.800	3	Ub
1-12UNF	Y82679	5P	GH4	5.13	1.496	0.800	3	Ub
1"1/8-7UNC	Y82700	5P	GH6	5.44	1.535	0.896	4	Ub
1"1/8-12UNF	Y82701	5P	GH5	5.44	1.535	0.896	4	Ub
1"1/4-7UNC	Y82702	5P	GH6	5.75	1.535	1.021	4	Ub
1"1/4-12UNF	Y82703	5P	GH5	5.75	1.535	1.021	4	Ub
1"3/8-6UNC	Y82705	5P	GH6	6.06	1.811	1.108	4	Ub
1"3/8-12UNF	Y82706	5P	GH5	6.06	1.811	1.108	4	Ub
1"1/2-6UNC	Y82707	5P	GH6	6.38	1.811	1.233	4	Ub
1"1/2-12UNF	Y82708	5P	GH5	6.38	1.811	1.233	4	Ub
1"3/4-5UNC	Y82709	5P	GH7	7.00	1.929	1.430	4	Ub
2-4.5UNC	Y82710	5P	GH7	7.63	1.929	1.644	4	Ub

For Metric threads

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M3×0.5	Y72615	5P	D3	1.94	0.374	0.141	3	Ua
M3.5×0.6	Y72616	5P	D4	2.00	0.413	0.141	3	Ua
M4×0.7	Y72617	5P	D4	2.13	0.453	0.168	3	Ua
M5×0.8	Y72619	5P	D4	2.38	0.531	0.194	3	Ua
M6×1	Y72620	5P	D5	2.50	0.591	0.255	3	Ua
M7×1	Y72621	5P	D5	2.72	0.669	0.318	3	Ua
M8×1.25	Y72623	5P	D5	2.72	0.669	0.318	3	Ua
M8×1	Y72622	5P	D5	2.72	0.669	0.318	3	Ua
M10×1.5	Y72625	5P	D6	2.94	0.748	0.381	3	Ua
M10×1.25	Y72624	5P	D5	2.94	0.748	0.381	3	Ua
M12×1.75	Y72627	5P	D6	3.38	0.984	0.367	3	Ub
M12×1.25	Y72626	5P	D5	3.38	0.984	0.367	3	Ub
M14×2	Y72629	5P	D7	3.59	0.984	0.429	3	Ub
M14×1.5	Y72628	5P	D6	3.59	0.984	0.429	3	Ub
M16×2	Y72631	5P	D7	3.81	1.083	0.480	3	Ub
M16×1.5	Y72630	5P	D6	3.81	1.083	0.480	3	Ub
M18×2.5	Y72633	5P	D7	4.03	1.083	0.542	3	Ub
M18×1.5	Y72632	5P	D6	4.03	1.083	0.542	3	Ub

Concerning specification, please refer to spec dwg. P84 of technical information.
 The products of the code with "BR" have bright finish.
 The products of the code with "NI" have nitride surface treatment.

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX SS 6"

Long Shank Spiral Pointed Taps for Stainless Steels



Segment : 1F



Suitable for stainless steels which are sticky and tend to work-harden as well as chrome steels and molybdenum steels, through hole use.

ZELX NI

Spiral Pointed Taps for Nickel Base Alloys



Segment : 1F



ZELX NI is the tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and higher heat resistance than steels.

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y82523	5P	GH2	6.00	0.256	0.141	2	Ua
No.3-48UNC	Y82500	5P	GH2	6.00	0.295	0.141	2	Ua
No.4-40UNC	Y82501	5P	GH2	6.00	0.335	0.141	2	Ua
No.6-32UNC	Y82505	5P	GH3	6.00	0.413	0.141	3	Ua
No.8-32UNC	Y82507	5P	GH3	6.00	0.453	0.168	3	Ua
No.10-24UNC	Y82509	5P	GH3	6.00	0.531	0.194	3	Ua
No.10-32UNF	Y82510	5P	GH3	6.00	0.531	0.194	3	Ua
1/4-20UNC	Y82513	5P	GH3	6.00	0.591	0.255	3	Ua
1/4-28UNF	Y82514	5P	GH3	6.00	0.591	0.255	3	Ua
5/16-18UNC	Y82515	5P	GH3	6.00	0.669	0.318	3	Ua
5/16-24UNF	Y82516	5P	GH3	6.00	0.669	0.318	3	Ua
3/8-16UNC	Y82517	5P	GH3	6.00	0.748	0.381	3	Ua
3/8-24UNF	Y82518	5P	GH3	6.00	0.748	0.381	3	Ua
7/16-14UNC	Y82519	5P	GH3	6.00	0.866	0.323	3	Ub
7/16-20UNF	Y82520	5P	GH3	6.00	0.866	0.323	3	Ub
1/2-13UNC	Y82521	5P	GH3	6.00	0.984	0.367	3	Ub
1/2-20UNF	Y82522	5P	GH3	6.00	0.984	0.367	3	Ub

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y85523	5P	GH2	1.75	0.256	0.141	2	Ua
No.4-40UNC	Y85501	5P	GH2	1.88	0.335	0.141	2	Ua
	Y85502		GH3					
	Y85504		GH4					
	Y85504BR							
No.5-40UNC	Y85503	5P	GH2	1.94	0.374	0.141	3	Ua
No.6-32UNC	Y85505	5P	GH3	2.00	0.413	0.141	3	Ua
	Y85524		GH4					
	Y85535		GH5					
No.6-40UNF	Y85512	5P	GH2	2.00	0.413	0.141	3	Ua
	Y85507		GH3					
No.8-32UNC	Y85507NI	5P	GH3	2.13	0.453	0.168	3	Ua
	Y85529							
	Y85529BR							
	Y85537		GH5					
	Y85537BR							
	Y85537NI							
	Y85560		GH6					
	Y85560BR							
	Y85560NI							
	Y85567							
Y85567BR	GH7							
Y85567NI								
No.10-24UNC	Y85509	5P	GH3	2.38	0.531	0.194	3	Ua
	Y85539		GH5					
No.10-32UNF	Y85510	5P	GH3	2.38	0.531	0.194	3	Ua
	Y85510NI							
	Y85530							
	Y85530BR		GH4					
	Y85530NI							
	Y85540							
	Y85540BR							
Y85540NI	GH5							

ZELX NI Spiral Pointed Taps for Nickel Base Alloys

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
No.10-32UNF	Y85561	5P	GH6	2.38	0.531	0.194	3	Ua
	Y85561BR							
	Y85561NI		GH7					
	Y85570							
	Y85570BR							
	Y85570NI							
1/4-20UNC	Y85513	5P	GH3	2.50	0.591	0.255	3	Ua
	Y85513NI							
	Y85543		GH5					
	Y85543NI							
1/4-28UNF	Y85514	5P	GH3	2.50	0.591	0.255	3	Ua
	Y85531		GH4					
	Y85531BR							
	Y85531NI							
	Y85544		GH5					
	Y85544BR							
	Y85544NI							
	Y85562		GH6					
	Y85562BR							
	Y85562NI							
	Y85574		GH7					
	Y85574BR							
Y85574NI								
5/16-18UNC	Y85515	5P	GH3	2.72	0.669	0.318	3	Ua
	Y85545		GH5					
	Y85553		GH7					
5/16-24UNF	Y85516	5P	GH3	2.72	0.669	0.318	3	Ua
	Y85532		GH4					
	Y85532BR							
	Y85546		GH5					
	Y85546BR							
	Y85563							
	Y85563BR							
	Y85576		GH7					
Y85576BR								
3/8-16UNC	Y85517	5P	GH3	2.94	0.748	0.381	3	Ua
	Y85547		GH5					
3/8-24UNF	Y85518	5P	GH3	2.94	0.748	0.381	3	Ua
	Y85533		GH4					
	Y85533BR							
	Y85548		GH5					
	Y85548BR							
	Y85564							
	Y85564BR							
	Y85578		GH7					
Y85578BR								
7/16-14UNC	Y85519	5P	GH3	3.16	0.866	0.323	3	Ub
	Y85549		GH5					

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
7/16-20UNF	Y85520	5P	GH3	3.16	0.866	0.323	3	Ub
	Y85550		GH5					
	Y85550BR							
1/2-13UNC	Y85521	5P	GH3	3.38	0.984	0.367	3	Ub
	Y85551		GH5					
1/2-20UNF	Y85522	5P	GH3	3.38	0.984	0.367	3	Ub
	Y85552		GH5					
	Y85552BR							
	Y85582		GH7					
	Y85582BR							
Y85582NI	0.472							
5/8-11UNC	Y85525	5P	GH3	3.81	1.083	0.480	3	Ub
	Y85555		GH5					
	Y85585							
5/8-18UNF	Y85526	5P	GH3	3.81	1.083	0.480	3	Ub
	Y85556		GH5					
	Y85586							
3/4-10UNC	Y85527	5P	GH3	4.25	1.201	0.590	3	Ub
	Y85557		GH5					
3/4-16UNF	Y85528	5P	GH3	4.25	1.201	0.590	3	Ub
	Y85558		GH5					

For Metric threads

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M2.5×0.45	Y87320	5P	D3	1.81	0.295	0.141	2	Ua
M3×0.5	Y87321	5P	D3	1.94	0.374	0.141	3	Ua
M3.5×0.6	Y87322	5P	D4	2.00	0.413	0.141	3	Ua
M4×0.7	Y87323	5P	D4	2.13	0.453	0.168	3	Ua
M5×0.8	Y87324	5P	D4	2.38	0.531	0.194	3	Ua
M6×1	Y87325	5P	D5	2.50	0.591	0.255	3	Ua
M7×1	Y87326	5P	D5	2.72	0.669	0.318	3	Ua
M8×1.25	Y87328	5P	D5	2.72	0.669	0.318	3	Ua
M10×1.5	Y87330	5P	D6	2.94	0.748	0.381	3	Ua
M10×1.25	Y87329	5P	D5	2.94	0.748	0.381	3	Ua
M12×1.75	Y87332	5P	D6	3.38	0.984	0.367	3	Ub

Concerning specification, please refer to spec dwg. P84 of technical information.
 The products of the code with "BR" have bright finish.
 The products of the code with "NI" have nitride surface treatment.

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX NI STI

STI Spiral Pointed Taps for Nickel Base Alloys



Segment : 1F



ZELX NI is the tap for nickel base alloys which, with nickel as main composition, have much higher corrosion resistance and higher heat resistance than steels.

ZELX AL

Spiral Pointed Taps for Non-Ferrous Materials



Segment : 1F



In tapping of aluminum die castings and aluminum castings, ZELX AL solves chip jamming and chip clogging trouble, and avoids torn threads.

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y87200	5P	GH2	1.88	0.335	0.141	2	Ua
No.4-40UNC	Y87203	5P	GH1	2.00	0.413	0.141	3	Ua
	Y87204		GH2					
No.6-32UNC	Y87208	5P	GH2	2.38	0.531	0.194	3	Ua
	Y87224		GH3					
No.6-40UNF	Y87209	5P	GH2	2.13	0.453	0.168	3	Ua
No.8-32UNC	Y87210	5P	GH2	2.38	0.571	0.220	3	Ua
	Y87226		GH3					
No.10-24UNC	Y87212	5P	GH2	2.50	0.591	0.255	3	Ua
	Y87228		GH3					
No.10-32UNF	Y87213	5P	GH2	2.50	0.591	0.255	3	Ua
	Y87229		GH3					
1/4-20UNC	Y87248	5P	GH2	2.72	0.669	0.318	3	Ua
	Y87258		GH3					
1/4-28UNF	Y87249	5P	GH2	2.72	0.669	0.318	3	Ua
	Y87259		GH3					
5/16-18UNC	Y87260	5P	GH3	2.94	0.748	0.381	3	Ua
5/16-24UNF	Y87251	5P	GH2	2.94	0.748	0.381	3	Ua
	Y87261		GH3					
3/8-16UNC	Y87262	5P	GH3	3.38	0.984	0.367	3	Ub
	Y87270		GH4					
3/8-24UNF	Y87253	5P	GH2	3.16	0.866	0.323	3	Ub
	Y87263		GH3					
7/16-14UNC	Y87264	5P	GH3	3.59	0.984	0.429	3	Ub
7/16-20UNF	Y87265	5P	GH3	3.38	0.984	0.367	3	Ub
	Y87275		GH4					
1/2-13UNC	Y87266	5P	GH3	3.81	1.083	0.480	3	Ub
1/2-20UNF	Y87267	5P	GH3	3.59	0.984	0.429	3	Ub

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y86200	5P	GH2	1.77	0.276	0.141	2	Ua
No.4-40UNC	Y86201	5P	GH2	2.20	0.433	0.141	2	Ua
No.5-40UNC	Y86202	5P	GH2	2.20	0.433	0.141	3	Ua
No.6-32UNC	Y86203	5P	GH3	2.20	0.512	0.141	3	Ua
No.8-32UNC	Y86204	5P	GH3	2.48	0.512	0.168	3	Ua
No.10-24UNC	Y86205	5P	GH3	2.76	0.630	0.194	3	Ua
No.10-32UNF	Y86206	5P	GH3	2.76	0.630	0.194	3	Ua
	Y86207		GH3					
1/4-20UNC	Y86208	5P	GH5	3.15	0.748	0.255	3	Ua
	Y86209		GH3					
1/4-28UNF	Y86211	5P	GH4	3.15	0.748	0.255	3	Ua
	Y86212		GH3					
5/16-18UNC	Y86213	5P	GH5	3.54	0.866	0.318	3	Ua
	Y86214		GH3					
5/16-24UNF	Y86215	5P	GH4	3.54	0.866	0.318	3	Ua
	Y86216		GH3					
3/8-16UNC	Y86217	5P	GH5	3.94	0.945	0.381	3	Ua
	Y86218		GH3					
3/8-24UNF	Y86219	5P	GH4	3.54	0.787	0.381	3	Ua
	Y86220		GH3					
7/16-14UNC	Y86221	5P	GH5	3.94	0.945	0.323	3	Ub
	Y86222		GH3					
7/16-20UNF	Y86223	5P	GH5	3.94	0.945	0.323	3	Ub
	Y86224		GH3					
1/2-13UNC	Y86225	5P	GH5	4.33	1.142	0.367	3	Ub
	Y86226		GH3					
1/2-20UNF	Y86227	5P	GH5	3.94	0.866	0.367	3	Ub
	Y86228		GH3					
For Metric threads								
M3x0.5	Y86228	5P	D3	2.20	0.433	0.141	3	Ua
M3.5x0.6	Y86229	5P	D4	2.20	0.512	0.141	3	Ua
M4x0.7	Y86230	5P	D4	2.48	0.512	0.168	3	Ua
M5x0.8	Y86231	5P	D4	2.76	0.630	0.194	3	Ua

ZELX AL Spiral Pointed Taps for Non-Ferrous Materials PO Spiral Pointed Taps

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M6×1	Y86232	5P	D5	3.15	0.748	0.255	3	Ua
M7×1	Y86233	5P	D5	3.15	0.748	0.318	3	Ua
M8×1.25	Y86235	5P	D5	3.54	0.866	0.318	3	Ua
M8×1	Y86234	5P	D5	3.54	0.866	0.318	3	Ua
M10×1.5	Y86237	5P	D6	3.94	0.945	0.381	3	Ua
M10×1.25	Y86236	5P	D5	3.94	0.945	0.381	3	Ua
M12×1.75	Y86240	5P	D6	4.33	1.142	0.367	3	Ub
M12×1.5	Y86239	5P	D5	3.94	0.866	0.367	3	Ub
M12×1.25	Y86238	5P	D5	3.94	0.866	0.367	3	Ub

PO

Spiral Pointed Taps



Segment : 1E



Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.0-80UNF	Y82000	5P	GH1	1.63	0.310	0.141	2	Ub
	Y82000BR							
	Y82001	1.5P	GH1					
	Y82001BR							
	Y82050	5P	GH2					
	Y82050BR							
	Y82100	5P	GH3					
	Y82100BR							
	Y82146	5P	GH4					
	Y82146BR							
Y82150	5P	GH5						
Y82150BR								
No.1-64UNC	Y82002	5P	GH1	1.69	0.380	0.141	2	Ub
	Y82002BR							
	Y82052	1.5P	GH2					
	Y82053BR							
No.1-72UNF	Y82004	5P	GH1	1.69	0.380	0.141	2	Ub
	Y82004BR							
	Y82005	1.5P						

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
No.1-72UNF	Y82005BR	1.5P	GH1	1.69	0.380	0.141	2	Ub
	Y82054	5P	GH2					
	Y82055	1.5P						
	Y82055BR							
No.2-56UNC	Y82006	5P	GH1	1.75	0.440	0.141	2	Ub
	Y82006BR							
	Y82007	1.5P						
	Y82007BR							
	Y82056	5P	GH2					
	Y82056BR							
	Y82057	1.5P						
	Y82057BR							
	Y82106	5P	GH3					
	Y82147		GH4					
Y82156	GH5							
Y82156BR								
No.2-64UNF	Y82008	5P	GH1	1.75	0.440	0.141	2	Ub
	Y82058		GH2					
	Y82058BR							
No.3-48UNC	Y82010	5P	GH1	1.81	0.500	0.141	2	Ub
	Y82060		GH2					
	Y82060BR							
	Y82061	1.5P						
	Y82061BR							
	Y82110	5P	GH3					
Y82110BR								
No.3-56UNF	Y82012	5P	GH1	1.81	0.500	0.141	2	Ub
	Y82062		GH2					
	Y82062BR							
	Y82063	1.5P						
Y82063BR								
No.4-40UNC	Y82014	5P	GH1	1.88	0.560	0.141	2	Ub
	Y82064		GH2					
	Y82064BR							
	Y86054	1.5P						
	Y82065		5P					
	Y82114							
	Y82114BR	5P	GH4					
	Y82148							
	Y82164	5P	GH5					
	Y82190							
No.4-48UNF	Y82016	5P	GH1	1.88	0.560	0.141	2	Ub
	Y82066	5P	GH2					
	Y82066BR							
	Y82067	1.5P						
	Y82067BR							
No.4-36UNS	Y82068	5P	GH2	1.88	0.560	0.141	2	Ub
No.5-40UNC	Y82020	5P	GH1	1.94	0.630	0.141	2	Ub

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

PO Spiral Pointed Taps

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type								
No.5-40UNC	Y82070	5P	GH2	1.94	0.630	0.141	2	Ub	No.8-36UNF	Y82032	5P	GH1	2.13	0.750	0.168	2	Ub								
	Y82070BR									Y82082															
	Y86060	1.5P								GH2	Y82082BR														
	Y82071										Y82083														
	Y82071BR										Y82083BR														
No.5-44UNF	Y82072	5P	GH2	1.94	0.630	0.141	2	Ub	No.10-24UNC	Y82034	5P	GH1	2.38	0.880	0.194	2	Ub								
	Y82073	1.5P								GH2								Y82084							
	Y82073BR										Y82084BR														
No.6-32UNC	Y82024	5P	GH1	2.00	0.690	0.141	2	Ub		Y82134	5P	GH2						2.38	0.880	0.194	2	Ub			
	Y82074	5P								GH2													Y82134BR		
	Y86064								1.5P				GH2	Y86122											
	Y82075	5P	GH3							Y82135															
	Y82075BR									Y82135BR															
	Y82124	5P	GH3						Y82196	5P	GH7	2.38	0.880	0.194	2	Ub									
	Y82124BR								5P								GH5	Y82196BR							
	Y86114	1.5P	GH7							Y85216															
	Y82125									5P	GH11							Y82038	5P	GH1	2.38	0.880	0.194	2	Ub
	Y82125BR	5P	GH4						Y82088																
	Y82149								5P	GH5	Y82088BR														
	Y82174										1.5P	GH7	Y86078												
	Y82174BR	5P	GH11						Y82089																
	Y82192								1.5P	GH7	Y82089BR														
	Y82192BR	5P	GH2								Y82138														
Y82193BR	5P			GH4	Y82138BR																				
Y85212		5P	GH11		Y86124	5P	GH3	2.38	0.880	0.194	2	Ub													
No.6-40UNF	Y82026	5P	GH1	2.00	0.690								0.141	2	Ub	Y82139	1.5P	GH4	2.38	0.880	0.194	2	Ub		
	Y82076	5P				GH2	Y82139BR																		
	Y82076BR		1.5P				GH2									Y82152									
	Y82077	5P				GH5										Y82188									
	Y82077BR							Y82188BR																	
No.8-32UNC	Y82028	5P	GH1	2.13	0.750	0.168	2	Ub	Y82198	5P	GH7	2.38	0.940	0.220	2	Ub									
	Y82078								5P								GH2	Y85217							
	Y82078BR									1.5P	GH2							Y82042	5P	GH1	2.38	0.940	0.220	2	Ub
	Y86068	5P	GH3						Y82142																
	Y82079								5P								GH3	Y82142BR							
	Y82079BR	1.5P	GH3							Y86126															
	Y82128								5P	GH5	Y82143														
	Y82128BR										Y82143BR														
	Y86118	5P	GH5						No.12-24UNC	Y82144	5P	GH3	2.38	0.940	0.220	2	Ub								
	Y82129									1.5P								GH7	Y82145						
	Y82129BR	1.5P	GH7								Y82145BR														
	Y82151									5P	GH4	No.12-28UNF						Y82200	5P	GH1	2.50	1.000	0.255	2	Ub
	Y82178																	5P							
	Y82178BR	5P	GH2						Y82250																
	Y82194								5P	GH7	Y82250BR														
Y82194BR	1.5P	GH3	Y82300																						
Y82195BR			5P	GH3	Y82300BR																				
Y85214					5P	GH11	Y82302																		

PO Spiral Pointed Taps

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type	Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type		
1/4-20UNC	Y82302BR	5P	GH3	2.50	1.000	0.255	3	Ub	5/16-24UNF	Y82262BR		GH2	2.72	1.130	0.318	2	Ub		
	Y86300									Y82264								3	
	Y82301									Y82264BR									
	Y82301BR	1.5P	GH4				Y82312			5P	GH3	Y82312BR				2			
	Y82352						Y82314					3							
	Y82400						Y82314BR												
	Y82400BR	5P	GH5				Y82313			1.5P	GH4	Y82313BR				2			
	Y82402						Y82362					3							
	Y82402BR						Y82362BR												
	Y85231		GH11				Y82364			5P	GH11	Y82365BR				2			
1/4-28UNF	Y82204	5P	GH1	2.50	1.000	0.255	2	Ub	3/8-16UNC			Y82216		GH1	2.94		1.250	0.381	3
	Y82204BR									Y82216BR	5P	GH2							
	Y82256									Y82266									
	Y82256BR	1.5P	GH2				Y82266BR			5P	GH3	Y82316	3						
	Y82257						Y82316BR					1.5P		GH5					
	Y82255						Y86308												
	Y82304	5P	GH3				Y82317			5P	GH11	Y82317BR	2						
	Y82304BR						Y82416					GH4							
	Y82306						Y82416BR												
	Y82305	1.5P	GH4				Y82416BR			5P	GH11	Y85235	2						
	Y82305BR						Y82218					5P		GH1					
	Y82356						Y82218BR												
	Y82356BR	5P	GH5				Y82268			5P	GH2	Y82268BR	3						
	Y82357						Y82318					1.5P		GH3					
	Y82357BR						Y82318BR												
Y82404	5P	GH7	Y82368	5P	GH4	Y82368BR	3												
Y82442			Y82368BR			1.5P		GH5											
Y85232			Y85236																
5/16-18UNC	Y82208	5P	GH1	2.72	1.130	0.318	2	Ub	3/8-24UNF	Y82218		GH1	2.94	1.250	0.381	3	Ub		
	Y82208BR									Y82268								5P	GH2
	Y82258									Y82268BR									
	Y82258BR	1.5P	GH2				Y82318			5P	GH3	Y82318BR				3			
	Y82260						Y82368					1.5P						GH4	
	Y82308						Y82368BR												
	Y82308BR	5P	GH3				Y85236			5P	GH11	Y82270				3			
	Y82310						Y82270BR					5P						GH2	
	Y82310BR						Y82320												
	Y86304	1.5P	GH3				Y82320BR			1.5P	GH3	Y82320BR				3			
	Y82309						Y82321					5P						GH5	
	Y82309BR						Y82321BR												
	Y82408	5P	GH5				Y82420			5P	GH11	Y82420BR				2			
Y82408BR	Y85237			5P	GH2														
Y82410	Y82272																		
Y82410BR	5P	GH11	Y82272BR	5P	GH2	Y82272BR	3												
Y85233			Y82322			5P		GH3											
5/16-24UNF			Y82212						Y82322BR										
	Y82212BR	Y82322BR																	
	Y82262																		

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

PO Spiral Pointed Taps

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
7/16-20UNF	Y82422	5P	GH5	3.16	1.440	0.323	3	Ub
	Y82422BR							
	Y85238		GH11					
1/2-13UNC	Y82224	5P	GH1	3.38	1.660	0.367	3	Ub
	Y82224BR		GH2					
	Y82274							
	Y82274BR	GH3						
	Y82324							
	Y82324BR							
	Y86316	GH5						
	Y82424							
	Y82424BR							
	Y85239	GH11						
1/2-20UNF	Y82226	5P	GH2	3.38	1.660	0.367	3	Ub
	Y82226BR							
	Y82276							
	Y82276BR		GH3					
	Y82326							
	Y82326BR		GH5					
	Y82426							
	Y82426BR							
Y85240	GH11							
5/8-11UNC	Y82332	5P	GH3	3.81	1.810	0.480	3	Ub
	Y82432		GH5					
	Y82432BR							
	Y85243		GH11					
5/8-18UNF	Y82334	5P	GH3	3.81	1.810	0.480	3	Ub
	Y82334BR							
3/4-10UNC	Y82336	5P	GH3	4.25	2.000	0.590	3	Ub
	Y82336BR		GH5					
	Y82436							
	Y82436BR		GH11					
Y85245								
3/4-16UNF	Y82338	5P	GH3	4.25	2.000	0.590	3	Ub
	Y82338BR							
For Metric threads								
Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
M3×0.5	Y78115	5P	D3	1.94	0.630	0.141	3	Ub
M3.5×0.6	Y78116	5P	D4	2.00	0.690	0.141	3	Ub
M4×0.7	Y78117	5P	D4	2.13	0.750	0.168	3	Ub
M4.5×0.75	Y78118	5P	D4	2.38	0.880	0.194	3	Ub
M5×0.8	Y78119	5P	D4	2.38	0.880	0.194	3	Ub
M6×1	Y78120	5P	D5	2.50	1.000	0.255	3	Ub
M7×1	Y78121	5P	D5	2.72	1.130	0.318	3	Ub
M8×1.25	Y78123	5P	D5	2.72	1.130	0.318	3	Ub
M8×1	Y78122	5P	D5	2.72	1.130	0.318	3	Ub
M10×1.5	Y78125	5P	D6	2.94	1.250	0.381	3	Ub

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
M10×1.25	Y78124	5P	D5	2.94	1.250	0.381	3	Ub
M12×1.75	Y78127	5P	D6	3.38	1.660	0.367	3	Ub
M12×1.25	Y78126	5P	D5	3.38	1.660	0.367	3	Ub
M14×2	Y78129	5P	D7	3.59	1.660	0.429	3	Ub
M14×1.5	Y78128	5P	D6	3.59	1.660	0.429	3	Ub
M16×2	Y78131	5P	D7	3.81	1.810	0.480	3	Ub
M16×1.5	Y78130	5P	D6	3.81	1.810	0.480	3	Ub
M18×2.5	Y78133	5P	D7	4.03	1.810	0.542	3	Ub
M18×1.5	Y78132	5P	D6	4.03	1.810	0.542	3	Ub

STI PO

Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts



Segment : 1E



Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y82716	5P	GH2	1.88	0.563	0.141	2	Ub
	Y82704	5P	GH1	2.00	0.688	0.141	2	Ub
No.4-40UNC	Y82720		GH2					
No.6-32UNC	Y82724	5P	GH2	2.38	0.875	0.194	2	Ub
	Y82740		GH3					
No.8-32UNC	Y82726	5P	GH2	2.38	0.938	0.220	2	Ub
	Y82742		GH3					
No.10-24UNC	Y82728	5P	GH2	2.50	1.000	0.255	2	Ub
No.10-32UNF	Y82729	5P	GH2	2.50	1.000	0.255	2	Ub
1/4-20UNC	Y82758	5P	GH2	2.72	1.125	0.318	2	Ub
	Y82768		GH3					
1/4-28UNF	Y82759	5P	GH2	2.72	1.125	0.318	2	Ub
	Y82769		GH3					
5/16-24UNF	Y82761	5P	GH2	2.94	1.250	0.381	2	Ub

ZELX MOLD

Hand Taps for Hard-to-Machine Materials



Segment : 1B



Suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels

HT-CI

Hand Taps for Cast Irons



Segment : 1A



Suitable for hard and abrasive materials such as cast irons.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.4-40UNC	Y89599	5P	GH2	1.88	0.335	0.141	3	Ua
No.5-40UNC	Y89601	5P	GH2	1.94	0.374	0.141	3	Ua
No.6-32UNC	Y89602	5P	GH3	2.00	0.413	0.141	3	Ua
No.8-32UNC	Y89604	5P	GH3	2.13	0.453	0.168	3	Ua
No.10-24UNC	Y89606	5P	GH3	2.38	0.531	0.194	3	Ua
No.10-32UNF	Y89607	5P	GH3	2.38	0.531	0.194	3	Ua
1/4-20UNC	Y89613	5P	GH3	2.50	0.591	0.255	3	Ua
1/4-28UNF	Y89614	5P	GH3	2.50	0.591	0.255	3	Ua
5/16-18UNC	Y89615	5P	GH3	2.72	0.669	0.318	4	Ua
5/16-24UNF	Y89616	5P	GH3	2.72	0.669	0.318	4	Ua
3/8-16UNC	Y89617	5P	GH3	2.94	0.748	0.381	4	Ua
3/8-24UNF	Y89618	5P	GH3	2.94	0.748	0.381	4	Ua
7/16-14UNC	Y89619	5P	GH3	3.16	0.866	0.323	4	Ua
7/16-20UNF	Y89620	5P	GH3	3.16	0.866	0.323	4	Ua
1/2-13UNC	Y89621	5P	GH3	3.38	0.984	0.367	4	Ua
1/2-20UNF	Y89622	5P	GH3	3.38	0.984	0.367	4	Ua
5/8-11UNC	Y89625	5P	GH3	3.81	1.083	0.480	4	Ua
5/8-18UNF	Y89626	5P	GH3	3.81	1.083	0.480	4	Ua
3/4-10UNC	Y89627	5P	GH3	4.25	1.201	0.590	4	Ua
3/4-16UNF	Y89628	5P	GH3	4.25	1.201	0.590	4	Ua

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
1/4-20UNC	Y86001	5P	GH3	2.50	1.000	0.255	4	Ub
	Y86002	1.5P						
	Y86003	5P	GH5					
	Y86004	1.5P						
1/4-28UNF	Y86005	5P	GH3	2.50	1.000	0.255	4	Ub
	Y86006	1.5P						
5/16-18UNC	Y86007	5P	GH3	2.72	1.130	0.318	4	Ub
	Y86008	1.5P						
	Y86009	5P	GH5					
	Y86010	1.5P						
5/16-24UNF	Y86011	5P	GH3	2.72	1.130	0.318	4	Ub
	Y86012	1.5P						
3/8-16UNC	Y86013	5P	GH3	2.94	1.250	0.381	4	Ub
	Y86014	1.5P						
	Y86015	5P	GH5					
	Y86016	1.5P						
3/8-24UNF	Y86017	5P	GH3	2.94	1.250	0.381	4	Ub
	Y86018	1.5P						
7/16-14UNC	Y86019	5P	GH3	3.16	1.440	0.323	4	Ub
	Y86020	1.5P						
	Y86021	5P	GH5					
	Y86022	1.5P						
7/16-20UNF	Y86023	5P	GH3	3.16	1.440	0.323	4	Ub
	Y86024	1.5P						
	Y86025	5P	GH5					
	Y86026	1.5P						
1/2-13UNC	Y86027	5P	GH3	3.38	1.660	0.367	4	Ub
	Y86028	1.5P						
	Y86029	5P	GH5					
	Y86030	1.5P						
1/2-20UNF	Y86031	5P	GH3	3.38	1.660	0.367	4	Ub
	Y86032	1.5P						
	Y86033	5P	GH5					
	Y86034	1.5P						

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

HT-CI Hand Taps for Cast Irons

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
9/16-12UNC	Y86035	5P	GH3	3.59	1.660	0.429	4	Ub
	Y86036	1.5P						
9/16-18UNF	Y86037	5P	GH3	3.59	1.660	0.429	4	Ub
	Y86038	1.5P						
5/8-11UNC	Y86039	5P	GH3	3.81	1.810	0.480	4	Ub
	Y86040	1.5P						
5/8-18UNF	Y86041	5P	GH3	3.81	1.810	0.480	4	Ub
	Y86042	1.5P						
3/4-10UNC	Y86043	5P	GH3	4.25	2.000	0.590	4	Ub
	Y86044	1.5P						
3/4-16UNF	Y86045	5P	GH3	4.25	2.000	0.590	4	Ub
	Y86046	1.5P						

HT Hand Taps

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	
No.1-72UNF	Y80007	5P	GH1	1.69	0.380	0.141	2	Ub	
	Y80007BR								
	Y80008	1.5P	GH1						
	Y80008BR								
	Y80107	5P	GH2						
	Y80108								1.5P
No.2-56UNC	Y80009	9P	GH1	1.75	0.440	0.141	3	Ub	
	Y80010	5P							
	Y80601	1.5P							GH1
	Y80011								
	Y80602	9P							GH2
	Y80109								
	Y80109BR	5P							GH2
	Y80110								
	Y80110BR	1.5P							GH2
	Y80651								
	Y80651BR	9P							GH1
	Y80111								
Y80111BR	5P	GH1							
Y80652									
Y80652BR	1.5P	GH2							
Y80112									
No.2-64UNF	Y80013	5P	GH1	1.75	0.440	0.141	3	Ub	
	Y80014	1.5P							
	Y80112	9P							GH1
	Y80112BR								
	Y80113	5P							GH2
	Y80113BR								
Y80114	1.5P	GH2							
Y80114BR									
No.3-48UNC	Y80016	5P	GH1	1.81	0.500	0.141	2	Ub	
	Y80115	9P							GH1
	Y80115BR								
	Y80116	5P							GH2
	Y80116BR								
	Y80657	1.5P							GH2
	Y80657BR								
	Y80117	9P							GH1
	Y80117BR								
Y80658	5P	GH2							
Y80658BR									
No.3-56UNF	Y80019	5P	GH1	1.81	0.500	0.141	3	Ub	
	Y80118	9P							GH1
	Y80118BR								
	Y80119	5P							GH2
	Y80119BR								
Y80120	1.5P	GH2							
Y80120BR									
No.4-40UNC	Y80021	9P	GH1	1.88	0.560	0.141	3	Ub	

HT

Hand Taps



Segment : 1A



Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	
For Unified threads									
No.0-80UNF	Y80000	9P	GH1	1.63	0.310	0.141	2	Ub	
	Y80000BR								
	Y80001	5P							
	Y80001BR								
	Y80002	1.5P							GH2
	Y80002BR								
	Y80101	5P							
Y80102	1.5P								
No.1-64UNC	Y80003	9P	GH1	1.69	0.380	0.141	2	Ub	
	Y80003BR								
	Y80004	5P							
	Y80004BR								
	Y80005	1.5P							GH2
Y80005BR									
Y80104	5P								
No.1-72UNF	Y80006	9P	GH1	1.69	0.380	0.141	2	Ub	
	Y80006BR								

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Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type	Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type						
No.4-40UNC	Y80022	5P	GH1	1.88	0.560	0.141	3	Ub	No.6-32UNC	Y80628	5P	GH1	2.00	0.690	0.141	2	Ub						
	Y80613						1.5P			2	Y80038					1.5P							
	Y80023	1.5P	GH2				3			3	Y80136	9P				GH2		2	Y80136BR	5P	3		
	Y80121	9P								3	Y80137	5P											
	Y80121BR	5P	GH2				2			2	Y80137BR					1.5P		GH2	3	Y80678	1.5P	2	
	Y80122									2	Y80138	9P							GH3	3			Y80138BR
	Y80122BR	1.5P	GH2				3			2	Y80236					9P		GH3		3	Y80236BR	5P	2
	Y80663									3	Y80237	5P							GH3	3	Y80237BR		
	Y80663BR	2	GH2				2			2	Y80728					5P		GH3		2	Y80728BR	1.5P	3
	Y80123									2	Y80238	1.5P							GH3	3	Y80238BR		
	Y80123BR	2	GH2				3			3	Y80729					5P		GH11		GH3	3	Y80729BR	5P
	Y80664									3	Y80729BR	5P							GH11		2	Y85035	
Y80664BR	2	Y80729BR	5P	GH11	3	Y85035	5P	GH11	3														
No.4-48UNF	Y80025	5P			GH1	1.88			0.560	0.141	3	Ub	No.6-40UNF	Y80040	5P	GH1	2.00	0.690	0.141	3	Ub		
	Y80124	9P	GH2	3	Ub		3	Ub						Y80139	9P	GH2						3	Ub
	Y80124BR	9P												Y80139BR	5P								
	Y80125	5P	GH2	3	Ub		3	Ub						Y80140		5P						GH2	2
	Y80125BR	5P												Y80140BR	1.5P								
	Y80126	1.5P	GH2	3	Ub		2	Ub						Y80681		1.5P						GH2	3
	Y80126BR	1.5P												Y80729	5P								
No.4-36UNS	Y80127	9P	GH2	1.88	0.560	0.141	3	Ub	No.6-40UNF	Y80141	1.5P	2.00	0.690	0.141		3	Ub						
	Y80127BR	9P								Y80141BR					5P			GH1	3	Ub			
	Y80128	5P	GH2							3	Ub										3	Ub	Y80042
	Y80128BR	5P													Y80043			5P	GH1	3			Ub
	Y80129	1.5P	GH2							3	Ub				3			Ub			Y80044	1.5P	
	Y80129BR	1.5P																	Y80401	5P	GH1	3	Ub
No.5-40UNC	Y80031	5P	GH1	1.94	0.630	0.141	3	Ub	No.8-32UNC	Y80402	1.5P	GH1	2.13	0.750	0.168	4	Ub						
	Y80032	1.5P								GH2	2							Ub	4	Ub			
	Y80130	9P	GH2									2									Ub	4	Ub
	Y80130BR	9P								Y80143	5P							GH2	3	Ub			
	Y80131	5P	GH2							2		Ub									3	Ub	Y80451
	Y80131BR										5P							Y80684	9P	GH3			4
	Y80672	1.5P	GH2							3	Ub	2						Ub			Y80144	1.5P	
	Y80672BR																		1.5P	Y80452	5P		GH3
	Y80132	2	GH2							3	Ub	4						Ub	Y80452BR	5P		GH3	
	Y80132BR																		2		Y80242		9P
Y80673	2	GH2	3	Ub	4	Ub	Y80685	9P	GH3	4	Ub												
Y80673BR							2					Y80242BR	5P	GH3	3	Ub							
No.5-44UNF	Y80034	5P	GH1	1.94	0.630	0.141	3	Ub	No.8-32UNC	Y80243	5P	2.13					0.750	0.168	4	Ub			
	Y80133	9P								GH2			2	Ub	4	Ub							
	Y80133BR	9P	GH2								2										Ub	4	Ub
	Y80134	5P								GH2			2	Ub	4	Ub							
	Y80134BR		5P								Y80501BR										5P	GH3	3
	Y80675	1.5P	GH2							3	Ub		4	Ub	Y80501BR	5P							
	Y80135														1.5P						Y80501BR	5P	GH3
	Y80135BR	1.5P	Y80501BR							5P	GH3		3	Ub									
No.6-32UNC	Y80036	9P	GH1	2.00	0.690	0.141	3	Ub	No.8-32UNC			Y80501BR			5P	GH3	2.13	0.750	0.168	4	Ub		
	Y80037	5P								Y80501BR	5P	GH3	3	Ub									

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

HT Hand Taps

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	
No.8-32UNC	Y80734	5P	GH3	2.13	0.750	0.168	2	Ub	No.10-32UNF	Y80153	1.5P	GH2	2.38	0.880	0.194	3	Ub	
	Y80734BR									Y80461								4
	Y80244	Y80694								2								
	Y80244BR	9P								GH3	Y80251	4						
	Y80502										Y80251BR							4
	Y80502BR	5P								GH3	Y80252	3						
	Y80735										Y80252BR							4
	Y80735BR										Y80510							3
	Y85041	5P								GH11	Y80510BR	4						
No.8-36UNF	Y80046	5P	GH1	2.13	0.750	0.168	4	Ub	Y80743	GH3	2.38	0.880	0.194	2	Ub			
	Y80145	9P	GH1						Y80743BR							2		
	Y80145BR								Y80253							4		
	Y80146	5P	GH2						Y80511	3								
	Y80146BR								Y80511BR							3		
	Y80147	1.5P	GH2						Y80744	2								
	Y80147BR								Y80744BR							2		
No.10-24UNC	Y80048	9P	GH1	2.38	0.880	0.194	4	Ub	Y85050	5P	GH11	2.38	0.940	0.220	4	Ub		
	Y80049	5P							GH1	Y80055	5P						GH1	4
	Y80407	1.5P							GH1	Y80254	9P						GH3	3
	Y80148	9P	GH2						Y80254BR	5P	GH3						4	
	Y80149	5P							GH2								Y80255	4
	Y80457	5P	GH2						Y80255BR	1.5P	GH3						4	
	Y80690								2									
	Y80150	1.5P	GH1						Y80256	4								
	Y80248	9P							GH1		4							
	Y80248BR	4																
	Y80249	5P	GH3						Y80256BR	1.5P	GH3						4	
	Y80249BR								3									
	Y80507								3									
	Y80507BR	GH3	GH3						Y80257	9P	GH1						4	
	Y80740								2									
	Y80740BR	GH3	GH3						Y80257BR	5P	GH3						4	
	Y80250								4									
	Y80250BR	1.5P	GH3						Y80258	1.5P	GH3						4	
	Y80508								3									
	Y80508BR								3									
Y80691	GH2	GH3	Y80258BR	5P	GH3	4												
Y80741			2															
Y80741BR			2															
Y85047	5P	GH11	Y80259	1.5P	GH3	4												
No.10-32UNF	Y80051	9P	GH1			Y80259BR	4											
	Y80052	5P		GH1	1/4-20UNC	Y81000	9P	2.50	1.000	0.255	4	Ub						
	Y80053	1.5P		GH1		Y81001	5P						GH1	3				
	Y80151	9P	GH2	Y81002		1.5P	GH1						3					
	Y80152	9P		GH2		Y81100							9P	GH2	4			
	Y80460	5P	GH2	Y81101		5P	GH2						3					
	Y80693			2														
	Y81200			9P		GH3							Y81651	5P	GH2	3		
Y81200BR	4																	
Y81201	5P	GH3	Y81102	1.5P	GH2	4												
Y81201BR			4															
Y81701	GH3	GH3	Y81200	9P	GH3	4												
Y81701BR			3															
Y81951			2															
Y81951BR	1.5P	GH3	Y81202	1.5P	GH3	4												
Y81202			4															

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Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type	Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type									
1/4-20UNC	Y81202BR	1.5P	GH3	2.50	1.000	0.255	4	Ub	5/16-18UNC	Y81407	5P	GH5	2.72	1.130	0.318	4	Ub									
	Y81702						3			Y81807						3										
	Y81952						2			Y81408	4					Y81808		3								
	Y81952BR									Y85068	4															
	Y81401	5P	GH5				4			Y81010	5P	GH1						Y81110	1.5P	GH2						
	Y81801						3			Y81111																
	Y81402	1.5P	GH5				4			Y81209	9P	GH1						Y81209BR	5P	GH3						
	Y81802						3			Y81210								Y81210BR				Y81710	1.5P	GH4		
	Y85062	5P	GH11				4			Y81710BR		Y81211						Y81711	5P	GH4						
1/4-28UNF	Y81004	5P	GH1	2.50	1.000	0.255	4	Ub	5/16-24UNF	Y81211BR	1.5P	GH4														
	Y81005	1.5P								Y81211				Y81310	5P	GH4										
	Y81104	5P	GH2								Y81311	1.5P	GH11													
	Y81105	1.5P								Y81210				Y85071												
	Y81203	9P	GH3								Y81013	5P	GH1		Y81613	1.5P	GH2									
	Y81203BR										Y81014				Y81113			5P	GH2							
	Y81204	5P	GH3								Y81114	1.5P	GH1		Y81212	9P	GH1									
	Y81204BR										Y81212BR				Y81213			5P	GH3							
	Y81704										Y81213BR		Y81213BR													
	Y81704BR										Y81713		Y81713BR													
	Y81954										Y81214		Y81214BR	1.5P	GH5		Y81413	5P	GH5							
	Y81954BR										Y81714		Y81714BR													
	Y81205	1.5P	GH4								Y81414	1.5P	GH11		Y81813	5P	GH3									
	Y81205BR										Y81814				Y85074				Y81813							
	Y81705										Y81212		Y81215BR	9P	GH3		Y81215	5P	GH3							
	Y81955										Y81213		Y81216													
	Y81955BR		Y81213BR								Y81216BR				Y81716											
Y81304	5P	GH4		Y81716BR																						
Y81305	1.5P		GH4	4																						
Y85065	5P	GH11	4																							
5/16-18UNC	Y81007	5P	GH1	2.72	1.130	0.318	4	Ub	3/8-16UNC	Y81214	1.5P	GH5														
	Y81607						3			Y81214BR				Y81413	5P	GH5										
	Y81008	1.5P	GH2							Y81714	1.5P	GH11		Y81813			5P	GH3								
	Y81107	5P					Y81214						Y81714BR													
	Y81108	1.5P	GH2							Y81413	5P	GH5		Y81813	5P	GH3										
	Y81206	9P	GH3							Y81814																
	Y81206BR									Y81215BR		Y85074														
	Y81207	5P	GH3							Y81215	9P	GH3		Y81116	5P	GH2										
	Y81207BR									Y81216				Y81117			1.5P	GH2								
	Y81707									Y81216BR		Y81215	9P	GH3		Y81215			5P	GH3						
	Y81707BR									Y81716		Y81215BR						Y81215BR								
	Y81957									GH3		Y81716BR				Y81216	5P	GH3								
	Y81957BR									GH3						Y81216BR										
	Y81208	1.5P	GH3							Y81958				Y81716												
	Y81208BR									Y81958BR		Y81716BR														
	Y81708									GH3																
	Y81708BR									GH3																
Y81958				GH3																						
Y81958BR				GH3																						

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

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Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type					
3/8-24UNF	Y81217	1.5P	GH3	2.94	1.250	0.381	4	Ub	1/2-13UNC	Y81426	1.5P	GH5	3.38	1.660	0.367	4	Ub					
	Y81217BR						5P			GH11	Y85086	5P				GH11						
	Y81717						5P		GH4	3	Y81028	5P	GH1	3.38	1.660	0.367	4	Ub				
	Y81717BR	Y81029	1.5P							4												
	Y81316	9P	4																			
	Y81317	1.5P								Y81227	9P											
	Y85077	5P	GH11				4		Y81227BR	9P	4											
7/16-14UNC	Y81218	9P	GH3	3.16	1.440	0.323	4	Ub	1/2-20UNF	Y81228		5P	GH3	3.38	1.660	0.367	3	Ub				
	Y81218BR	5P					GH3			4	Y81228BR	5P	GH3				3		4			
	Y81219								Y81728	1.5P	4											
	Y81219BR								Y81229			Y81229BR	1.5P									
	Y81719	1.5P					GH5		3	Y81428	5P	GH5	3.59	1.660	0.429	4	Ub					
	Y81719BR								Y81429	1.5P												
	Y81220	1.5P					GH5		4	Y85089	5P	GH11	3.59	1.660	0.429	4	Ub					
	Y81220BR								Y81230	9P	4											
	Y81720								Y81230BR	9P												
	Y81720BR	5P					GH5		3	Y81231	5P	GH3	3.59	1.660	0.429	4	Ub					
	Y81419								Y81231BR	5P	GH3											
	Y81420	1.5P					GH11		4	Y81232	1.5P	4	Ub									
	Y85080	5P							GH11	Y81232BR	1.5P											
	7/16-20UNF	Y81122					5P		GH2	3.16	1.440	0.323	4	Ub	9/16-12UNC	Y81431	5P	GH5	3.59	1.660	0.429	4
Y81221		9P	GH3	3	Y81233	9P	GH3	3.59	1.660				0.429			4	Ub					
Y81221BR					Y81233BR													9P				
Y81222		5P	GH3	3	Y81234	5P	GH3	3.59	1.660				0.429			4	Ub					
Y81222BR					Y81234BR	5P																
Y81722					Y81235	1.5P																
Y81722BR		1.5P	GH5	4	Y81235BR	1.5P	GH5	3.59	1.660				0.429		4	Ub						
Y81223				Y81434	5P																	
Y81223BR		5P	GH5	4	Y81435	1.5P																
Y81422		5P			GH5	3.59	1.660	0.429	4				Ub									
Y81422BR		5P	GH2	4	Ub																	
Y81423		1.5P	GH11			4	Y81037	5P	GH1				3.81		1.810	0.480	4	Ub				
Y85083		5P		GH11	Y81038		1.5P															
1/2-13UNC	Y81025	5P	GH1	3.38	1.660	0.367	4	Ub	5/8-11UNC	Y81038BR	1.5P	GH1	3.81	1.810	0.480	4	Ub					
	Y81026	1.5P								GH2	4							Ub				
	Y81125	5P	Y81137																5P	GH2		
	Y81126	1.5P	9P							GH3	4							Ub				
	Y81224	9P																	Y81236	9P		
	Y81224BR	5P	GH3						3	Y81236BR	9P	GH3	3.81	1.810	0.480	4	Ub					
	Y81225									Y81237	5P											
	Y81225BR									Y81237BR	5P											
	Y81725	1.5P	GH3						3	Y81238	1.5P	GH3	3.81	1.810	0.480	4	Ub					
	Y81725BR									Y81238BR								1.5P				
	Y81226	1.5P	GH3						4	Y81437	5P	GH5	3.81	1.810	0.480	4	Ub					
	Y81226BR									Y81438	1.5P											
	Y81726									5P	GH11	3.81						1.810	0.480	4	Ub	
	Y81726BR	Y81040	5P						GH2													
	Y81425	5P	GH5							Y81140	5P											
1/2-13UNC	Y81040	5P	GH1	3.38	1.660	0.367	4	Ub	5/8-18UNF	Y81239	9P	GH3	3.81	1.810	0.480	4	Ub					
	Y81140	5P	GH2							Y81239BR	9P											
	Y81239	9P	GH3							4	Ub											
	Y81239BR	9P																				
	Y81240	5P	GH3							4	Ub											
	Y81240	5P																				

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Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type	Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type											
5/8-18UNF	Y81240BR	5P	GH3	3.81	1.810	0.480	4	Ub	7/8-14UNF	Y81359	1.5P	GH4	4.69	2.220	0.697	4	Ub											
	Y81241	1.5P								Y81359BR								5P	GH6									
	Y81241BR	5P	GH5							Y81161	5P	GH2																
	Y81440									Y81360	9P																	
	Y81441									Y81360BR	5P	GH4																
11/16-11UNS	Y81242	9P	GH3	4.03	1.810	0.542	4	Ub	Y81361	1.5P	GH4	5.13	2.500	0.800	4	Ub												
	Y81242BR	5P							Y81361BR								5P											
	Y81243	1.5P							GH6	Y81362	1.5P						GH6											
	Y81243BR									Y81362BR								5P										
	Y81244									Y81461	5P																	
	Y81244BR	GH3							4.03	1.810	0.542						4	Ub	1-12UNF	Y81363	9P							
Y81245BR	9P		Y81363BR	5P	GH4																							
Y81246	5P		Y81364	1.5P	GH4																							
Y81246BR	1.5P		Y81364BR			5P																						
Y81247	GH2		4.25	2.000	0.590	4	Ub	1-14UNS				Y81365	1.5P	GH4	5.13	2.500				0.800	4	Ub						
Y81247BR		5P							Y81365BR	5P																		
3/4-10UNC	Y81149	5P	GH3	4.25	2.000	0.590	4	Ub	1-14UNS	Y81167	5P	GH2	5.13	2.500	0.800	4	Ub											
	Y81248	9P								Y81167BR	5P																	
	Y81248BR	5P								GH3	Y81366	9P																
	Y81249		Y81366BR								5P																	
	Y81249BR	1.5P	GH5							Y81367	1.5P	GH4																
	Y81250									Y81367BR								5P										
	Y81250BR	GH5	4.25							2.000	0.590	4						Ub	1-14UNS	Y81368	1.5P	GH4	5.13	2.500	0.800	4	Ub	
	Y81449																			5P								Y81368BR
	Y81450	1.5P	GH11							4.25	2.000	0.590						4	Ub	1-14UNS	Y81369	9P						
Y85104	5P	Y81369BR		5P																								
3/4-16UNF	Y81052	5P	GH1	4.25	2.000	0.590	4	Ub	1-14UNS				Y81370	5P	GH4	5.44	2.560				0.896	4	Ub					
	Y81152	9P	Y81370BR										5P															
	Y81251	9P	GH3										Y81371	1.5P	GH4													
	Y81251BR												Y81371BR											5P				
	Y81252	5P	GH5										4.25	2.000	0.590									4	Ub	1-14UNS	Y81372	9P
	Y81252BR																										5P	Y81372BR
	Y81253	1.5P	GH5																								Y81373	1.5P
	Y81253BR									Y81373BR	5P																	
	Y81452	5P	GH5							4.25	2.000	0.590						4	Ub	1-14UNS							Y81374	1.5P
Y81453	1.5P	Y81374BR		5P																								
7/8-9UNC	Y81354	9P	GH4	4.69	2.220	0.697	4	Ub	1-14UNS							Y81375	9P											
	Y81354BR	5P														Y81375BR	5P											
	Y81355	1.5P														GH4	Y81376				1.5P	GH4						
	Y81355BR												Y81376BR	5P														
	Y81356	5P											GH6	Y81377	1.5P	GH4												
	Y81356BR													Y81377BR			5P											
	Y81455	5P											GH2	4.69	2.220	0.697	4				Ub	1-14UNS	Y81378	9P				
7/8-14UNF	Y81158	9P	GH4	4.69	2.220	0.697	4	Ub	1-14UNS	Y81378BR	5P																	
	Y81357	5P								GH4	Y81379	1.5P	GH4															
	Y81357BR										Y81379BR							5P										
	Y81358	5P								GH4	Y81380	1.5P	GH4															
	Y81358BR										Y81380BR							5P										

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

HT Hand Taps

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	
1"1/4-12UNF	Y81380BR	1.5P	GH4	5.75	2.560	1.021	4	Ub	M6×1	Y78025	5P	D5	2.50	1.000	0.255	4	Ub	
1"3/8-6UNC	Y81381	9P	GH4	6.06	3.000	1.108	4	Ub		Y78026	1.5P	M7×1	D5	2.72	1.130	0.318	4	Ub
	Y81382								5P	Y78028	5P							
	Y81383	1.5P										Y78034	5P	M8×1	D5	2.72	1.130	0.318
	Y81384BR								9P	Y78035	1.5P							
	Y81385	5P										Y78032	1.5P	Y78040	5P	D6	2.94	1.250
	Y81386BR								1.5P	Y78041	1.5P							
1"1/2-6UNC	Y81387	9P	GH4	6.38	3.000	1.233	4	Ub				Y78046	5P	M10×1.5	D6	3.38	1.660	0.367
	Y81387BR								5P	Y78047	1.5P							
	Y81388	1.5P										Y78052	5P	M12×1.75	D6	3.38	1.660	0.367
	Y81388BR								5P	Y78053	1.5P							
	Y81389	1.5P										Y78055	5P	M14×2	D7	3.59	1.660	0.429
	Y81389BR								9P	Y78056	1.5P							
1"1/2-12UNF	Y81390	9P	GH4	6.38	3.000	1.233	4	Ub				Y78050	1.5P	M14×1.5	D6	3.59	1.660	0.429
	Y81390BR								5P	Y78058	5P							
	Y81391	1.5P										Y78059	1.5P	Y78055	5P	D6	3.81	1.810
	Y81391BR								5P	Y78056	1.5P							
	Y81392	1.5P										Y78065	1.5P	Y78061	5P	D6	4.03	1.810
	Y81392BR								9P	Y78062	1.5P							
For Metric threads												M18×2.5	Y78067	5P	D6	4.47	2.000	0.652
Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	Y78071	1.5P	M20×2.5							
M1.6×0.35	Y77995	5P	D3	1.63	0.310	0.141	2	Ub				Y78076	5P	M20×1.5	D6	4.47	2.000	0.652
	Y77996	1.5P					3		Y78077	1.5P	M22×2.5							
M1.8×0.35	Y77998	5P	D3	1.69	0.375	0.141	2	Ub				Y78073	5P	M22×1.5	D6	4.69	2.220	0.697
	Y77999	1.5P					3		Y78074	1.5P	M24×3							
M2×0.4	Y78001	5P	D3	1.75	0.440	0.141	3	Ub				Y78082	5P	M24×2	D7	4.91	2.220	0.760
	Y78002	1.5P							Y78080	1.5P	M27×3							
M2.2×0.45	Y78004	5P	D3	1.75	0.440	0.141	3	Ub				Y78088	5P	M27×2	D7	5.13	2.500	0.896
	Y78005	1.5P							Y78086	1.5P	M30×3.5							
M2.5×0.45	Y78007	5P	D3	1.81	0.500	0.141	3	Ub				Y78094	5P	M30×2	D7	5.44	2.560	1.021
	Y78008	1.5P							Y78095	1.5P	M30×2							
M3×0.5	Y78010	5P	D3	1.94	0.630	0.141	3	Ub				Y78091	5P	M30×2	D7	5.44	2.560	1.021
	Y78011	1.5P							Y78092	1.5P	M30×2							
M3.5×0.6	Y78013	5P	D4	2.00	0.690	0.141	3	Ub										
	Y78014	1.5P																
M4×0.7	Y78016	5P	D4	2.13	0.750	0.168	4	Ub										
	Y78017	1.5P																
M4.5×0.75	Y78019	5P	D4	2.38	0.880	0.194	4	Ub										
	Y78020	1.5P																
M5×0.8	Y78022	5P	D4	2.38	0.880	0.194	4	Ub										
	Y78023	1.5P																

HT Hand Taps

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M33×3.5	Y78100	5P	D9	5.75	2.560	1.108	4	Ub
	Y78101	1.5P						
M33×2	Y78097	5P	D7	5.75	2.560	1.108	4	Ub
	Y78098	1.5P						
M36×4	Y78106	5P	D9	6.06	3.000	1.233	4	Ub
	Y78107	1.5P						
M36×3	Y78103	5P	D8	6.06	3.000	1.233	4	Ub
	Y78104	1.5P						
M39×4	Y78112	5P	D10	6.69	3.190	1.305	4	Ub
	Y78113	1.5P						
M39×3	Y78109	5P	D8	6.69	3.190	1.305	4	Ub
	Y78110	1.5P						

STI HT Hand Taps for Helical Coil Wire Screw Thread Inserts

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
5/16-18UNC	Y81884	5P	GH3	2.94	1.250	0.381	4	Ub
	Y81885	1.5P						
3/8-16UNC	Y81888	5P	GH3	3.38	1.656	0.367	4	Ub
	Y81889	1.5P						
7/16-14UNC	Y81892	5P	GH3	3.59	1.656	0.429	4	Ub
7/16-20UNF	Y81894	5P	GH3	3.38	1.656	0.367	4	Ub
1/2-13UNC	Y81896	5P	GH3	3.81	1.810	0.480	4	Ub

STI HT

Hand Taps for Helical Coil Wire Screw Thread Inserts



Segment : 1D



ZELX CARB CI

Carbide Taps for Cast Irons



Segment : 1L



Suitable for hard and abrasive materials such as cast irons.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y80780	5P	GH2	1.88	0.563	0.141	3	Ub
	Y80781	1.5P						
No.4-40UNC	Y80784	5P	GH2	2.00	0.688	0.141	3	Ub
	Y80785	1.5P						
No.6-32UNC	Y80816	5P	GH3	2.38	0.875	0.194	3	Ub
	Y80817	1.5P						
No.8-32UNC	Y80820	5P	GH3	2.38	0.938	0.220	3	Ub
	Y80821	1.5P						
No.10-24UNC	Y80800	5P	GH2	2.50	1.000	0.255	3	Ub
	Y80801	1.5P						
No.10-32UNF	Y80802	5P	GH2	2.50	1.000	0.255	3	Ub
	Y80803	1.5P						
	Y80826	5P	GH3					
	Y80827	1.5P						
1/4-20UNC	Y81880	5P	GH3	2.72	1.125	0.318	3	Ub
	Y81881	1.5P						
1/4-28UNF	Y81862	5P	GH2	2.72	1.125	0.318	3	Ub
	Y81863	1.5P						

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.10-24UNC	Y83806	5P	GH3	2.38	0.880	0.194	4	Ua
	Y83807	1.5P						
No.10-32UNF	Y83808	5P	GH3	2.38	0.880	0.194	4	Ua
	Y83809	1.5P						
1/4-20UNC	Y83810	5P	GH3	2.50	1.000	0.255	4	Ua
	Y83811	1.5P						
	Y83860	5P	GH5					
	Y83861	1.5P						
1/4-28UNF	Y83812	5P	GH3	2.50	1.000	0.255	4	Ua
	Y83813	1.5P						
	Y83862	5P	GH5					
	Y83863	1.5P						
5/16-18UNC	Y83814	5P	GH3	2.72	1.130	0.318	4	Ua
	Y83815	1.5P						
	Y83864	5P	GH5					
	Y83865	1.5P						
5/16-24UNF	Y83816	5P	GH3	2.72	1.130	0.318	4	Ua
	Y83817	1.5P						
	Y83866	5P	GH5					
	Y83867	1.5P						
3/8-16UNC	Y83818	5P	GH3	2.94	1.250	0.381	4	Ua
	Y83819	1.5P						

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX CARB CI Carbide Taps for Cast Irons

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
3/8-16UNC	Y83868	5P	GH5	2.94	1.250	0.381	4	Ua
	Y83869	1.5P						
3/8-24UNF	Y83820	5P	GH3	2.94	1.250	0.381	4	Ua
	Y83821	1.5P						
	Y83870	5P	GH5					
	Y83871	1.5P						
	Y83822	5P						
7/16-14UNC	Y83823	1.5P	GH3	3.16	1.440	0.323	4	Ua
	Y83872	5P						
	Y83873	1.5P	GH5					
	Y83824	5P						
7/16-20UNF	Y83825	1.5P	GH3	3.16	1.440	0.323	4	Ua
	Y83874	5P						
	Y83875	1.5P	GH5					
	Y83826	5P						
	Y83827	1.5P						
1/2-13UNC	Y83876	5P	GH3	3.38	1.660	0.367	4	Ua
	Y83877	1.5P						
	Y83878	5P	GH5					
	Y83879	1.5P						
1/2-20UNF	Y83828	5P	GH3	3.38	1.660	0.367	4	Ua
	Y83829	1.5P						
	Y83878	5P	GH5					
	Y83879	1.5P						
	Y83834	5P						
5/8-11UNC	Y83835	1.5P	GH3	3.81	1.810	0.480	4	Ua
	Y83884	5P						
	Y83885	1.5P	GH5					
	Y83836	5P						
5/8-18UNF	Y83837	1.5P	GH3	3.81	1.810	0.480	4	Ua
	Y83886	5P						
	Y83887	1.5P	GH5					

For Metric threads

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
M3×0.5	Y70000	5P	D3	1.94	0.630	0.141	3	Ua
	Y70001	1.5P						
M4×0.7	Y70002	5P	D4	2.13	0.750	0.168	4	Ua
	Y70003	1.5P						
M5×0.8	Y70004	5P	D4	2.38	0.880	0.194	4	Ua
	Y70005	1.5P						
M6×1	Y70006	5P	D5	2.50	1.000	0.255	4	Ua
	Y70007	1.5P						
M8×1.25	Y70010	5P	D5	2.72	1.130	0.318	4	Ua
	Y70011	1.5P						
M8×1	Y70008	5P	D5	2.72	1.130	0.318	4	Ua
	Y70009	1.5P						
M10×1.5	Y70014	5P	D6	2.94	1.250	0.381	4	Ua
	Y70015	1.5P						
M10×1.25	Y70012	5P	D5	2.94	1.250	0.381	4	Ua

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
M10×1.25	Y70013	1.5P	D5	2.94	1.250	0.381	4	Ua
	Y70020	5P	D6	3.38	1.660	0.367	4	Ua
M12×1.75	Y70021	1.5P						
M12×1.5	Y70018	5P	D6	3.38	1.660	0.367	4	Ua
M12×1.25	Y70016	5P	D5	3.38	1.660	0.367	4	Ua
	Y70017	1.5P						
M14×2	Y70024	5P	D7	3.59	1.660	0.429	4	Ua
	Y70025	1.5P						
M14×1.5	Y70022	5P	D6	3.59	1.660	0.429	4	Ua
M16×2	Y70029	1.5P	D7	3.81	1.810	0.480	4	Ua
M16×1.5	Y70026	5P	D6	3.81	1.810	0.480	4	Ua
	Y70027	1.5P						

ZELX CARB AL

Carbide Taps for Non-Ferrous Materials



Segment : 1L



ZELX CARB AL is the carbide tap suitable for tapping aluminum castings (AC), aluminum die castings (ADC), and zinc die castings (ZDC).

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
No.5-40UNC	Y84800	5P	GH3	1.94	0.630	0.141	3	Ua
	Y84801	1.5P						
No.6-32UNC	Y84802	5P	GH3	2.00	0.690	0.141	3	Ua
	Y84803	1.5P						
No.8-32UNC	Y84804	5P	GH3	2.13	0.750	0.168	3	Ua
	Y84805	1.5P						
No.10-24UNC	Y84806	5P	GH3	2.38	0.880	0.194	3	Ua
	Y84807	1.5P						
No.10-32UNF	Y84808	5P	GH3	2.38	0.880	0.194	3	Ua
	Y84809	1.5P						
1/4-20UNC	Y84810	5P	GH3	2.50	1.000	0.255	3	Ua
	Y84811	1.5P						
	Y84860	5P	GH5					
	Y84861	1.5P						
	Y84812	5P						
1/4-28UNF	Y84813	1.5P	GH3	2.50	1.000	0.255	3	Ua
	Y84862	5P						
	Y84862	5P	GH5					

ZELX CARB AL Carbide Taps for Non-Ferrous Materials

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
1/4-28UNF	Y84863	1.5P	GH5	2.50	1.000	0.255	3	Ua
5/16-18UNC	Y84814	5P	GH3	2.72	1.130	0.318	3	Ua
	Y84815	1.5P						
	Y84864	5P	GH5					
	Y84865	1.5P						
5/16-24UNF	Y84816	5P	GH3	2.72	1.130	0.318	3	Ua
	Y84817	1.5P					4	
	Y84866	5P	GH5				3	
	Y84867	1.5P						
3/8-16UNC	Y84818	5P	GH3	2.94	1.250	0.381	3	Ua
	Y84819	1.5P						
	Y84868	5P	GH5					
	Y84869	1.5P						
3/8-24UNF	Y84820	5P	GH3	2.94	1.250	0.381	3	Ua
	Y84821	1.5P						
	Y84870	5P	GH5					
	Y84871	1.5P						
7/16-14UNC	Y84822	5P	GH3	3.16	1.440	0.323	3	Ua
	Y84823	1.5P						
	Y84872	5P	GH5					
	Y84873	1.5P						
7/16-20UNF	Y84824	5P	GH3	3.16	1.440	0.323	3	Ua
	Y84825	1.5P						
	Y84874	5P	GH5					
	Y84875	1.5P						
1/2-13UNC	Y84826	5P	GH3	3.38	1.660	0.367	3	Ua
	Y84827	1.5P						
	Y84876	5P	GH5					
	Y84877	1.5P						
1/2-20UNF	Y84828	5P	GH3	3.38	1.660	0.367	3	Ua
	Y84829	1.5P						
	Y84878	5P	GH5					
	Y84879	1.5P						

For Metric threads

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M3×0.5	Y71000	5P	D3	1.94	0.630	0.141	3	Ua
M4×0.7	Y71002	5P	D4	2.13	0.750	0.168	3	Ua
	Y71003	1.5P						
M5×0.8	Y71004	5P	D4	2.38	0.880	0.194	3	Ua
	Y71005	1.5P						
M6×1	Y71006	5P	D5	2.50	1.000	0.255	3	Ua
	Y71007	1.5P						
M8×1.25	Y71010	5P	D5	2.72	1.130	0.318	3	Ua
	Y71011	1.5P						
M8×1	Y71008	5P	D5	2.72	1.130	0.318	3	Ua
	Y71009	1.5P						
M10×1.5	Y71014	5P	D6	2.94	1.250	0.381	3	Ua

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M10×1.5	Y71015	1.5P	D6	2.94	1.250	0.381	3	Ua
M10×1.25	Y71012	5P	D5	2.94	1.250	0.381	3	Ua
	Y71013	1.5P						
M12×1.75	Y71020	5P	D6	3.38	1.660	0.367	3	Ua
	Y71021	1.5P						
M12×1.5	Y71018	5P	D6	3.38	1.660	0.367	3	Ua
	Y71019	1.5P						
M12×1.25	Y71016	5P	D5	3.38	1.660	0.367	3	Ua
	Y71017	1.5P						

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ROLL

Thread Forming Taps for Thin Soft Structural Steel Sheets



Segment : 1J



Tapping in the parts of thin steel sheets such as SPC and SPH, those of such soft steels as lower than SS400 and S20C is usually operated

ROLL Thread Forming Taps for Thin Soft Structural Steel Sheets

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	
No.4-48UNF	Y87858	4P	GH5	1.88	0.560	0.141		Ub	
	Y87858BR								
	Y87859	1.5P							
	Y87859BR								
No.5-40UNC	Y87787	4P	GH3	1.94	0.630	0.141		Ub	
	Y87787BR								
	Y87788	1.5P							
	Y87788BR								
	Y87860	4P							
	Y87860BR								GH5
	Y87861								
	Y87861BR	1.5P							
No.5-44UNF	Y87789	4P	GH3	1.94	0.630	0.141		Ub	
	Y87789BR								
	Y87790	1.5P							
	Y87790BR								
	Y87862	4P							
	Y87862BR								GH5
	Y87863								
	Y87863BR	1.5P							
No.6-32UNC	Y87791	4P	GH3	2.00	0.690	0.141		Ub	
	Y87791BR								
	Y87792	1.5P							
	Y87792BR								
	Y87864	4P							
	Y87864BR								GH5
	Y87865								
	Y87865BR	1.5P							
No.6-40UNF	Y87970	4P	GH10	2.00	0.690	0.141		Ub	
	Y87970BR								
	Y87971	1.5P							
	Y87971BR								
	Y87793								4P
Y87793BR									
	Y87794	1.5P							
	Y87794BR								
No.6-40UNF	Y87866	4P	GH5	2.00	0.690	0.141		Ub	
	Y87866BR								
	Y87867	1.5P							
	Y87867BR								
	Y87795								4P
Y87795BR									
No.8-32UNC	Y87796	1.5P	GH3	2.13	0.750	0.168		Ub	
	Y87796BR								
	Y87868	4P							
	Y87868BR								
	Y87869	1.5P							
Y87869BR									

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.0-80UNF	Y87732	1.5P	GH2	1.63	0.310	0.141		Ub
	Y87732BR							
No.1-64UNC	Y87734	1.5P	GH2	1.69	0.380	0.141		Ub
	Y87734BR							
No.1-72UNF	Y87736	1.5P	GH2	1.69	0.380	0.141		Ub
	Y87736BR							
No.2-56UNC	Y87738	1.5P	GH2	1.75	0.440	0.141		Ub
	Y87738BR		GH3					
	Y87776							
	Y87776BR							
No.2-64UNF	Y87740	1.5P	GH2	1.75	0.440	0.141		Ub
	Y87740BR		GH3					
	Y87778	4P						
	Y87778BR							
No.3-48UNC	Y87742	1.5P	GH2	1.81	0.500	0.141		Ub
	Y87742BR		GH3					
	Y87780							
	Y87780BR							
No.3-56UNF	Y87744	1.5P	GH2	1.81	0.500	0.141		Ub
	Y87744BR		GH3					
	Y87782							
	Y87782BR							
No.4-40UNC	Y87783	4P	GH3	1.88	0.560	0.141		Ub
	Y87783BR							
	Y87784	1.5P						
	Y87784BR							
	Y87856	4P						
	Y87856BR							
	Y87857							
Y87857BR								
No.4-48UNF	Y87785	4P	GH3	1.88	0.560	0.141		Ub
	Y87785BR							
	Y87786	1.5P						
	Y87786BR							

ROLL Thread Forming Taps for Thin Soft Structural Steel Sheets

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type	Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type			
No.8-32UNC	Y87972	4P	GH10	2.13	0.750	0.168		Ub	No.12-28UNF	Y87909	4P	GH6	2.38	0.940	0.220		Ub			
	Y87972BR									Y87909BR										
	Y87973	1.5P								Y87910										
	Y87973BR									Y87910BR										
No.8-36UNF	Y87797	4P	GH3	2.13	0.750	0.168		Ub	1/4-20UNC	Y87837	4P	GH4	2.50	1.000	0.255		Ub			
	Y87797BR									Y87837BR										
	Y87798	1.5P								Y87838										
	Y87798BR									Y87838BR										
	Y87870	4P	GH5							Y87911	4P	GH6						Y87911BR		
	Y87870BR									Y87912										
	Y87871	1.5P								Y87912BR										
	Y87871BR									Y87978										
No.10-24UNC	Y87829	4P	GH4	2.38	0.880	0.194		Ub	1/4-28UNF	Y87978	4P	GH10	2.50	1.000	0.255		Ub			
	Y87829BR									Y87979										
	Y87830	1.5P								Y87979BR										
	Y87830BR									Y87839										
	Y87903	4P	GH6							Y87839BR	4P	GH4						Y87840		
	Y87903BR									Y87840BR										
	Y87904	1.5P								Y87913	4P							GH6	Y87913BR	
	Y87904BR									Y87914										
	Y87974	4P	GH10							Y87914BR	1.5P	Y87980								
	Y87974BR									Y87981										
	Y87975	1.5P								Y87872	4P	GH5						Y87872BR		
	Y87975BR									Y87873										
No.10-32UNF	Y87831	4P	GH4	2.38	0.880	0.194		Ub	5/16-18UNC	Y87873BR	1.5P		GH7	2.72	1.130	0.318		Ub		
	Y87831BR									Y87930										
	Y87832	1.5P								Y87930BR										
	Y87832BR									Y87931										
	Y87905	4P	GH6							Y87931BR	1.5P	GH5	Y87874							
	Y87905BR									Y87874BR										
	Y87906	1.5P								Y87875	1.5P		GH7						Y87875BR	
	Y87906BR									Y87932										
	Y87976	4P	GH10							Y87932BR	4P	GH7							Y87933	
	Y87976BR									Y87933BR										
	Y87977	1.5P								GH4	Y87933BR		1.5P						GH5	Y87876
	Y87977BR										Y87876BR									
No.12-24UNC	Y87833	4P	GH4	2.38	0.940	0.220		Ub	5/16-24UNF		Y87877	1.5P	GH7	2.72	1.130	0.318		Ub		
	Y87833BR										Y87877BR									
	Y87834	1.5P								Y87934	4P	GH5							Y87934BR	
	Y87834BR									Y87935										
	Y87907	4P	GH6							Y87935BR	1.5P		GH7						Y87876	
	Y87907BR									Y87876BR										
	Y87908	1.5P								GH4	Y87877	1.5P							GH5	Y87877BR
	Y87908BR										Y87934									
No.12-28UNF	Y87835	4P	GH4	2.38	0.940	0.220		Ub	3/8-16UNC		Y87934BR	4P	GH7	2.94	1.250	0.381		Ub		
	Y87835BR										Y87935									
	Y87836	1.5P								Y87935BR										
	Y87836BR																			

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ROLL Thread Forming Taps for Thin Soft Structural Steel Sheets

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type	Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
3/8-16UNC	Y87935BR	1.5P	GH7	2.94	1.250	0.381		Ub	9/16-12UNC	Y87991BR	1.5P	GH10	3.59	1.660	0.429		Ub
3/8-24UNF	Y87878	4P	GH5	2.94	1.250	0.381		Ub	9/16-18UNF	Y87948	4P	GH7	3.59	1.660	0.429		Ub
	Y87878BR																
	Y87879	1.5P															
	Y87879BR																
	Y87936	4P															
	Y87936BR																
	Y87937	1.5P															
	Y87937BR																
7/16-14UNC	Y87880	4P	GH5	3.16	1.440	0.323		Ub	5/8-11UNC	Y87950	4P	GH7	3.81	1.810	0.480		Ub
	Y87880BR																
	Y87881	1.5P															
	Y87881BR																
	Y87960	4P															
	Y87960BR																
	Y87961	1.5P															
	Y87961BR																
7/16-20UNF	Y87882	4P	GH5	3.16	1.440	0.323		Ub	5/8-18UNF	Y87952	4P	GH7	3.81	1.810	0.480		Ub
	Y87882BR																
	Y87883	1.5P															
	Y87883BR																
	Y87962	4P															
	Y87962BR																
	Y87963	1.5P															
	Y87963BR																
1/2-13UNC	Y87884	4P	GH5	3.38	1.660	0.367		Ub	3/4-10UNC	Y87954	4P	GH7	4.25	2.000	0.590		Ub
	Y87884BR																
	Y87885	1.5P															
	Y87885BR																
	Y87964	4P															
	Y87964BR																
	Y87965	1.5P															
	Y87965BR																
1/2-20UNF	Y87886	4P	GH5	3.38	1.660	0.367		Ub	3/4-16UNF	Y87956	4P	GH7	4.25	2.000	0.590		Ub
	Y87886BR																
	Y87887	1.5P															
	Y87887BR																
	Y87966	4P															
	Y87966BR																
	Y87967	1.5P															
	Y87967BR																
9/16-12UNC	Y87946	4P	GH7	3.59	1.660	0.429		Ub		Y87957	1.5P	GH10					
	Y87946BR																
	Y87947	1.5P															
	Y87947BR																
	Y87990	4P															
	Y87990BR																
	Y87991	1.5P															

Products for USA market

N-RZ

Thread Forming Taps for Steels



Segment : 1J



N-RZ is the forming tap suitable for steel materials such as carbon steels, alloy steels and stainless steels.

N-RZ Thread Forming Taps for Steels

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.0-80UNF	Y89410	2P	GH2	1.57	0.315	0.141		Ub
No.1-64UNC	Y89411	2P	GH2	1.57	0.315	0.141		Ub
No.1-72UNF	Y89412	2P	GH2	1.57	0.315	0.141		Ub
No.2-56UNC	Y89413	2P	GH2	1.77	0.354	0.141		Ub
	Y89414		GH3					
No.2-64UNF	Y89415	2P	GH2	1.77	0.354	0.141		Ub
	Y89416		GH3					
No.3-48UNC	Y89417	2P	GH2	1.97	0.276	0.141		Ub
	Y89418		GH3					
No.3-56UNF	Y89419	2P	GH2	1.97	0.276	0.141		Ub
	Y89420		GH3					
No.4-40UNC	Y89423	4P	GH3	2.20	0.433	0.141		Ub
	Y89421	2P						
	Y89424	4P	GH5					
	Y89422	2P						
No.4-48UNF	Y89427	4P	GH3	2.20	0.433	0.141		Ub
	Y89425	2P						
	Y89428	4P	GH5					
	Y89426	2P						
No.5-40UNC	Y89431	4P	GH3	2.20	0.433	0.141		Ub
	Y89429	2P						
	Y89432	4P	GH5					
	Y89430	2P						
No.5-44UNF	Y89435	4P	GH3	2.20	0.433	0.141		Ub
	Y89433	2P						
	Y89434		GH5					
No.6-32UNC	Y89440	4P	GH3	2.20	0.512	0.141		Ub
	Y89437	2P						
	Y89441	4P	GH5					
	Y89438	2P						
No.6-40UNF	Y89444	4P	GH3	2.20	0.512	0.141		Ub
	Y89442	2P						
	Y89445	4P	GH5					
	Y89443	2P						

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
No.8-32UNC	Y89448	4P	GH3	2.48	0.512	0.168		Ub
	Y89446	2P						
	Y89449	4P	GH5					
	Y89447	2P						
No.8-36UNF	Y89452	4P	GH3	2.48	0.512	0.168		Ub
	Y89450	2P						
	Y89453	4P	GH5					
	Y89451	2P						
No.10-24UNC	Y89456	4P	GH4	2.76	0.630	0.194		Ub
	Y89454	2P						
	Y89457	4P	GH6					
	Y89455	2P						
No.10-32UNF	Y89460	4P	GH4	2.76	0.630	0.194		Ub
	Y89458	2P						
	Y89461	4P	GH6					
Y89459	2P							
No.12-24UNC	Y89464	4P	GH4	3.15	0.630	0.220		Ub
	Y89462	2P						
	Y89465	4P	GH6					
	Y89463	2P						
No.12-28UNF	Y89468	4P	GH4	3.15	0.630	0.220		Ub
	Y89466	2P						
	Y89469	4P	GH6					
	Y89467	2P						
1/4-20UNC	Y89472	4P	GH4	3.15	0.748	0.255		Ub
	Y89470	2P						
	Y89473	4P	GH6					
	Y89471	2P						
1/4-28UNF	Y89476	4P	GH4	3.15	0.748	0.255		Ub
	Y89474	2P						
	Y89477	4P	GH6					
	Y89475	2P						
5/16-18UNC	Y89480	4P	GH5	3.54	0.866	0.318		Ub
	Y89478	2P						
	Y89481	4P	GH7					
	Y89479	2P						
5/16-24UNF	Y89484	4P	GH5	3.54	0.866	0.318		Ub
	Y89482	2P						
	Y89485	4P	GH7					
	Y89483	2P						
3/8-16UNC	Y89488	4P	GH5	3.94	0.945	0.381		Ub
	Y89486	2P						
	Y89489	4P	GH7					
	Y89487	2P						
3/8-24UNF	Y89492	4P	GH5	3.54	0.787	0.381		Ub
	Y89490	2P						
	Y89493	4P	GH7					
	Y89491	2P						

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

N-RZ Thread Forming Taps for Steels

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
7/16-14UNC	Y89496	4P	GH5	3.94	0.945	0.323		Ub
	Y89494	2P						
	Y89497	4P	GH7					
	Y89495	2P						
7/16-20UNF	Y89502	4P	GH5	3.94	0.945	0.323		Ub
	Y89498	2P						
	Y89503	4P	GH7					
	Y89499	2P						
1/2-13UNC	Y89506	4P	GH5	4.33	1.142	0.367		Ub
	Y89504	2P						
	Y89507	4P	GH7					
	Y89505	2P						
1/2-20UNF	Y89510	4P	GH5	3.94	0.866	0.367		Ub
	Y89508	2P						
	Y89511	4P	GH7					
	Y89509	2P						
For Metric threads								
Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
M3×0.5	Y89513	4P	D5	2.20	0.433	0.141		Ub
	Y89512	2P						
M3.5×0.6	Y89515	4P	D6	2.20	0.512	0.141		Ub
	Y89514	2P						
M4×0.7	Y89517	4P	D6	2.48	0.512	0.168		Ub
	Y89516	2P						
M5×0.8	Y89519	4P	D7	2.76	0.630	0.194		Ub
	Y89518	2P						
M6×1	Y89521	4P	D8	3.15	0.748	0.255		Ub
	Y89520	2P						
M7×1	Y89523	4P	D9	3.15	0.748	0.318		Ub
	Y89522	2P						
M8×1.25	Y89527	4P	D9	3.54	0.866	0.318		Ub
	Y89526	2P						
M8×1	Y89525	4P	D9	3.54	0.866	0.318		Ub
	Y89524	2P						
M10×1.5	Y89531	4P	D10	3.94	0.945	0.381		Ub
	Y89530	2P						
M10×1.25	Y89529	4P	D9	3.94	0.945	0.381		Ub
	Y89528	2P						
M12×1.75	Y89535	4P	D11	4.33	1.142	0.367		Ub
	Y89534	2P						
M12×1.25	Y89533	4P	D9	3.94	0.866	0.367		Ub
	Y89532	2P						

N-RS

Thread Forming Taps for Non-Ferrous Materials



Segment : 1J



N-RS is the forming tap suitable for non-ferrous materials such as aluminum castings, aluminum die casting and brass.

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For Unified threads								
No.0-80UNF	Y88410	2P	GH2	1.57	0.315	0.141		Ub
No.1-64UNC	Y88411	2P	GH2	1.57	0.315	0.141		Ub
No.1-72UNF	Y88412	2P	GH2	1.57	0.315	0.141		Ub
No.2-56UNC	Y88413	2P	GH2	1.77	0.354	0.141		Ub
	Y88414		GH3					
No.2-64UNF	Y88415	2P	GH2	1.77	0.354	0.141		Ub
	Y88416		GH3					
No.3-48UNC	Y88417	2P	GH2	1.97	0.276	0.141		Ub
	Y88418		GH3					
No.3-56UNF	Y88419	2P	GH2	1.97	0.276	0.141		Ub
	Y88420		GH3					
No.4-40UNC	Y88423	4P	GH3	2.20	0.433	0.141		Ub
	Y88421	2P						
	Y88424	4P	GH5					
	Y88422	2P						
No.4-48UNF	Y88427	4P	GH3	2.20	0.433	0.141		Ub
	Y88425	2P						
	Y88428	4P	GH5					
	Y88426	2P						
No.5-40UNC	Y88431	4P	GH3	2.20	0.433	0.141		Ub
	Y88429	2P						
	Y88432	4P	GH5					
	Y88430	2P						
No.5-44UNF	Y88435	4P	GH3	2.20	0.433	0.141		Ub
	Y88433	2P						
	Y88436	4P	GH5					
	Y88434	2P						
No.6-32UNC	Y88440	4P	GH3	2.20	0.512	0.141		Ub
	Y88437	2P						
	Y88441	4P	GH5					
	Y88438	2P						
No.6-40UNF	Y88444	4P	GH3	2.20	0.512	0.141		Ub
	Y88442	2P						
	Y88445	4P	GH5					

N-RS Thread Forming Taps for Non-Ferrous Materials

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
No.6-40UNF	Y88443	2P	GH5	2.20	0.512	0.141		Ub
No.8-32UNC	Y88448	4P	GH3	2.48	0.512	0.168		Ub
	Y88446	2P						
	Y88449	4P	GH5					
	Y88447	2P						
No.8-36UNF	Y88452	4P	GH3	2.48	0.512	0.168		Ub
	Y88450	2P						
	Y88453	4P	GH5					
	Y88451	2P						
No.10-24UNC	Y88456	4P	GH4	2.76	0.630	0.194		Ub
	Y88454	2P						
	Y88457	4P	GH6					
	Y88455	2P						
No.10-32UNF	Y88460	4P	GH4	2.76	0.630	0.194		Ub
	Y88458	2P						
	Y88461	4P	GH6					
	Y88459	2P						
No.12-24UNC	Y88464	4P	GH4	3.15	0.630	0.220		Ub
	Y88462	2P						
	Y88465	4P	GH6					
	Y88463	2P						
No.12-28UNF	Y88468	4P	GH4	3.15	0.630	0.220		Ub
	Y88466	2P						
	Y88469	4P	GH6					
	Y88467	2P						
1/4-20UNC	Y88472	4P	GH4	3.15	0.748	0.255		Ub
	Y88470	2P						
	Y88473	4P	GH6					
	Y88471	2P						
1/4-28UNF	Y88476	4P	GH4	3.15	0.748	0.255		Ub
	Y88474	2P						
	Y88477	4P	GH6					
	Y88475	2P						
5/16-18UNC	Y88480	4P	GH5	3.54	0.866	0.318		Ub
	Y88478	2P						
	Y88481	4P	GH7					
	Y88479	2P						
5/16-24UNF	Y88484	4P	GH5	3.54	0.866	0.318		Ub
	Y88482	2P						
	Y88485	4P	GH7					
	Y88483	2P						
3/8-16UNC	Y88488	4P	GH5	3.94	0.945	0.381		Ub
	Y88486	2P						
	Y88489	4P	GH7					
	Y88487	2P						
3/8-24UNF	Y88492	4P	GH5	3.54	0.787	0.381		Ub
	Y88490	2P						
	Y88493	4P	GH7					

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
3/8-24UNF	Y88491	2P	GH7	3.54	0.787	0.381		Ub
7/16-14UNC	Y88496	4P	GH5	3.94	0.945	0.323		Ub
	Y88494	2P						
	Y88497	4P	GH7					
	Y88495	2P						
	Y88502	4P						
Y88498	2P							
7/16-20UNF	Y88503	4P	GH7	3.94	0.945	0.323		Ub
	Y88499	2P						
	Y88506	4P	GH5					
	Y88504	2P						
1/2-13UNC	Y88507	4P	GH7	4.33	1.142	0.367		Ub
	Y88505	2P						
	Y88510	4P	GH5					
	Y88508	2P						
1/2-20UNF	Y88511	4P	GH7	3.94	0.866	0.367		Ub
	Y88509	2P						

For Metric threads

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M3×0.5	Y88513	4P	D5	2.20	0.433	0.141		Ub
	Y88512	2P						
M3.5×0.6	Y88515	4P	D6	2.20	0.512	0.141		Ub
	Y88514	2P						
M4×0.7	Y88517	4P	D6	2.48	0.512	0.168		Ub
	Y88516	2P						
M5×0.8	Y88519	4P	D7	2.76	0.630	0.194		Ub
	Y88518	2P						
M6×1	Y88521	4P	D8	3.15	0.748	0.255		Ub
	Y88520	2P						
M7×1	Y88523	4P	D9	3.15	0.748	0.318		Ub
	Y88522	2P						
M8×1.25	Y88527	4P	D9	3.54	0.866	0.318		Ub
	Y88526	2P						
M8×1	Y88525	4P	D9	3.54	0.866	0.318		Ub
	Y88524	2P						
M10×1.5	Y88531	4P	D10	3.94	0.945	0.381		Ub
	Y88530	2P						
M10×1.25	Y88529	4P	D9	3.94	0.945	0.381		Ub
	Y88528	2P						
M12×1.75	Y88535	4P	D11	4.33	1.142	0.367		Ub
	Y88534	2P						
M12×1.25	Y88533	4P	D9	3.94	0.866	0.367		Ub
	Y88532	2P						

Overall length	Thread length	Shank dia.
L	ℓ	D _s

ZELX OL-RZ

High Performance Thread Forming Taps for Dry Tapping



Segment : 1J



ZELX OL-RZ is the forming tap enabling dry tapping under following condition : Tapping of the sizes smaller than M6, Thin steel sheets having burring operation, and steel parts with rather shorter length.

ZELX HP-RZ

High Performance Thread Forming Taps



Segment : 1J



ZELX HP-RZ is suitable for steels (lower than 35HRC) and light alloys, and is applicable to the high speed tapping (20-50m/min.).

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.2-56UNC	Y86600	4P	GH3	1.77	0.354	0.141		Ua
No.4-40UNC	Y86601	4P	GH5	2.20	0.433	0.141		Ua
No.4-48UNF	Y86602	4P	GH5	2.20	0.433	0.141		Ua
No.5-40UNC	Y86603	4P	GH5	2.20	0.433	0.141		Ua
No.6-32UNC	Y86604	4P	GH5	2.20	0.512	0.141		Ua
No.8-32UNC	Y86605	4P	GH5	2.48	0.512	0.168		Ua
No.10-24UNC	Y86606	4P	GH6	2.76	0.630	0.194		Ua
No.10-32UNF	Y86607	4P	GH6	2.76	0.630	0.194		Ua
1/4-20UNC	Y86608	4P	GH6	3.15	0.748	0.255		Ua
1/4-28UNF	Y86609	4P	GH6	3.15	0.748	0.255		Ua
For Metric threads								
Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M3×0.5	Y86610	4P	D5	2.20	0.433	0.141		Ua
M3.5×0.6	Y86611	4P	D6	2.20	0.512	0.141		Ua
M4×0.7	Y86612	4P	D6	2.48	0.512	0.168		Ua
M5×0.8	Y86614	4P	D7	2.76	0.630	0.194		Ua
M6×1	Y86615	4P	D8	3.15	0.748	0.255		Ua

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For Unified threads								
No.0-80UNF	Y86800	2P	GH2	1.57	0.315	0.141		Ua
No.2-56UNC	Y86801	2P	GH3	1.77	0.354	0.141		Ua
No.3-48UNC	Y86802	2P	GH3	1.97	0.276	0.141		Ua
No.3-56UNF	Y86803	2P	GH3	1.97	0.276	0.141		Ua
No.4-40UNC	Y86804	2P	GH3	2.20	0.433	0.141		Ua
	Y86805		GH5					
No.4-48UNF	Y86806	2P	GH3	2.20	0.433	0.141		Ua
	Y86807		GH5					
No.5-40UNC	Y86799	2P	GH5	2.20	0.433	0.141		Ua
No.6-32UNC	Y86810	4P	GH3	2.20	0.512	0.141		Ua
	Y86808	2P						
	Y86811	4P	GH5					
	Y86809	2P						
No.8-32UNC	Y86814	4P	GH3	2.48	0.512	0.168		Ua
	Y86812	2P						
	Y86815	4P	GH5					
	Y86813	2P						
No.10-24UNC	Y86818	4P	GH4	2.76	0.630	0.194		Ua
	Y86816	2P						
	Y86819	4P	GH6					
	Y86817	2P						
No.10-32UNF	Y86822	4P	GH4	2.76	0.630	0.194		Ua
	Y86820	2P						
	Y86823	4P	GH6					
	Y86821	2P						
1/4-20UNC	Y86826	4P	GH4	3.15	0.748	0.255		Ua
	Y86824	2P						
	Y86827	4P	GH6					
	Y86825	2P						
1/4-28UNF	Y86830	4P	GH4	3.15	0.748	0.255		Ua
	Y86828	2P						
	Y86831	4P	GH6					
	Y86829	2P						
5/16-18UNC	Y86834	4P	GH5	3.54	0.866	0.318		Ua

ZELX HP-RZ High Performance Thread Forming Taps

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
5/16-18UNC	Y86832	2P	GH5	3.54	0.866	0.318		Ua
	Y86835	4P	GH7					
	Y86833	2P						
5/16-24UNF	Y86838	4P	GH5	3.54	0.866	0.318		Ua
	Y86836	2P						
	Y86837	2P	GH7					
	Y86839	2P						
3/8-16UNC	Y86842	4P	GH5	3.94	0.945	0.381		Ua
	Y86840	2P						
	Y86843	4P	GH7					
	Y86841	2P						
3/8-24UNF	Y86846	4P	GH5	3.54	0.787	0.381		Ua
	Y86844	2P						
	Y86847	4P	GH7					
	Y86845	2P						
7/16-14UNC	Y86850	4P	GH5	3.94	0.945	0.323		Ub
	Y86848	2P						
	Y86851	4P	GH7					
	Y86849	2P						
7/16-20UNF	Y86854	4P	GH5	3.94	0.945	0.323		Ub
	Y86852	2P						
	Y86855	4P	GH7					
	Y86853	2P						
1/2-13UNC	Y86858	4P	GH5	4.33	1.142	0.367		Ub
	Y86856	2P						
	Y86859	4P	GH7					
	Y86857	2P						
1/2-20UNF	Y86862	4P	GH5	3.94	0.866	0.367		Ub
	Y86860	2P						
	Y86863	4P	GH7					
	Y86861	2P						
For Metric threads								
Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M3×0.5	Y86885	4P	D5	2.20	0.433	0.141		Ua
	Y86864	2P						
M3.5×0.6	Y86865	2P	D6	2.20	0.512	0.141		Ua
M4×0.7	Y86887	4P	D6	2.48	0.512	0.168		Ua
	Y86866	2P						
M5×0.8	Y86888	4P	D7	2.76	0.630	0.194		Ua
	Y86867	2P						
M6×1	Y86889	4P	D8	3.15	0.748	0.255		Ua
	Y86868	2P						
M7×1	Y86870	4P	D9	3.15	0.748	0.318		Ua
	Y86869	2P						
M8×1.25	Y86874	4P	D9	3.54	0.866	0.318		Ua
	Y86873	2P						
M8×1	Y86872	4P	D9	3.54	0.866	0.318		Ua

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
M8×1	Y86871	2P	D9	3.54	0.866	0.318		Ua
M10×1.5	Y86878	4P	D10	3.94	0.945	0.381		Ua
	Y86877	2P						
M10×1.25	Y86876	4P	D9	3.94	0.945	0.381		Ua
	Y86875	2P						
M12×1.75	Y86884	4P	D11	4.33	1.142	0.367		Ub
	Y86883	2P						
M12×1.5	Y86882	4P	D9	3.94	0.866	0.367		Ub
	Y86881	2P						
M12×1.25	Y86880	4P	D9	3.94	0.866	0.367		Ub
	Y86879	2P						

ZELX SS NPT

For NPT Threads



Segment : 1H



Suitable for tapping stainless steels, chrome steels and chrome molybdenum steels.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
1/16-27	Y83640	2.5P	ANSI G	2.13	0.688	0.313	4	Uc
1/8-27	Y83641	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
	0.313							
1/4-18	Y83643	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
3/8-18	Y83644	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
1/2-14	Y83645	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
3/4-14	Y83646	2.5P	ANSI G	3.25	1.375	0.906	4	Uc
1-11.5	Y83647	2.5P	ANSI G	3.75	1.750	1.125	4	Uc

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZELX SS NPTF

For American Taper Pipe Dryseal Threads



Segment : 1H



Suitable for tapping stainless steels, chrome steels and chrome molybdenum steels.

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/16-27	Y83660	2.5P	ANSI G	2.13	0.688	0.313	4	Uc
1/8-27	Y83661	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
	Y83662					0.313		
1/4-18	Y83663	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
3/8-18	Y83664	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
1/2-14	Y83665	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
3/4-14	Y83666	2.5P	ANSI G	3.25	1.375	0.906	4	Uc
1-11.5	Y83667	2.5P	ANSI G	3.75	1.750	1.125	4	Uc

NPT

For NPT Threads



Segment : 1G



Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/16-27	Y83100	2.5P	ANSI G	2.13	0.688	0.313	4	Uc
	Y83100BR							
1/8-27	Y83101	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
	Y83101BR							
	Y83102					0.313		
	Y83102BR							
1/4-18	Y83103	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
	Y83103BR							
3/8-18	Y83104	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
	Y83104BR							
1/2-14	Y83105	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
	Y83105BR							
3/4-14	Y83106	2.5P	ANSI G	3.25	1.375	0.906	4	Uc
	Y83106BR							
1-11.5	Y83107	2.5P	ANSI G	3.75	1.750	1.125	5	Uc
	Y83107BR							
1"1/4-11.5	Y83108	2.5P	ANSI G	4.00	1.750	1.313	5	Uc
	Y83108BR							
1"1/2-11.5	Y83109	2.5P	ANSI G	4.25	1.750	1.500	6	Uc
	Y83109BR							
2-11.5	Y83110	2.5P	ANSI G	4.50	1.750	1.875	6	Uc
	Y83110BR							

ZELX MOLD NPT

For American Pipe Threads



Segment : 1H



Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/8-27	Y89641	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
1/4-18	Y89643	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
3/8-18	Y89644	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
1/2-14	Y89645	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
3/4-14	Y89646	2.5P	ANSI G	3.25	1.375	0.906	5	Uc

INT-NPT

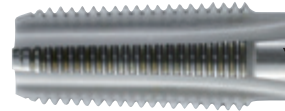
Interrupted Spiral Fluted Taps (LH spiral flutes) for NPT Threads



INT-NPT having low left-hand spiral flutes and having every other thread interrupted, reduces cutting torque. INT-NPT is suitable for such sticky materials as stainless steels and chrome molybdenum steels.

NPT-CI

For NPT Threads, for Cast Irons



NPT-CI is suitable for hard and abrasive materials such as cast irons.

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For American Pipe Threads								
1/8-27	Y83151	2.5P	ANSI G	2.13	0.750	0.438	5	Uc
	Y83151BR							
	Y83152							
	Y83152BR							
1/4-18	Y83153	2.5P	ANSI G	2.44	1.063	0.563	5	Uc
	Y83153BR							
3/8-18	Y83154	2.5P	ANSI G	2.56	1.063	0.700	5	Uc
	Y83154BR							
1/2-14	Y83155	2.5P	ANSI G	3.13	1.375	0.688	5	Uc
	Y83155BR							
3/4-14	Y83156	2.5P	ANSI G	3.25	1.375	0.906	5	Uc
	Y83156BR							
1-11.5	Y83157	2.5P	ANSI G	3.75	1.750	1.125	5	Uc
	Y83157BR							
1"1/4-11.5	Y83158	2.5P	ANSI G	4.00	1.750	1.313	5	Uc
	Y83158BR							
1"1/2-11.5	Y83159	2.5P	ANSI G	4.25	1.750	1.500	7	Uc
	Y83159BR							
2-11.5	Y83160	2.5P	ANSI G	4.50	1.750	1.875	7	Uc
	Y83160BR							

Size	Code	Chamfer	Class	L (inch)	ℓ (inch)	D _s (inch)	Flute	Type
For American Pipe Threads								
1/8-27	Y83201	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
	Y83202							
1/4-18	Y83203	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
3/8-18	Y83204	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
1/2-14	Y83205	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
3/4-14	Y83206	2.5P	ANSI G	3.25	1.375	0.906	4	Uc
1-11.5	Y83207	2.5P	ANSI G	3.75	1.750	1.125	5	Uc
1"1/4-11.5	Y83208	2.5P	ANSI G	4.00	1.750	1.313	5	Uc
1"1/2-11.5	Y83209	2.5P	ANSI G	4.25	1.750	1.500	6	Uc
2-11.5	Y83210	2.5P	ANSI G	4.50	1.750	1.875	6	Uc

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

NPTF

For NPTF Dryseal Threads



Segment : 1G

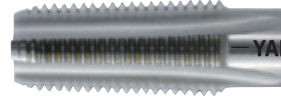


NPTF-CI

For NPTF Dryseal Threads, for Cast Irons



Segment : 1G



NPT-CI is suitable for hard and abrasive materials such as cast irons.

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/16-27	Y83125	2.5P	ANSI G	2.13	0.688	0.313	4	Uc
	Y83125BR							
1/8-27	Y83126	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
	Y83126BR							
	Y83127					0.313		
	Y83127BR							
1/4-18	Y83128	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
	Y83128BR							
3/8-18	Y83129	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
	Y83129BR							
1/2-14	Y83130	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
	Y83130BR							
3/4-14	Y83131	2.5P	ANSI G	3.25	1.375	0.906	5	Uc
	Y83131BR							
1-11.5	Y83132	2.5P	ANSI G	3.75	1.750	1.125	5	Uc
	Y83132BR							
1"1/4-11.5	Y83133	2.5P	ANSI G	4.00	1.750	1.313	5	Uc
	Y83133BR							
1"1/2-11.5	Y83134	2.5P	ANSI G	4.25	1.750	1.500	6	Uc
	Y83134BR							
2-11.5	Y83135	2.5P	ANSI G	4.50	1.750	1.875	6	Uc
	Y83135BR							

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/8-27	Y83226	2.5P	ANSI G	2.13	0.750	0.438	4	Uc
	Y83227					0.313		
1/4-18	Y83228	2.5P	ANSI G	2.44	1.063	0.563	4	Uc
3/8-18	Y83229	2.5P	ANSI G	2.56	1.063	0.700	4	Uc
1/2-14	Y83230	2.5P	ANSI G	3.13	1.375	0.688	4	Uc
3/4-14	Y83231	2.5P	ANSI G	3.25	1.375	0.906	4	Uc
1-11.5	Y83232	2.5P	ANSI G	3.75	1.750	1.125	5	Uc
1"1/4-11.5	Y83233	2.5P	ANSI G	4.00	1.750	1.313	5	Uc
1"1/2-11.5	Y83234	2.5P	ANSI G	4.25	1.750	1.500	6	Uc
2-11.5	Y83235	2.5P	ANSI G	4.50	1.750	1.875	6	Uc

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

NPS

For NPS Threads



Segment : 1G



NPSF

For NPSF Dryseal Threads



Segment : 1G



Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/8-27	Y83301	5P	ANSI G	2.13	0.750	0.438	4	Ub
	Y83301BR							
	Y83302							
	Y83302BR							
1/4-18	Y83303	5P	ANSI G	2.44	1.063	0.563	4	Ub
	Y83303BR							
3/8-18	Y83304	5P	ANSI G	2.56	1.063	0.700	4	Ub
	Y83304BR							
1/2-14	Y83305	5P	ANSI G	3.13	1.375	0.688	4	Ub
	Y83305BR							
3/4-14	Y83306	5P	ANSI G	3.25	1.375	0.906	4	Ub
	Y83306BR							
1-11.5	Y83307	5P	ANSI G	3.75	1.750	1.125	5	Ub
	Y83307BR							

Size	Code	Chamfer	Class	<i>L</i> (inch)	<i>ℓ</i> (inch)	<i>D_s</i> (inch)	Flute	Type
For American Pipe Threads								
1/8-27	Y83326	5P	ANSI G	2.13	0.750	0.438	4	Ub
	Y83326BR							
	Y83327							
	Y83327BR							
1/4-18	Y83328	5P	ANSI G	2.44	1.063	0.563	4	Ub
	Y83328BR							
3/8-18	Y83329	5P	ANSI G	2.56	1.063	0.700	4	Ub
1/2-14	Y83330	5P	ANSI G	3.13	1.375	0.688	4	Ub
	Y83330BR							
3/4-14	Y83331	5P	ANSI G	3.25	1.375	0.906	5	Ub
	Y83331BR							
1-11.5	Y83332	5P	ANSI G	3.75	1.750	1.125	5	Ub
	Y83332BR							

Outside diameter	Thickness
D	T

AR-D HSS

Adjustable Thread Cutting Round Dies



Segment : 31



※when no recess in the rear face.

AR-D HSS Adjustable Thread Cutting Round Dies

Size	Code	Class	D (inch)	T (inch)	Clearance holes	Chamfer length front face	Chamfer length rear face
1/2-13UNC	Y60353	2A	1-1/2"	1/2"	4	2.5P	1.5P
1/2-20UNF	Y60354	2A	1-1/2"	1/2"	4	2.5P	1.5P
9/16-12UNC	Y60355	2A	1-1/2"	1/2"	5	2.5P	1.5P
9/16-18UNF	Y60356	2A	1-1/2"	1/2"	5	2.5P	1.5P
5/8-11UNC	Y60357	2A	1-1/2"	1/2"	5	2.5P	1.5P
	Y60358		2"	5/8"	4		
5/8-18UNF	Y60359	2A	1-1/2"	1/2"	5	2.5P	1.5P
	Y60360		2"	5/8"	4		
3/4-10UNC	Y60361	2A	2"	5/8"	5	2.5P	1.5P
3/4-16UNF	Y60362	2A	2"	5/8"	5	2.5P	1.5P
7/8-9UNC	Y60363	2A	2"	5/8"	6	2.5P	1.5P
7/8-14UNF	Y60364	2A	2"	5/8"	6	2.5P	1.5P

Size	Code	Class	D (inch)	T (inch)	Clearance holes	Chamfer length front face	Chamfer length rear face
For Unified threads							
No.5-40UNC	Y60365	2A	13/16"	1/4"	3	2.5P	1.5P
No.5-44UNF	Y60366	2A	13/16"	1/4"	3	2.5P	1.5P
No.6-32UNC	Y60367	2A	13/16"	1/4"	3	2.5P	1.5P
	Y60368		1"	3/8"			
No.6-40UNF	Y60370	2A	13/16"	1/4"	3	2.5P	1.5P
No.8-32UNC	Y60372	2A	13/16"	1/4"	3	2.5P	1.5P
	Y60373		1"	3/8"			
No.8-36UNF	Y60374	2A	13/16"	1/4"	3	2.5P	1.5P
No.10-24UNC	Y60376	2A	13/16"	1/4"	4	2.5P	1.5P
	Y60377		1"	3/8"	3		
No.10-32UNF	Y60379	2A	13/16"	1/4"	4	2.5P	1.5P
	Y60380		1"	3/8"	3		
No.12-28UNF	Y60383	2A	13/16"	1/4"	4	2.5P	1.5P
No.12-24UNC	Y60381	2A	13/16"	1/4"	4	2.5P	1.5P
	Y60382		1"	3/8"			
1/4-20UNC	Y60333	2A	13/16"	1/4"	4	2.5P	1.5P
	Y60334		1"	3/8"			
	Y60335		1-1/2"	1/2"			
1/4-28UNF	Y60336	2A	13/16"	1/4"	4	2.5P	1.5P
	Y60337		1"	3/8"			
	Y60338		1-1/2"	1/2"			
5/16-18UNC	Y60339	2A	13/16"	1/4"	5	2.5P	1.5P
	Y60340		1"	3/8"	4		
	Y60341		1-1/2"	1/2"			
5/16-24UNF	Y60342	2A	13/16"	1/4"	5	2.5P	1.5P
	Y60343		1"	3/8"	4		
	Y60344		1-1/2"	1/2"			
3/8-16UNC	Y60346	2A	1-1/2"	1/2"	4	2.5P	1.5P
	Y60345		1"	3/8"	5		
3/8-24UNF	Y60347	2A	1"	3/8"	5	2.5P	1.5P
	Y60348		1-1/2"	1/2"	4		
7/16-14UNC	Y60349	2A	1"	3/8"	5	2.5P	1.5P
	Y60350		1-1/2"	1/2"	4		
7/16-20UNF	Y60351	2A	1"	3/8"	5	2.5P	1.5P
	Y60352		1-1/2"	1/2"	4		

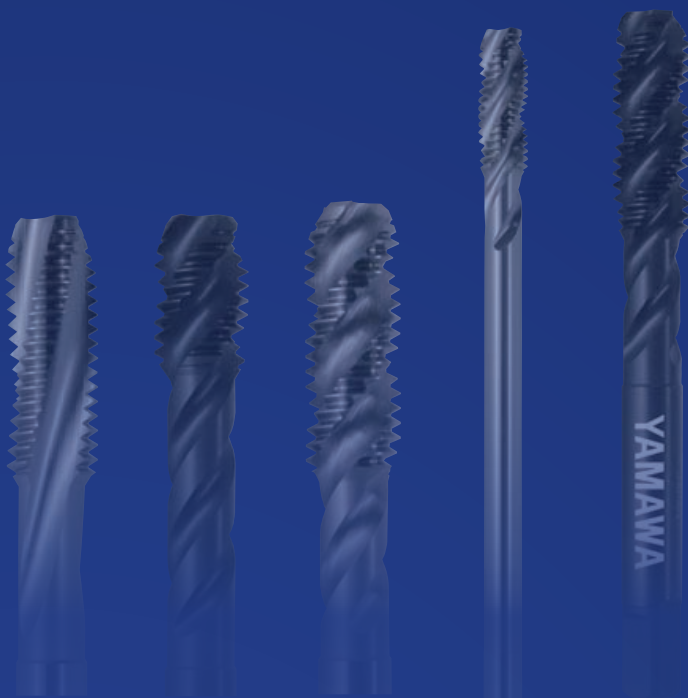
Explanation of icons

	High speed steel		Nitriding/Oxidizing		For left hand thread
	High speed steel (Cobalt HSS)		TiN coated		For synchronized feeding
	Powder HSS		TiCN coated		Number of threads on chamfer
	Ultra micro grain cemented carbide		TiAlN coated		Through hole use
	Alloy tool steels		For blind hole with through coolant hole		Specially for horizontal use on blind hole
	Alloy steel		For through hole with radial coolant hole		Specially for vertical use on blind hole
	Oxidizing		Helix angle of spiral flutes		Blind hole use
	Nitriding		LH helix angle of spiral flutes		Center drills left hand cut
	Special toolings				

Explanation of quantity symbols

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

Product For Europe



SP

Spiral Fluted Taps



Segment : 1C



N-SP

Spiral Fluted Taps



Segment : 1D



Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M2×0.4	66402.0	2P~3P	ISO2	45	8	2.8	2	DIN371
M2.3×0.4	66402.3	2P~3P	ISO2	45	4	2.8	2	DIN371
M3×0.5	66403.0	2P~3P	ISO2	56	5	3.5	3	DIN371
M3.5×0.6	66403.5	2P~3P	ISO2	56	7	4	3	DIN371
M4×0.7	66404.0	2P~3P	ISO2	63	7	4.5	3	DIN371
M5×0.8	66405.0	2P~3P	ISO2	70	9	6	3	DIN371
M6×1	66406.0	2P~3P	ISO2	80	11	6	3	DIN371
M8×1.25	66408.0	2P~3P	ISO2	90	12	8	3	DIN371
M10×1.5	6640010	2P~3P	ISO2	100	13	10	3	DIN371
M12×1.75	6740012	2P~3P	ISO2	110	15	9	3	DIN376
M14×2	6740014	2P~3P	ISO2	110	18	11	3	DIN376
M16×2	6740016	2P~3P	ISO2	110	18	12	3	DIN376
M20×2.5	6740020	2P~3P	ISO2	140	20	16	4	DIN376

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M6×1	N96406.0+50	2P~3P	6H+0.05	80	11	6	3	DIN371
M10×1.5	N9640010+50	2P~3P	6H+0.05	100	13	10	3	DIN371
M12×1.75	N9740012+50	2P~3P	6H+0.05	110	15	9	3	DIN376
For Unified Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.4-40UNC	N9340UN4H	2P~3P	2B	56	5	3.5	2	DIN371
No.6-32UNC	N9340UN6J	2P~3P	2B	56	6	4	3	DIN371
No.6-40UNF	N9340UN6H	2P~3P	2B	56	6	4	3	DIN371
No.8-32UNC	N9340UN8J	2P~3P	2B	63	6.5	4.5	3	DIN371
No.10-24UNC	N9340UNAM	2P~3P	2B	70	8	6	3	DIN371
No.10-32UNF	N9340UNAJ	2P~3P	2B	70	8	6	3	DIN371
1/4-20UNC	N9340U04N	2P~3P	2B	80	10	7	3	DIN371
1/4-28UNF	N9340U04K	2P~3P	2B	80	8.5	7	3	DIN371
5/16-18UNC	N9340U05O	2P~3P	2B	90	11	8	3	DIN371
5/16-24UNF	N9440U05M	2P~3P	2B	90	9	6	3	DIN374
3/8-16UNC	N9340U06P	2P~3P	2B	100	13	9	3	DIN371
3/8-24UNF	N9440U06M	2P~3P	2B	100	9	7	3	DIN374
7/16-14UNC	N9440U07Q	2P~3P	2B	100	14	8	3	DIN376
7/16-20UNF	N9440U07N	2P~3P	2B	100	14	8	3	DIN374
1/2-13UNC	N9440U08R	2P~3P	2B	110	15	9	3	DIN376
1/2-20UNF	N9440U08N	2P~3P	2B	100	15	9	3	DIN374
9/16-12UNC	N9440U09S	2P~3P	2B	110	17	11	3	DIN376
9/16-18UNF	N9440U09O	2P~3P	2B	100	17	11	3	DIN374
5/8-11UNC	N9440U10U	2P~3P	2B	110	18	12	3	DIN376
5/8-18UNF	N9440U10O	2P~3P	2B	100	17	12	3	DIN374
3/4-10UNC	N9440U12V	2P~3P	2B	125	20	14	4	DIN376
3/4-16UNF	N9440U12P	2P~3P	2B	110	17	14	4	DIN374
7/8-9UNC	N9440U14W	2P~3P	2B	140	22	18	4	DIN376
7/8-14UNF	N9440U14Q	2P~3P	2B	125	18	18	4	DIN374
1'-8UNC	N9440U16X	2P~3P	2B	160	25	18	4	DIN376
1'-12UNF	N9440U16S	2P~3P	2B	140	18	18	4	DIN374

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

EV-SP/EV-SP-OX

Spiral Fluted Taps



Segment : 1D



EV-SP/EV-SP-OX Spiral Fluted Taps

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type		
M4×0.7	71404.00X	2P~3P	ISO2	53	7	4	3	ISO529		
	95404.00X			45				DIN352		
	96404.0			63				4.5	DIN371	
	96404.00X									
	(96424.0)									
	97404.0									
	97404.00X									
	(97424.00X)									
96404.06G	ISO3	4.5	DIN371							
M4×0.5	98404.0GOX	2P~3P	ISO2	63	10	2.8	3	DIN374		
M4.5×0.75	96404.5OX	2P~3P	ISO2	70	16	6	3	DIN371		
M5×0.8	96405.0+100	2P~3P	ISO2	6H+0.10	9	6	3	DIN371		
	71405.0			58				ISO529		
	71405.00X			70				5	DIN352	
	95405.00X									50
	96405.0									
	96405.00X									
	(96425.0)									
	97405.0									3.5
97405.00X	ISO3	6	DIN371							
96405.06G										
M5×0.5	98405.0GOX	2P~3P	ISO2	70	12	3.5	3	DIN374		
M6×1	96406.0+100	2P~3P	ISO2	6H+0.10	11	6	3	DIN371		
	71406.0			66				ISO529		
	71406.00X			80				4.5	DIN376	
	95406.00X									50
	96406.0									
	96406.00X									
	(96426.0)									
	97406.0									80
97406.00X	ISO3	6	DIN371							
(97426.00X)										
96406.06G										
M6×0.75	98406.0JOX	2P~3P	ISO2	80	14	4.5	3	DIN374		
M6×0.5	98406.0GOX	2P~3P	ISO2	80	8	4.5	3	DIN374		
M7×1	96407.0	2P~3P	ISO2	80	19	7	3	DIN371		
	96407.00X									
M7×0.75	98407.0JOX	2P~3P	ISO2	80	14	5.5	3	DIN374		
M8×1.25	96408.0+100	2P~3P	ISO2	6H+0.10	12	8	3	DIN371		
	71408.0			72				ISO529		
	71408.00X			90				6	DIN352	
	95408.00X									56
	96408.0									
	96408.00X									
	(96428.0)									
	97408.0									6
97408.00X	ISO3	6	DIN371							
97428.00X										

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type		
For Metric Threads										
M1.4×0.3	(96401.4OX)	2P~3P	ISO2	40	7	2.5	2	DIN371		
M1.6×0.35	(96401.6OX)	2P~3P	ISO2	40	8	2.5	2	DIN371		
M1.7×0.35	(96401.7OX)	2P~3P	ISO2	40	8	2.5	2	DIN371		
M1.8×0.35	(96401.8OX)	2P~3P	ISO2	40	8	2.5	2	DIN371		
M2×0.4	(71402.00X)	2P~3P	ISO2	41	8	2.5	2	ISO529		
	(95402.00X)			36				DIN352		
	96402.0			45				4	2.8	DIN371
	(96402.00X)									
(96422.0)										
M2.2×0.45	(96402.2)	2P~3P	ISO2	45	9	2.8	2	DIN371		
	(96402.2OX)									
M2.3×0.4	(96402.3OX)	2P~3P	ISO2	45	4	2.8	2	DIN371		
M2.5×0.45	(71402.5OX)	2P~3P	ISO2	44.5	9.5	2.8	2	ISO529		
	(95402.5OX)			40	9			DIN352		
	96402.5			50	4			2.8	DIN371	
	(96402.5OX)									
(96422.5)										
M2.6×0.45	(96402.6)	2P~3P	ISO2	50	9	2.8	2	DIN371		
M3×0.5	96403.0+100	2P~3P	ISO2	6H+0.10	5	3.5	3	DIN371		
	71403.0			48				3.15	ISO529	
	71403.00X			56				2.2	DIN376	
	95403.00X									40
	96403.0									
	96403.00X									
	(96423.0)									
	97403.0									
	97403.00X			ISO3				3.5	DIN371	
	96403.06G									
M3×0.35	98403.0DOX	2P~3P	ISO2	56	9	2.2	3	DIN374		
M3.5×0.6	96403.5	2P~3P	ISO2	56	7	4	3	DIN371		
	96403.5OX							2		
M4×0.7	96404.0+100	2P~3P	6H+0.10	63	7	4.5	3	DIN371		
	71404.0		ISO2	53				4	ISO529	

*Products which codes additionally have "OX" are provided as Oxidizing treated.

*Helix angle of the tap having designation () on its code is 45°.

EV-SP/EV-SP-OX Spiral Fluted Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type		
M8×1.25	96408.06G	2P~3P	ISO3	90	12	8	3	DIN371		
	98408.0M	2P~3P	ISO2	90	12	6	3	DIN374		
98408.0MOX										
M8×0.75	98408.0JOX	2P~3P	ISO2	80	10	6	3	DIN374		
M8×0.5	98408.0GOX	2P~3P	ISO2	80	10	6	3	DIN374		
M10×1.5	9640010+100	2P~3P	ISO2	6H+0.10	100	10	3	DIN371		
	7140010			80	ISO529					
	7140010OX			70	7			DIN352		
	9540010OX									
	9640010			100	7			DIN376		
	9640010OX									
	(9642010)									
	9740010									
	9740010OX									
	(9742010OX)									
96400106G	ISO3	10	DIN371							
M10×1.25	7240010NOX	2P~3P	ISO2	80	12	10	3	ISO529		
	9840010N							100	7	DIN374
	9840010NOX									
M10×1	7240010MOX	2P~3P	ISO2	80	12	10	3	ISO529		
	9840010M							90	7	DIN374
	9840010MOX									
M10×0.75	9840010JOX	2P~3P	ISO2	90	12	7	3	DIN374		
M12×1.75	9740012+100	2P~3P	ISO2	6H+0.10	110	15	9	DIN376		
	7540012			89	ISO529					
	7540012OX			75	DIN352					
	9540012OX									
	9740012			110	DIN376					
	9740012OX									
	(9742012)									
	(9742012OX)									
97400126G	ISO3									
M12×1.5	7640012OOX	2P~3P	ISO2	89	14	9	3	ISO529		
	9840012O							100	DIN374	
	9840012OOX									
M12×1.25	7640012NOX	2P~3P	ISO2	84	14	9	3	ISO529		
	9840012N							100	DIN374	
	9840012NOX									
	(9842012NOX)									
M12×1	9840012M	2P~3P	ISO2	100	14	9	3	DIN374		
	9840012MOX									
M12×0.75	9840012JOX	2P~3P	ISO2	100	14	9	3	DIN374		
M14×2	7540014OX	2P~3P	ISO2	95	18	11	3	ISO529		
	9540014OX							80	DIN352	
	9740014							110	DIN376	
	9740014OX									
	(9742014)									
	(9742014OX)									

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type		
M14×1.5	7640014OOX	2P~3P	ISO2	100	14	11	3	ISO529		
	9840014O							11	DIN374	
	9840014OLH									
	9840014OOX									
	9847014OOX									
M14×1.25	9840014NOX	2P~3P	ISO2	100	14	11	3	DIN374		
M14×1	9840014MOX	2P~3P	ISO2	100	14	11	3	DIN374		
	(9842014MOX)									
M15×1.5	9840015OOX	2P~3P	ISO2	100	14	12	3	DIN374		
M16×2	7540016	2P~3P	ISO2	102	18	12.5	3	ISO529		
	7540016OX							80	DIN352	
	9540016OX									
	9740016							110	DIN376	
	9740016OX									
	(9742016)									
	(9742016OX)									
	97400166G							ISO3		
M16×1.75	9840016POX	2P~3P	ISO2	100	14	12	3	DIN374		
M16×1.5	7640016OOX	2P~3P	ISO2	102	14	12.5	3	ISO529		
	9840016O							100	12	DIN374
	9840016OOX									
M16×1.25	9840016NOX	2P~3P	ISO2	100	14	12	3	DIN374		
M16×1	9840016MOX	2P~3P	ISO2	100	14	12	3	DIN374		
M18×2.5	7540018OX	2P~3P	ISO2	112	20	14	4	ISO529		
	9540018OX							95	DIN352	
	9740018							125	DIN376	
	9740018OX									
(9742018OX)										
M18×2	7640018QOX	2P~3P	ISO2	112	18	14	4	ISO529		
	9840018QOX							125	DIN374	
M18×1.5	7640018OOX	2P~3P	ISO2	95	14	45	4	ISO529		
	9840018O							110	14	DIN374
	9840018OOX									
M18×1.25	9840018NOX	2P~3P	ISO2	110	14	14	4	DIN374		
M18×1	9840018MOX	2P~3P	ISO2	110	14	14	4	DIN374		
M20×2.5	7540020OX	2P~3P	ISO2	112	20	14	4	ISO529		
	9540020OX							95	DIN352	
	9740020							140	DIN376	
	9740020OX									
	(9742020)									
(9742020OX)										
M20×2	7640020QOX	2P~3P	ISO2	112	18	14	4	ISO529		
	9840020QOX							140	16	DIN374
M20×1.5	7640020OOX	2P~3P	ISO2	112	14	14	4	ISO529		
	9840020O							125	16	DIN374
	9840020OOX									
	(9842020OOX)									
M20×1	7640020MOX	2P~3P	ISO2	112	14	14	4	ISO529		

*Helix angle of the tap having designation () on its code is 45°.

Overall length	Thread length	Shank dia.
L	ℓ	D _s

EV-SP/EV-SP-OX Spiral Fluted Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type		
M20×1	9840020MOX	2P~3P	ISO2	125	14	16	4	DIN374		
M22×2.5	7540022OX	2P~3P	ISO2	118	20	18	4	ISO529		
	9540022OX			100				DIN352		
	9740022			140				DIN376		
	9740022OX									
	(9742022)									
	(9742022OX)									
M22×2	9840022QOX	2P~3P	ISO2	140	18	18	4	DIN374		
M22×1.5	7640022OX	2P~3P	ISO2	118	14	18	4	ISO529		
	9840022O			125				DIN374		
	9840022OOX									
	(9842022OX)									
M22×1	9840022MOX	2P~3P	ISO2	125	14	18	4	DIN374		
M24×3	7540024OX	2P~3P	ISO2	130	25	18	4	ISO529		
	9540024OX			110				DIN352		
	9740024			160				DIN376		
	9740024OX									
	(9742024OX)									
M24×2	7640024QOX	2P~3P	ISO2	130	18	18	4	ISO529		
	9840024QOX			140			4	DIN374		
M24×1.5	7640024OXX	2P~3P	ISO2	130	18	18	4	ISO529		
	9840024O			140				DIN374		
	9840024OXX									
M24×1	9840024MOX	2P~3P	ISO2	140	18	18	4	DIN374		
M25×2	7640025QOX	2P~3P	ISO2	130	18	18	4	ISO529		
M25×1.5	7640025OXX	2P~3P	ISO2	130	18	18	4	ISO529		
	9840025OXX			140				DIN374		
M25×1	9840025MOX	2P~3P	ISO2	140	18	18	4	DIN374		
M26×1.5	9840026OXX	2P~3P	ISO2	140	18	18	4	DIN374		
	7540027OX			135				20	4	DIN376
	9740027									
	9740027OX									
	(9742027OX)									
M27×2	9840027QOX	2P~3P	ISO2	140	20	20	4	DIN374		
M27×1.5	7640027OXX	2P~3P	ISO2	127	20	20	4	ISO529		
	9840027OXX			140				DIN374		
M27×1	9840027MOX	2P~3P	ISO2	140	20	20	4	DIN374		
M28×2	9840028QOX	2P~3P	ISO2	140	20	20	4	DIN374		
	7640028OXX			127				20	4	ISO529
	9840028OXX									
M28×1	9840028MOX	2P~3P	ISO2	140	20	20	4	DIN374		
M30×3.5	7540030OX	2P~3P	ISO2	138	30	22	4	ISO529		
	9740030			180				DIN376		
	9740030OX									
	(9742030OX)									
M30×2	9840030QOX	2P~3P	ISO2	150	20	22	4	DIN374		
M30×1.5	7640030OXX	2P~3P	ISO2	127	20	20	4	ISO529		
	9840030OXX			150				DIN374		

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M30×1	9840030MOX	2P~3P	ISO2	150	20	22	4	DIN374
M32×1.5	7640032OXX	2P~3P	ISO2	137	20	22.4	4	ISO529
	9840032OXX			150		22		DIN374
M33×3.5	9740033	2P~3P	ISO2	180	30	25	4	DIN376
	9740033OX							
M33×2	9840033QOX	2P~3P	ISO2	160	20	25	4	DIN374
M33×1.5	9840033OXX	2P~3P	ISO2	160	20	25	4	DIN374
M34×1.5	9840034OXX	2P~3P	ISO2	160	20	25	4	DIN374
M35×2	9840035QOX	2P~3P	ISO2	170	20	26	4	DIN374
M35×1.5	9840035OXX	2P~3P	ISO2	170	20	28	4	DIN374
	7540036OX			162				25
M36×4	9740036	2P~3P	ISO2		200	40	28	
	9740036OX							
M36×3	7640036SOX	2P~3P	ISO2	162	30	25	4	ISO529
	9840036SOX			200		28		DIN374
	9847036SOX			170		20		
M36×2	7640036QOX	2P~3P	ISO2	144	20	25	4	ISO529
	9840036QOX			170		28		DIN374
M36×1.5	7640036OXX	2P~3P	ISO2	144	20	25	4	ISO529
	9840036OXX			170		28		DIN374
M39×4	9740039	2P~3P	ISO2	200	40	32	4	DIN376
M39×3	9840039SOX	2P~3P	ISO2	170	25	32	4	DIN374
M39×1.5	9840039OXX	2P~3P	ISO2	170	25	32	4	DIN374
M42×4.5	7540042	2P~3P	ISO2	170	40	28	4	ISO529
	7540042OX			200				32
9740042								
M42×3	9840042SOX	2P~3P	ISO2	200	30	32	4	DIN374
M45×4.5	9740045	2P~3P	ISO2	220	45	36	4	DIN376
M45×1.5	7640045OXX	2P~3P	ISO2	165	25	31.5	4	ISO529
M48×5	9740048	2P~3P	ISO2	250	45	36	4	DIN376
	9740048OX							

For Unified Threads

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.4-40UNC	7340UN4HOX	2P~3P	2B	48	5	3.15	2	ISO529
No.4-48UNF	7340UN4FOX	2P~3P	2B	48	5	3.15	2	ISO529
No.5-40UNC	7340UN5HOX	2P~3P	2B	48	5	3.15	3	ISO529
No.6-32UNC	7340UN6JOX	2P~3P	2B	50	6	3.55	3	ISO529
No.6-40UNF	7340UN6HOX	2P~3P	2B	50	6	3.55	3	ISO529
No.8-32UNC	7340UN8JOX	2P~3P	2B	53	6.5	4.5	3	ISO529
No.8-36UNF	7340UN8IOX	2P~3P	2B	53	6.5	4.5	3	ISO529
No.10-24UNC	7340UNAMOX	2P~3P	2B	58	8	5	3	ISO529
No.10-32UNF	7340UNAJOX	2P~3P	2B	58	8	5	3	ISO529
No.12-24UNC	7340UNCMOX	2P~3P	2B	62	8.5	5.6	3	ISO529
No.12-28UNF	7340UNCCKOX	2P~3P	2B	62	8.5	5.6	3	ISO529
1/4-20UNC	7340U04N	2P~3P	2B	66	11	6.3	3	ISO529
	7340U04NOX							
1/4-28UNF	7340U04KOX	2P~3P	2B	66	11	6.3	3	ISO529

*Products which codes additionally have "OX" are provided as Oxidizing treated.

*Helix angle of the tap having designation () on its code is 45°.

EV-SP/EV-SP-OX Spiral Fluted Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
5/16-18UNC	7340U05OXX	2P~3P	2B	72	12	8	3	ISO529
	7340U05M 7340U05MOX	2P~3P	2B	72	12	8	3	ISO529
3/8-16UNC	7340U06P	2P~3P	2B	80	13	10	3	ISO529
	7340U06POX							
3/8-24UNF	7340U06MOX	2P~3P	2B	80	12	10	3	ISO529
7/16-14UNC	7740U07QOX	2P~3P	2B	85	14	8	3	ISO529
7/16-20UNF	7740U07NOX	2P~3P	2B	85	14	8	3	ISO529
1/2-13UNC	7740U08R	2P~3P	2B	89	15	9	3	ISO529
	7740U08ROX							
1/2-20UNF	7740U08N	2P~3P	2B	89	14	9	3	ISO529
	7740U08NOX							
9/16-12UNC	7740U09SOX	2P~3P	2B	95	18	11.2	3	ISO529
9/16-18UNF	7740U09OXX	2P~3P	2B	95	14	11.2	3	ISO529
5/8-11UNC	7740U10UOX	2P~3P	2B	102	18	12.5	3	ISO529
5/8-18UNF	7740U100	2P~3P	2B	102	14	12.5	3	ISO529
	7740U100OX							
3/4-10UNC	7740U12VOX	2P~3P	2B	112	20	14	4	ISO529
3/4-16UNF	7740U12POX	2P~3P	2B	112	14	14	4	ISO529
7/8-9UNC	7740U14WOX	2P~3P	2B	118	20	16	4	ISO529
7/8-14UNF	7740U14QOX	2P~3P	2B	118	18	16	4	ISO529
1'-8UNC	7740U16XOX	2P~3P	2B	130	25	18	4	ISO529
1'-12UNF	7740U16SOX	2P~3P	2B	130	18	18	4	ISO529

For G Threads

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
G1/8-28	9940R02	2P~3P	-	90	12	7	3	DIN5156
	9940R02OX							
G1/4-19	9940R04	2P~3P	-	100	14	11	3	DIN5156
	9940R04OX							
G3/8-19	9940R06	2P~3P	-	100	14	12	3	DIN5156
	9940R06OX							
G1/2-14	9940R08	2P~3P	-	125	18	16	4	DIN5156
	9940R08OX							
G5/8-14	9940R10OX	2P~3P	-	125	18	18	4	DIN5156
G3/4-14	9940R12	2P~3P	-	140	20	20	4	DIN5156
	9940R12OX							
G1'-11	9940R16	2P~3P	-	160	20	25	4	DIN5156
	9940R16OX							
G1'1/4-11	9940R20OX	2P~3P	-	170	20	32	4	DIN5156
G1'1/2-11	9940R24OX	2P~3P	-	190	25	36	4	DIN5156

AL-SP

Spiral Fluted Taps for Aluminum Die Castings and Castings



Segment : 1D



In aluminum die casting and aluminum casting tapping, AL-SP solve such problems as chip jamming, chip clogging, and torn threads.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M2x0.4	96432.0	2P~3P	ISO2	45	8	2.8	2	DIN371
M2.5x0.45	96432.5	2P~3P	ISO2	50	9	2.8	2	DIN371
M3x0.5	96433.0	2P~3P	ISO2	56	11	3.5	3	DIN371
M4x0.7	96434.0	2P~3P	ISO2	63	13	4.5	3	DIN371
M5x0.8	96435.0	2P~3P	ISO2	70	16	6	3	DIN371
M6x1	96436.0	2P~3P	ISO2	80	19	6	3	DIN371
M8x1.25	96438.0	2P~3P	ISO2	90	22	8	3	DIN371
M10x1.5	9643010	2P~3P	ISO2	100	24	10	3	DIN371
M12x1.75	9743012	2P~3P	ISO2	110	29	9	3	DIN376
M14x2	9743014	2P~3P	ISO2	110	30	11	3	DIN376
M16x2	9743016	2P~3P	ISO2	110	32	12	3	DIN376

LO-SP/LO-SP-OX

Low Spiral Fluted Taps



Segment : 1D



Spiral flutes with low helix break down chips and eject them smoothly. Suitable for thermal refined steels of high carbon steels and alloy tool steels. Suitable for horizontal tapping.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M2x0.4	96412.0	3.5P~5P	ISO2	45	8	2.8	2	DIN371
	96412.0OX							
M2.3x0.4	96412.3	3.5P~5P	ISO2	45	9	2.8	2	DIN371
M2.5x0.45	96412.5	3.5P~5P	ISO2	50	9	2.8	2	DIN371

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

LO-SP/LO-SP-OX Low Spiral Fluted Taps

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
M2.5x0.45	96412.5OX	3.5P~5P	ISO2	50	9	2.8	2	DIN371
M2.6x0.45	96412.6	3.5P~5P	ISO2	50	9	2.8	2	DIN371
	96412.6OX							
M3x0.5	66413.0	3.5P~5P	ISO2	56	11	3.5	2	DIN371
	96413.00X6G		ISO3					
	96413.0		ISO2					
	96413.00X							
	97413.00X							
M3.5x0.6	96413.5	3.5P~5P	ISO2	56	13	4	3	DIN371
	97413.5OX					2.5	2	DIN376
M4x0.7	96414.0	3.5P~5P	ISO2	63	13	4.5	3	DIN371
	96414.00X6G		ISO3					
	96414.00X		ISO2					
	97414.00X							
M5x0.8	96415.0+50	3.5P~5P	6H+0.05	70	16	6	3	DIN371
	96415.0		ISO2					
	96415.00X6G		ISO3					
	96415.00X		ISO2					
	97415.00X							
M5x0.5	98415.0GOX	3.5P~5P	ISO2	70	12	3.5	3	DIN374
M6x1	96416.0+50	3.5P~5P	6H+0.05	80	19	6	3	DIN371
	96416.0		ISO2					
	96416.00X6G		ISO3					
	96416.00X		ISO2					
	96416.00X+50		6H+0.05					
	97416.00X		ISO2					
M6x0.75	98416.0JOX	3.5P~5P	ISO2	80	14	4.5	3	DIN374
M7x1	96417.0OX	3.5P~5P	ISO2	80	19	7	3	DIN371
M8x1.25	96418.0+50	3.5P~5P	6H+0.05	90	22	8	3	DIN371
	96418.0		ISO2					
	96418.00X6G		ISO3					
	96418.00X		ISO2					
	96418.00X+50		6H+0.05					
	97418.00X		ISO2					
M8x1	98418.0M	3.5P~5P	ISO2	90	22	6	3	DIN374
	98418.0MOX							
M8x0.75	98418.0JOX	3.5P~5P	ISO2	80	19	6	3	DIN374
M10x1.5	9641010+50	3.5P~5P	6H+0.05	100	24	10	3	DIN371
	9641010		ISO2					
	96410100X6G		ISO3					
	96410100X		ISO2					
	96410100X+50		6H+0.05					
	97410100X		ISO2					
M10x1.25	9841010N	3.5P~5P	ISO2	100	24	7	3	DIN374
	9841010NOX							
M10x1	9841010MOX	3.5P~5P	ISO2	90	20	7	3	DIN374
	9841010M							
M10x0.75	9841010JOX	3.5P~5P	ISO2	90	20	7	3	DIN374

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
M12x1.75	9741012	3.5P~5P	ISO2	110	29	9	3	DIN376
	9741012OX6G		ISO3					
	9741012OX		ISO2					
M12x1.5	9841012O	3.5P~5P	ISO2	100	22	9	3	DIN374
	9841012OOX							
M12x1.25	9841012N	3.5P~5P	ISO2	100	22	9	3	DIN374
	9841012NOX							
M12x1	9841012MOX	3.5P~5P	ISO2	100	22	9	3	DIN374
	9841012M							
M14x2	9741014	3.5P~5P	ISO2	110	30	11	3	DIN376
	9741014OX6G		ISO3					
	9741014OX		ISO2					
M14x1.5	9841014O	3.5P~5P	ISO2	100	22	11	3	DIN374
	9841014OOX							
M14x1	9841014MOX	3.5P~5P	ISO2	100	22	11	3	DIN374
M16x2	9741016	3.5P~5P	ISO2	110	32	12	3	DIN376
	9741016OX6G		ISO3					
	9741016OX		ISO2					
M16x1.5	9841016OOX	3.5P~5P	ISO2	100	22	12	3	DIN374
	9841016O							
M16x1	9841016M	3.5P~5P	ISO2	100	22	12	3	DIN374
	9841016MOX							
M18x2.5	9741018OX	3.5P~5P	ISO2	125	34	14	4	DIN376
M18x1.5	9841018O	3.5P~5P	ISO2	110	25	14	4	DIN374
	9841018OOX							
M20x2.5	9741020	3.5P~5P	ISO2	140	34	16	4	DIN376
	9741020OX							
M20x2	9841020QOX	3.5P~5P	ISO2	140	34	16	4	DIN374
M20x1.5	9841020OOX	3.5P~5P	ISO2	125	25	16	4	DIN374
M20x1	9841020MOX	3.5P~5P	ISO2	125	25	16	4	DIN374
M22x2.5	9741022OX	3.5P~5P	ISO2	140	34	18	4	DIN376
M22x1.5	9841022OOX	3.5P~5P	ISO2	125	25	18	4	DIN374
M22x1	9841022MOX	3.5P~5P	ISO2	125	25	18	4	DIN374
M24x3	9741024	3.5P~5P	ISO2	160	38	18	4	DIN376
	9741024OX							
M24x2	9841024QOX	3.5P~5P	ISO2	140	28	18	4	DIN374
M24x1.5	9841024O	3.5P~5P	ISO2	140	28	18	4	DIN374
	9841024OOX							
M24x1	9841024MOX	3.5P~5P	ISO2	125	18	18	4	DIN374
M25x1.5	9841025OOX	3.5P~5P	ISO2	140	28	18	4	DIN374
M27x3	9741027OX	3.5P~5P	ISO2	160	38	20	4	DIN376
M27x2	9841027QOX	3.5P~5P	ISO2	140	28	20	4	DIN374
M28x1.5	9841028OOX	3.5P~5P	ISO2	105	45	21	4	DIN374
M28x1	9841028MOX	3.5P~5P	ISO2	140	30	20	4	DIN374
M30x3.5	9741030OX	3.5P~5P	ISO2	180	45	22	4	DIN376
	9741030							
M30x2	9841030QOX	3.5P~5P	ISO2	105	45	23	4	DIN374
M30x1.5	9841030OOX	3.5P~5P	ISO2	150	28	22	4	DIN374

*Products which codes additionally have "OX" are provided as Oxidizing treated.

LO-SP/LO-SP-OX Low Spiral Fluted Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For G Threads								
G1/8-28	9941R02	3.5P~5P	-	90	20	7	3	DIN5156
	9941R02OX							
G1/4-19	9941R04	3.5P~5P	-	100	22	11	3	DIN5156
	9941R04OX							
G3/8-19	9941R06	3.5P~5P	-	100	22	12	3	DIN5156
	9941R06OX							
G1/2-14	9941R08	3.5P~5P	-	125	25	16	4	DIN5156
	9941R08OX							
G3/4-14	9941R12OX	3.5P~5P	-	140	28	20	4	DIN5156
G1'-11	9941R16OX	3.5P~5P	-	160	30	25	4	DIN5156

MC-SP

Spiral Fluted Taps with Internal Coolant



Segment : 1D



Through internal coolant hole, satisfactory amount of oil is supplied to the exact cutting area.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M6×1	96406.0OH	2P~3P	ISO2	80	11	6	3	DIN371
M8×1.25	96408.0OH	2P~3P	ISO2	90	12	8	3	DIN371
M10×1.5	9640010OH	2P~3P	ISO2	100	13	10	3	DIN371
M12×1.75	9740012OH	2P~3P	ISO2	110	15	9	3	DIN376
M14×2	9740014OH	2P~3P	ISO2	110	18	11	3	DIN376
M16×2	9740016OH	2P~3P	ISO2	110	18	12	3	DIN376

PH-SP

Spiral Fluted Taps for Hard-to-Machine Materials



Segment : 1D



Suitable for hard steels of 35-45HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	96483.0	3P	ISO2	56	5	3.5	3	DIN371
M4×0.7	96484.0	3P	ISO2	63	7	4.5	3	DIN371
M5×0.8	96485.0	3P	ISO2	70	9	6	3	DIN371
M6×1	96486.0	3P	ISO2	80	11	6	3	DIN371
M8×1.25	96488.0	3P	ISO2	90	12	8	3	DIN371
M8×1	98488.0M	3P	ISO2	90	12	6	3	DIN374
M10×1.5	9648010	3P	ISO2	100	13	10	3	DIN371
M10×1.25	9848010N	3P	ISO2	100	12	7	3	DIN374
M10×1	9848010M	3P	ISO2	90	12	7	3	DIN374
M12×1.75	9748012	3P	ISO2	110	15	9	4	DIN376
M12×1.5	9848012O	3P	ISO2	100	14	9	4	DIN374
M12×1.25	9848012N	3P	ISO2	100	14	9	4	DIN374
M14×2	9748014	3P	ISO2	110	18	11	4	DIN376
M14×1.5	9848014O	3P	ISO2	100	14	11	4	DIN374
M16×2	9748016	3P	ISO2	110	18	12	4	DIN376
M16×1.5	9848016O	3P	ISO2	100	14	12	4	DIN374
M18×2.5	9748018	3P	ISO2	125	20	14	4	DIN376
M18×1.5	9848018O	3P	ISO2	110	14	14	4	DIN374
M20×2.5	9748020	3P	ISO2	140	20	16	4	DIN376
M20×1.5	9848020O	3P	ISO2	125	14	16	4	DIN374
M22×2.5	9748022	3P	ISO2	140	20	18	5	DIN376
M22×1.5	9848022O	3P	ISO2	125	14	18	5	DIN374
M24×3	9748024	3P	ISO2	160	25	18	5	DIN376
M24×2	9848024Q	3P	ISO2	140	18	18	5	DIN374
M24×1.5	9848024O	3P	ISO2	140	18	18	5	DIN374
M27×3	9748027	3P	ISO2	160	25	20	5	DIN376
M27×2	9848027Q	3P	ISO2	140	20	20	5	DIN374
M30×3.5	9748030	3P	ISO2	180	30	22	5	DIN376
M30×2	9848030Q	3P	ISO2	150	20	22	5	DIN374
M30×1.5	9848030O	3P	ISO2	150	20	22	5	DIN374
For G Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
G1/8-28	9948G02	3P	-	90	12	7	3	DIN5156

Overall length	Thread length	Shank dia.
L	ℓ	D _s

PH-SP Spiral Fluted Taps for Hard-to-Machine Materials

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
G1/4-19	9948G04	3P	-	100	14	11	4	DIN5156
G3/8-19	9948G06	3P	-	100	14	12	4	DIN5156
G1/2-14	9948G08	3P	-	125	18	16	4	DIN5156

E-SP

Spiral Fluted Taps for Soft Structural Steels



Segment : 1D



In tapping soft steel such as SS41, S25C, spiral fluted taps are prone to oversize cutting trouble. E-SP is the unique spiral fluted tap having fully solved this problem.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	96463.0	2P~3P	ISO2	56	5	3.5	3	DIN371
M4×0.7	96464.0	2P~3P	ISO2	63	7	4.5	3	DIN371
M5×0.8	96465.0	2P~3P	ISO2	70	9	6	3	DIN371
M6×1	96466.0	2P~3P	ISO2	80	11	6	3	DIN371
M8×1.25	96468.0	2P~3P	ISO2	90	12	8	3	DIN371
M10×1.5	9646010	2P~3P	ISO2	100	13	10	3	DIN371
M12×1.75	9746012	2P~3P	ISO2	110	15	9	3	DIN376
M14×2	9746014	2P~3P	ISO2	110	18	11	3	DIN376
M16×2	9746016	2P~3P	ISO2	110	18	12	3	DIN376
M18×2.5	9746018	2P~3P	ISO2	125	20	14	4	DIN376
M20×2.5	9746020	2P~3P	ISO2	140	20	16	4	DIN376
M22×2.5	9746022	2P~3P	ISO2	140	20	18	4	DIN376
M24×3	9746024	2P~3P	ISO2	160	25	18	4	DIN376

SP(LH)

Spiral Fluted Taps for Left Hand Threads



Segment : 1D



Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M4×0.7	96404.0LH	2P~3P	ISO2	63	7	4.5	3	DIN371
M5×0.8	96405.0LH	2P~3P	ISO2	70	9	6	3	DIN371
M6×1	96406.0LH	2P~3P	ISO2	80	11	6	3	DIN371
M8×1.25	96408.0LH	2P~3P	ISO2	90	12	8	3	DIN371
M8×1	98408.0MLH	2P~3P	ISO2	90	12	6	3	DIN374
M10×1.5	9640010LH	2P~3P	ISO2	100	13	10	3	DIN371
M12×1.75	9740012LH	2P~3P	ISO2	110	15	9	3	DIN376
M14×2	9740014LH	2P~3P	ISO2	110	18	11	3	DIN376
M16×2	9740016LH	2P~3P	ISO2	110	18	12	3	DIN376
M16×1.5	98400160LH	2P~3P	ISO2	100	14	12	3	DIN374
M18×2.5	9740018LH	2P~3P	ISO2	125	20	14	4	DIN376
M20×2.5	9740020LH	2P~3P	ISO2	140	20	16	4	DIN376

SP+VA

Spiral Fluted Taps for Stainless Steels



Segment : 1D



Applying the blanks of high toughness and high accuracy, SP+VA derive the maximum performance from high facility machining centers and high precision toolings, blind hole use

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	9685VP3.0	2P~3P	ISO2	56	6.5	4	3	DIN371
	9685VPM3.0							
M4×0.7	9685VP4.0	2P~3P	ISO2	63	9	6	3	DIN371
	9685VPM4.0							

SP+VA Spiral Fluted Taps for Stainless Steels

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M5×0.8	9685VP5.0	2P~3P	ISO2	70	10.5	6	3	DIN371
	9685VPM5.0							
M6×1	9685VP6.0	2P~3P	ISO2	80	15	6	3	DIN371
M8×1.25	9685VP8.0	2P~3P	ISO2	90	19	8	3	DIN371
M10×1.5	9685VP010	2P~3P	ISO2	100	23	10	4	DIN371
M12×1.75	9685VP012	2P~3P	ISO2	110	26	12	3	DIN371

SP-VA/SP-VA TiCN Spiral Fluted Taps for Stainless Steels

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M10×1.25	9845010N	2P~3P	ISO2	100	12	7	3	DIN374
M10×1	9845010M	2P~3P	ISO2	90	12	7	3	DIN374
M12×1.75	9745012	2P~3P	ISO2	110	15	9	3	DIN376
	9745012TC							
	97450126G		ISO3					
M12×1.5	9845012O	2P~3P	ISO2	100	14	9	3	DIN374
M12×1.25	9845012N	2P~3P	ISO2	100	14	9	3	DIN374
M12×1	9845012M	2P~3P	ISO2	100	14	9	3	DIN374
M14×2	9745014	2P~3P	ISO2	110	18	11	3	DIN376
	9745014TC							
M14×1.5	9845014O	2P~3P	ISO2	100	14	11	3	DIN374
M14×1	9845014M	2P~3P	ISO2	100	14	11	3	DIN374
M16×2	9745016	2P~3P	ISO2	110	18	12	3	DIN376
	9745016TC							
M16×1.5	9845016O	2P~3P	ISO2	100	14	12	3	DIN374
M18×2.5	9745018	2P~3P	ISO2	125	20	14	4	DIN376
M18×1.5	9845018O	2P~3P	ISO2	110	14	14	4	DIN374
M20×2.5	9745020	2P~3P	ISO2	140	20	16	4	DIN376
	9745020TC							
M20×1.5	9845020O	2P~3P	ISO2	125	14	16	4	DIN374
M22×2.5	9745022	2P~3P	ISO2	140	20	18	4	DIN376
M22×1.5	9845022O	2P~3P	ISO2	125	14	18	4	DIN374
M24×3	9745024	2P~3P	ISO2	160	25	18	4	DIN376
M24×1.5	9845024O	2P~3P	ISO2	140	18	18	4	DIN374
M27×3	9745027	2P~3P	ISO2	160	25	20	4	DIN376
M30×3.5	9745030	2P~3P	ISO2	180	30	22	4	DIN376
M36×4	9745036	2P~3P	ISO2	200	40	28	4	DIN376

SP-VA/SP-VA TiCN

Spiral Fluted Taps for Stainless Steels



Segment : 1D



Suitable for stainless steels tending to work-harden as well as chrome steels and molybdenum steels, blind hole use

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M2×0.4	96452.0	2P~3P	ISO2	45	4	2.8	2	DIN371
M2.5×0.45	96452.5	2P~3P	ISO2	50	4	2.8	2	DIN371
M3×0.5	96453.0	2P~3P	ISO2	56	5	3.5	2	DIN371
	96453.0TC							
	96453.06G		ISO3					
M4×0.7	96454.0	2P~3P	ISO2	63	7	4.5	3	DIN371
	96454.0TC							
	96454.06G		ISO3					
M5×0.8	96455.0	2P~3P	ISO2	70	9	6	3	DIN371
	96455.0TC							
	96455.06G		ISO3					
M6×1	96456.0	2P~3P	ISO2	80	11	6	3	DIN371
	96456.0TC							
	96456.06G		ISO3					
M8×1.25	96458.0	2P~3P	ISO2	90	12	8	3	DIN371
	96458.0TC							DIN376
	97458.0		ISO3			8		DIN371
	96458.06G					DIN371		
M8×1	98458.0M	2P~3P	ISO2	90	12	6	3	DIN374
M10×1.5	9645010	2P~3P	ISO2	100	13	10	3	DIN371
	9645010TC							DIN376
	9745010		ISO3			7		DIN376
	96450106G					DIN371		

For Unified Threads

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.4-40UNC	9345UN4H	2P~3P	2B	56	5	3.5	2	DIN371
No.6-32UNC	9345UN6J	2P~3P	2B	56	6	4	3	DIN371
No.8-32UNC	9345UN8J	2P~3P	2B	63	6.5	4.5	3	DIN371
No.10-24UNC	9345UNAM	2P~3P	2B	70	8	6	3	DIN371
No.10-32UNF	9345UNAJ	2P~3P	2B	70	8	6	3	DIN371
1/4-20UNC	9345U04N	2P~3P	2B	80	10	7	3	DIN371
1/4-28UNF	9345U04K	2P~3P	2B	80	8.5	7	3	DIN371
5/16-18UNC	9345U05O	2P~3P	2B	90	11	8	3	DIN371
5/16-24UNF	9445U05M	2P~3P	2B	90	9	6	3	DIN374
3/8-16UNC	9345U06P	2P~3P	2B	100	13	9	3	DIN371
3/8-24UNF	9445U06M	2P~3P	2B	100	9	7	3	DIN374
7/16-14UNC	9445U07Q	2P~3P	2B	100	14	8	3	DIN376
7/16-20UNF	9445U07N	2P~3P	2B	100	14	8	3	DIN374
1/2-13UNC	9445U08R	2P~3P	2B	110	15	9	3	DIN376
1/2-20UNF	9445U08N	2P~3P	2B	100	15	9	3	DIN374
9/16-12UNC	9445U09S	2P~3P	2B	110	17	11	3	DIN376
9/16-18UNF	9445U09O	2P~3P	2B	100	17	11	3	DIN374
5/8-11UNC	9445U10U	2P~3P	2B	110	18	12	3	DIN376

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

SP-VA/SP-VA TiCN Spiral Fluted Taps for Stainless Steels

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
5/8-18UNF	9445U100	2P~3P	2B	100	17	12	3	DIN374
3/4-10UNC	9445U12V	2P~3P	2B	125	20	14	4	DIN376
3/4-16UNF	9445U12P	2P~3P	2B	110	17	14	4	DIN374
7/8-9UNC	9445U14W	2P~3P	2B	140	22	18	4	DIN376
7/8-14UNF	9445U14Q	2P~3P	2B	125	18	18	4	DIN374
1'-8UNC	9445U16X	2P~3P	2B	160	25	18	4	DIN376
1'-12UNF	9445U16S	2P~3P	2B	140	18	18	4	DIN374
For G Threads								
Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
G1/8-28	9945G02	2P~3P	-	90	12	7	3	DIN5156
G1/4-19	9945G04	2P~3P	-	100	14	11	3	DIN5156
G3/8-19	9945G06	2P~3P	-	100	14	12	4	DIN5156
G1/2-14	9945G08	2P~3P	-	125	18	16	4	DIN5156

SP-BLF/SP-BLF-OX Spiral Fluted Taps, BLF design

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
M14x2	9747014OX	2P~3P	ISO2	110	30	11	3	DIN376
M16x2	9747016	2P~3P	ISO2	110	32	12	3	DIN376
	9747016OX							
M18x2.5	9747018	2P~3P	ISO2	125	34	14	4	DIN376
	9747018OX							
M20x2.5	9747020	2P~3P	ISO2	140	34	16	4	DIN376
	9747020OX							
M22x2.5	9747022	2P~3P	ISO2	140	34	18	4	DIN376
	9747022OX							
M24x3	9747024	2P~3P	ISO2	160	38	18	4	DIN376
	9747024OX							
M27x3	9747027OX	2P~3P	ISO2	160	38	20	4	DIN376
M30x3.5	9747030	2P~3P	ISO2	180	45	22	4	DIN376
	9747030OX							
M33x3.5	9747033OX	2P~3P	ISO2	180	50	25	4	DIN376
M36x4	9747036	2P~3P	ISO2	200	56	28	4	DIN376
	9747036OX							
M39x4	9747039OX	2P~3P	ISO2	200	60	32	4	DIN376

SP-BLF/SP-BLF-OX

Spiral Fluted Taps, BLF design



Segment : 1D



Leaving some first full threads unchanged, SP-BLF/SP-BLF OX have the crests of other remaining threads removed. These special geometry and special flute design maintain good chip ejection and reduce wear friction.

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3x0.5	96473.0	2P~3P	ISO2	56	11	3.5	3	DIN371
	96473.0OX							
M4x0.7	96474.0	2P~3P	ISO2	63	13	4.5	3	DIN371
	96474.0OX							
M5x0.8	96475.0	2P~3P	ISO2	70	16	6	3	DIN371
	96475.0OX							
M6x1	96476.0	2P~3P	ISO2	80	19	6	3	DIN371
	96476.0OX							
M8x1.25	96478.0	2P~3P	ISO2	90	22	8	3	DIN371
	96478.0OX							
M10x1.5	9647010	2P~3P	ISO2	100	24	10	3	DIN371
	9647010OX							
M12x1.75	9747012	2P~3P	ISO2	110	29	9	3	DIN376
	9747012OX							
M14x2	9747014	2P~3P	ISO2	110	30	11	3	DIN376

SU2-SP

Spiral Fluted Taps for Tough Stainless Steels



Segment : 1D



Most suitable for such tough stainless steels as SUS316 and SUS317, blind hole use

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3x0.5	96443.0	2P~3P	ISO2	56	11	3.5	3	DIN371
M4x0.7	96444.0	2P~3P	ISO2	63	13	4.5	3	DIN371
M5x0.8	96445.0	2P~3P	ISO2	70	16	6	3	DIN371
M6x1	96446.0	2P~3P	ISO2	80	19	6	3	DIN371
M8x1.25	96448.0	2P~3P	ISO2	90	22	8	3	DIN371
M10x1.5	9644010	2P~3P	ISO2	100	24	10	3	DIN371
M12x1.75	9744012	2P~3P	ISO2	110	29	9	4	DIN376
M14x2	9744014	2P~3P	ISO2	110	30	11	4	DIN376
M16x2	9744016	2P~3P	ISO2	110	32	12	4	DIN376
M18x2.5	9744018	2P~3P	ISO2	125	34	14	4	DIN376
M20x2.5	9744020	2P~3P	ISO2	140	34	16	4	DIN376

*Products which codes additionally have "OX" are provided as Oxidizing treated.

SU2-SP Spiral Fluted Taps for Tough Stainless Steels

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M22×2.5	9744022	2P~3P	ISO2	140	34	18	4	DIN376
M24×3	9744024	2P~3P	ISO2	160	38	18	4	DIN376

ZEN-B Spiral Fluted Taps for Nickel Alloys

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
1/4-28UNF	1340U04K	2P~3P	2BX	80	8.5	7	3	DIN371
5/16-18UNC	1340U05O	2P~3P	2BX	90	11	8	3	DIN371
5/16-24UNF	1440U05M	2P~3P	2BX	90	9	6	3	DIN374
3/8-16UNC	1340U06P	2P~3P	2BX	100	13	9	3	DIN371
3/8-24UNF	1440U06M	2P~3P	2BX	100	9	7	3	DIN374
7/16-20UNC	1440U07N	2P~3P	2BX	100	14	8	3	DIN374
1/2-13UNF	1440U08R	2P~3P	2BX	110	15	9	3	DIN376
1/2-20UNC	1440U08N	2P~3P	2BX	100	15	9	3	DIN374
9/16-18UNF	1440U09O	2P~3P	2BX	100	17	11	3	DIN374

ZEN-B

Spiral Fluted Taps for Nickel Alloys



Segment : 1D



ZEN-B is the tap for nickel base alloys which, with nickel as main composition, have higher corrosion resistance and higher heat resistance than steels.

ZET-B

Spiral Fluted Taps for Titanium Alloys



Segment : 1D



ZET-B is suitable for titanium alloys which, having titanium as the main component, are tough, light, and heat resistant.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	16403.0	2P~3P	ISO2X	56	5	3.5	3	DIN371
M4×0.7	16404.0	2P~3P	ISO2X	63	7	4.5	3	DIN371
M5×0.8	16405.0	2P~3P	ISO2X	70	9	6	3	DIN371
M6×1	16406.0	2P~3P	ISO2X	80	11	6	3	DIN371
M8×1.25	16408.0	2P~3P	ISO2X	90	12	8	3	DIN371
M10×1.5	1640010	2P~3P	ISO2X	100	13	10	3	DIN371
M10×1.25	1840010N	2P~3P	ISO2X	100	12	7	3	DIN374
M12×1.75	1740012	2P~3P	ISO2X	110	15	9	3	DIN376
M12×1.5	1840012O	2P~3P	ISO2X	100	14	9	3	DIN374
M12×1.25	1840012N	2P~3P	ISO2X	100	14	9	3	DIN374
M14×2	1740014	2P~3P	ISO2X	110	18	11	3	DIN376
M14×1.5	1840014O	2P~3P	ISO2X	100	14	11	3	DIN374
M16×2	1740016	2P~3P	ISO2X	110	18	12	3	DIN376
M16×1.5	1840016O	2P~3P	ISO2X	100	14	12	3	DIN374
M18×2.5	1740018	2P~3P	ISO2X	125	20	14	4	DIN376
M20×2.5	1740020	2P~3P	ISO2X	140	20	16	4	DIN376
M22×2.5	1740022	2P~3P	ISO2X	140	20	18	4	DIN376
M24×3	1740024	2P~3P	ISO2X	160	25	18	4	DIN376
For Unified Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.4-40UNC	1340UN4H	2P~3P	2BX	56	5	3.5	3	DIN371
No.6-32UNC	1340UN6J	2P~3P	2BX	56	6	4	3	DIN371
No.8-32UNC	1340UN8J	2P~3P	2BX	63	6.5	4.5	3	DIN371
No.10-24UNC	1340UNAM	2P~3P	2BX	70	8	6	3	DIN371
No.10-32UNF	1340UNAJ	2P~3P	2BX	70	8	6	3	DIN371
1/4-20UNC	1340U04N	2P~3P	2BX	80	10	7	3	DIN371

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M4×0.7	16414.0	2P~3P	ISO2X	63	7	4.5	3	DIN371
M5×0.8	16415.0	2P~3P	ISO2X	70	9	6	3	DIN371
M6×1	16416.0	2P~3P	ISO2X	80	11	6	3	DIN371
M8×1.25	16418.0	2P~3P	ISO2X	90	12	8	3	DIN371
M10×1.5	1641010	2P~3P	ISO2X	100	13	10	3	DIN371
M10×1.25	1841010N	2P~3P	ISO2X	100	12	7	3	DIN374
M12×1.75	1741012	2P~3P	ISO2X	110	15	9	3	DIN376
M12×1.5	1841012O	2P~3P	ISO2X	100	14	9	3	DIN374
M12×1.25	1841012N	2P~3P	ISO2X	100	14	9	3	DIN374
M14×2	1741014	2P~3P	ISO2X	110	18	11	3	DIN376
M14×1.5	1841014O	2P~3P	ISO2X	100	14	11	3	DIN374
M16×2	1741016	2P~3P	ISO2X	110	18	12	4	DIN376
M16×1.5	1841016O	2P~3P	ISO2X	100	14	12	4	DIN374
M18×2.5	1741018	2P~3P	ISO2X	125	20	14	4	DIN376
M20×2.5	1741020	2P~3P	ISO2X	140	20	16	4	DIN376
M22×2.5	1741022	2P~3P	ISO2X	140	20	18	4	DIN376
M24×3	1741024	2P~3P	ISO2X	160	25	18	4	DIN376

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

ZET-B Spiral Fluted Taps for Titanium Alloys

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Unified Threads								
No.4-40UNC	1341UN4H	2P~3P	2BX	56	5	3.5	3	DIN371
No.6-32UNC	1341UN6J	2P~3P	2BX	56	6	4	3	DIN371
No.6-40UNF	1341UN6H	2P~3P	2BX	56	6	4	3	DIN371
No.8-32UNC	1341UN8J	2P~3P	2BX	63	6.5	4.5	3	DIN371
No.10-24UNC	1341UNAM	2P~3P	2BX	70	8	6	3	DIN371
No.10-32UNF	1341UNAJ	2P~3P	2BX	70	8	6	3	DIN371
1/4-20UNC	1341U04N	2P~3P	2BX	80	10	7	3	DIN371
1/4-28UNF	1341U04K	2P~3P	2BX	80	8.5	7	3	DIN371
5/16-18UNC	1341U05O	2P~3P	2BX	90	11	8	3	DIN371
5/16-24UNF	1441U05M	2P~3P	2BX	90	9	6	3	DIN374
3/8-16UNC	1341U06P	2P~3P	2BX	100	13	9	3	DIN371
3/8-24UNF	1441U06M	2P~3P	2BX	100	9	7	3	DIN374
1/2-13UNC	1441U08R	2P~3P	2BX	110	15	9	3	DIN376
1/2-20UNF	1441U08N	2P~3P	2BX	100	15	9	3	DIN374
5/8-11UNC	1441U10U	2P~3P	2BX	110	18	12	4	DIN376
3/4-10UNC	1441U12V	2P~3P	2BX	125	20	14	4	DIN376

PO/PO-OX

Spiral Pointed Taps



Segment : 1F



Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3x0.5	96303.06G	3.5P~5P	ISO3	56	11	3.5	3	DIN371
M8x1.25	96308.06G	3.5P~5P	ISO3	90	22	8	3	DIN371
M12x1.75	97300126G	3.5P~5P	ISO3	110	29	9	3	DIN376
No.4-40UNC	7330UN4H	3.5P~5P	2B	48	11	3.15	2	ISO529
For Unified Threads								
Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
5/16-18UNC	7330U05OOX	3.5P~5P	2B	72	22	8	3	ISO529
5/16-24UNF	7330U05MOX	3.5P~5P	2B	72	22	8	3	ISO529
3/8-16UNC	7330U06POX	3.5P~5P	2B	80	24	10	3	ISO529
1/2-13UNC	7730U08ROX	3.5P~5P	2B	89	29	9	3	ISO529
1/2-20UNF	7730U08NOX	3.5P~5P	2B	89	29	9	3	ISO529
9/16-12UNC	7730U09SOX	3.5P~5P	2B	95	30	11.2	3	ISO529
5/8-11UNC	7730U10UOX	3.5P~5P	2B	102	32	12.5	3	ISO529
5/8-18UNF	7730U10OOX	3.5P~5P	2B	102	32	12.5	3	ISO529
7/8-9UNC	7730U14WOX	3.5P~5P	2B	118	38	16	3	ISO529
1"-8UNC	7730U16XOX	3.5P~5P	2B	130	45	18	3	ISO529

*Products which codes additionally have "OX" are provided as Oxidizing treated.

N-PO

Spiral Pointed Taps



Segment : 1F



EV-PO/EV-PO-OX/EV-PO NX

Spiral Pointed Taps



Segment : 1F



Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M6×1	N97306.0OX	3.5P~5P	ISO2	80	19	4.5	3	DIN376
M8×1.25	N96308.0	3.5P~5P	ISO2	90	22	8	3	DIN371
M10×1.5	N9630010+100	3.5P~5P	6H+0.10	100	24	10	3	DIN371
M10×1.25	N9830010N	3.5P~5P	ISO2	100	24	7	3	DIN374
M12×1.25	N9830012N	3.5P~5P	ISO2	100	22	9	4	DIN374
For Unified Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.4-40UNC	N9330UN4H	3.5P~5P	2B	56	11	3.5	3	DIN371
No.6-32UNC	N9330UN6J	3.5P~5P	2B	56	12	4	3	DIN371
No.8-32UNC	N9330UN8J	3.5P~5P	2B	63	13	4.5	3	DIN371
No.10-32UNF	N9330UNAJ	3.5P~5P	2B	70	14	6	3	DIN371
1/4-28UNF	N9330U04K	3.5P~5P	2B	80	16	7	3	DIN371
1/4-20UNC	N9330U04N	3.5P~5P	2B	80	17	7	3	DIN371
5/16-18UNC	N9330U05O	3.5P~5P	2B	90	20	8	3	DIN371
3/8-16UNC	N9330U06P	3.5P~5P	2B	100	22	9	3	DIN371
3/8-24UNF	N9430U06M	3.5P~5P	2B	100	18	7	3	DIN374
7/16-20UNF	N9430U07N	3.5P~5P	2B	100	20	8	3	DIN374
1/2-13UNC	N9430U08R	3.5P~5P	2B	110	25	9	3	DIN376
9/16-18UNF	N9430U09O	3.5P~5P	2B	100	22	11	3	DIN374
5/8-11UNC	N9430U10U	3.5P~5P	2B	110	28	12	3	DIN376
5/8-18UNF	N9430U10O	3.5P~5P	2B	100	22	12	3	DIN374
3/4-10UNC	N9430U12V	3.5P~5P	2B	125	32	14	3	DIN376
3/4-16UNF	N9430U12P	3.5P~5P	2B	110	25	14	3	DIN374
7/8-14UNF	N9430U14Q	3.5P~5P	2B	125	26	18	3	DIN374
1'-8UNC	N9430U16X	3.5P~5P	2B	160	36	18	3	DIN376
1'-12UNF	N9430U16S	3.5P~5P	2B	140	28	18	3	DIN376

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M1.4×0.3	96301.4	3.5P~5P	ISO2	40	7	2.5	2	DIN371
M1.6×0.35	96301.6	3.5P~5P	ISO2	40	8	2.5	2	DIN371
M1.7×0.35	96301.7	3.5P~5P	ISO2	40	8	2.5	2	DIN371
M2×0.4	71302.0	3.5P~5P	ISO2	41	8	2.5	2	ISO529
	71302.0NX							DIN352
	95302.0							DIN371
	96302.0							DIN371
M2.2×0.45	96302.2	3.5P~5P	ISO2	45	9	2.8	3	DIN371
M2.3×0.4	96302.3	3.5P~5P	ISO2	45	9	2.8	3	DIN371
M2.5×0.45	71302.5	3.5P~5P	ISO2	44.5	9.5	2.8	2	ISO529
	71302.5NX							DIN371
	96302.5							DIN371
M2.6×0.45	96302.6	3.5P~5P	ISO2	50	9	2.8	3	DIN371
M3×0.5	71303.0	3.5P~5P	ISO2	48	11	3.5	3	ISO529
	71303.0NX							DIN352
	95303.0							DIN371
	96303.0							DIN371
	96303.0NX							DIN371
	96303.0OX							DIN371
	96333.0							DIN376
	97303.0							DIN376
M3.5×0.6	71303.5	3.5P~5P	ISO2	50	13	3.55	3	ISO529
	96303.5							DIN371
	96303.5OX							DIN371
M4×0.7	71304.0	3.5P~5P	ISO2	53	13	4.5	3	ISO529
	71304.0NX							DIN352
	95304.0							DIN371
	96304.0							DIN371
	96304.0NX							DIN371
	96304.0OX							DIN371
	96334.0							DIN376
	97304.0							DIN376
	96304.06G							ISO3
M4×0.5	98304.0G	3.5P~5P	ISO2	63	10	2.8	3	DIN374

*Products which codes additionally have "NX" are provided as Nitriding/Oxidizing treated.

*Products which codes additionally have "OX" are provided as Oxidizing treated.

*Concerning specification, please refer to spec dwg. P84 of technical information.

Overall length	Thread length	Shank dia.
L	ℓ	D _s

EV-PO/EV-PO-OX/EV-PO NX Spiral Pointed Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type	
M5×0.8	71305.0	3.5P~5P	ISO2	58	16	5	3	ISO529	
	71305.0NX							DIN352	
	95305.0			70		6	2	3	DIN371
	96305.0								DIN376
	96305.0NX			70		6	3	3	DIN371
	96305.0OX								DIN376
	96335.0			70		6	3	3	DIN371
	97305.0								DIN376
	97305.0OX			70		6	3	3	DIN371
	96305.06G								DIN371
M5×0.5	98305.0G	3.5P~5P	ISO2	70	12	3.5	3	DIN374	
M6×1	71306.0	3.5P~5P	ISO2	66	19	6.3	3	ISO529	
	71306.0NX							DIN352	
	95306.0			80		6	4.5	3	DIN371
	96306.0								DIN376
	96306.0NX			80		6	4.5	3	DIN371
	96306.0OX								DIN376
	96336.0			80		6	6	3	DIN371
	97306.0								DIN376
	97306.0OX			80		6	6	3	DIN371
	96306.06G								DIN371
M6×0.75	98306.0J	3.5P~5P	ISO2	80	14	4.5	3	DIN374	
M6×0.5	98306.0G	3.5P~5P	ISO2	80	14	4.5	3	DIN374	
M7×1	96307.0	3.5P~5P	ISO2	80	19	7	3	DIN371	
M8×1.25	71308.0	3.5P~5P	ISO2	72	22	8	3	ISO529	
	71308.0NX							DIN352	
	95308.0			90		8	6	3	DIN371
	96308.0								DIN376
	96308.0NX			90		8	6	3	DIN371
	96308.0OX								DIN376
	96338.0			90		8	6	3	DIN371
	97308.0								DIN376
	97308.0NX			90		8	6	3	DIN371
	97308.0OX								DIN376
M8×1	98308.0M	3.5P~5P	ISO2	90	22	6	3	DIN374	
M8×0.75	98308.0J	3.5P~5P	ISO2	80	19	6	3	DIN374	
M10×1.5	7130010	3.5P~5P	ISO2	80	24	10	3	ISO529	
	7130010NX							DIN352	
	7130010OX			70		7	3	DIN371	
	9530010							DIN376	
	9630010			100		10	7	3	DIN371
	9630010NX								DIN376
	9630010OX			100		10	7	3	DIN371
	9633010								DIN376
	9730010			100		10	7	3	DIN371
	9730010NX								DIN376
	9730010OX			100		10	7	3	DIN371
	96300106G								DIN371

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type	
M10×1.25	9830010N	3.5P~5P	ISO2	100	24	7	3	DIN374	
M10×1	9830010M	3.5P~5P	ISO2	90	20	7	3	DIN374	
M10×0.75	9830010J	3.5P~5P	ISO2	90	20	7	3	DIN374	
M12×1.75	7530012	3.5P~5P	ISO2	89	29	9	3	ISO529	
	7530012NX							DIN352	
	9530012			110			4	3	DIN376
	9730012								DIN376
	9730012NX								DIN376
9730012OX	DIN376								
9733012	DIN376								
M12×1.5	9830012O	3.5P~5P	ISO2	100	22	9	4	DIN374	
M12×1.25	9830012N	3.5P~5P	ISO2	100	22	9	4	DIN374	
M12×1	9830012M	3.5P~5P	ISO2	100	22	9	4	DIN374	
M14×2	7530014	3.5P~5P	ISO2	95	30	11.2	3	ISO529	
	9730014							DIN376	
	9730014OX			DIN376					
M14×1.5	9830014O	3.5P~5P	ISO2	100	22	11	4	DIN374	
M14×1.25	9830014N	3.5P~5P	ISO2	100	22	11	4	DIN374	
M14×1	9830014M	3.5P~5P	ISO2	100	22	11	4	DIN374	
M16×2	7530016	3.5P~5P	ISO2	102	32	12.5	3	ISO529	
	7530016NX							DIN376	
	9730016			110		12	3	DIN376	
	9730016OX							DIN376	
M16×1.5	9830016O	3.5P~5P	ISO2	100	22	12	4	DIN374	
M16×1	9830016M	3.5P~5P	ISO2	100	22	12	4	DIN374	
M18×2.5	7530018	3.5P~5P	ISO2	112	37	14	3	ISO529	
	9730018							DIN376	
	9730018OX			DIN376					
M18×2	9830018Q	3.5P~5P	ISO2	125	34	14	4	DIN374	
M18×1.5	9830018O	3.5P~5P	ISO2	110	25	14	4	DIN374	
M18×1	9830018M	3.5P~5P	ISO2	110	25	14	4	DIN374	
M20×2.5	7530020	3.5P~5P	ISO2	112	40	14	3	ISO529	
	7530020NX							DIN352	
	9530020			140		34	4	DIN376	
	9730020							DIN376	
9730020OX	DIN376								
M20×2	9830020Q	3.5P~5P	ISO2	140	34	16	4	DIN374	
M20×1.5	9830020O	3.5P~5P	ISO2	125	25	16	4	DIN374	
M20×1	9830020M	3.5P~5P	ISO2	125	25	16	4	DIN374	
M22×2.5	9730022	3.5P~5P	ISO2	140	34	18	3	DIN376	
M22×1.5	9830022O	3.5P~5P	ISO2	125	25	18	3	DIN374	
M22×1	9830022M	3.5P~5P	ISO2	125	25	18	4	DIN374	
M24×3	7530024	3.5P~5P	ISO2	130	45	18	3	ISO529	
	7530024NX							DIN352	
	9730024			160			38	3	DIN376
	9730024NX								DIN376
9730024OX	DIN376								
M24×2	9830024Q	3.5P~5P	ISO2	140	28	18	4	DIN374	

*Products which codes additionally have "NX" are provided as Nitriding/Oxidizing treated.

*Products which codes additionally have "OX" are provided as Oxidizing treated.

EV-PO/EV-PO-OX/EV-PO NX Spiral Pointed Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M24×1.5	9830024O	3.5P~5P	ISO2	140	28	18	4	DIN374
M24×1	9830024M	3.5P~5P	ISO2	140	28	18	4	DIN374
M25×1.5	9830025O	3.5P~5P	ISO2	140	28	18	4	DIN374
M26×1.5	9830026O	3.5P~5P	ISO2	140	28	18	4	DIN374
M27×3	7530027	3.5P~5P	ISO2	135	45	20	4	ISO529
	9730027			160	38			DIN376
M27×2	9830027Q	3.5P~5P	ISO2	140	28	20	4	DIN374
M27×1.5	9830027O	3.5P~5P	ISO2	140	28	20	4	DIN374
M28×1.5	9830028O	3.5P~5P	ISO2	140	28	20	4	DIN374
M28×1	9830028M	3.5P~5P	ISO2	140	28	20	4	DIN374
M30×3.5	7530030	3.5P~5P	ISO2	138	48	20	4	ISO529
	7530030NX							DIN376
	9730030			180	45	22		DIN376
	9730030OX							DIN376
M30×2	9830030Q	3.5P~5P	ISO2	150	28	22	4	DIN374
M30×1.5	9830030O	3.5P~5P	ISO2	150	28	22	4	DIN374
M33×3.5	9730033	3.5P~5P	ISO2	180	50	25	4	DIN376
M33×2	9830033Q	3.5P~5P	ISO2	160	30	25	4	DIN374
M36×4	9730036	3.5P~5P	ISO2	200	56	28	4	DIN376
	9730036OX							DIN376
M36×1.5	9830036O	3.5P~5P	ISO2	170	30	28	4	DIN374
For Unified Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.6-32UNC	7330UN6J	3.5P~5P	2B	50	13	3.55	3	ISO529
No.8-32UNC	7330UN8J	3.5P~5P	2B	53	13	4.5	3	ISO529
No.10-24UNC	7330UNAM	3.5P~5P	2B	58	16	5	3	ISO529
No.10-32UNF	7330UNAJ	3.5P~5P	2B	58	16	5	3	ISO529
No.10-24UNC	7330UNCM	3.5P~5P	2B	58	16	5	3	ISO529
1/4-20UNC	7330U04N	3.5P~5P	2B	66	19	6.3	3	ISO529
	7330U04NOX							ISO529
1/4-28UNF	7330U04K	3.5P~5P	2B	66	19	6.3	3	ISO529
5/16-18UNC	7330U05O	3.5P~5P	2B	72	22	8	3	ISO529
5/16-24UNF	7330U05M	3.5P~5P	2B	72	22	8	3	ISO529
3/8-16UNC	7330U06P	3.5P~5P	2B	80	24	10	3	ISO529
3/8-24UNF	7330U06M	3.5P~5P	2B	80	24	10	3	ISO529
	7330U06MOX							ISO529
7/16-14UNC	7730U07Q	3.5P~5P	2B	85	25	8	3	ISO529
7/16-20UNF	7730U07N	3.5P~5P	2B	85	25	8	3	ISO529
	7730U07NOX							ISO529
1/2-13UNC	7730U08R	3.5P~5P	2B	89	29	9	3	ISO529
1/2-20UNF	7730U08N	3.5P~5P	2B	89	29	9	3	ISO529
9/16-18UNF	7730U09O	3.5P~5P	2B	95	30	11.2	3	ISO529
5/8-11UNC	7730U10U	3.5P~5P	2B	102	32	12.5	3	ISO529
5/8-18UNF	7730U10O	3.5P~5P	2B	102	32	12.5	3	ISO529
3/4-10UNC	7730U12V	3.5P~5P	2B	112	37	14	3	ISO529
	7730U12VOX							ISO529
3/4-16UNF	7730U12P	3.5P~5P	2B	112	37	14	3	ISO529

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
7/8-9UNC	7730U14W	3.5P~5P	2B	118	38	16	3	ISO529
7/8-14UNF	7730U14Q	3.5P~5P	2B	118	38	16	3	ISO529
1'-8UNC	7730U16X	3.5P~5P	2B	130	45	18	3	ISO529
1'-12UNF	7730U16S	3.5P~5P	2B	130	45	18	3	ISO529
For G Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
G1/8-28	9930R02	3.5P~5P	-	90	20	7	3	DIN5156
	9930R02NX							DIN5156
	9930R02OX							DIN5156
G1/4-19	9930R04	3.5P~5P	-	100	22	11	3	DIN5156
	9930R04OX							DIN5156
G3/8-19	9930R06	3.5P~5P	-	100	22	12	3	DIN5156
	9930R06OX							DIN5156
G1/2-14	9930R08	3.5P~5P	-	125	25	16	3	DIN5156
	9930R08OX							DIN5156
G5/8-14	9930R10	3.5P~5P	-	125	25	18	3	DIN5156
G3/4-14	9930R12	3.5P~5P	-	140	28	20	4	DIN5156
	9930R12NX							DIN5156
	9930R12OX							DIN5156
G1'-11	9930R16	3.5P~5P	-	160	30	25	4	DIN5156
	9930R16OX							DIN5156
G1'1/4-11	9930R20	3.5P~5P	-	170	30	32	4	DIN5156
G1'1/2-11	9930R24	3.5P~5P	-	190	32	36	4	DIN5156

*Products which codes additionally have "NX" are provided as Nitriding/Oxidizing treated.

*Products which codes additionally have "OX" are provided as Oxidizing treated.

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

EH-PO

Spiral Pointed Taps for Hard-to-Machine Materials



Segment : 1F



EH-PO is suitable for high hardness steels of 35-45HRC, such as forgings and thermal refined materials of high carbon steels and alloy steels, and die steels.

MC-PO

Spiral Pointed Taps with Internal Coolant



Segment : 1F



Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3×0.5	26303.0	3.5P~5P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	26304.0	3.5P~5P	ISO2X	63	13	4.5	3	DIN371
M5×0.8	26305.0	3.5P~5P	ISO2X	70	16	6	3	DIN371
M6×1	26306.0	3.5P~5P	ISO2X	80	19	6	3	DIN371
M8×1.25	26308.0	3.5P~5P	ISO2X	90	22	8	3	DIN371
M8×1	28308.0M	3.5P~5P	ISO2X	90	22	6	4	DIN374
M10×1.5	2630010	3.5P~5P	ISO2X	100	24	10	3	DIN371
M10×1.25	2830010N	3.5P~5P	ISO2X	100	24	7	4	DIN374
M10×1	2830010M	3.5P~5P	ISO2X	90	20	7	4	DIN374
M12×1.75	2730012	3.5P~5P	ISO2X	110	29	9	3	DIN376
M12×1.5	2830012O	3.5P~5P	ISO2X	100	22	9	4	DIN374
M12×1.25	2830012N	3.5P~5P	ISO2X	100	22	9	3	DIN374
M14×2	2730014	3.5P~5P	ISO2X	110	30	11	3	DIN376
M14×1.5	2830014O	3.5P~5P	ISO2X	100	22	11	4	DIN374
M16×2	2730016	3.5P~5P	ISO2X	110	32	12	3	DIN376
M16×1.5	2830016O	3.5P~5P	ISO2X	100	22	12	4	DIN374
M18×2.5	2730018	3.5P~5P	ISO2X	125	34	14	3	DIN376
M18×1.5	2830018O	3.5P~5P	ISO2X	110	25	14	4	DIN374
M20×2.5	2730020	3.5P~5P	ISO2X	140	34	16	3	DIN376
M20×1.5	2830020O	3.5P~5P	ISO2X	125	25	16	4	DIN374
M22×2.5	2730022	3.5P~5P	ISO2X	140	34	18	3	DIN376
M24×3	2730024	3.5P~5P	ISO2X	160	38	18	3	DIN376

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M6×1	96306.0OH	3.5P~5P	ISO2	80	19	6	3	DIN371
M8×1.25	96308.0OH	3.5P~5P	ISO2	90	22	8	3	DIN371
M10×1.5	9630010OH	3.5P~5P	ISO2	100	24	10	3	DIN371
M12×1.75	9730012OH	3.5P~5P	ISO2	110	29	9	3	DIN376
M16×2	9730016OH	3.5P~5P	ISO2	110	32	12	3	DIN376

SL+VA

Spiral Fluted Taps for Stainless Steels, Through Hole Use



Segment : 1S



Applying the blanks of high toughness and high accuracy, SL+VA derive the maximum performance from high facility machining centers and high precision toolings. Spiral fluted taps for stainless steels, through hole use

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3×0.5	9665VP3.0 (9665VPM3.0)	3.5P~5P	ISO2X	56	6.5	4	3	DIN371
M4×0.7	9665VP4.0 (9665VPM4.0)	3.5P~5P	ISO2X	63	9	6	3	DIN371
M5×0.8	9665VP5.0 (9665VPM5.0)	3.5P~5P	ISO2X	70	10.5	6	3	DIN371
M6×1	9665VP6.0	3.5P~5P	ISO2X	80	15	6	3	DIN371
M8×1.25	9665VP8.0	3.5P~5P	ISO2X	90	19	8	3	DIN371
M10×1.5	9665VP010	3.5P~5P	ISO2X	100	23	10	3	DIN371
M12×1.75	9665VP012	3.5P~5P	ISO2X	110	26	12	3	DIN371

*The tap having designation () on its code has no square.

PO VA/PO VA TiCN

Spiral Pointed Taps for Stainless Steels



Segment : 1F



Suitable for such stainless steels tending to work harden, chrome steels and molybdenum steels.

PO VA/PO VA TiCN Spiral Pointed Taps for Stainless Steels

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M20×2.5	9735020TC	3.5P~5P	ISO2X	140	34	16	3	DIN376
M20×1.5	9835020O	3.5P~5P	ISO2X	125	25	16	3	DIN374
M22×2.5	9735022	3.5P~5P	ISO2X	140	34	18	3	DIN376
M22×1.5	9835022O	3.5P~5P	ISO2X	125	25	18	4	DIN374
M24×3	9735024	3.5P~5P	ISO2X	160	38	18	3	DIN376
M24×1.5	9835024O	3.5P~5P	ISO2X	140	28	18	4	DIN374
M27×3	9735027	3.5P~5P	ISO2X	160	38	20	4	DIN376
M30×3.5	9735030	3.5P~5P	ISO2X	180	45	22	4	DIN376
M36×4	9735036	3.5P~5P	ISO2X	200	56	28	4	DIN376

For Unified Threads

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.4-40UNC	9335UN4H	3.5P~5P	2BX	56	11	3.5	3	DIN371
No.6-32UNC	9335UN6J	3.5P~5P	2BX	56	12	4	3	DIN371
No.8-32UNC	9335UN8J	3.5P~5P	2BX	63	13	4.5	3	DIN371
No.10-24UNC	9335UNAM	3.5P~5P	2BX	70	15	6	3	DIN371
No.10-32UNF	9335UNAJ	3.5P~5P	2BX	70	14	6	3	DIN371
1/4-20UNC	9335U04N	3.5P~5P	2BX	80	17	7	3	DIN371
1/4-28UNF	9335U04K	3.5P~5P	2BX	80	16	7	3	DIN371
5/16-18UNC	9335U05O	3.5P~5P	2BX	90	20	8	3	DIN371
5/16-24UNF	9435U05M	3.5P~5P	2BX	90	17	6	3	DIN374
3/8-16UNC	9335U06P	3.5P~5P	2BX	100	22	9	3	DIN371
3/8-24UNF	9435U06M	3.5P~5P	2BX	100	18	7	3	DIN374
7/16-14UNC	9435U07Q	3.5P~5P	2BX	100	22	8	3	DIN374
1/2-13UNC	9435U08R	3.5P~5P	2BX	110	25	9	3	DIN376
1/2-20UNF	9435U08N	3.5P~5P	2BX	100	22	9	3	DIN374
9/16-12UNC	9435U09S	3.5P~5P	2BX	110	25	11	3	DIN374
5/8-11UNC	9435U10U	3.5P~5P	2BX	110	28	12	3	DIN374
3/4-10UNC	9435U12V	3.5P~5P	2BX	125	32	14	3	DIN376
7/8-9UNC	9435U14W	3.5P~5P	2BX	140	32	18	3	DIN376
1'-8UNC	9435U16X	3.5P~5P	2BX	160	36	18	3	DIN376

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M2×0.4	96352.0	3.5P~5P	ISO2X	45	8	2.8	2	DIN371
M2.5×0.45	96352.5	3.5P~5P	ISO2X	50	9	2.8	3	DIN371
M3×0.5	96353.0	3.5P~5P	ISO2X	56	11	3.5	3	DIN371
	96353.0TC							
M4×0.7	96354.0	3.5P~5P	ISO2X	63	13	4.5	3	DIN371
	96354.0TC							
M5×0.8	96355.0	3.5P~5P	ISO2X	70	16	6	3	DIN371
	96355.0TC							
M6×1	96356.0	3.5P~5P	ISO2X	80	19	6	3	DIN371
	96356.0TC							
M8×1.25	96358.0	3.5P~5P	ISO2X	90	22	8	3	DIN371
	96358.0TC							
	97358.0							6
M8×1	98358.0M	3.5P~5P	ISO2X	90	22	6	3	DIN374
	98358.0M6G		ISO3					
M10×1.5	9635010	3.5P~5P	ISO2X	100	24	10	3	DIN371
	9635010TC							
	9735010							7
M10×1.25	9835010N	3.5P~5P	ISO2X	100	24	7	3	DIN374
M10×1	9835010M	3.5P~5P	ISO2X	90	20	7	3	DIN374
M12×1.75	9735012	3.5P~5P	ISO2X	110	29	9	3	DIN376
	9735012TC							
M12×1.5	9835012O	3.5P~5P	ISO2X	100	22	9	4	DIN374
M12×1.25	9835012N	3.5P~5P	ISO2X	100	22	9	4	DIN374
M12×1	9835012M	3.5P~5P	ISO2X	100	22	9	4	DIN374
M14×2	9735014	3.5P~5P	ISO2X	110	30	11	3	DIN376
	9735014TC							
M14×1.5	9835014O	3.5P~5P	ISO2X	100	22	11	4	DIN374
M16×2	9735016	3.5P~5P	ISO2X	110	32	12	3	DIN376
	9735016TC							
M16×1.5	9835016O	3.5P~5P	ISO2X	100	22	12	4	DIN374
M18×2.5	9735018	3.5P~5P	ISO2X	125	34	14	3	DIN376
M18×1.5	9835018O	3.5P~5P	ISO2X	110	25	14	4	DIN374
M20×2.5	9735020	3.5P~5P	ISO2X	140	34	16	3	DIN376

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

PO-INT

Interrupted Spiral Pointed Taps



Segment : 1F



ZEN-P

Spiral Pointed Taps for Nickel Base Alloys



Segment : 1F



ZEN-P is the tap for nickel base alloys which, with nickel as main composition, have higher corrosion resistance and higher heat resistance than steels.

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M2×0.4	96342.0	3.5P~5P	ISO2	45	8	2.8	2	DIN371
M2.5×0.45	96342.5	3.5P~5P	ISO2	50	9	2.8	3	DIN371
M3×0.5	96343.0	3.5P~5P	ISO2	56	11	3.5	3	DIN371
M4×0.7	96344.0	3.5P~5P	ISO2	63	13	4.5	3	DIN371
M5×0.8	96345.0	3.5P~5P	ISO2	70	16	6	3	DIN371
M6×1	96346.0	3.5P~5P	ISO2	80	19	6	3	DIN371
	97346.0					4.5		DIN376
M8×1.25	96348.0	3.5P~5P	ISO2	90	22	8	3	DIN371
	97348.0					6		DIN376
M10×1.5	96340.10	3.5P~5P	ISO2	100	24	10	3	DIN371
	97340.10					7		DIN376
M12×1.75	97340.12	3.5P~5P	ISO2	110	29	9	3	DIN376
M14×2	97340.14	3.5P~5P	ISO2	110	30	11	3	DIN376
M16×2	97340.16	3.5P~5P	ISO2	110	32	12	3	DIN376
M20×2.5	97340.20	3.5P~5P	ISO2	140	34	16	3	DIN376

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3×0.5	16303.0	3.5P~5P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	16304.0	3.5P~5P	ISO2X	63	13	4.5	3	DIN371
M5×0.8	16305.0	3.5P~5P	ISO2X	70	16	6	3	DIN371
M6×1	16306.0	3.5P~5P	ISO2X	80	19	6	3	DIN371
M8×1.25	16308.0	3.5P~5P	ISO2X	90	22	8	3	DIN371
M10×1.5	16300.10	3.5P~5P	ISO2X	100	24	10	3	DIN371
M10×1.25	18300.10N	3.5P~5P	ISO2X	100	24	7	3	DIN374
M12×1.75	17300.12	3.5P~5P	ISO2X	110	29	9	3	DIN376
M12×1.5	18300.12O	3.5P~5P	ISO2X	100	22	9	4	DIN374
M12×1.25	18300.12N	3.5P~5P	ISO2X	100	22	9	3	DIN374
M14×2	17300.14	3.5P~5P	ISO2X	110	30	11	3	DIN376
M14×1.5	18300.14O	3.5P~5P	ISO2X	100	22	11	4	DIN374
M16×2	17300.16	3.5P~5P	ISO2X	110	32	12	3	DIN376
M16×1.5	18300.16O	3.5P~5P	ISO2X	100	22	12	4	DIN374
M18×2.5	17300.18	3.5P~5P	ISO2X	125	34	14	3	DIN376
M20×2.5	17300.20	3.5P~5P	ISO2X	140	34	16	3	DIN376
M22×2.5	17300.22	3.5P~5P	ISO2X	140	34	18	3	DIN376
M24×3	17300.24	3.5P~5P	ISO2X	160	38	18	3	DIN376

For Unified Threads								
Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
No.6-32UNC	1330UN6J	3.5P~5P	2BX	56	12	4	3	DIN371
No.8-32UNC	1330UN8J	3.5P~5P	2BX	63	13	4.5	3	DIN371
No.10-24UNC	1330UNAM	3.5P~5P	2BX	70	15	6	3	DIN371
No.10-32UNF	1330UNAJ	3.5P~5P	2BX	70	14	6	3	DIN371
1/4-20UNC	1330U04N	3.5P~5P	2BX	80	17	7	3	DIN371
1/4-28UNF	1330U04K	3.5P~5P	2BX	80	16	7	3	DIN371
5/16-18UNC	1330U05O	3.5P~5P	2BX	90	20	8	3	DIN371
5/16-24UNF	1430U05M	3.5P~5P	2BX	90	17	6	3	DIN374
3/8-16UNC	1330U06P	3.5P~5P	2BX	100	22	9	3	DIN371
3/8-24UNF	1430U06M	3.5P~5P	2BX	100	18	7	3	DIN374
1/2-13UNC	1430U08R	3.5P~5P	2BX	110	25	9	3	DIN376
1/2-20UNF	1430U08N	3.5P~5P	2BX	100	22	9	3	DIN374
5/8-11UNC	1430U10U	3.5P~5P	2BX	110	28	12	3	DIN376

ZEN-P Spiral Pointed Taps for Nickel Base Alloys

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
5/8-18UNF	1430U100	3.5P~5P	2BX	100	22	12	3	DIN376

ZET-P

Spiral Fluted Taps for Titanium Alloys, Through Hole Use



Segment : 1T



Suitable for titanium alloys which, including titanium as the main component, are tough, light and have heat resistance feature.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	16493.0	3.5P~5P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	16494.0	3.5P~5P	ISO2X	63	13	4.5	3	DIN371
M5×0.8	16495.0	3.5P~5P	ISO2X	70	16	6	3	DIN371
M6×1	16496.0	3.5P~5P	ISO2X	80	19	6	3	DIN371
M8×1.25	16498.0	3.5P~5P	ISO2X	90	22	8	3	DIN371
M8×1	18498.0M	3.5P~5P	ISO2X	90	22	6	3	DIN374
M10×1.5	1649010	3.5P~5P	ISO2X	100	24	10	3	DIN371
M10×1.25	1849010N	3.5P~5P	ISO2X	100	24	7	3	DIN374
M12×1.75	1749012	3.5P~5P	ISO2X	110	29	9	3	DIN376
M12×1.5	1849012O	3.5P~5P	ISO2X	100	22	9	4	DIN374
M12×1.25	1849012N	3.5P~5P	ISO2X	100	22	9	4	DIN374
M14×2	1749014	3.5P~5P	ISO2X	110	30	11	3	DIN376
M14×1.5	1849014O	3.5P~5P	ISO2X	100	22	11	4	DIN374
M16×2	1749016	3.5P~5P	ISO2X	110	32	12	3	DIN376
M16×1.5	1849016O	3.5P~5P	ISO2X	100	22	12	4	DIN374
M27×3	1749027	3.5P~5P	ISO2X	160	38	20	4	DIN376

HT Hand Taps



Segment : 1A



Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M1×0.25	61101.0F	F	ISO2	32	5.5	2.5	3	DIN352
	61101.0M	M						
	61101.0V	V						
M1.1×0.25	61101.1F	F	ISO2	32	5.5	2.5	3	DIN352
	61101.1M	M						
	61101.1V	V						
M1.2×0.25	61101.2F	F	ISO2	32	5.5	2.5	3	DIN352
	61101.2M	M						
	61101.2V	V						
M1.4×0.3	61101.4F	F	ISO2	32	7	2.5	3	DIN352
	61101.4M	M						
	61101.4V	V						
M1.6×0.35	61101.6F	F	ISO2	32	8	2.5	3	DIN352
	61101.6M	M						
	61101.6V	V						
M1.7×0.35	61101.7F	F	ISO2	32	8	2.5	3	DIN352
	61101.7M	M						
	61101.7V	V						
M1.8×0.35	61101.8F	F	ISO2	32	8	2.5	3	DIN352
	61101.8M	M						
	61101.8V	V						
M2×0.4	61102.0F	F	ISO2	36	8	2.8	3	DIN352
	61102.0M	M						
	61102.0V	V						
	81202.0A	9P		41	2.5	3	ISO529	
	81202.0B	5P						
81202.0C	1.5P	45	2.8	3	DIN371			
96202.0	2P~3P							
M2.2×0.45	61102.2F	F	ISO2	36	9	2.8	3	DIN352
	61102.2M	M						
	61102.2V	V						
M2.3×0.4	61102.3F	F	ISO2	36	9	2.8	3	DIN352
	61102.3M	M						
	61102.3V	V						

Overall length	Thread length	Shank dia.
L	ℓ	D _s

HT Hand Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type	Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type					
M2.5×0.45	61102.5F	F	ISO2	40	9	2.8	3	DIN352	M5×0.8	81205.0B	5P	ISO2	58	16	5	3	ISO529					
	61102.5M	M								81205.0C	1.5P											
	61102.5V	V								96205.0	2P~3P											
	81202.5A	9P		44.5	9.5					9	DIN371		96205.0B	2P~3P	70	22	6	4	DIN371			
	81202.5B	5P											M5×0.5	62115.0GF						F	50	12
	81202.5C	1.5P												62115.0GV	V							
	96202.5	2P~3P		50	9					DIN371	M5.5×0.5		62115.5GF	F	50	12	6	4	DIN2181			
61102.6F	F	40	9	2.8	3	DIN352	62115.5GV	V														
61102.6M	M						44.5	9.5	DIN371	61106.0F	F	50	6	DIN352								
61102.6V	V									61106.0M	M											
M2.6×0.45	81202.6C	9P	ISO2	40	9	3.5	3	DIN352	M6×1	81206.0A	9P				ISO2	66	19	6.3	3	ISO529		
	61103.0F	F								48	11	3.15	3	ISO529							81206.0B	5P
	61103.0M	M																			81206.0C	1.5P
	61103.0V	V		96206.0	2P~3P																	
	81203.0A	9P		56	3.5					DIN371	96206.0B	2P~3P	80	6		DIN371						
	81203.0B	5P									96206.0NX	2P~3P										
	81203.0C	1.5P									97206.0	2P~3P										
96203.0	2P~3P	4.5	DIN376	97206.0B	3.5P~5P																	
96203.0B	2P~3P																					
M3×0.35	62113.0DF	F	ISO2	40	9	3.5	3	DIN2181	M6×0.75	62116.0JF	F	ISO2	50	14	6	3	DIN2181					
	62113.0DV	V								62116.0JV	V											
M3×0.5	61103.5F	F	ISO2	45	13	4	3	DIN352	M6×0.5	62116.0GF	F	ISO2	50	14	6	4	DIN2181					
	61103.5M	M								62116.0GV	V											
	61103.5V	V								61107.0F	F							50	6	DIN352		
	81203.5A	9P		61107.0M	M																	
	81203.5B	5P		61107.0V	V																	
	81203.5C	1.5P		81207.0A	9P																	
	M3.5×0.35	62113.5DF		F	ISO2					45	10		4	3	DIN2181	M7×1	81207.0B	5P	ISO2	66	19	7.1
62113.5DV		V	81207.0C	1.5P																		
M4×0.7	61104.0F	F	ISO2	45	13	4.5	3	DIN352	M7×0.75	96207.0	2P~3P	80	26	7	3		DIN371					
	61104.0M	M								96207.0B	2P~3P											
	61104.0V	V								62117.0JF	F											
	81204.0A	9P		53	4					ISO529	62117.0JV		V	50	14		6	4		DIN2181		
	81204.0B	5P									61108.0F		F								56	6
	81204.0C	1.5P												61108.0M	M							
	96204.0	2P~3P		61108.0V	V																	
96204.0B	2P~3P	81208.0A	9P																			
M4×0.5	62114.0GF	F	ISO2	45	10	4.5	4	DIN2181	M8×1.25	81208.0B	5P	ISO2	72	22	8	4	ISO529					
	62114.0GV	V								81208.0C	1.5P											
M4.5×0.75	61104.5F	F	ISO2	50	12	6	3	DIN352		96208.0	2P~3P							90	6	3	DIN371	
	61104.5M	M								96208.0B	2P~3P											
	61104.5V	V								97208.0	2P~3P											
M4.5×0.5	62114.5GF	F	ISO2	50	12	6	4	DIN2181		97208.0B	3.5P~5P		56	22	6	4	DIN2181					
	62114.5GV	V								62118.0MF	F											
M5×0.8	61105.0F	F	ISO2	50	16	6	3	DIN352	M8×1	62118.0MV	V	90	19	6	4	DIN374						
	61105.0M	M								62118.0JF	F											
	61105.0V	V															62118.0JV	V				
	81205.0A	9P		58	5					ISO529	M8×0.75								62118.0JF	F	50	19
81205.0A	9P	58	5	ISO529	62118.0JV	V																

HT Hand Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M8×0.5	62118.0GF	F	ISO2	50	19	6	4	DIN2181
	62118.0GV	V						
M9×1.25	61109.0F	F	ISO2	63		7		DIN352
	61109.0M	M						
	61109.0V	V						
	81209.0A	9P		72	22	9	4	ISO529
	81209.0B	5P						
	81209.0C	1.5P						
	96209.0B	2P~3P						
96209.0B	2P~3P	90				DIN371		
M9×1	62119.0MF	F	ISO2	63	22	7	4	DIN2181
	62119.0MV	V						
M9×0.75	62119.0JF	F	ISO2	56	19	7	4	DIN2181
	62119.0JV	V						
M10×1.5	6110010F	F	ISO2	70		7		DIN352
	6110010M	M						
	6110010V	V						
	8120010A	9P		80	24	10	4	ISO529
	8120010B	5P						
	8120010C	1.5P						
	9620010							
	9620010B	2P~3P		100			3	DIN371
	9720010B					7	4	DIN376
M10×1.25	6211010NF	F	ISO2	70	24	7	4	DIN2181
	6211010NV	V						
	9820010N	2P~3P						
M10×1	6211010MF	F	ISO2	63	20	7	4	DIN2181
	6211010MV	V						
	9820010M	2P~3P						
M10×0.75	6211010JF	F	ISO2	63	20	7	4	DIN2181
	6211010JV	V						
M10×0.5	6211010GF	F	ISO2	63	20	7	4	DIN2181
	6211010GV	V						
M11×1.5	6110011F	F	ISO2	70	24	8	4	DIN352
	6110011M	M						
	6110011V	V						
M11×1	6211011MF	F	ISO2	70	30	8	4	DIN2181
	6211011MV	V						
M12×1.75	6110012F	F	ISO2	75				DIN352
	6110012M	M						
	6110012V	V						
	8520012A	9P		89	29	9	4	ISO529
	8520012B	5P						
	8520012C	1.5P						
	9720012	2P~3P						
9720012B	3.5P~5P	110			3	DIN376		
					4			
M12×1.5	6211012OF	F	ISO2	70	22	9	4	DIN2181
	6211012OV	V						
	9820012O	2P~3P						
M12×1.25	6211012NF	F	ISO2	70	22	9	4	DIN2181
	6211012NV	V						
	9820012N	2P~3P						
M12×1	6211012MF	F	ISO2	70	22	9	4	DIN2181
	6211012MV	V						
	9820012M	2P~3P						
	6211012JF	F		70	22	9	4	DIN2181
	6211012JV	V						
	6110014F	F						
	6110014M	M						
M14×2	6110014V	V	ISO2	80		11	4	DIN352
	8520014A	9P						
	8520014B	5P						
	8520014C	1.5P		95	11.2	3	ISO529	
	9720014	2P~3P						
9720014	2P~3P	110	11	3	DIN376			
M14×1.5	6211014OF	F	ISO2	70	22	11	4	DIN2181
	6211014OV	V						
	9820014O	2P~3P						
M14×1.25	6211014NF	F	ISO2	70	22	11	4	DIN2181
	6211014NV	V						
M14×1	6211014MF	F	ISO2	70	22	11	4	DIN2181
	6211014MV	V						
	9820014M	2P~3P						
M16×2	6110016F	F	ISO2	80		12	4	DIN352
	6110016M	M						
	6110016V	V						
	8520016A	9P		102	12.5	3	ISO529	
	8520016B	5P						
	8520016C	1.5P						
	9720016	2P~3P						
9720016	2P~3P	110	12	3	DIN376			
M16×1.5	6211016OF	F	ISO2	70	22	12	4	DIN2181
	6211016OV	V						
	9820016O	2P~3P						
M16×1.25	6211016NF	F	ISO2	70	22	12	4	DIN2181
	6211016NV	V						
M16×1	6211016MF	F	ISO2	70	22	12	4	DIN2181
	6211016MV	V						
	9820016M	2P~3P						
M18×2.5	6110018F	F	ISO2	95	40			DIN352
	6110018M	M						
	6110018V	V						
	8520018A	9P		112	37			ISO529
	8520018B	5P						
	8520018C	1.5P						
M18×2	6211018QF	F	ISO2	80	22	14	4	DIN2181
	6211018QV	V						
	9820018Q	2P~3P						
M18×1.5	6211018OF	F	ISO2	80	22	14	4	DIN2181

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

HT Hand Taps

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type	Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type																				
M18×1.5	6211018OV	V	ISO2	80	22	14	4	DIN2181	M24×1	9820024M	2P~3P	ISO2	140	28	18	4	DIN374																				
	9820018O	2P~3P		6211025QF	F					6211025QV	V							M25×2	6211025OF	F	ISO2	90	22	18	4	DIN2181											
M18×1	6211018MF	F	ISO2	80	22	14	4	DIN2181	M25×1.5	6211025OV	V	ISO2	90	22	18	4	DIN2181																				
	6211018MV	V		9820018M	2P~3P					6211025O	2P~3P							9820025O	2P~3P	140	28	DIN374															
M20×2.5	6110020F	F	ISO2	95	40	16	4	DIN352	M26×1.5	6211026OF	F	ISO2	90	22	18	4	DIN2181																				
	6110020M	M								6211026OV	V							9820026O	2P~3P	140	28	DIN374															
	6110020V	V								112	37							14	ISO529	M27×3	6110027F	F	ISO2	110	50	20	4	DIN352									
	8520020A	9P																			6110027M	M							6110027V	V	8520027A	9P	8520027B	5P	135	45	ISO529
	8520020B	5P																			8520027C	1.5P							9720027	2P~3P	160	38	DIN376				
8520020C	1.5P	M27×2	6211027QF	F	ISO2	90	22	20	4	DIN2181																											
6211020QF	F		6211020QV	V							9820020Q	2P~3P	140	34	DIN374																						
M20×2	6211020QV	V	ISO2	80	22	16	4	DIN2181	M27×1.5	6211027OF	F	ISO2	90	22	20	4	DIN2181																				
	9820020Q	2P~3P		6211027OV	V					6211028QF	F							ISO2	90	22	20	4	DIN2181														
M20×1.5	6211020OF	F	ISO2	80	22	16	4	DIN2181	M28×2	6211028QV	V	ISO2	90	22	20	4	DIN2181																				
	6211020OV	V		6211020OF	F					6211028OF	F							ISO2	90	22	20	4	DIN2181														
M20×1	9820020O	2P~3P	ISO2	125	25	16	4	DIN374	M28×1.5	6211028OV	V	ISO2	140	28	20	4	DIN374																				
	6211020MF	F		6211020MF	F					9820028O	2P~3P							6110030F	F	ISO2	125	56	22	4	DIN352												
M22×2.5	6211020MV	V	ISO2	80	22	16	4	DIN2181	M30×3.5	6110030M	M	ISO2	138	48	20	ISO529																					
	9820020M	2P~3P		6110030V	V					8520030A	9P						8520030B	5P	8520030C	1.5P	9720030	2P~3P	180	45	22	DIN376											
M22×2	6110022F	F	ISO2	100	40	18	4	DIN352	M30×2	6211030QF	F	ISO2	90	22	22	4	DIN2181																				
	6110022M	M								6211030QV	V							9820030Q	2P~3P	150	28	DIN374															
	6110022V	V								118	38							16	ISO529	M30×1.5	6211030OF	F	ISO2	90	22	22	4	DIN2181									
	8520022A	9P																			6211030OV	V							9820030O	2P~3P	150	28	DIN374				
	8520022B	5P																			9720030	2P~3P	6211032OF	F	ISO2	90	22	22	4	DIN2181							
8520022C	1.5P	6211032OV	V	9820032O	2P~3P	150	28	DIN374																													
M22×1.5	6211022QF	F	ISO2	80	22	18	4	DIN2181	M32×1.5	6110033F	F	ISO2	125	56	25	4	DIN352																				
	6211022QV	V		6110033M	M					6110033V	V							9720033	2P~3P	180	50	DIN376															
M22×1	6211022OF	F	ISO2	80	22	18	4	DIN2181	M33×3.5	6211033QF	F	ISO2	100	25	25	4	DIN2181																				
	6211022OV	V		6211033QV	V					6211022MF	F							ISO2	90	22	18	4	DIN2181														
M22×1	9820022O	2P~3P	ISO2	125	25	18	4	DIN374	M33×2	6211022MV	V	ISO2	90	30	19	4	DIN2181																				
	6211022MF	F		6110024F	F					6110024M	M							6110024V	V	8520024A	9P	8520024B	5P	8520024C	15P	9720024	2P~3P	160	38	3	DIN376						
M24×3	6110024M	M	ISO2	110	50	18	4	DIN352	M33×1.5	6211032OF	F	ISO2	90	22	22	4	DIN2181																				
	6110024V	V								6211032OV	V							9820032O	2P~3P	150	28	DIN374															
	8520024A	9P								130	45							18	ISO529	M33×1.5	6211033OF	F	ISO2	90	22	22	4	DIN2181									
	8520024B	5P																			6211033OV	V							9820033O	2P~3P	150	28	DIN374				
	8520024C	15P																			9720033	2P~3P	6110033F	F	ISO2	125	56	25	4	DIN352							
9720024	2P~3P	6110033M	M	6110033V	V	9720033	2P~3P	180	50	DIN376																											
M24×2	6211024QF	F	ISO2	90	22	18	4	DIN2181	M33×2	6211033QF	F	ISO2	100	25	25	4	DIN2181																				
	6211024QV	V		6211024OF	F					6211024OV	V							9820024O	2P~3P	140	28	DIN374															
	9820024Q	2P~3P		6211024MF	F					6211024MV	V							6211024OF	F	6211024OV	V	9820024O	2P~3P	140	28	DIN374											
M24×1.5	6211024OF	F	ISO2	90	22	18	4	DIN2181	M33×2	6211033QV	V	ISO2	100	25	25	4	DIN2181																				
	6211024OV	V		6211024MF	F					6211024MV	V							6211024OF	F	6211024OV	V	9820024O	2P~3P	140	28	DIN374											
M24×1	6211024MF	F	ISO2	90	22	18	4	DIN2181	M33×2	6211033QV	V	ISO2	100	25	25	4	DIN2181																				
	6211024MV	V		6211024MF	F					6211024MV	V							6211024OF	F	6211024OV	V	9820024O	2P~3P	140	28	DIN374											

HT Hand Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M33×2	9820033Q	2P~3P	ISO2	160	30	25	4	DIN374
	6211033OF	F		100	25		4	DIN2181
M33×1.5	6211033OV	V	ISO2			25		
	9820033O	2P~3P		160	30			DIN374
M34×1.5	6211034OF	F	ISO2	100	25	28	4	DIN2181
	6211034OV	V						
M35×1.5	6211035OF	F		100	25		4	DIN2181
	6211035OV	V	ISO2			28		
	9820035O	2P~3P		170	30			DIN374
M36×4	6110036F	F		150	63	28		DIN352
	6110036M	M						
	6110036V	V						
	8520036A	9P	ISO2				4	
	8520036B	5P		162	57	25		ISO529
	8520036C	1.5P						
	9720036	2P~3P		200	56	28		DIN376
M36×3	6211036SF	F		125	40		4	DIN2181
	6211036SV	V	ISO2			28		
	9820036S	2P~3P		200	56			DIN374
M36×2	6211036QF	F		125	40		4	DIN2181
	6211036QV	V	ISO2			28		
	9820036Q	2P~3P		170	30			DIN374
M36×1.5	6211036OF	F	ISO2	100	25	28	4	DIN2181
	6211036OV	V						
M38×1.5	6211038OF	F	ISO2	100	25	28	4	DIN2181
	6211038OV	V						
M39×4	6110039F	F		150	63		4	DIN352
	6110039M	M	ISO2			32		
	6110039V	V						
	9720039	2P~3P		200	60			DIN376
M39×1.5	6211039OF	F	ISO2	110	25	32	4	DIN2181
	6211039OV	V						
M40×2	6211040QF	F	ISO2	125	40	32	4	DIN2181
	6211040QV	V						
M40×1.5	6211040OF	F	ISO2	110	25	32	4	DIN2181
	6211040OV	V						
M42×4.5	6110042F	F		150	63	32		DIN352
	6110042M	M					4	
	6110042V	V	ISO2			28		ISO529
	8520042A	9P		170	60			
	9720042	2P~3P		200		32		DIN376
M42×3	6211042SF	F	ISO2	125	40	32	4	DIN2181
	6211042SV	V						
M42×2	6211042QF	F	ISO2	120	40	32	4	DIN2181
	6211042QV	V						
M42×1.5	6211042OF	F	ISO2	110	25	32	4	DIN2181
	6211042OV	V						
M45×4.5	6110045F	F	ISO2	160	70	36	4	DIN352

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M45×4.5	6110045M	M	ISO2	160	70	36	4	DIN352
	6110045V	V						
M45×3	6211045SF	F	ISO2	125	40	36	4	DIN2181
	6211045SV	V						
M45×2	6211045QF	F	ISO2	125	40	36	4	DIN2181
	6211045QV	V						
M45×1.5	6211045OF	F	ISO2	110	25	36	4	DIN2181
	6211045OV	V						
M48×5	6110048F	F		180	75	36	4	DIN352
	6110048M	M	ISO2					
	6110048V	V						
M48×3	6211048SF	F	ISO2	140	40	36	4	DIN2181
	6211048SV	V						
M48×2	6211048QF	F	ISO2	140	40	36	4	DIN2181
	6211048QV	V						
M48×1.5	6211048OF	F	ISO2	140	40	36	4	DIN2181
	6211048OV	V						
For Unified Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
No.0-80UNF	8320UN0BB	5P	2B	41	8	2.5	3	ISO529
	8320UN0BC	1.5P						
No.1-64UNC	8320UN1DB	3.5P~5P	2B	41	8	2.5	3	ISO529
	8320UN1DC							
No.1-72UNF	8320UN1CB	5P	2B	41	8	2.5	3	ISO529
	8320UN1CC	1.5P						
No.2-56UNC	8320UN2EB	5P	2B	44.5	9.5	2.8	3	ISO529
	8320UN2EC	9P						
No.2-64UNF	8320UN2DB	5P	2B	44.5	9.5	2.8	3	ISO529
	8320UN2DC	1.5P						
No.3-48UNC	8320UN3FB	3.5P~5P	2B	44.5	9.5	2.8	3	ISO529
	8320UN3FC							
No.3-56UNF	8320UN3EB	5P	2B	44.5	9.5	2.8	3	ISO529
	8320UN3EC	1.5P						
No.4-40UNC	8320UN4HA	9P	2B	48	11	3.15	3	ISO529
	8320UN4HB	3.5P~5P						
	8320UN4HC							
No.4-48UNF	8320UN4FA	9P	2B	48	11	3.15	3	ISO529
	8320UN4FB	5P						
	8320UN4FC	1.5P						
No.5-40UNC	8320UN5HB	3.5P~5P	2B	48	11	3.15	3	ISO529
	8320UN5HC							
No.5-44UNF	8320UN5GB	5P	2B	48	11	3.15	3	ISO529
	8320UN5GC	1.5P						
No.6-32UNC	8320UN6JA	9P	2B	50	13	3.55	3	ISO529
	8320UN6JB	5P						
	8320UN6JC	1.5P						
No.6-40UNF	8320UN6HA	9P	2B	50	13	3.55	3	ISO529

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

HT Hand Taps

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
No.6-40UNF	8320UN6HB	5P	2B	50	13	3.55	3	ISO529
	8320UN6HC	1.5P						
No.8-32UNC	8320UN8JA	9P	2B	53	13	4.5	3	ISO529
	8320UN8JB	5P						
	8320UN8JC	1.5P						
No.8-36UNF	8320UN8IB	5P	2B	53	13	4.5	3	ISO529
	8320UN8IC	1.5P						
No.10-24UNC	8320UNAMA	9P	2B	58	16	5	3	ISO529
	8320UNAMB	5P						
	8320UNAMC	1.5P						
No.10-32UNF	8320UNAJA	9P	2B	58	16	5	3	ISO529
	8320UNAJB	5P						
	8320UNAJC	1.5P						
No.12-24UNC	8320UNCMA	9P	2B	62	17	5.6	3	ISO529
	8320UNCMB	5P						
	8320UNCMC	1.5P						
No.12-28UNF	8320UNCKA	9P	2B	62	17	5.6	3	ISO529
	8320UNCKB	5P						
	8320UNCKC	1.5P						
1/4-20UNC	8320U04NA	9P	2B	66	19	6.3	3	ISO529
	8320U04NB	5P						
	8320U04NC	1.5P						
1/4-28UNF	8320U04KA	9P	2B	66	19	6.3	3	ISO529
	8320U04KB	5P						
	8320U04KC	1.5P						
5/16-18UNC	8320U05OA	9P	2B	72	22	8	4	ISO529
	8320U05OB	5P						
	8320U05OC	1.5P						
5/16-24UNF	8320U05MA	9P	2B	72	22	8	4	ISO529
	8320U05MB	5P						
	8320U05MC	1.5P						
3/8-16UNC	8320U06PA	9P	2B	80	24	10	4	ISO529
	8320U06PB	5P						
	8320U06PC	1.5P		100	22	9		DIN371
	N9320U06PC	2P~3P						
3/8-24UNF	8320U06MA	9P	2B	80	24	10	4	ISO529
	8320U06MB	5P						
	8320U06MC	1.5P		100	18	7		DIN374
	N9420U06MC	2P~3P						
7/16-14UNC	8720U07QA	9P	2B	85	25	8	4	ISO529
	8720U07QB	5P						
	8720U07QC	1.5P						
7/16-20UNF	8720U07NA	9P	2B	85	25	8	4	ISO529
	8720U07NB	5P						
	8720U07NC	1.5P						
1/2-13UNC	8720U08RA	9P	2B	89	29	9	4	ISO529
	8720U08RB	5P						
	8720U08RC	1.5P						

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
1/2-13UNC	N9420U08RC	2P~3P	2B	110	25	9	4	DIN376
	8720U08NA	9P						
1/2-20UNF	8720U08NB	5P	2B	89	29	9	4	ISO529
	8720U08NC	1.5P						
	8720U09SA	9P						
9/16-12UNC	8720U09SB	5P	2B	95	30	11.2	4	ISO529
	8720U09SC	1.5P						
9/16-18UNF	8720U09OA	9P	2B	95	30	11.2	4	ISO529
	8720U09OB	5P						
	8720U09OC	1.5P		100	22	11	DIN374	
	N9420U09OC	2P~3P						
5/8-11UNC	8720U10UA	9P	2B	102	32	12.5	4	ISO529
	8720U10UB	5P						
	8720U10UC	1.5P		110	28	12		DIN376
	N9420U10UC	2P~3P						
5/8-18UNF	8720U10OA	9P	2B	102	32	12.5	4	ISO529
	8720U10OB	5P						
3/4-10UNC	8720U12VA	9P	2B	112	37	14	4	ISO529
	8720U12VB	5P						
3/4-16UNF	8720U12VA	9P	2B	112	37	14	4	ISO529
	8720U12VB	5P						
7/8-9UNC	8720U14WA	9P	2B	118	38	16	4	ISO529
	8720U14WB	5P						
7/8-14UNF	8720U14QA	9P	2B	118	38	16	4	ISO529
	8720U14QB	5P						
1'-8UNC	8720U16XA	9P	2B	130	45	18	4	ISO529
	8720U16XB	5P						
1'-12UNF	8720U16SA	9P	2B	120	45	18	4	ISO529
	8720U16SB	5P						
1'-14UNS	8720U16QA	9P	2B	120	35	18	4	ISO529
	8720U16QB	5P						
1'1/8-12UNF	8720U18SA	9P	2B	127	37	20	4	ISO529
	8720U18SB	5P						
1'1/4-7UNC	8720U20YA	9P	2B	151	51	22.4	4	ISO529
	8720U20YB	5P						
1'1/4-12UNF	8720U20SA	9P	2B	137	37	22.4	4	ISO529
	8720U20SB	5P						
1'3/8-12UNF	8720U22SA	9P	2B	144	39	25	4	ISO529
	8720U22SB	5P						
1'1/2-12UNF	8720U24SA	9P	2B	149	39	28	4	ISO529
	8720U24SB	5P						

HT Hand Taps

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Whitworth Threads								
3/32W48	6310W1HF	F	-	42	15	3	3	DIN351
	6310W1HM	M						
	6310W1HV	V						
1/8W40	6310W02F	F	-	46	18	4	3	DIN351
	6310W02M	M						
	6310W02V	V						
5/32W32	6310W2HF	F	-	52	20	5	4	DIN351
	6310W2HM	M						
	6310W2HV	V						
3/16W24	6310W03F	F	-	50	18	5.5	3	DIN351
	6310W03V	V						
	6310W03M	M						
7/32W24	6310W3HF	F	-	60	22	5.5	4	DIN351
	6310W3HM	M						
	6310W3HV	V						
1/4W20	6310W04F	F	-	56	22	6	3	DIN351
	6310W04M	M						
	6310W04V	V						
5/16W18	6310W05F	F	-	63	25	6	4	DIN351
	6310W05M	M						
	6310W05V	V						
3/8W16	6310W06F	F	-	70	28	7	4	DIN351
	6310W06M	M						
	6310W06V	V						
7/16W14	6310W07F	F	-	75	30	8	4	DIN351
	6310W07M	M						
	6310W07V	V						
1/2W12	6310W08F	F	-	85	42	9	4	DIN351
	6310W08M	M						
	6310W08V	V						
9/16W12	6310W09F	F	-	90	42	10.5	4	DIN351
	6310W09M	M						
	6310W09V	V						
5/8W11	6310W10F	F	-	90	36	12	4	DIN351
	6310W10M	M						
	6310W10V	V						
3/4W10	6310W12F	F	-	105	40	14	4	DIN351
	6310W12M	M						
	6310W12V	V						
7/8W9	6310W14F	F	-	110	45	18	4	DIN351
	6310W14M	M						
	6310W14V	V						
1"W8	6310W16F	F	-	125	60	20	4	DIN351
	6310W16M	M						
	6310W16V	V						

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For G Threads								
G1/8-28	6412G02F	F	-	63	20	7	4	DIN5157
	6412G02V	V						
	9920R02	2P~3P						
G1/4-19	6412G04F	F	-	70	22	11	4	DIN5157
	6412G04V	V						
	9920R04	2P~3P						
G3/8-19	6412G06F	F	-	70	22	12	4	DIN5157
	6412G06V	V						
	9920R06	2P~3P						
G1/2-14	6412G08F	F	-	80	22	16	4	DIN5157
	6412G08V	V						
	9920R08	2P~3P						
G5/8-14	6412G10F	F	-	80	22	18	4	DIN5157
	6412G10V	V						
G3/4-14	6412G12F	F	-	90	22	20	4	DIN5157
	6412G12V	V						
G7/8-14	6412G14F	F	-	90	22	22	4	DIN5157
	6412G14V	V						
G1'-11	6412G16F	F	-	100	25	25	4	DIN5157
	6412G16V	V						
G1'1/4-11	6412G20F	F	-	125	40	32	4	DIN5157
G1'1/2-11	6412G24F	F	-	140	40	36	6	DIN5157
	6412G24V	V						

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

EH-HT

Hand Taps for Hard-to-Machine Materials



Segment : 1B



Suitable for hard steels of 35-45 HRC, such as forgings and thermal refined steels of high carbon steels and alloy steels, and die steels.

GG

Hand Taps for Cast Irons



Segment : 1B



GG is suitable for hard and abrasive materials such as cast irons.

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M2.5×0.45	26202.5C	2P~3P	ISO2X	50	9	2.8	3	DIN371
M3×0.5	26203.0C	2P~3P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	26204.0C	2P~3P	ISO2X	63	13	4.5	3	DIN371
M4.5×0.75	26204.5C	2P~3P	ISO2X	70	16	6	3	DIN371
M5×0.8	26205.0C	2P~3P	ISO2X	70	16	6	3	DIN371
M6×1	26206.0C	2P~3P	ISO2X	80	19	6	3	DIN371
M8×1.25	26208.0C	2P~3P	ISO2X	90	22	8	4	DIN371
M8×1	28208.0MC	2P~3P	ISO2X	90	22	6	4	DIN374
M10×1.5	2620010C	2P~3P	ISO2X	100	24	10	4	DIN371
M10×1.25	2820010NC	2P~3P	ISO2X	100	24	7	4	DIN374
M10×1	2820010MC	2P~3P	ISO2X	90	20	7	4	DIN374
M12×1.75	2720012C	2P~3P	ISO2X	110	29	9	4	DIN376
M12×1.5	2820012OC	2P~3P	ISO2X	100	22	9	4	DIN374
M12×1.25	2820012NC	2P~3P	ISO2X	100	22	9	4	DIN374
M14×2	2720014C	2P~3P	ISO2X	110	30	11	4	DIN376
M14×1.5	2820014OC	2P~3P	ISO2X	100	22	11	4	DIN374
M16×2	2720016C	2P~3P	ISO2X	110	32	12	4	DIN376
M16×1.5	2820016OC	2P~3P	ISO2X	100	22	12	4	DIN374
M18×2.5	2720018C	2P~3P	ISO2X	125	34	14	4	DIN376
M18×1.5	2820018OC	2P~3P	ISO2X	110	25	14	4	DIN374
M20×2.5	2720020C	2P~3P	ISO2X	140	34	16	4	DIN376
M20×1.5	2820020OC	2P~3P	ISO2X	125	25	16	4	DIN374
M22×2.5	2720022C	2P~3P	ISO2X	140	34	18	4	DIN376
M24×3	2720024C	2P~3P	ISO2X	160	38	18	4	DIN376
For G Threads								
Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
G1/8-28	2920G02	2P~3P	-	90	20	7	4	DIN5156
G1/4-19	2920G04	2P~3P	-	100	22	11	4	DIN5156
G3/8-19	2920G06	2P~3P	-	100	22	12	4	DIN5156
G1/2-14	2920G08	2P~3P	-	125	25	16	4	DIN5156

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3×0.5	96263.0	2P~3P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	96264.0	2P~3P	ISO2X	63	13	4.5	4	DIN371
M5×0.8	96265.0	2P~3P	ISO2X	70	16	6	4	DIN371
	96265.0OH					3.5		DIN376
	97265.0							
M6×1	96266.0	2P~3P	ISO2X	80	19	6	4	DIN371
	96266.0OH					4.5		DIN376
	97266.0							
M8×1.25	96268.0	2P~3P	ISO2X	90	22	8	4	DIN371
	96268.0OH					6		DIN376
	97268.0							
M8×1	98268.0M	2P~3P	ISO2X	90	22	6	4	DIN374
	98268.0MOH							
M10×1.5	9626010	2P~3P	ISO2X	100	24	10	4	DIN371
	9626010OH					7		DIN376
	9726010							
M10×1.25	9826010N	2P~3P	ISO2X	100	24	7	4	DIN374
	9826010NOH							
M10×1	9826010M	2P~3P	ISO2X	90	20	7	4	DIN374
	9826010MOH							
M11×1	9826011MOH	2P~3P	ISO2X	90	20	8	4	DIN374
M12×1.75	9726012	2P~3P	ISO2X	110	29	9	4	DIN376
	9726012OH							
M12×1.5	9826012O	2P~3P	ISO2X	100	22	9	4	DIN374
	9826012OOH							
M12×1.25	9826012N	2P~3P	ISO2X	100	22	9	4	DIN374
	9826012NOH							
M12×1	9826012M	2P~3P	ISO2X	100	22	9	4	DIN374
M14×2	9726014	2P~3P	ISO2X	110	30	11	4	DIN376
	9726014OH							
M14×1.5	9826014O	2P~3P	ISO2X	100	22	11	4	DIN374
	9826014OOH							
M14×1	9826014MOH	2P~3P	ISO2X	100	22	11	4	DIN374
M16×2	9726016	2P~3P	ISO2X	110	32	12	4	DIN376

*Product code "OH" means the tap has the coolant hole for blind holes use.

GG Hand Taps for Cast Irons

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
M16×2	9726016OH	2P~3P	ISO2X	110	32	12	4	DIN376
M16×1.5	9826016O	2P~3P	ISO2X	100	22	12	4	DIN374
	9826016OOH							
M18×2.5	9726018	2P~3P	ISO2X	125	34	14	4	DIN376
	9726018OH							
M18×1.5	9826018O	2P~3P	ISO2X	110	25	14	4	DIN374
	9826018OOH							
M20×2.5	9726020	2P~3P	ISO2X	140	34	16	4	DIN376
	9726020OH							
M20×1.5	9826020O	2P~3P	ISO2X	125	25	16	4	DIN374
	9826020OOH							
M22×2.5	9726022	2P~3P	ISO2X	140	34	18	4	DIN376
M22×1.5	9826022O	2P~3P	ISO2X	125	25	18	4	DIN374
	9826022OOH							
M24×3	9726024	2P~3P	ISO2X	160	38	18	4	DIN376
M24×1.5	9826024O	2P~3P	ISO2X	140	28	18	4	DIN374
For G Threads								
Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
G1/8-28	9926R02	2P~3P	-	90	20	7	4	DIN5156
G1/4-19	9926R04	2P~3P	-	100	22	11	4	DIN5156
G3/8-19	9926R06	2P~3P	-	100	22	12	4	DIN5156
G1/2-14	9926R08	2P~3P	-	125	25	16	4	DIN5156
G3/4-14	9926R12	2P~3P	-	140	28	20	4	DIN5156
G1'-11	9926R16	2P~3P	-	160	30	25	4	DIN5156

LA-O

Hand Taps for Die Cast Materials



Segment : 1B



LA-O is the oversized tap and is suitable for the materials tending to shrink such as aluminum alloy die castings (ADC) and zinc alloy die castings (ZDC).

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	96233.0	3.5P~5P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	96234.0	3.5P~5P	ISO2X	63	13	4.5	3	DIN371
M5×0.8	96235.0	3.5P~5P	ISO2X	70	16	6	3	DIN371
M6×1	96236.0	3.5P~5P	ISO2X	80	19	6	3	DIN371
M8×1.25	96238.0	3.5P~5P	ISO2X	90	22	8	4	DIN371
M10×1.5	9623010	3.5P~5P	ISO2X	100	24	10	4	DIN371
M12×1.75	9723012	3.5P~5P	ISO2X	110	29	9	4	DIN376
M14×2	9723014	3.5P~5P	ISO2X	110	30	11	4	DIN376
M16×2	9723016	3.5P~5P	ISO2X	110	32	12	4	DIN376

CT-FC

Cemented Carbide Taps for Cast Irons



Segment : 1L



CT FC is the carbide tap suitable for hard and abrasive materials such as cast irons.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Flute	Type
For Metric Threads								
M3×0.5	36263.0	2P~3P	ISO2X	56	11	3.5	3	DIN371
M4×0.7	36264.0	2P~3P	ISO2X	63	13	4.5	4	DIN371
M5×0.8	36265.0	2P~3P	ISO2X	70	16	6	4	DIN371
M6×1	36266.0	2P~3P	ISO2X	80	19	6	4	DIN371
M8×1.25	36268.0	2P~3P	ISO2X	90	22	8	4	DIN371
M10×1.5	3626010	2P~3P	ISO2X	100	24	10	4	DIN371

Overall length	Thread length	Shank dia.
<i>L</i>	<i>ℓ</i>	<i>D_s</i>

CT-FC Cemented Carbide Taps for Cast Irons

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
M12×1.75	3726012	2P~3P	ISO2X	110	29	9	4	DIN376
M14×2	3726014	2P~3P	ISO2X	110	30	11	4	DIN376
M16×2	3726016	2P~3P	ISO2X	110	32	12	4	DIN376

NT

Nut Taps



Segment : 1I



NT is the nut tap with straight flutes to be mainly used for nut tapping machine.

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Metric Threads								
M3×0.5	60003.0	-	ISO2	70	22	2.2	3	DIN357
M4×0.7	60004.0	-	ISO2	90	25	2.8	3	DIN357
M5×0.8	60005.0	-	ISO2	100	28	3.5	3	DIN357
M6×1	60006.0	-	ISO2	110	32	4.5	3	DIN357
M8×1.25	60008.0	-	ISO2	125	40	6	3	DIN357
M10×1.5	6000010	-	ISO2	140	45	7	3	DIN357
M12×1.75	6000012	-	ISO2	180	50	9	3	DIN357
M14×2	6000014	-	ISO2	200	56	11	3	DIN357
M16×2	6000016	-	ISO2	200	63	12	3	DIN357
M20×2.5	6000020	-	ISO2	250	70	16	3	DIN357

PG

Hand Taps for Conduit Tube Threads



Segment : 1H



Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Flute	Type
For Conduit Tube Threads								
PG7	9020PG7	3.5P	-	70	20	9	4	-
PG9	9020PG9	3.5P	-	70	22	12	4	-
PG11	9020PG11	3.5P	-	80	22	14	4	-
PG13.5	9020PG13.5	3.5P	-	80	22	16	4	-
PG16	9020PG16	3.5P	-	80	22	18	4	-
PG21	9020PG21	3.5P	-	90	22	20	4	-
PG29	9020PG29	3.5P	-	110	25	28	4	-

R-D

Thread Forming Taps for Thin Soft Structural Steel Sheets



Segment : 1J



Suitable for tapping the general fasteners made from thin steel sheets such as SPC and SPH, and such soft steels lower than SS400 and S20C.

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Lobe	Type
For Metric Threads								
M2×0.4	93532.0B	2P~3P	ISO2X	45	8	2.8	-	DIN371
M2.5×0.45	93532.5B	2P~3P	ISO2X	50	9	2.8	-	DIN371
	93542.5B		ISO3X					
M3×0.5	93533.0B	2P~3P	ISO2X	56	11	3.5	4	DIN371
	93543.0B		ISO3X					
M3.5×0.6	93533.5B	2P~3P	ISO2X	56	13	4	4	DIN371
M4×0.7	93534.0B	2P~3P	ISO2X	63	13	4.5	4	DIN371
	93544.0B		ISO3X					

R-D Thread Forming Taps for Thin Soft Structural Steel Sheets

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Lobe	Type
M5×0.8	93535.0B	2P~3P	ISO2X	70	16	6	4	DIN371
	93545.0B		ISO3X					
M6×1	93536.0B	2P~3P	ISO2X	80	19	6	4	DIN371
	93546.0B		ISO3X					
M8×1.25	93538.0B	2P~3P	ISO2X	90	22	8	3	DIN371
	93548.0B		ISO3X					
M10×1.5	9353010B	2P~3P	ISO2X	100	24	10	4	DIN371
	9354010B		ISO3X					
M12×1.75	9353012B	2P~3P	ISO2X	110	29	9	4	DIN376
	9354012B		ISO3X					
M14×2	9353014B	2P~3P	ISO2X	110	30	11	4	DIN376
M16×2	9353016B	2P~3P	ISO2X	110	32	12	4	DIN376

N-RS

Thread Forming Taps for Non-Ferrous Materials


Segment : 1J



Suitable for non-ferrous materials such as aluminum castings, aluminum die casting, and brass.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Lobe	Type
For Metric Threads								
M2×0.4	93502.0B	2P~3P	ISO2X	45	8	2.8	4	DIN371
M2.3×0.4	93502.3B	2P~3P	ISO2X	45	9	2.8	4	DIN371
M2.5×0.45	93502.5B	2P~3P	ISO2X	50	9	2.8	4	DIN371
M3×0.5	93503.0B	2P~3P	ISO2X	56	11	3.5	4	DIN371
	(93523.0B)							
M4×0.7	93504.0B	2P~3P	ISO2X	63	13	4.5	4	DIN371
	(93524.0B)							
M5×0.8	93505.0B	2P~3P	ISO2X	70	16	6	4	DIN371
	(93525.0B)							
M6×1	93506.0B	2P~3P	ISO2X	80	19	6	4	DIN371
	(93526.0B)							
M8×1.25	93508.0B	2P~3P	ISO2X	90	22	8	6	DIN371
	(93528.0B)							
M10×1.5	9350010B	2P~3P	ISO2X	100	24	10	6	DIN371
	(9352010B)							
M12×1.75	9350012B	2P~3P	ISO2X	110	29	9	6	DIN376

*The tap having designation () on its code has no oil groove.

N-RZ

Thread Forming Taps for Steels


Segment : 1J



Suitable for steel materials such as carbon steels, alloy steels, and stainless steels.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Lobe	Type
For Metric Threads								
M2.5×0.45	93512.5B	2P~3P	ISO2X	50	9	2.8	4	DIN371
M3×0.5	93513.0B	2P~3P	ISO2X	56	11	3.5	4	DIN371
M3.5×0.6	93513.5B	2P~3P	ISO2X	56	13	4	4	DIN371
M4×0.7	93514.0B	2P~3P	ISO2X	63	13	4.5	4	DIN371
M5×0.8	93515.0B	2P~3P	ISO2X	70	16	6	4	DIN371
M6×1	93516.0B	2P~3P	ISO2X	80	19	6	4	DIN371
M8×1.25	93518.0B	2P~3P	ISO2X	90	22	8	6	DIN371
M10×1.5	9351010B	2P~3P	ISO2X	100	24	10	6	DIN371
M12×1.75	9351012B	2P~3P	ISO2X	110	29	9	6	DIN376
M16×2	9351016B	2P~3P	ISO2X	110	32	12	6	DIN376

OL-RZ

Thread Forming Taps for Dry Tapping, TiCN Coated


Segment : 1J



OL-RZ is the forming tap enabling dry tapping under following condition : Tapping of the sizes smaller than M6, thin steel sheets having burring operation, and steel parts with rather shorter length.

Size	Code	Chamfer	Class	L (mm)	ℓ (mm)	D _s (mm)	Lobe	Type
For Metric Threads								
M3×0.5	13553.0	4P	ISO2X	56	11	3.5	4	DIN371
M4×0.7	13554.0	4P	ISO2X	63	13	4.5	4	DIN371
M5×0.8	13555.0	4P	ISO2X	70	16	6	4	DIN371
M6×1	13556.0	4P	ISO2X	80	19	6	4	DIN371

Overall length	Thread length	Shank dia.	Outside diameter	Thickness
<i>L</i>	<i>ℓ</i>	<i>D_s</i>	<i>D</i>	<i>T</i>

HP-RZ

High Performance Roll Taps



Segment : 1J



HP-RZ is suitable for steels (lower than 35HRC) and light alloys, and is applicable to the high speed tapping (20-50m/min.).

SR-D HSS Solid Thread Cutting Round Dies

Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes
M1.7×0.35	09401.7	6g	16	5	3
M1.8×0.35	09401.8	6g	16	5	3
M2×0.4	09402.0	6g	16	5	3
M2×0.25	09422.0B	6g	16	5	3
M2.2×0.45	09402.2	6g	16	5	3
M2.3×0.4	09402.3	6g	16	5	3
M2.5×0.45	09402.5	6g	16	5	3
M2.5×0.35	09422.5D	6g	16	5	3
M2.6×0.45	09402.6	6g	16	5	3
M3×0.5	09403.0	6g	20	5	3
M3×0.35	09423.0D	6g	20	5	3
M3.5×0.6	09403.5	6g	20	5	3
M4×0.7	09404.0	6g	20	5	3
M4M0.75	09424.0J	6g	20	5	3
M4×0.5	09424.0G	6g	20	5	3
M5×0.8	09405.0	6g	20	7	4
M5×0.5	09425.0G	6g	20	5	4
M6×1	09406.0	6g	20	7	4
M6×0.75	09426.0J	6g	20	7	4
M6×0.5	09426.0G	6g	20	5	4
M7×1	09407.0	6g	25	9	4
M7×0.75	09427.0J	6g	25	9	4
M8×1.25	09408.0	6g	25	9	4
M8×1	09428.0M	6g	25	9	4
M8×0.75	09428.0J	6g	25	9	4
M8×0.5	09428.0G	6g	25	9	4
M9×1.25	09409.0	6g	25	9	5
M9×1	09429.0M	6g	25	9	5
M9×0.75	09429.0J	6g	25	9	5
M10×1.5	0940010	6g	30	11	4
M10×1.25	0942010N	6g	30	11	4
M10×1	0942010M	6g	30	11	4
M10×0.75	0942010J	6g	30	11	4
M10×0.5	0942010G	6g	30	11	4
M11×1.5	0940011	6g	30	11	5
M11×1	0942011M	6g	30	11	5
M12×1.75	0940012	6g	38	14	4
M12×1.5	0942012O	6g	38	10	4
M12×1.25	0942012N	6g	38	10	4
M12×1	0942012M	6g	38	10	4
M12×0.75	0942012J	6g	38	10	4
M12×0.5	0942012G	6g	38	10	4
M14×2	0940014	6g	38	14	5
M14×1.5	0942014O	6g	38	10	5
M14×1.25	0942014N	6g	38	10	5
M14×1	0942014M	6g	38	10	5
M15×1.5	0942015O	6g	38	10	3
M16×2	0940016	6g	45	18	5

Size	Code	Chamfer	Class	<i>L</i> (mm)	<i>ℓ</i> (mm)	<i>D_s</i> (mm)	Lobe	Type
For Metric Threads								
M2×0.4	13562.0	2P~3P	ISO2X	45	8	2.8	4	DIN371
M2.5×0.45	13562.5	2P~3P	ISO2X	50	9	2.8	4	DIN371
M3×0.5	13563.0	2P~3P	ISO2X	56	11	3.5	4	DIN371
M4×0.7	13564.0	2P~3P	ISO2X	63	13	4.5	4	DIN371
M5×0.8	13565.0	2P~3P	ISO2X	70	16	6	4	DIN371
M6×1	13566.0	2P~3P	ISO2X	80	19	6	4	DIN371
M8×1.25	13568.0	2P~3P	ISO2X	90	22	8	6	DIN371
M10×1.5	1356010	2P~3P	ISO2X	100	24	10	6	DIN371
M12×1.75	1356012	2P~3P	ISO2X	110	29	9	6	DIN376
M12×1.25	1856012N	2P~3P	ISO2X	100	22	9	6	DIN374

SR-D

HSS Solid Thread Cutting Round Dies



Segment : 32



Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes
For Metric Threads					
M1×0.25	09401.0	6g	16	5	3
M1.1×0.25	09401.1	6g	16	5	3
M1.2×0.25	09401.2	6g	16	5	3
M1.4×0.3	09401.4	6g	16	5	3
M1.6×0.35	09401.6	6g	16	5	3

SR-D HSS Solid Thread Cutting Round Dies

Size	Code	Class	D (mm)	T (mm)	Number of clearance holes
M16x1.5	0942016O	6g	45	14	5
M16x1	0942016M	6g	45	14	5
M18x2.5	0940018	6g	45	18	5
M18x2	0942018Q	6g	45	14	5
M18x1.5	0942018O	6g	45	14	5
M18x1	0942018M	6g	45	14	5
M20x2.5	0940020	6g	45	18	5
M20x1.5	0942020O	6g	45	14	5
M20x2	0942020Q	6g	45	14	5
M20x1	0942020M	6g	45	14	5
M22x2.5	0940022	6g	55	22	5
M22x2	0942022Q	6g	55	16	3
M22x1.5	0942022O	6g	55	16	5
M22x1.25	0942022N	6g	55	16	5
M22x1	0942022M	6g	55	16	5
M24x3	0940024	6g	55	22	5
M24x2	0942024Q	6g	55	16	5
M24x1.5	0942024O	6g	55	16	5
M24x1	0942024M	6g	55	16	5
M25x1.5	0942025O	6g	55	16	6
M26x1.5	0942026O	6g	55	16	6
M27x3	0940027	6g	65	25	6
M27x2	0942027Q	6g	65	18	6
M27x1.5	0942027O	6g	65	18	6
M27x1	0943027M	6g	65	18	6
M28x2	0943028Q	6g	65	18	6
M28x1.5	0942028O	6g	65	18	6
M30x3.5	0940030	6g	65	25	6
M30x2	0942030Q	6g	65	18	6
M30x1.5	0942030O	6g	65	18	6
M32x1.5	0942032O	6g	65	18	6
M33x3.5	0941033	6g	65	25	8
M36x4	0940036	6g	65	25	8
M36x3	0942036S	6g	65	25	8
M36x1.5	0942036O	6g	65	18	8
M38x1.5	0942038O	6g	75	20	6
M39x4	0940039	6g	75	30	6
M39x2	0942039Q	6g	75	20	6
M39x1.5	0942039O	6g	75	20	6
M42x4.5	0940042	6g	75	30	8
M42x3	0942042S	6g	75	30	8
M42x2	0942042Q	6g	75	20	8
M42x1.5	0942042O	6g	75	20	8
For Unified Threads					
Size	Code	Class	D (mm)	T (mm)	Number of clearance holes
No.0-80UNF	0948UN0B	2A	16	5	3
No.1-64UNC	0948UN1D	2A	16	5	3

Size	Code	Class	D (mm)	T (mm)	Number of clearance holes	
No.1-72UNF	0948UN1C	2A	16	5	3	
No.2-56UNC	0948UN2E	2A	16	5	3	
No.2-64UNF	0948UN2D	2A	16	5	3	
No.3-48UNC	0948UN3F	2A	16	5	3	
No.3-56UNF	0948UN3E	2A	16	5	3	
No.4-40UNC	0948UN4H	2A	20	5	3	
No.4-48UNF	0948UN4F	2A	20	5	3	
No.5-40UNC	0948UN5H	2A	20	5	3	
No.5-44UNF	0948UN5G	2A	20	5	3	
No.6-32UNC	0948UN6J	2A	20	7	3	
No.6-40UNF	0948UN6H	2A	20	5	3	
No.8-32UNC	0948UN8J	2A	20	7	3	
No.8-36UNF	0948UN8I	2A	20	7	3	
No.10-24UNC	0948UNAM	2A	20	7	4	
No.10-32UNF	0948UNAJ	2A	20	7	4	
No.12-24UNC	0948UNCM	2A	20	7	4	
No.12-28UNF	0948UNCK	2A	20	7	4	
1/4-20UNC	0948U04N	2A	25	9	4	
1/4-28UNF	0948U04K	2A	25	9	4	
5/16-18UNC	0948U05O	2A	25	9	4	
5/16-24UNF	0948U05M	2A	25	9	4	
3/8-16UNC	0948U06P	2A	30	11	4	
3/8-24UNF	0948U06M	2A	30	11	4	
7/16-14UNC	0948U07Q	2A	30	11	5	
7/16-20UNF	0948U07N	2A	30	11	5	
1/2-13UNC	0948U08R	2A	38	14	4	
1/2-20UNF	0948U08N	2A	38	10	4	
9/16-12UNC	0948U09S	2A	38	14	5	
9/16-18UNF	0948U09O	2A	38	10	5	
5/8-11UNC	0948U10U	2A	45	18	5	
5/8-18UNF	0948U10O	2A	45	14	5	
3/4-10UNC	0948U12V	2A	45	18	5	
3/4-16UNF	0948U12P	2A	45	14	5	
7/8-9UNC	0948U14W	2A	55	22	5	
7/8-14UNF	0948U14Q	2A	55	16	5	
1'-8UNC	0948U16X	2A	55	22	5	
1'-12UNF	0948U16S	2A	55	16	5	
1'-14UNEF	0948U16Q	2A	55	16	5	
1'1/2-12UNF	0948U24S	2A	75	20	6	
For G Threads						
Size	Code	Class	D (mm)	T (mm)	Number of clearance holes	Basic Major Dia
G1/8-28	0946R02	-	30	11	4	9.728
G1/4-19	0946R04	-	38	10	5	13.157
G3/8-19	0946R06	-	45	14	5	16.662
G1/2-14	0946R08	-	45	16	5	20.955
G5/8-14	0946R10	-	55	16	5	22.911
G7/8-14	0946R14	-	65	18	5	30.201

Outside diameter	Thickness
<i>D</i>	<i>T</i>

SR-D HSS Solid Thread Cutting Round Dies

Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes	Basic Major Dia
G1'-11	0946R16	-	65	18	6	33.249
G1'1/4-11	0946R20	-	75	20	6	41.910
G1'1/2-11	0946R24	-	90	22	6	47.803

PO-D Spiral Pointed Dies

Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes
M8x1.25	09418.0	6g	25	9	4
M8x1	09438.0M	6g	25	9	4
M8x0.75	09438.0J	6g	25	9	4
M8x0.5	09438.0G	6g	25	9	4
M9x1.25	09419.0	6g	25	9	5
M9x1	09439.0M	6g	25	9	5
M10x1.5	0941010	6g	30	11	4
M10x1.25	0943010N	6g	30	11	4
M10x1	0943010M	6g	30	11	4
M10x0.75	0943010J	6g	30	11	4
M10x0.5	0943010G	6g	30	11	4
M11x1.5	0941011	6g	30	11	5
M12x1.75	0941012	6g	38	14	4
M12x1.5	0943012O	6g	38	10	4
M12x1.25	0943012N	6g	38	10	4
M12x0.75	0943012J	6g	38	10	4
M12x0.5	0943012G	6g	38	10	4
M14x2	0941014	6g	38	14	5
M14x1.5	0943014O	6g	38	10	5
M14x1.25	0943014N	6g	38	10	5
M14x1	0943014M	6g	38	10	5
M15x1.5	0943015O	6g	38	10	5
M16x2	0941016	6g	45	18	5
M16x1.5	0943016O	6g	45	14	5
M16x1	0943016M	6g	45	14	5
M18x2.5	0941018	6g	45	18	5
M18x2	0943018Q	6g	45	14	5
M18x1.5	0943018O	6g	45	14	5
M18x1	0943018M	6g	45	14	5
M20x2.5	0941020	6g	45	18	5
M20x2	0943020Q	6g	45	14	5
M20x1.5	0943020O	6g	45	14	5
M20x1	0943020M	6g	45	14	5
M22x2	0943022Q	6g	55	16	5
M22x1.5	0943022O	6g	55	16	5
M22x1	0943022M	6g	55	16	5
M24x2	0943024Q	6g	55	16	5
M24x1.5	0943024O	6g	55	16	5
M24x1	0943024M	6g	55	16	3
M26x1.5	0943026O	6g	55	16	6
M27x3	0941027	6g	65	25	6
M27x2	0943027Q	6g	65	18	3
M27x1.5	0943027O	6g	65	18	6
M27x1	0943027M	6g	65	18	6
M28x2	0943028Q	6g	65	18	6
M28x1.5	0943028O	6g	65	18	6
M30x3.5	0941030	6g	65	25	6
M30x1.5	0943030O	6g	65	18	6

PO-D

Spiral Pointed Dies

Spiral pointed flute is only in front face.

Front Face



Segment : 32



Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes
For Metric Threads					
M1x0.25	09411.0	6g	16	5	3
M1.1x0.25	09411.1	6g	16	5	3
M1.2x0.25	09411.2	6g	16	5	3
M1.4x0.3	09411.4	6g	16	5	3
M1.6x0.35	09411.6	6g	16	5	3
M1.7x0.35	09411.7	6g	16	5	3
M1.8x0.35	09411.8	6g	16	5	3
M2x0.4	09412.0	6g	16	5	3
M2x0.25	09432.0B	6g	16	5	3
M2.2x0.45	09412.2	6g	16	5	3
M2.3x0.4	09412.3	6g	16	5	3
M2.5x0.45	09412.5	6g	16	5	3
M2.5x0.35	09432.5D	6g	16	5	3
M2.6x0.45	09412.6	6g	16	5	3
M3x0.5	09413.0	6g	20	5	3
M3x0.35	09433.0D	6g	20	5	3
M3.5x0.6	09413.5	6g	20	5	3
M4x0.7	09414.0	6g	20	5	3
M4x0.5	09434.0G	6g	20	5	3
M5x0.8	09415.0	6g	20	7	4
M5x0.5	09435.0G	6g	20	5	3
M6x1	09416.0	6g	20	7	4
M6x0.75	09436.0J	6g	20	7	4
M6x0.5	09436.0G	6g	20	5	4
M7x1	09417.0	6g	25	9	4
M7x0.75	09437.0J	6g	25	9	3

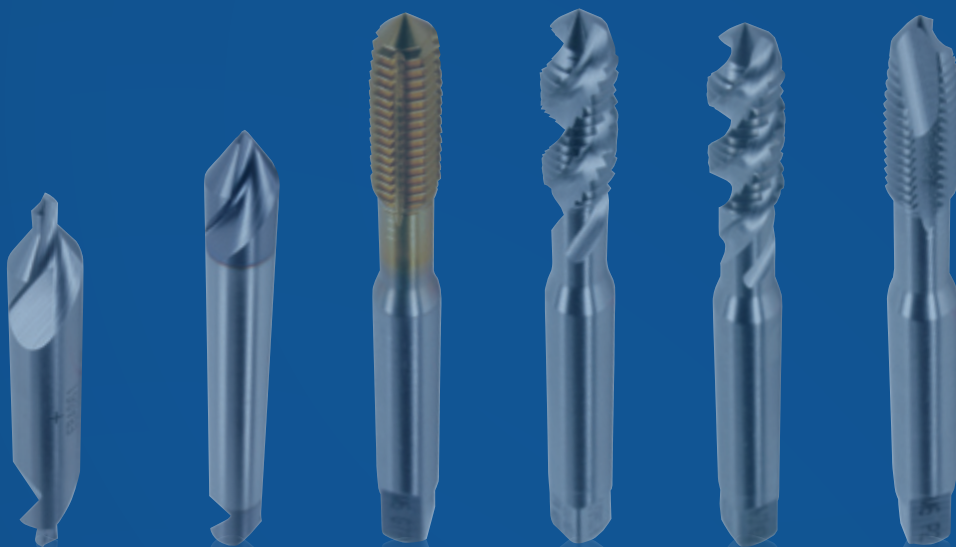
Outside diameter	Thickness
<i>D</i>	<i>T</i>

PO-D Spiral Pointed Dies

Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes	
M33x3.5	0941033	6g	65	25	8	
M36x4	0941036	6g	65	25	8	
For Unified Threads						
Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes	
No.0-80UNF	0949UN0B	2A	16	5	3	
No.1-64UNC	0949UN1D	2A	16	5	3	
No.1-72UNF	0949UN1C	2A	16	5	3	
No.2-56UNC	0949UN2E	2A	16	5	3	
No.2-64UNF	0949UN2D	2A	16	5	3	
No.3-48UNC	0949UN3F	2A	16	5	3	
No.3-56UNF	0949UN3E	2A	16	5	3	
No.4-40UNC	0949UN4H	2A	20	5	3	
No.4-48UNF	0949UN4F	2A	20	5	3	
No.5-40UNC	0949UN5H	2A	20	5	3	
No.5-44UNF	0949UN5G	2A	20	5	3	
No.6-32UNC	0949UN6J	2A	20	7	3	
No.6-40UNF	0949UN6H	2A	20	5	3	
No.8-32UNC	0949UN8J	2A	20	7	3	
No.8-36UNF	0949UN8I	2A	20	7	3	
No.10-24UNC	0949UNAM	2A	20	7	4	
No.10-32UNF	0949UNAJ	2A	20	7	4	
No.12-24UNC	0949UNCM	2A	20	7	4	
No.12-28UNF	0949UNCK	2A	20	7	4	
1/4-20UNC	0949U04N	2A	25	9	4	
1/4-28UNF	0949U04K	2A	25	9	4	
5/16-18UNC	0949U05O	2A	25	9	4	
5/16-24UNF	0949U05M	2A	25	9	4	
3/8-16UNC	0949U06P	2A	30	11	4	
3/8-24UNF	0949U06M	2A	30	11	4	
7/16-14UNC	0949U07Q	2A	30	11	5	
7/16-20UNF	0949U07N	2A	30	11	5	
1/2-13UNC	0949U08R	2A	38	14	4	
1/2-20UNF	0949U08N	2A	38	10	4	
9/16-12UNC	0949U09S	2A	38	14	5	
9/16-18UNF	0949U09O	2A	38	10	5	
5/8-11UNC	0949U10U	2A	45	18	5	
5/8-18UNF	0949U10O	2A	45	14	5	
3/4-10UNC	0949U12V	2A	45	18	5	
3/4-16UNF	0949U12P	2A	45	14	5	
7/8-9UNC	0949U14W	2A	55	22	5	
7/8-14UNF	0949U14Q	2A	55	16	5	
1'-8UNC	0949U16X	2A	55	22	5	
1'-12UNF	0949U16S	2A	55	16	5	
For G Threads						
Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes	Basic Major Dia
G1/8-28	0947R02	-	30	11	4	9.728

Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes	Basic Major Dia
G1/4-19	0947R04	-	38	10	5	13.157
G3/8-19	0947R06	-	45	14	5	16.662
G1/2-14	0947R08	-	45	16	5	20.955
G5/8-14	0947R10	-	55	16	5	22.911
G3/4-14	0947R12	-	55	16	6	26.441
G7/8-14	0947R14	-	65	18	6	30.201
G1'-11	0947R16	-	65	18	6	33.249
G1'1/4-11	0947R20	-	75	20	6	41.910
G1'1/2-11	0947R24	-	90	22	6	47.803
For Pipe Taps for NPT Threads						
Size	Code	Class	<i>D</i> (mm)	<i>T</i> (mm)	Number of clearance holes	Basic Major Dia
NPT1/8-27	0981NPT02	-	38	10	4	10.117
NPT1/4-18	0981NPT04	-	38	15	5	13.426
NPT3/8-18	0980NPT06	-	45	15	5	16.866
	0981NPT06					
NPT1/2-14	0981NPT08	-	45	19	6	20.980
NPT3/4-14	0981NPT12	-	65	20	6	26.325
NPT1'-11.5	0981NPT16	-	65	25	8	32.934

YAMAWA Line-ups arranged on sizes



M2 Taps	Sizes-1
Dies	Sizes-5
M3 Taps	Sizes-6
Dies	Sizes-10
M4 Taps	Sizes-12
Dies	Sizes-16
M5 Taps	Sizes-18
Dies	Sizes-22
M6 Taps	Sizes-24
Dies	Sizes-29
M8 Taps	Sizes-32
Dies	Sizes-37
M10 Taps	Sizes-40
Dies	Sizes-47
M12 Taps	Sizes-50
Dies	Sizes-58
M1 ~ M7 Taps	Sizes-60
Dies	Sizes-74
M9 ~ M24 Taps	Sizes-78
Dies	Sizes-100
M25 ~ M48 Taps	Sizes-103
Dies	Sizes-113
For Unified threads	Taps Sizes-115
	Dies Sizes-130
For Whitworth threads	Taps Sizes-132
	Dies Sizes-136
For Screw threads used on sewing machines	Taps Sizes-137
	Dies Sizes-138
For Pipe threads	Taps Sizes-139
	Dies Sizes-143
For American pipe threads	Taps Sizes-145
	Dies Sizes-147
For Miniature threads	Taps Sizes-148
	Dies Sizes-149

Explanation of catalogue contents

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
General purpose	8	PO-Y	PY62.0E	PO	6HX	40		5P	PO-1
		HT-Y	TY62.0E5	HT	6HX	40	3	5P	HT-2
			TY62.0E1	HT	6HX	40		1.5P	HT-2
		R-Y	RY2.0E3	RO	6HX	42		3P	RO-1
Standard	5 6 8 11 12	SP	SPP2.0E	SP	P1			2.5P	SP-2
			SPP2.0E1	SP	P1			1.5P	SP-2

Page shown in line-ups depending on products

Classification of materials

Kind	Chip shape after boring (drilling)	No.	Examples of materials
Ferrous		①	Cast iron, Ductile cast iron, Sintered material
		②	High hardness material
		③	Heat treated steel (45-55HRC)
		④	Heat treated steel (25-45HRC)
		⑤	High carbon steel, Tool steel, Alloy steel, Heat treated steel
		⑥	Medium carbon steel, Cast steel
		⑦	Stainless steel
		⑧	Low carbon steel
Non-ferrous		⑨	Titanium alloy
		⑩	Nickel base alloy
		⑪	Rolled aluminum, Copper, Copper alloy
		⑫	Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
		⑬	Thermosetting plastic

Hardness of materials : Please refer to material composition table shown in technical data.

Flute shape of taps and chip ejection

SP= Spiral	PO= Spiral point	SL= LH spiral	HT= Straight	RO= Forming
<p>Continuous chips</p>	<p>Ejection backward</p>	<p>Broken chips stored in flutes</p>	<p>No chips thread forming</p>	

M2 Taps

M3 Taps

M4 Taps

M5 Taps

M6 Taps

M8 Taps

M10 Taps

M12 Taps

M1-M7 Taps

M9-M24 Taps

M25-M48 Taps

For Unified threads Taps

For Whitworth threads Taps

For Small thread and irregular pitches Taps (SM)

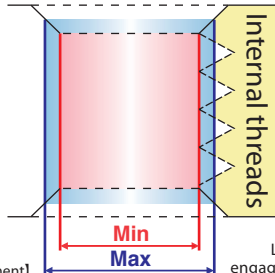
For Pipe threads Taps

For American pipe threads Taps

For Miniature threads Taps

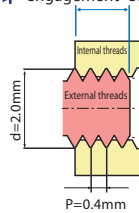
Flow chart : M2 tapping

Check 1 Boring before tapping

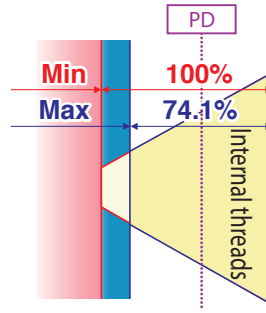


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	-	$S \leq 1(\text{mm})$
M	Normal engagement length	5H	6H	7H	$1 < N \leq 3(\text{mm})$
L	Long engagement length	6H	7H	8H	$3 < L(\text{mm})$



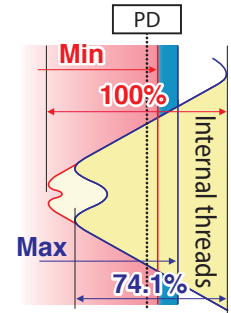
Engagement ratio on cutting taps



	Drill size (ref.)	D1	
		Min	Max
Bored hole size	1.6	1.567	1.679
Engagement ratio	92.4%	100%	74.1%

Unit: mm
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



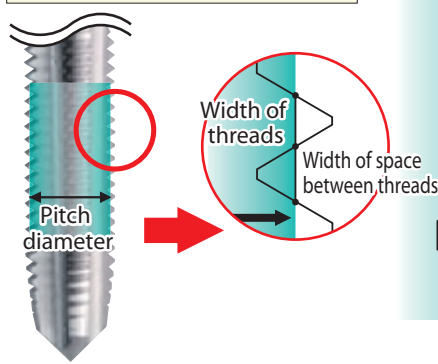
Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

*Hole size for thread forming taps	Unit: mm	
	Min	Max
	1.79	1.84

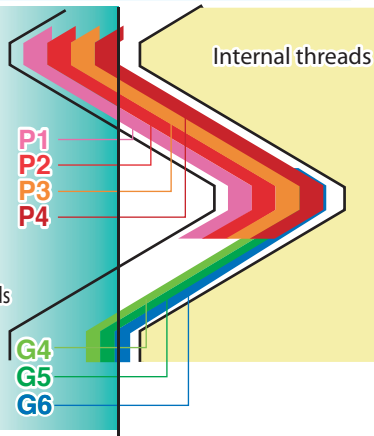
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

Class	PD tolerance
P1	10μm ~ 25μm
P2	25μm ~ 40μm
P3	40μm ~ 55μm
P4	55μm ~ 70μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

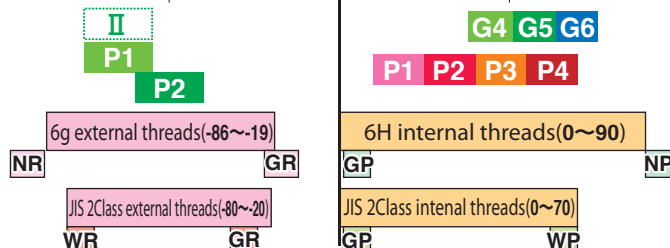
Class	PD tolerance
G4	38μm ~ 51μm
G5	51μm ~ 64μm
G6	64μm ~ 76μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Relative position of PD tolerance area of external threads and internal threads, taps and gages.

Check 3 Gage check

Ring gage pitch diameter (for external threads inspection)			
NR6g	-96 ~ -86	GR6g	-22 ~ -12
WR II	-80 ~ -72	GR II	-32 ~ -24

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	1.886~1.981	1.654~1.721	-
JIS 2class	1.890~1.980	1.660~1.720	~1.490

Plug gage pitch diameter (for internal threads inspection)			
GP6H	2 ~ 10	NP6H	90 ~ 98
GP II	4 ~ 12	WP II	62 ~ 70

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	-	1.740~1.830	1.567~1.679
JIS 2class	-	1.740~1.810	1.567~1.679

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Taps M2×0.4													
General purpose	8	PO-Y	PY62.0E	PO		40		5P	PO-1				
		HT-Y	TY62.0E5	HT	6HX	40	3	5P	HT-2				
			TY62.0E1	HT		40		1.5P	HT-2				
		R-Y	RY2.0E3	RO		42		3P	RO-1				
Standard	5 6 8 11 12	SP	SPP2.0E	SP	P1			2.5P	SP-2				
			SPP2.0E1	SP	P1			1.5P	SP-2				
		+SP(N+SP)	SNPP2.0E	SP	P1			2.5P	SP-21				
		N-SP	(SNMP2.0E1)	SP	P1			1.5P	SP-3				
			(SNP2.0E)	SP	P1	42	3	2.5P	SP-2				
			(SNP2.0E1)	SP	P1			1.5P	SP-3				
		PO	POQ2.0E	PO	P2			5P	PO-2				
		+PO(N+PO)	(PNPQ2.0E)	PO	P2			5P	PO-15				
		N-PO	(PNQ2.0E)	PO	P2			5P	PO-2				
		1 5 6 12	HT	(TNMP2.0E9)						9P	HT-5		
				TNMP2.0E5						5P	HT-5		
				TNMP2.0E1	HT	P1	42	3		1.5P	HT-5		
				(TNP2.0E9)						9P	HT-5		
				(TNP2.0E5)						5P	HT-5		
				(TNP2.0E1)						1.5P	HT-5		
Oversize	5 6 8 11 12			SP	SPQ2.0E	SP	P2			2.5P	SP-3		
					SPR2.0E	SP	P3			2.5P	SP-3		
			SPS2.0E	SP	P4			2.5P	SP-3				
		+SP(N+SP)	SNPQ2.0E	SP	P2			2.5P	SP-21				
			SNPR2.0E	SP	P3			2.5P	SP-21				
			SNPS2.0E	SP	P4			2.5P	SP-21				
		N-SP	(SNQ2.0E)	SP	P2			2.5P	SP-3				
			(SNR2.0E)	SP	P3	42	3	2.5P	SP-3				
			(SNS2.0E)	SP	P4			2.5P	SP-3				
		PO	POR2.0E	PO	P3			5P	PO-2				
			POS2.0E	PO	P4			5P	PO-2				
		+PO(N+PO)	(PNPR2.0E)	PO	P3			5P	PO-15				
			(PNPS2.0E)	PO	P4			5P	PO-15				
		N-PO	(PNR2.0E)	PO	P3			5P	PO-2				
			(PNS2.0E)	PO	P4			5P	PO-2				
1 5 6 12	HT	(TNMR2.0E9)		P3				9P	HT-5				
		TNMR2.0E5		P3				5P	HT-5				
		TNMR2.0E1		P3				1.5P	HT-5				
		(TNR2.0E9)		P3				9P	HT-5				
		(TNR2.0E5)		P3				5P	HT-5				
		(TNR2.0E1)		P3				1.5P	HT-5				
		(TNMS2.0E9)	HT	P4	42	3		9P	HT-5				
		TNMS2.0E5		P4				5P	HT-5				
		TNMS2.0E1		P4				1.5P	HT-5				
		(TNS2.0E9)		P4				9P	HT-5				
		(TNS2.0E5)		P4				5P	HT-5				
		(TNS2.0E1)		P4				1.5P	HT-5				
		For left hand threads	5 6 8 11 12	SP(LH)	SPP2.0E-L						SP-26		
				N-SP(LH)	(SNMP2.0E-L)	SP	P1	42	3	2.5P	SP-26		
					(SNP2.0E-L)						SP-26		
1 5 6 12	HT(LH)			(TNMP2.0E9-L)	HT	P1	42	3	9P	HT-40			
For left hand threads	1 5 6 12	HT(LH)	TNMP2.0E5-L						5P				
			TNMP2.0E1-L						1.5P				
			(TNP2.0E9-L)	HT	P1	42	3	9P	HT-40				
			(TNP2.0E5-L)						5P				
			(TNP2.0E1-L)						1.5P				
		Oxidizing	5 6 8	SP-OX	SPP2.0EX	SP	P1			2.5P	SP-23		
				+SP-OX(N+SP-OX)	SNPP2.0EX	SP	P1			2.5P	SP-25		
				N-SP-OX	(SNP2.0EX)	SP	P1			2.5P	SP-23		
				PO-OX	POQ2.0EX	PO	P2	42	3	5P	PO-17		
				+PO-OX(N+PO-OX)	(PNPQ2.0EX)	PO	P2			5P	PO-18		
				N-PO-OX	(PNQ2.0EX)	PO	P2			5P	PO-17		
				Oversize	PO-OX	POR2.0EX		PO	P3	42	3	5P	PO-17
						(PNPR2.0EX)						5P	PO-18
						(PNR2.0EX)						5P	PO-18
				TiN coated	7 8 11 12	AU+SP	VSAPQ2.0E	SP	P2			2.5P	SP-29
R+V	RVP42.0EP		G4						4P	RO-24			
	RVP42.0EB		G4						2P	RO-24			
	RVP52.0EP		G5						4P	RO-24			
	RVP52.0EB		G5						2P	RO-24			
	RVP62.0EP		G6						4P	RO-24			
	RVP62.0EB		G6						2P	RO-24			
R-V	(RV42.0EP)	RO	G4			42	3	4P	RO-24				
	(RV42.0EB)		G4					2P	RO-24				
	(RV52.0EP)		G5					4P	RO-24				
	(RV52.0EB)		G5					2P	RO-24				
	(RV62.0EP)		G6					4P	RO-24				
	(RV62.0EB)		G6					2P	RO-24				
Long shank	5 6 8 11 12	LS-SP	SPP2.0EL07			SP	P1	70		2.5P	SP-30		
			SPP2.0EL10			SP	P1	100		2.5P	SP-30		
		LS-N-SP	(SNMP2.0EL07)	SP	P1	70		2.5P	SP-30				
			(SNP2.0EL07)	SP	P1	70		2.5P	SP-30				
			(SNP2.0EL10)	SP	P1	100	3	2.5P	SP-30				
		LS-PO	POQ2.0EL07	PO	P2	70		5P	PO-23				
			POQ2.0EL10	PO	P2	100		5P	PO-23				
		LS-N-PO	(PNQ2.0EL07)	PO	P2	70		5P	PO-23				
			(PNQ2.0EL10)	PO	P2	100		5P	PO-23				
		1 5 6 12	LS-HT	TNMP2.0E507				70		5P	HT-47		
				TNMP2.0E510				100		5P	HT-47		
				TNMP2.0E107				70		1.5P	HT-47		
				TNMP2.0E110				100		1.5P	HT-47		
				(L072.0E5-P)	HT	P1	70	3	5P	HT-47			
				(L102.0E5-P)					100	5P	HT-47		
(L072.0E1-P)							70	1.5P	HT-47				
(L102.0E1-P)							100	1.5P	HT-47				
Thread forming taps for steels	6 8			N+RZ	NRZP42.0EP		G4			4P	RO-2		
					NRZP42.0EB		G4			2P	RO-2		
			NRZP52.0EP		G5			4P	RO-3				
			NRZP52.0EB		G5			2P	RO-3				
			NRZP62.0EP	RO	G6	42	3	4P	RO-3				
			NRZP62.0EB		G6			2P	RO-3				
		N-RZ	(NRZ42.0EP)		G4			4P	RO-2				
			(NRZ42.0EB)		G4			2P	RO-2				
			(NRZ52.0EP)		G5			4P	RO-3				

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Thread forming taps for steels	6 8	N-RZ	(NRZ52.0EB)	G5				2P	RO-3	
			(NRZ62.0EP)	RO	G6	42	3	4P	RO-3	
			(NRZ62.0EB)	G6					2P	RO-3
For high carbon steels	1 5 6	HC+PO	PCPQ2.0E	PO	P2	42	3	5P	PO-41	
		HC-PO	(PCQ2.0E)							PO-41
Carbide taps for hard materials	2	UH-CT	UHCR2.0E5	HT	P3	40	4	5P	CT-10	
For stainless steels	6 7 8	SU+SP	SUPP2.0E	SP	P1			2.5P	SP-41	
		SU-SP	(SUP2.0E)	SP	P1			2.5P	SP-41	
		SU+PO	PUPQ2.0E	PO	P2				5P	PO-32
		SU-PO	(PUQ2.0E)	PO	P2				5P	PO-32
		SU-HT	(TUMQ2.0E9)	HT	P2	42	3	9P	HT-70	
			TUMQ2.0E4	HT	P2				4P	HT-70
			TUMQ2.0E1	HT	P2				1.5P	HT-70
			(TUQ2.0E9)	HT	P2				9P	HT-70
			(TUQ2.0E4)	HT	P2				4P	HT-70
			(TUQ2.0E1)	HT	P2				1.5P	HT-70
		Oversize	6 7 8	SU+SP	SUPQ2.0E	SP	P2			2.5P
	SUPR2.0E			SP	P3			2.5P	SP-41	
SU-SP	(SUR2.0E)			SP	P3	42	3	2.5P	SP-41	
SU+PO	PUPR2.0E			PO	P3			5P	PO-32	
SU-PO	(PUR2.0E)			PO	P3			5P	PO-32	
For cast irons	1	FC-O	TFCM2.0E5					5P	HT-77	
			TFCM2.0E1					1.5P	HT-77	
			(TFC2.0E5)	HT	40-5	42	3	5P	HT-77	
			(TFC2.0E1)					1.5P	HT-77	
Carbide	1 12 13	N-CT FC	TCNR2.0E3	HT	P3	40	3	3P	CT-3	
			TCNR2.0E1					1.5P	CT-3	
For aluminum alloys	11 12 13	AL+SP	ASHPQ2.0E					2.5P	SP-60	
		AL-SP	ASHMQ2.0E1					1.5P	SP-60	
			(ASHQ2.0E)	SP	P2	42	3	2.5P	SP-60	
			(ASHQ2.0E1)					1.5P	SP-60	
	11 12	LA-O	TLAM2.0E5						5P	HT-80
			TLAM2.0E1						1.5P	HT-80
			(TLA2.0E5)	HT	40-5	42	3	5P	HT-80	
			(TLA2.0E1)					1.5P	HT-80	
Carbide	11 12 13	N-CT LA	TCNR2.0E3A	HT	P3	40	3	3P	CT-1	
			TCNR2.0E1A					1.5P	CT-1	
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP42.0EP	G4				4P	RO-12	
			NRSP42.0EB	G4				2P	RO-12	
			NRSP52.0EP	G5				4P	RO-12	
			NRSP52.0EB	G5				2P	RO-12	
			NRSP62.0EP	G6				4P	RO-12	
			NRSP62.0EB	G6				2P	RO-12	
		N-RS	(NRS42.0EP)	RO	G4	42	3	4P	RO-12	
			(NRS42.0EB)	G4				2P	RO-12	
			(NRS52.0EP)	G5				4P	RO-12	
			(NRS52.0EB)	G5				2P	RO-12	
			(NRS62.0EP)	G6				4P	RO-12	
			(NRS62.0EB)	G6				2P	RO-12	
Short chamfer	11 12	MG-HT	TMGMQ2.0E1	HT	P2	42	3	1P	HT-84	
			(TMGQ2.0E1)						HT-84	
For thermosetting plastics	13	PL-1	TPLM2.0E3	HT	P4	42	3	3P	HT-89	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For thermosetting plastics	13	PL-1	(TPL2.0E3)	HT	P4	42	3	3P	HT-89	
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP42.0EP	G4					RO-27	
			OLRZP52.0EP	RO	G5	42	3	4P	RO-27	
		OL-RZ	(OLRZ42.0EP)	G4					RO-27	
			(OLRZ52.0EP)	G5				RO-28		
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP42.0EB	G4					RO-30	
			HRZP52.0EB	RO	G5	42	3	2P	RO-30	
		HP-RZ	(HRZ42.0EB)	G4					RO-30	
			(HRZ52.0EB)	G5					RO-30	
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM42.0E1	RO	G4	42	3	1P	RO-35	
			(SRZ42.0E1)						RO-35	
For deep hole use	5 6 8	S-SP	SSMP2.0E	SP	P1			2.5P	SP-52	
			(SSP2.0E)	SP	P1			2.5P	SP-52	
		S-PO	PSMQ2.0E	PO	P2	42	3	5P	PO-39	
			(PSQ2.0E)	PO	P2		5P	PO-39		
Nut taps	6 8 11 12	NT	NH22.0E	HT	II b	75	1.4	28P	etc-1	
Taps M2x0.25										
Standard	5 6 8 11 12	SP	SPP2.0B	SP				2.5P	SP-3	
		N-SP	(SNMP2.0B)	SP				2.5P	SP-3	
			(SNP2.0B)	SP	P1	42	3	2.5P	SP-3	
		PO	POP2.0B	PO				5P	PO-2	
		N+PO	(PNPP2.0B)	PO				5P	PO-15	
		N-PO	(PNP2.0B)	PO				5P	PO-2	
		1 5 6 12	HT	(TNMP2.0B9)					9P	HT-5
			TNMP2.0B5						5P	HT-5
			TNMP2.0B1	HT	P1	42	3	1.5P	HT-5	
			(TNP2.0B9)					9P	HT-5	
	(TNP2.0B5)					5P	HT-5			
	(TNP2.0B1)					1.5P	HT-5			
Thread forming taps for steels	6 8	N-RZ	NRZM42.0BP	G4				4P	RO-3	
			NRZM42.0BB	G4				2P	RO-3	
			(NRZ42.0BP)	G4				4P	RO-3	
			(NRZ42.0BB)	RO	G4	42	3	2P	RO-3	
			NRZM52.0BP	G5				4P	RO-3	
			NRZM52.0BB	G5				2P	RO-3	
			(NRZ52.0BP)	G5				4P	RO-3	
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM42.0BP	G4				4P	RO-12	
			NRSM42.0BB	G4				2P	RO-12	
			(NRS42.0BP)	G4				4P	RO-12	
			(NRS42.0BB)	RO	G4	42	3	2P	RO-12	
			NRSM52.0BP	G5				4P	RO-12	
			NRSM52.0BB	G5				2P	RO-12	
			(NRS52.0BB)	G5				2P	RO-3	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on sewing machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

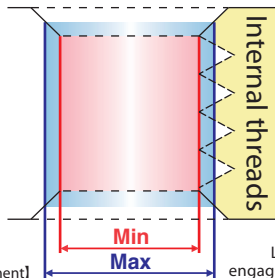
- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page	
Dies M2×0.4										
Solid dies	HSS	⑥⑧⑪⑫	SD-Y	6G	16	7	2~2.5P	DDG2.0E	Di-1	
Adjustable dies	SKS		AR-D		16	5		GD22.0E	Di-1	
	SKS		AR-D		20	7		GE22.0E	Di-1	
	SKS	⑥⑧	AR-D		25	9		GG22.0E	Di-1	
	HSS	⑪⑫	AR-D HSS	II	16	5	2~2.5P	HD22.0E	Di-12	
	HSS		AR-D HSS		20	7		HE22.0E	Di-13	
	HSS		AR-D HSS		25	9		HG22.0E	Di-13	
	For left hand threads	SKS	⑥⑧	AR-D LH	II	16	5	2~2.5P	GD22.0E-L	Di-7
		SKS	⑪⑫	AR-D LH		20	7		GE22.0E-L	Di-7
	Solid dies for auto lathe	For steels				P1	10	3	FBP2.0E	Di-9
						P2	10	3	FBQ2.0E	Di-9
SKS			⑥⑧	AD-S ST		P1	16	5	FDP2.0E	Di-9
					P2	16	5	2~2.5P	FDQ2.0E	Di-9
					P1	20	7		FEP2.0E	Di-9
					P2	20	7		FEQ2.0E	Di-9
For brass						P1	10	3	EBP2.0E	Di-11
						P2	10	3	EBQ2.0E	Di-11
		SKS	⑪⑫	AD-S BR		P1	16	5	EDP2.0E	Di-11
					P2	16	5	2~2.5P	EDQ2.0E	Di-11
					P1	20	7		EEP2.0E	Di-11
					P2	20	7		EEQ2.0E	Di-11
For stainless steels					P1	16	5	HDP2.0E	Di-14	
					P2	16	5	HDQ2.0E	Di-14	
	HSS	⑥⑦⑧	HS-D		P1	20	7	HEP2.0E	Di-14	
				P2	20	7	2~2.5P	HEQ2.0E	Di-14	
Rolling dies					R2			RDQ2.0E	Di-16	
	HSS	⑥⑦⑧⑪⑫	RS-D		R3	16	5	RDR2.0E	Di-16	
					R4			RDS2.0E	Di-16	
Dies M2×0.25										
Adjustable dies	SKS		AR-D		16	5		GD22.0B	Di-1	
	SKS	⑥⑧⑪⑫	AR-D	II	20	7	2~2.5P	GE22.0B	Di-1	
	HSS		AR-D HSS		16	5		HD22.0B	Di-13	
	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	20	7	2~2.5P	GE22.0B-L	Di-7
Solid dies for auto lathe	For steels				P1	10	3	FBP2.0B	Di-9	
					P2	10	3	FBQ2.0B	Di-9	
		SKS	⑥⑧	AD-S ST		P1	16	5	FDP2.0B	Di-9
					P2	16	5	2~2.5P	FDQ2.0B	Di-9
					P1	10	3		EBP2.0B	Di-11
					P2	10	3		EBQ2.0B	Di-11
	For brass	SKS	⑪⑫	AD-S BR		P1	16	5	EDP2.0B	Di-11
					P2	16	5	2~2.5P	EDQ2.0B	Di-11
					P1	10	3		HBP2.0B	Di-14
					P2	10	3		HBQ2.0B	Di-14
		HSS	⑥⑦⑧	HS-D		P1	16	5	HDP2.0B	Di-14
					P2	16	5	2~2.5P	HDQ2.0B	Di-15
Rolling dies	HSS	⑥⑦⑧⑪⑫	RS-D		R3	16	5	RDR2.0B	Di-16	
					R4			RDS2.0B	Di-16	

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Small threads and irregular pitches Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

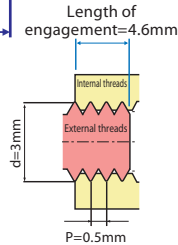
Flow chart : M3 tapping

Check 1 — Boring before tapping

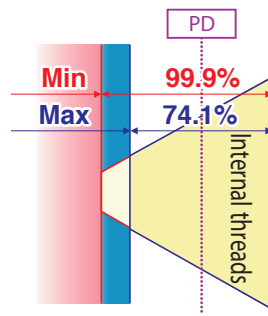


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

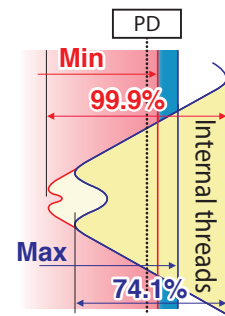
Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 1.5$ (mm)
M	Normal engagement length	5H	6H	7H	$1.5 < N \leq 4.5$ (mm)
L	Long engagement length	6H	7H	8H	$4.5 < L$ (mm)



Engagement ratio on cutting taps



Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

Bored hole size	Drill size (ref.)	D1	
		Min	Max
2.5	2.5	2.459	2.599
Engagement ratio	92.4%	99.9%	74.1%

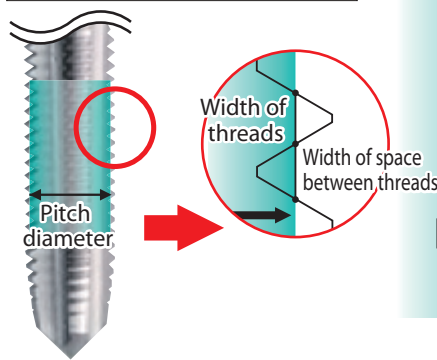
Unit : mm
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

*Hole size for thread forming taps	Unit : mm	
	Min	Max
2.75	2.75	2.82

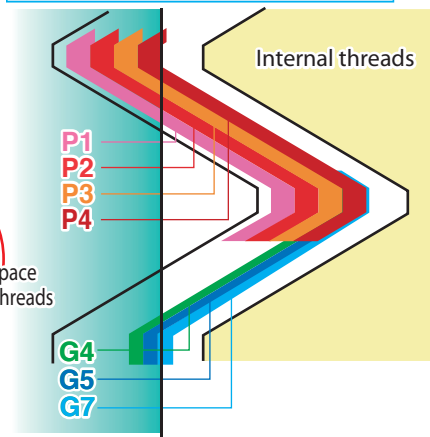
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

Class	PD tolerance
P1	10μm ~ 25μm
P2	25μm ~ 40μm
P3	40μm ~ 55μm
P4	55μm ~ 70μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

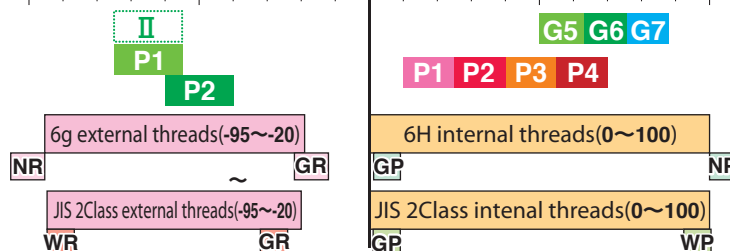
Class	PD tolerance
G5	51μm ~ 64μm
G6	64μm ~ 76μm
G7	76μm ~ 89μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Relative position of PD tolerance area of external threads and internal threads, taps and gages.

Check 3 — Gage check

Ring gage pitch diameter (for external threads inspection)				Unit : μm
NR6g	-105 ~ -95	GR6g	-23 ~ -13	
WR II	-95 ~ -87	GR II	-32 ~ -24	

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Accuracy of external threads				Unit : mm
	Major diameter	Pitch diameter	Minor diameter	
6g	2.874~2.980	2.580~2.655	—	
JIS 2class	2.874~2.980	2.580~2.655	~2.367	

Plug gage pitch diameter (for internal threads inspection)				Unit : μm
GP6H	2 ~ 10	NP6H	100 ~ 108	
GP II	4 ~ 12	WP II	92 ~ 100	

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Accuracy of internal threads				Unit : mm
	Major diameter	Pitch diameter	Minor diameter	
6H	—	2.675~2.775	2.459~2.599	
JIS 2class	—	2.675~2.775	2.459~2.599	

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and diameter metric Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M3×0.5											
General purpose	⑧	ISP	SI73.0G	SP	-			2.5P	SP-1		
		SP-Y	(SY3.0G)	SP	-			2.5P	SP-1		
		IPO	PI7Q3.0G	PO	-	46	4	5P	PO-1		
		IHT	HI73.0G5	HT	-			5P	HT-1		
			HI73.0G2	HT	-			2P	HT-1		
		R-Y	RY3.0G3	RO	6HX			3P	RO-1		
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPP3.0G	SP	P1			2.5P	SP-4		
			SPP3.0G1	SP	P1			1.5P	SP-4		
		+SP(N+SP)	SNPP3.0G	SP	P1			2.5P	SP-21		
		N-SP	(SNMP3.0G1)	SP	P1	46	4	1.5P	SP-4		
			(SNP3.0G1)	SP	P1			1.5P	SP-4		
		PO	POQ3.0G	PO	P2			5P	PO-3		
		+PO(N+PO)	PNPQ3.0G	PO	P2			5P	PO-15		
		① ⑤ ⑥ ⑫	HT	(TNMQ3.0G9)					9P	HT-7	
				TNMQ3.0G5					5P	HT-7	
				TNMQ3.0G1	HT	P2	46	4	1.5P	HT-7	
				(TNQ3.0G9)					9P	HT-7	
				(TNQ3.0G5)					5P	HT-7	
				(TNQ3.0G1)					1.5P	HT-7	
		Oversize	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ3.0G	SP	P2			2.5P	SP-4
	SPR3.0G			SP	P3			2.5P	SP-4		
	SPS3.0G			SP	P4			2.5P	SP-4		
+SP(N+SP)	SNPQ3.0G			SP	P2			2.5P	SP-21		
	SNPR3.0G			SP	P3	46	4	2.5P	SP-21		
	SNPS3.0G			SP	P4			2.5P	SP-21		
PO	POR3.0G			PO	P3			5P	PO-3		
	POS3.0G			PO	P4			5P	PO-3		
+PO(N+SP)	PNPR3.0G			PO	P3			5P	PO-15		
	PNPS3.0G			PO	P4			5P	PO-15		
① ⑤ ⑥ ⑫	HT			(TNMR3.0G9)			P3			9P	HT-7
				TNMR3.0G5			P3			5P	HT-7
				TNMR3.0G1			P3			1.5P	HT-7
				(TNR3.0G9)			P3			9P	HT-7
		(TNR3.0G5)			P3			5P	HT-7		
		(TNR3.0G1)			P3			1.5P	HT-7		
		(TNMS3.0G9)			P4			9P	HT-7		
		TNMS3.0G5	HT	P4	46	4	5P	HT-7			
		TNMS3.0G1		P4			1.5P	HT-7			
		(TNS3.0G9)		P4			9P	HT-7			
		(TNS3.0G5)		P4			5P	HT-7			
		(TNS3.0G1)		P4			1.5P	HT-7			
		(TNMT3.0G9)		P5			9P	HT-7			
		TNMT3.0G5		P5			5P	HT-7			
TNMT3.0G1		P5			1.5P	HT-7					
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPP3.0G-L	SP	P1			2.5P	SP-26		
		N-SP(LH)	SNMP3.0G-L	SP	P1			2.5P	SP-26		
			(SNP3.0G-L)	SP	P1			2.5P	SP-26		
		PO(LH)	POQ3.0G-L	PO	P2	46	4	5P	PO-19		
		N+PO(LH)	(PNPQ3.0G-L)	PO	P2			5P	PO-25		
			(PNQ3.0G-L)	PO	P2			5P	PO-19		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For left hand threads	① ⑤ ⑥ ⑫	HT(LH)	(TNMQ3.0G9-L)					9P	HT-41		
			TNMQ3.0G5-L					5P	HT-41		
			TNMQ3.0G1-L	HT	P2	46	4	1.5P	HT-41		
			(TNQ3.0G9-L)					9P	HT-41		
			(TNQ3.0G5-L)					5P	HT-41		
			(TNQ3.0G1-L)					1.5P	HT-41		
Oxidizing	⑤ ⑥ ⑧	SP-OX	SPP3.0GX	SP	P1			2.5P	SP-23		
		+SP-OX(N+SP-OX)	SNPP3.0GX	SP	P1			2.5P	SP-25		
		N-SP-OX	(SNP3.0GX)	SP	P1	46	4	2.5P	SP-23		
		PO-OX	POQ3.0GX	PO	P2			5P	PO-17		
		+PO-OX(N+PO-OX)	PNPQ3.0GX	PO	P2			5P	PO-18		
		N-PO-OX	(PNQ3.0GX)	PO	P2			5P	PO-17		
		Oversize	⑤ ⑥ ⑧	SP-OX	SPO3.0GX	SP	P2			2.5P	SP-23
					SPR3.0GX	SP	P3			2.5P	SP-23
+SP-OX(N+SP-OX)	SNPQ3.0GX			SP	P2	46	4	2.5P	SP-25		
	SNPR3.0GX			SP	P3			2.5P	SP-25		
+PO-OX(N+PO-OX)	PNPR3.0GX			PO	P3			5P	PO-18		

TiN coated	⑦ ⑧ ⑪ ⑫	AU+SP	VSAPQ3.0G	SP	P2	46	4	2.5P	SP-29	
		AU+SL	VSAPQ3.0GL	SL	P2			5P	SL-1	
		⑤ ⑥ ⑧ ⑪ ⑫	PO-V	VPOQ3.0G						PO-22
				(VPNMQ3.0G)	PO	P2	46	4	5P	PO-22
			(VPNQ3.0G)							PO-22
		⑥ ⑦ ⑧ ⑪ ⑫	R+V	RVP53.0GP		G5				4P
RVP53.0GB				G5			2P	RO-26		
RVP63.0GP				G6				4P	RO-26	
RVP63.0GB				G6			2P	RO-26		
RVP73.0GP				G7				4P	RO-26	
RVP73.0GB				G7			2P	RO-26		
RVP83.0GP	RO			G8	46	4	4P	RO-26		
R-V	(RV53.0GP)			G5				4P	RO-26	
	(RV53.0GB)			G5				2P	RO-26	
	(RV63.0GP)			G6				4P	RO-26	
	(RV63.0GB)			G6				2P	RO-26	
	(RV73.0GP)			G7				4P	RO-26	
	(RV73.0GB)	G7				2P	RO-26			

Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPP3.0GL07	SP	P1	70		2.5P	SP-31	
			SPP3.0GL10	SP	P1	100		2.5P	SP-31	
			SPP3.0GL12	SP	P1	120		2.5P	SP-31	
			SPP3.0GL15	SP	P1	150		2.5P	SP-31	
			LS-N-SP	(SNMP3.0GL07)	SP	P1	70		2.5P	SP-31
				(SNMP3.0GL10)	SP	P1	100		2.5P	SP-31
		(SNMP3.0GL12)		SP	P1	120		2.5P	SP-31	
		(SNMP3.0GL15)		SP	P1	150		2.5P	SP-31	
		(SNP3.0GL07)		SP	P1	70	4	2.5P	SP-31	
		(SNP3.0GL10)		SP	P1	100		2.5P	SP-31	
		LS-PO	POQ3.0GL07	PO	P2	70		5P	PO-23	
			POQ3.0GL10	PO	P2	100		5P	PO-23	
			POQ3.0GL12	PO	P2	120		5P	PO-23	
			POQ3.0GL15	PO	P2	150		5P	PO-23	
			LS-N-PO	(PNMQ3.0GL07)	PO	P2	70		5P	PO-23

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Long shank	5 6 8 11 12	LS-N-PO	(PNMQ3.0GL10)			100			PO-23				
			(PNMQ3.0GL12)			120			PO-23				
			(PNMQ3.0GL15)			150			PO-23				
			(PNQ3.0GL07)	PO	P2	70	4	5P	PO-23				
			(PNQ3.0GL10)			100			PO-23				
			(PNQ3.0GL12)			120			PO-23				
			(PNQ3.0GL15)			150			PO-23				
			1 5 6 12	LS-HT	TNMP3.0G507			70		5P	HT-47		
					TNMP3.0G510			100		5P	HT-48		
					TNMP3.0G512			120		5P	HT-48		
	TNMP3.0G515					150		5P	HT-48				
	TNMP3.0G107					70	1.5P	HT-48					
	TNMP3.0G110					100	1.5P	HT-48					
	TNMP3.0G112					120	1.5P	HT-48					
	TNMP3.0G115	HT			P1	150	4	1.5P	HT-48				
	(L073.0G5-P)					70	4	5P	HT-47				
	(L103.0G5-P)					100	5P	HT-48					
	(L123.0G5-P)			120	5P	HT-48							
	(L153.0G5-P)			150	5P	HT-48							
	(L073.0G1-P)			70	1.5P	HT-48							
(L103.0G1-P)			100	1.5P	HT-48								
(L123.0G1-P)			120	1.5P	HT-48								
(L153.0G1-P)			150	1.5P	HT-48								
Oversize	5 6 8 11 12	LS-SP	SPO3.0GL10	SP	P2	100		2.5P	SP-31				
			SPR3.0GL10	SP	P3	100		2.5P	SP-31				
			SPR3.0GL15	SP	P3	150		2.5P	SP-31				
			LS-N-SP	(SNMQ3.0GL10)	SP	P2	100		2.5P	SP-31			
			(SNMQ3.0GL15)	SP	P2	150		2.5P	SP-31				
			(SNQ3.0GL10)	SP	P2	100		2.5P	SP-31				
			(SNMR3.0GL10)	SP	P3	100		2.5P	SP-31				
			(SNMR3.0GL15)	SP	P3	150	4	2.5P	SP-31				
			(SNR3.0GL10)	SP	P3	100		2.5P	SP-31				
			(SNR3.0GL15)	SP	P3	150		2.5P	SP-31				
	1 5 6 12	LS-PO	POR3.0GL10	PO	P3	100		5P	PO-23				
			POR3.0GL15	PO	P3	150		5P	PO-23				
			LS-N-PO	(PNMR3.0GL10)	PO	P3	100		5P	PO-23			
			(PNMR3.0GL15)	PO	P3	150		5P	PO-23				
			(PNR3.0GL10)	PO	P3	100		5P	PO-23				
			(PNR3.0GL15)	PO	P3	150		5P	PO-23				
			1 5 6 12	LS-HT	TNMR3.0G510			100		5P	HT-48		
					TNMR3.0G515			150		5P	HT-48		
					TNMR3.0G110			100	1.5P	HT-48			
					TNMR3.0G115			150	1.5P	HT-48			
(L103.0G5-R)	HT	P3			100	4	5P	HT-48					
(L153.0G5-R)					150	5P	HT-48						
(L103.0G1-R)					100	1.5P	HT-48						
(L153.0G1-R)					150	1.5P	HT-48						
5 6 8 11 12	LS-SP-K	-			SP	P1	100	4	2.5P	SP-41			
		LS-PO-K			PO	P2	100		5P	PO-32			
		5 6 8 11 12	LS-SP(LH)	SPP3.0GL10-L						SP-39			
				LS-N-SP(LH)	SNMP3.0GL10L	SP	P1	100	4	2.5P	SP-39		
		(SNP3.0GL10-L)							SP-39				
		Long shank	5 6 8 11 12	LS-HT(LH)	TNMP3.0G510L					5P	HT-65		
					TNMP3.0G110L					1.5P	HT-65		
					(L103.0G5-PL)	HT	P1	100	4	5P	HT-65		
					(L103.0G1-PL)						1.5P	HT-65	
					5 6 8 11 12	LS-SP-V	VSP3.0GL10	SP	P1			2.5P	SP-40
LS-N-SP-V	(VSNMP3.0GL10)						SP	P1		2.5P	SP-40		
(VSNP3.0GL10)	SP						P1	100	4	2.5P	SP-40		
LS-PO-V	VPO3.0GL10						PO	P2		5P	PO-31		
LS-N-PO-V	(VPMQ3.0GL10)						PO	P2		5P	PO-31		
(VPMQ3.0GL10)	PO						P2		5P	PO-31			
1 5 6 12	LS-HT-V		TNMP3.0G510V							5P	HT-68		
			TNMP3.0G110V							1.5P	HT-68		
			(VL103.0G5-P)	HT			P1	100	4	5P	HT-68		
			(VL103.0G1-P)								1.5P	HT-68	
			8	E-SP	ESHMP3.0G						SP-55		
					ESHMP3.0G-3	SP	P1	46	4	2.5P	SP-55		
					(ESH3.0G-3)						SP-55		
					6 8	N+RZ	NRZP53.0GP	G5				4P	RO-4
							NRZP53.0GB	G5				2P	RO-4
							NRZP63.0GP	G6				4P	RO-4
NRZP63.0GB	G6								2P	RO-4			
NRZP73.0GP	G7								4P	RO-4			
NRZP73.0GB	G7								2P	RO-4			
NRZP83.0GP	G8								4P	RO-4			
NRZP83.0GB	G8						2P	RO-4					
N-RZ	(NRZ53.0GP)	RO	G5	46			4	4P	RO-4				
	(NRZ53.0GB)	G5						2P	RO-4				
	(NRZ63.0GP)	G6				4P	RO-4						
	(NRZ63.0GB)	G6				2P	RO-4						
	(NRZ73.0GP)	G7				4P	RO-4						
	(NRZ73.0GB)	G7				2P	RO-4						
	(NRZ83.0GP)	G8				4P	RO-4						
	(NRZ83.0GB)	G8				2P	RO-4						
	6 8	LS-N-RZ	NRZM53.0GP10	G5				4P	RO-9				
			NRZM53.0GB10	G5				2P	RO-9				
(NRZ53.0GP10)			G5				4P	RO-9					
(NRZ53.0GB10)			RO	G5	100	4	2P	RO-9					
NRZM63.0GP10			G6				4P	RO-9					
NRZM63.0GB10			G6				2P	RO-9					
(NRZ63.0GP10)			G6				4P	RO-9					
(NRZ63.0GB10)			G6				2P	RO-9					
5 6			HC+SP	SCPP3.0G	SP	P1	46	4	2.5P	SP-56			
				(SCP3.0G)						SP-56			
	1 5 6	HC-PO		PCMQ3.0G	PO	P2	46	4	5P	PO-41			
				(PCQ3.0G)						PO-41			
	5 6	HC+SP-OX		SCPP3.0GX	SP	P1	46	4	2.5P	SP-59			
				(SCP3.0GX)						SP-59			
	1 4 5	EH-PO		EPHMR3.0G	PO				4.5P	PO-45			
				(EPHR3.0G)	PO				4.5P	PO-45			
				5 6	ETHMR3.0G5	HT	P3	46	4	5P	HT-93		
						ETHMR3.0G1	HT				2.5P	HT-93	
(ETHR3.0G5)			HT				5P	HT-93					
5 6			HC+SP	SCPP3.0G						SP-56			
				(SCP3.0G)						SP-56			
				1 5 6	HC-PO	PCMQ3.0G	PO	P2	46	4	5P	PO-41	
						(PCQ3.0G)						PO-41	
				5 6	HC+SP-OX	SCPP3.0GX	SP	P1	46	4	2.5P	SP-59	
	(SCP3.0GX)									SP-59			
	1 4 5	EH-PO		EPHMR3.0G	PO				4.5P	PO-45			
				(EPHR3.0G)	PO				4.5P	PO-45			
				5 6	ETHMR3.0G5	HT	P3	46	4	5P	HT-93		
						ETHMR3.0G1	HT				2.5P	HT-93	
(ETHR3.0G5)			HT				5P	HT-93					

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified Threads Taps
- For Whitworth Threads Taps
- For Small thread and precision machine Taps (SM)
- For Pipe threads Taps
- For American Pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For hard-to-machine materials	Powdered HSS	①④⑤ EH-HT	(ETHR3.0G1)	HT	P3	46	4	2.5P	HT-93		
		④⑤ PM-SP	-	SP	P3	46	4	3P	SP-69		
		PM-PO	-	PO	P3	46	4	5.5P	PO-47		
For titanium alloys	④⑤⑥⑨ ZET-B	ZETBMQ3.0G		SP	P2			3P	SP-67		
		(ZETBQ3.0G)		SP	P2	46	4	3P	SP-67		
		ZETPMR3.0G		SL	P3			5P	SL-3		
		ZETPR3.0G		SL	P3			5P	SL-3		
For nickel base alloys	⑥⑦⑧⑩ ZEN-B	ZENBMQ3.0G		SP	P2			3P	SP-68		
		(ZENBQ3.0G)		SP	P2	46	4	3P	SP-68		
		ZENPMR3.0G		PO	P3			4.5P	PO-46		
		ZENPR3.0G		PO	P3			4.5P	PO-46		
Carbide taps for hard materials	②	UH-CT	UHCR3.0G5	HT	P3	46	5	5P	CT-10		
		EH-CT	EHCR3.0G5	HT	P3	46	4	5P	CT-10		
For stainless steels	⑥⑦⑧	SU+SP	SUPP3.0G	SP	P1			2.5P	SP-42		
		SU+SL	SUPQ3.0GL	SL	P2			5P	SL-2		
		SU+PO	PUMQ3.0G	PO	P2			5P	PO-33		
			(PUQ3.0G)	PO	P2			5P	PO-33		
		SU+HT	TUMQ3.0G9	HT	P2			9P	HT-70		
			TUMQ3.0G4	HT	P2	46	4	4P	HT-70		
			TUMQ3.0G1	HT	P2			1.5P	HT-70		
			(TUQ3.0G9)	HT	P2			9P	HT-70		
			(TUQ3.0G4)	HT	P2			4P	HT-70		
			(TUQ3.0G1)	HT	P2			1.5P	HT-70		
		Oversize	⑥⑦⑧	SU+SP	SUPQ3.0G	SP	P2			2.5P	SP-42
				SUPR3.0G		SP	P3			2.5P	SP-42
				SU+SP	(SUR3.0G)	SP	P3			2.5P	SP-42
SU+PO	PUMR3.0G			PO	P3	46	4	5P	PO-33		
	(PUR3.0G)			PO	P3			5P	PO-33		
		PUMS3.0G		PO	P4		5P	PO-33			
		(PUS3.0G)		PO	P4		5P	PO-33			
For deep hole use	⑥⑦⑧	SU-S-SP	SSMP3.0G-SU	SP	P1	46		2.5P	SP-50		
			(SSP3.0G-SU)	SP	P1	46	4	2.5P	SP-50		
		LS-SU-S-SP	-	SP	P1	100		2.5P	SP-51		
		LS-SU-S-PO	-	PO	P2	100		5P	PO-38		
For hard-to-machine materials	⑤⑥⑦	SU2-SP	SU2MQ3.0G	SP	P2	46	4	3P	SP-48		
			(SU2Q3.0G)					3P	SP-48		
For cast irons	①	FC-O	TFCM3.0G5					5P	HT-77		
			TFCM3.0G1		HT	40-55	46	4	1.5P	HT-77	
			(TFC3.0G5)					5P	HT-77		
			(TFC3.0G1)					1.5P	HT-77		
Carbide	①⑫⑬	N-CT FC	TCNR3.0G3	HT	P3	46	4	3P	CT-3		
			TCNR3.0G1					1.5P	CT-3		
Long shank, carbide	①⑫⑬	LS-N-CT	-	HT	P3	100	4	3P	CT-7		
			-					1.5P	CT-7		
For aluminum alloys	⑪⑫⑬	AL+SP	ASHPQ3.0G					2.5P	SP-60		
		AL+SP	ASHMQ3.0G1		SP	P2	46	4	1.5P	SP-61	
			(ASHQ3.0G)					2.5P	SP-61		
			(ASHQ3.0G1)					1.5P	SP-61		
	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		
For aluminum alloys	⑪⑫	LA-O	TLAM3.0G5					5P	HT-81		
			TLAM3.0G1		HT	40-55	46	4	1.5P	HT-81	
			(TLA3.0G5)					5P	HT-81		
			(TLA3.0G1)					1.5P	HT-81		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For deep hole use	5 6 8	S-SP	SSMP3.0G-3	SP	P1			2.5P	SP-52		
			(SSP3.0G-3)	SP	P1	46	4	2.5P	SP-52		
Oversize	5 6 8	S-SP	PSMQ3.0G	PO	P2			5P	PO-39		
			(PSQ3.0G)	PO	P2			5P	PO-39		
Low spiral	1 5 6 11 12	LO-SP 8°	LSHMP3.0G8						SP-64		
			(LSHP3.0G8)						SP-64		
		LO-SP 15°	LSHMP3.0G15	SP	P1	46	4	2.5P	SP-64		
			(LSHP3.0G15)						SP-64		
		LO-SP 20°	LSHMP3.0G20						SP-64		
			(LSHP3.0G20)						SP-64		
Spiral fluted taps, universal use, BLF design	5 6 8 11 12	U-SP	USNMQ3.0G	SP	P2	46	4	2.5P	SP-59		
			(USNQ3.0G)						SP-59		
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC3.0G	SP	1b			2.5P	SP-62		
			(STIC3.0G)	SP	1b			2.5P	SP-62		
		PO STI	PO	1b				5P	PO-43		
		N-PO STI	PO	1b				5P	PO-43		
		STI-HT	TICM3.0G5	HT	1b				5P	HT-85	
			TICM3.0G1	HT	1b	52	5	1.5P	HT-85		
			(TIC3.0G5)	HT	1b				5P	HT-85	
		N-RS STI	TIC3.0G1	HT	1b				1.5P	HT-85	
			N-RS STI	RO	G3				4P	RO-23	
			N-RSM3IC3.0GB	RO	G3				2P	RO-23	
		Carbide	11 12	N-CT STI	TCNIC3.0G5	HT	1b	52	5	5P	CT-9
					TCNIC3.0G1	HT	1b			1.5P	CT-9
(NRS3IC3.0GP)	RO				G3				4P	RO-23	
			(NRS3IC3.0GB)	RO	G3			2P	RO-23		
Nut taps	6 8 11 12	NT	NH23.0G	HT	II b	90	2.1	30P	etc-1		
Taps 3M 0.6											
Standard	5 6 8 11 12	SP	SPP3.0H	SP	P1			2.5P	SP-4		
			+SP(N+SP)	SNPP3.0H	SP	P1			2.5P	SP-21	
		N-SP	(SNP3.0H)	SP	P1	46	4	2.5P	SP-4		
			PO	POQ3.0H	PO	P2			5P	PO-3	
		N-PO	(PNMQ3.0H)	PO	P2			5P	PO-3		
			(PNQ3.0H)	PO	P2			5P	PO-3		
		1 5 6 12	HT	(TNMQ3.0H9)					9P	HT-7	
				TNMQ3.0H5					5P	HT-8	
				TNMQ3.0H1	HT	P2	46	4	1.5P	HT-8	
				(TNQ3.0H9)					9P	HT-8	
				(TNQ3.0H5)					5P	HT-8	
				(TNQ3.0H1)					1.5P	HT-8	
For left hand threads	1 5 6 12	HT(LH)	(TNMQ3.0H9-L)					9P	HT-41		
			TNMQ3.0H5-L	HT	P2	46	4	5P	HT-41		
			TNMQ3.0H1-L					1.5P	HT-41		
Oxidizing	5 6 8	N-PO-OX	PNMQ3.0HX	PO	P2	46	4	5P	PO-17		
For stainless steels	6 7 8	SU+SP	SUPP3.0H	SP	P1			2.5P	SP-42		
		SU-PO	PUMQ3.0H	PO	P2	46	4	5P	PO-33		
Taps M3×0.35											
Standard	5 6 8 11 12	SP	SPP3.0D	SP	P1	46	4	2.5P	SP-4		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	5 6 8 11 12	N-SP	(SNMP3.0D)	SP	P1			2.5P	SP-4	
			(SNP3.0D)	SP	P1			2.5P	SP-4	
		PO	POQ3.0D	PO	P2	46	4	5P	PO-3	
			(PNMQ3.0D)	PO	P2			5P	PO-3	
		N-PO	(PNQ3.0D)	PO	P2			5P	PO-3	
			HT	(TNMQ3.0D9)					9P	HT-8
		1 5 6 12	HT	TNMQ3.0D5					5P	HT-8
				TNMQ3.0D1	HT	P2	46	4	1.5P	HT-8
				(TNQ3.0D9)					9P	HT-8
				(TNQ3.0D5)					5P	HT-8
				(TNQ3.0D1)					1.5P	HT-8
For left hand threads	1 5 6 12	HT(LH)	(TNMQ3.0D9-L)					9P	HT-41	
			TNMQ3.0D5-L					5P	HT-41	
			TNMQ3.0D1-L	HT	P2	46	4	1.5P	HT-41	
			(TNQ3.0D9-L)					9P	HT-41	
			(TNQ3.0D5-L)					5P	HT-41	
			(TNQ3.0D1-L)					1.5P	HT-41	
Thread forming taps for steels	6 8	N-RZ	NRZM53.0DP					4P	RO-4	
			NRZM53.0DB	RO	G5	46	4	2P	RO-4	
			(NRZ53.0DP)					4P	RO-4	
			(NRZ53.0DB)					2P	RO-4	
For cast irons	Carbide	1 12 13	N-CT FC	TCNR3.0D3	HT	P3	46	4	3P	CT-3
			TCNR3.0D1					1.5P	CT-3	
Thread forming taps for non-ferrous metals	11 12	N-RS	N-RS	N-RSM53.0DP	G5			4P	RO-14	
			N-RSM53.0DB	G5			2P	RO-14		
			(N-RS53.0DP)	G5			4P	RO-14		
			(N-RS53.0DB)	G5			2P	RO-14		
			N-RSM63.0DP	RO	G6	46	4	4P	RO-14	
			N-RSM63.0DB	G6			2P	RO-14		
			(N-RS63.0DP)	G6			4P	RO-14		
			(N-RS63.0DB)	G6			2P	RO-14		

Dies selection	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page	
Dies M3×0.5									
Solid round dies	HSS	SD-Y	6G	20	7	2~2.5P	DEG3.0G	Di-1	
Adjustable dies	SKS	AR-D		16	5		GD23.0G	Di-2	
	SKS	AR-D		20	7		GE23.0G	Di-2	
	SKS	AR-D		25	9		GG23.0G	Di-2	
	SKS	AR-D	II	38	13	2~2.5P	GJ23.0G	Di-2	
	HSS	AR-D HSS		16	5		HD23.0G	Di-13	
	HSS	AR-D HSS		20	7		HE23.0G	Di-13	
	HSS	AR-D HSS		25	9		HG23.0G	Di-13	
	For left hand threads	SKS	AR-D LH		20	7		GE23.0G-L	Di-7
		SKS	AR-D LH	II	25	9	2~2.5P	GG23.0G-L	Di-7
		HSS	AR-D HSS LH		20	7		HE23.0G-L	Di-14
Solid dies for auto lathe	For steels	SKS	6 8	AD-S ST	P1	16	5	FDP3.0G	Di-10
				P2	16	5	2~2.5P	FDQ3.0G	Di-10
				P1	20	7	FEP3.0G	Di-10	

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used at some machines Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

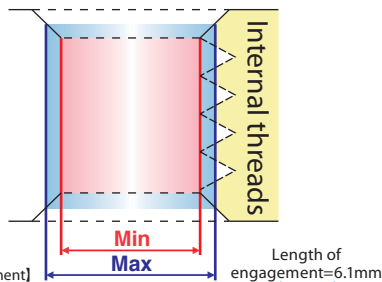
- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Solid dies for auto lathe	For steels	SKS	⑥ ⑧	AD-S ST	P2	20	7	2~2.5P	FEQ3.0G	Di-10
	For brass	SKS	⑪ ⑫	AD-S BR	P1	16	5		EDP3.0G	Di-11
					P2	16	5		EDQ3.0G	Di-12
					P1	20	7	2~2.5P	EEP3.0G	Di-11
					P2	20	7		EEQ3.0G	Di-12
	For stainless steels	HSS	⑥ ⑦ ⑧	HS-D	P1	16	5		HDP3.0G	Di-15
					P2	16	5		HQD3.0G	Di-15
					P1	20	7	2~2.5P	HEP3.0G	Di-15
					P2	20	7		HEQ3.0G	Di-15
	Rolling dies		HSS	⑥ ⑦ ⑧ ⑪ ⑫	RS-D	R2			REQ3.0G	Di-16
	R4	20				7		RES3.0G	Di-16	
	Spiral fluted dies		HSS	⑥ ⑧ ⑪ ⑫	SP-D	P1	20	7	1~1.5P	SEP3.0G
Spiral pointed dies		HSS	⑥ ⑧ ⑪ ⑫	PO-D	P1	20	7	1~1.5P	PEP3.0G	Di-17
Dies 3M 0.6										
Adjustable dies		SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	20	7	2~2.5P	GE23.0H	Di-2
For left hand threads	25				9		GG23.0H	Di-2		
	AR-D LH				II	20	7	2~2.5P	GE23.0H-L	Di-7
Dies M3x0.35										
Adjustable dies		SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	20	7		GE23.0D	Di-2
For left hand threads	SKS	II			25	9	2~2.5P	GG23.0D	Di-2	
	HSS	AR-D HSS			20	7		HE23.0D	Di-13	
Solid dies for auto lathe		SKS	⑥ ⑧ ⑪ ⑫	AD-S ST	P1	16	5		FDP3.0D	Di-10
For steels	P2				16	5		FDQ3.0D	Di-10	
	P1				20	7	2~2.5P	FEP3.0D	Di-10	
	P2				20	7		FEQ3.0D	Di-10	
	For brass				P1	16	5		EDP3.0D	Di-12
P2					16	5		EDQ3.0D	Di-12	
P1					20	7	2~2.5P	EEP3.0D	Di-12	
P2					20	7		EEQ3.0D	Di-12	
For stainless steels	P1				16	5		HDP3.0D	Di-15	
	P2				16	5		HQD3.0D	Di-15	
	P1				20	7	2~2.5P	HEP3.0D	Di-15	
	P2				20	7		HEQ3.0D	Di-15	
Rolling dies		HSS	⑥ ⑦ ⑧ ⑪ ⑫	RS-D	R2			REQ3.0D	Di-16	
R4	20				7		RES3.0D	Di-16		
R5						RET3.0D	Di-16			

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Small threads and irregular pitches Dies (SM)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

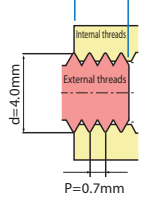
Flow chart : M4 tapping

Check 1 — Boring before tapping

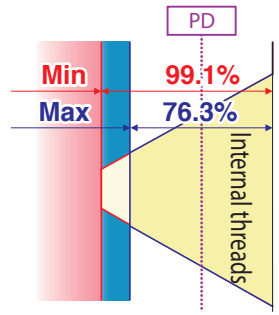


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 2(\text{mm})$
M	Normal engagement length	5H	6H	7H	$2 < N \leq 6(\text{mm})$
L	Long engagement length	6H	7H	8H	$6 < L(\text{mm})$



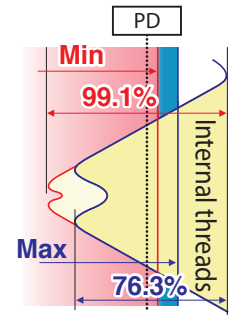
Engagement ratio on cutting taps



	Drill size (ref.)	D1	
		Min	Max
Bored hole size	3.3	3.242	3.422
Engagement ratio	92.4%	99.1%	76.3%

Unit : mm
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

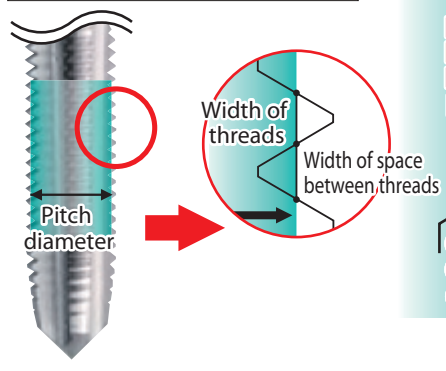
*Hole size for thread forming taps	
Min	Max
3.65	3.72

Unit : mm

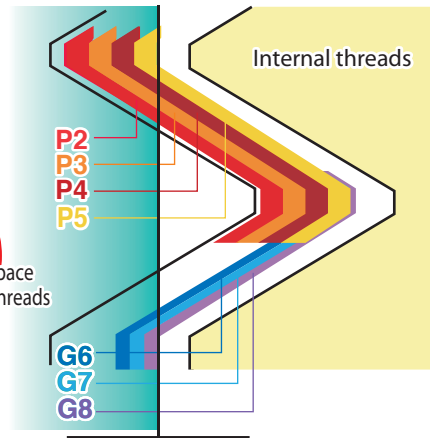
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

Class	PD tolerance
P2	20μm ~ 40μm
P3	40μm ~ 60μm
P4	60μm ~ 80μm
P5	80μm ~ 100μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

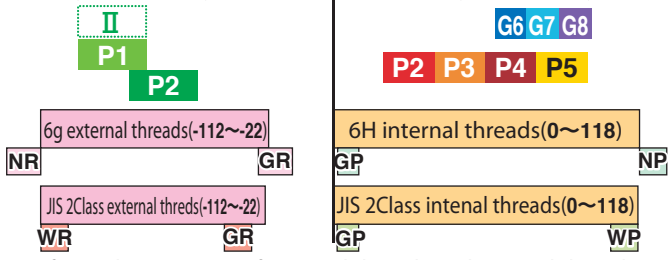
Class	PD tolerance
G6	64μm ~ 76μm
G7	76μm ~ 89μm
G8	89μm ~ 102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Relative position of PD tolerance area of external threads and internal threads, taps and gages.

Check 3 — Gage check

Unit : μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-126 ~ -112	GR6g	-31 ~ -17
WR II	-112 ~ -104	GR II	-34 ~ -26

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Unit : mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	3.838~3.978	3.433~3.523	—
JIS 2class	3.838~3.978	3.433~3.523	~3.119

Unit : μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	2 ~ 10	NP6H	118 ~ 126
GP II	4 ~ 12	WP II	110 ~ 118

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Unit : mm

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	—	3.545~3.663	3.242~3.422
JIS 2class	—	3.545~3.663	3.242~3.422

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small threads and deep-chamfering Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M4×0.7											
General purpose	8	ISP	SI74.0I	SP	-			2.5P	SP-1		
		SP-Y	(SY4.0I)	SP	-			2.5P	SP-1		
		IPO	PI7Q4.0I	PO	-	52	5	5P	PO-1		
		IHT	HI74.0I5	HT	-			5P	HT-1		
			HI74.0I2	HT	-			2P	HT-1		
		R-Y	RY4.0I3	RO	6HX			3P	RO-1		
		Standard	5 6 8 11 12	SP	SPQ4.0I	SP				2.5P	SP-4
					SPQ4.0I1	SP				1.5P	SP-4
				+SP(N+SP)	SNPQ4.0I	SP				2.5P	SP-21
				N-SP	(SNMQ4.0I1)	SP	P2	52	5	1.5P	SP-5
	(SNQ4.0I1)			SP				1.5P	SP-5		
PO	POQ4.0I			PO				5P	PO-3		
+PO(N+PO)	PNPQ4.0I			PO				5P	PO-15		
1 5 6 12	1 5 6 12			HT	(TNMQ4.0I9)					9P	HT-8
				4F	(TNMQ4.0I94)					9P	HT-8
					TNMQ4.0I5					5P	HT-8
		4F	TNMQ4.0I54					5P	HT-9		
			TNMQ4.0I1					1.5P	HT-8		
		4F	TNMQ4.0I14	HT	P2	52	5	1.5P	HT-9		
			(TNQ4.0I9)					9P	HT-8		
		4F	(TNQ4.0I94)					9P	HT-9		
			(TNQ4.0I5)					5P	HT-8		
		4F	(TNQ4.0I54)					5P	HT-9		
	(TNQ4.0I1)					1.5P	HT-8				
4F	(TNQ4.0I14)					1.5P	HT-9				
Oversize	5 6 8 11 12	SP	SPR4.0I	SP	P3			2.5P	SP-5		
			SP54.0I	SP	P4			2.5P	SP-5		
		+SP(N+SP)	SNPR4.0I	SP	P3			2.5P	SP-22		
			SNPS4.0I	SP	P4	52	5	2.5P	SP-22		
		PO	POR4.0I	PO	P3			5P	PO-3		
			POS4.0I	PO	P4			5P	PO-4		
		+PO(N+PO)	PNPR4.0I	PO	P3			5P	PO-16		
			PNPS4.0I	PO	P4			5P	PO-16		
		1 5 6 12	1 5 6 12	HT	(TNMR4.0I9)					9P	HT-9
				3F	(TNMR4.0I93)					9P	HT-9
	TNMR4.0I5							5P	HT-9		
3F	TNMR4.0I53							5P	HT-9		
	TNMR4.0I1							1.5P	HT-9		
3F	TNMR4.0I13							1.5P	HT-9		
	(TNR4.0I9)							9P	HT-9		
	(TNR4.0I5)							5P	HT-9		
	(TNR4.0I1)			HT	P3	52	5	1.5P	HT-9		
	(TNMS4.0I9)							9P	HT-9		
3F	(TNMS4.0I93)					9P	HT-9				
	TNMS4.0I5					5P	HT-9				
3F	TNMS4.0I53					5P	HT-9				
	TNMS4.0I1					1.5P	HT-9				
3F	TNMS4.0I13					1.5P	HT-9				
	(TNS4.0I9)					9P	HT-9				
	(TNS4.0I5)					5P	HT-9				
Standard	1 5 6 12	HT	(TNS4.0I1)					1.5P	HT-9		
			(TNMT4.0I9)	HT				9P	HT-9		
			TNMT4.0I5		P5	52	5	5P	HT-9		
			TNMT4.0I1		P5			1.5P	HT-9		
		For left hand threads	5 6 8 11 12	SP(LH)	SPQ4.0I-L	SP				2.5P	SP-26
				N-SP(LH)	(SNMQ4.0I-L)	SP				2.5P	SP-26
					(SNQ4.0I-L)	SP				2.5P	SP-26
				PO(LH)	POQ4.0I-L	PO	P2	52	5	5P	PO-19
				N+PO(LH)	(PNPQ4.0I-L)	PO				5P	PO-25
				N-PO(LH)	(PNQ4.0I-L)	PO				5P	PO-19
1 5 6 12	1 5 6 12			HT(LH)	(TNMQ4.0I9-L)					9P	HT-41
					TNMQ4.0I5-L					5P	HT-41
					TNMQ4.0I1-L					1.5P	HT-41
					(TNQ4.0I9-L)	HT	P2	52	5	9P	HT-41
			(TNQ4.0I5-L)					5P	HT-41		
			(TNQ4.0I1-L)					1.5P	HT-41		
		Oxidizing	5 6 8	SP-OX	SPQ4.0IX	SP	P2			2.5P	SP-23
				+SP-OX(N+SP-OX)	SNPQ4.0IX	SP	P2			2.5P	SP-25
				N-SP-OX	(SNQ4.0IX)	SP	P2			2.5P	SP-23
				PO-OX	POQ4.0IX	PO	P2	52	5	5P	PO-17
+PO-OX(N+PO-OX)	PNPQ4.0IX			PO	P2			5P	PO-18		
	PNPR4.0IX			PO	P3			5P	PO-18		
N-PO-OX	(PNQ4.0IX)			PO	P2			5P	PO-17		
Oversize	5 6 8			SP-OX	SPR4.0IX	SP	P3	52	5	2.5P	SP-23
				+SP-OX(N+SP-OX)	SNPR4.0IX	SP	P3	52	5	2.5P	SP-25
TiN coated	7 8 11 12			AU+SP	VSAPQ4.0I	SP	P2			2.5P	SP-30
		AU+SL	VSAPR4.0IL	SL	P3			5P	SL-1		
		5 6 8 11 12	PO-V	VPOQ4.0I					5P	PO-22	
			N-PO-V	(VPNMQ4.0I)	PO	P2	52	5	5P	PO-22	
			(VPNQ4.0I)					5P	PO-22		
		6 7 8 11 12	6 7 8 11 12	R+V	RVP54.0IP		G5			4P	RO-26
					RVP54.0IB		G5			2P	RO-26
					RVP64.0IP		G6			4P	RO-26
					RVP64.0IB		G6			2P	RO-26
					RVP74.0IP		G7			4P	RO-26
	RVP74.0IB				G7			2P	RO-26		
	RVP84.0IP				G8	52	5	4P	RO-26		
	RVP84.0IB			RO	G8	52	5	2P	RO-26		
R-V	(RV54.0IP)				G5			4P	RO-26		
	(RV54.0IB)				G5			2P	RO-26		
	(RV64.0IP)		G6			4P	RO-26				
	(RV64.0IB)		G6			2P	RO-26				
	(RV74.0IP)		G7			4P	RO-26				
	(RV74.0IB)		G7			2P	RO-26				
Long shank	5 6 8 11 12	LS-SP	SPQ4.0IL07				70	2.5P	SP-31		
			SPQ4.0IL10				100	2.5P	SP-31		
			SPQ4.0IL12				120	2.5P	SP-32		
			SPQ4.0IL15				150	2.5P	SP-32		
		LS-N-SP	(SNMQ4.0IL10)	SP	P2		5	100	2.5P	SP-32	
			(SNMQ4.0IL12)				120	2.5P	SP-32		
			(SNMQ4.0IL15)				150	2.5P	SP-32		
			(SNQ4.0IL10)				100	2.5P	SP-32		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	5 6 8 11 12	LS-N-SP	(SNQ4.0IL12)	SP		120	2.5P	SP-32				
			(SNQ4.0IL15)	SP		150	2.5P	SP-32				
			(SNQ4.0IL07)	SP		70	2.5P	SP-31				
		LS-PO	(POQ4.0IL07)	PO		70	5P	PO-24				
			(POQ4.0IL10)	PO		100	5P	PO-24				
			(POQ4.0IL12)	PO		120	5P	PO-24				
			(POQ4.0IL15)	PO		150	5P	PO-24				
		LS-N-PO	(PNMQ4.0IL07)	PO	P2	70	5	5P	PO-24			
			(PNMQ4.0IL10)	PO		100	5P	PO-24				
			(PNMQ4.0IL12)	PO		120	5P	PO-24				
			(PNMQ4.0IL15)	PO		150	5P	PO-24				
			(PNQ4.0IL07)	PO		70	5P	PO-24				
			(PNQ4.0IL10)	PO		100	5P	PO-24				
			(PNQ4.0IL12)	PO		120	5P	PO-24				
			(PNQ4.0IL15)	PO		150	5P	PO-24				
			1 5 6 12	LS-HT	(TNMQ4.0IS07)				70	5P	HT-48	
					(TNMQ4.0IS10)				100	5P	HT-48	
				(TNMQ4.0IS12)					120	5P	HT-48	
		(TNMQ4.0IS15)						150	5P	HT-48		
		(TNMQ4.0I107)						70	1.5P	HT-48		
		(TNMQ4.0I110)						100	1.5P	HT-48		
		(TNMQ4.0I112)						120	1.5P	HT-48		
		(TNMQ4.0I115)						150	1.5P	HT-48		
		(L074.0IS-Q)		HT	P2	70	5	5P	HT-48			
		(L104.0IS-Q)						100	5P	HT-48		
		(L124.0IS-Q)						120	5P	HT-48		
		(L154.0IS-Q)						150	5P	HT-48		
	Oversize	5 6 8 11 12	LS-SP	(SPR4.0IL10)	SP		100	2.5P	SR-32			
				(SPR4.0IL15)	SP		150	2.5P	SR-32			
			LS-N-SP	(SNMR4.0IL10)	SP		100	2.5P	SP-32			
(SNMR4.0IL15)				SP		150	2.5P	SP-32				
(SNR4.0IL10)				SP		100	2.5P	SP-32				
(SNR4.0IL15)				SP		150	2.5P	SP-32				
LS-PO			(POR4.0IL10)	PO	P3	100	5	5P	PO-24			
			(POR4.0IL15)	PO		150	5P	PO-24				
LS-N-PO			(PNMR4.0IL10)	PO		100	5P	PO-24				
			(PNMR4.0IL15)	PO		150	5P	PO-24				
		(PNR4.0IL10)	PO		100	5P	PO-24					
		(PNR4.0IL15)	PO		150	5P	PO-24					
1 5 6 12		LS-HT	(TNMR4.0IS10)				100	5P	HT-48			
			(TNMR4.0IS15)				150	5P	HT-48			
			(TNMR4.0I110)					100	1.5P	HT-49		
			(TNMR4.0I115)					150	1.5P	HT-49		
			(L104.0IS-R)	HT	P3	100	5	5P	HT-48			
			(L154.0IS-R)					150	5P	HT-48		
			(L104.0I1-R)					100	1.5P	HT-49		
			(L154.0I1-R)					150	1.5P	HT-49		
	With neck	5 6 8 11 12	LS-SP-K	-	SP	P2	100	5	2.5P	SP-41		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	With neck	5 6 8 11 12	LS-PO-K	-	PO	P2	100	5	5P	PO-32		
		For left hand threads	5 6 8 11 12	LS-SP(LH)	(SPQ4.0IL10-L)					2.5P	SP-39	
					(SNMQ4.0IL10L)	SP	P2	100	5	2.5P	SP-39	
						(SNQ4.0IL10-L)					2.5P	SP-39
			1 5 6 12	LS-HT(LH)	(TNMQ4.0IS10L)						5P	HT-65
		(TNMQ4.0I110L)									1.5P	HT-65
				(L104.0IS-QL)	HT	P2	100	5	5P	HT-65		
				(L104.0I1-QL)							1.5P	HT-65
		TiN coated		5 6 8 11 12	LS-SP-V	(VSPQ4.0IL10)	SP				2.5P	SP-40
	(VSNMQ4.0IL10)					SP					2.5P	SP-40
				(VSNQ4.0IL10)	SP				2.5P	SP-40		
				(VPOQ4.0IL10)	PO	P2	100	5	5P	PO-31		
				(VPMQ4.0IL10)	PO				5P	PO-31		
				(VPNQ4.0IL10)	PO				5P	PO-31		
	For soft structural steels	8	E-SP	(ESHMQ4.0I)	SP	P2	52	5	2.5P	SP-55		
				(ESHQ4.0I)						SP-55		
				Thread forming taps for steels	6 8	N+RZ	(NRZP54.0IP)	G5			4P	RO-5
							(NRZP54.0IB)	G5			2P	RO-5
				(NRZP64.0IP)	G6			4P	RO-5			
			(NRZP64.0IB)	G6			2P	RO-5				
			(NRZP74.0IP)	G7			4P	RO-5				
			(NRZP74.0IB)	G7			2P	RO-5				
			(NRZP84.0IP)	G8			4P	RO-5				
			(NRZP84.0IB)	G8			2P	RO-5				
			(NRZ54.0IP)	RO	G5	52	5	4P	RO-5			
			(NRZ54.0IB)					2P	RO-5			
			(NRZ64.0IP)					4P	RO-5			
			(NRZ64.0IB)					2P	RO-5			
			(NRZ74.0IP)					4P	RO-5			
			(NRZ74.0IB)					2P	RO-5			
			(NRZ84.0IP)					4P	RO-5			
			(NRZ84.0IB)					2P	RO-5			
Long shank	6 8	LS-N-RZ	(NRZM64.0IP10)	G6				4P	RO-9			
			(NRZM64.0IB10)	G6				2P	RO-9			
			(NRZ64.0IP10)	G6					4P	RO-9		
			(NRZ64.0IB10)	G6					2P	RO-9		
			(NRZM74.0IP10)	RO	G7	100	5	4P	RO-9			
			(NRZM74.0IB10)						2P	RO-9		
			(NRZ74.0IP10)						4P	RO-9		
			(NRZ74.0IB10)						2P	RO-9		
			For high carbon steels	5 6	HC+SP	(SCPQ4.0I)	SP	P2	52	5	2.5P	SP-56
						(SCQ4.0I)						SP-56
			(PCMQ4.0I)	PO	P2	52	5	5P	PO-41			
			(PCQ4.0I)					5P	PO-41			
Oxidizing	5 6	HC+SP-OX	(SCPQ4.0IX)	SP	P2	52	5	2.5P	SP-59			
			(SCQ4.0IX)						SP-59			
For hard-to-machine materials	1 4 5	EH-PO	(EPHMR4.0I)	PO	P3	52	5	4.5P	PO-45			
			(EPHR4.0I)	PO					4.5P	PO-45		

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and opening machines Taps (SU)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For hard-to-machine materials	① ④ ⑤	EH-HT	ETHMR4.015	HT				5P	HT-93	
		ETHMR4.011	HT	P3	52	5	2.5P	HT-93		
		(ETHR4.015)	HT				5P	HT-93		
		(ETHR4.011)	HT			2.5P	HT-93			
	Powdered HSS	④ ⑤	PM-SP	-	SP		52	3P	SP-69	
		LS-PM-SP	-	SP	P3	100	5	3P	SP-70	
		PM-PO	-	PO		52	5.5P	PO-47		
		LS-PM-PO	-	PO		100	5.5P	PO-48		
	For titanium alloys	④ ⑤ ⑥ ⑨	ZET-B	ZETBMR4.01	SP			3P	SP-67	
(ZETBR4.01)			SP			3P	SP-67			
ZET-P			ZETPMR4.01	SL	P3	52	5	5P	SL-3	
(ZETPR4.01)			SL			5P	SL-3			
For nickel base alloys	⑥ ⑦ ⑧ ⑩	ZEN-B	ZENBMR4.01	SP			3P	SP-68		
		(ZENBR4.01)	SP			3P	SP-68			
		ZEN-P	ZENPMR4.01	PO	P3	52	5	4.5P	PO-46	
		(ZENPR4.01)	PO			4.5P	PO-46			
Carbide taps for hard materials	②	UH-CT	UHCR4.015	HT	P3	52	5.5	5P	CT-10	
		EH-CT	EHCR4.015	HT	P3	52	5	5P	CT-10	
For stainless steels	⑥ ⑦ ⑧	SU+SP	SUPQ4.01	SP			2.5P	SP-42		
		SU+SL	SUPQ4.01L	SL			5P	SL-2		
		SU-PO	PUMQ4.01	PO			5P	PO-33		
		(PUQ4.01)	PO			5P	PO-33			
		SU-HT	(TUMQ4.019)	HT	P2	52	5	9P	HT-71	
		TUMQ4.014	HT			4P	HT-71			
		TUMQ4.011	HT			1.5P	HT-71			
		(TUQ4.019)	HT			9P	HT-71			
		(TUQ4.014)	HT			4P	HT-71			
		(TUQ4.011)	HT			1.5P	HT-71			
		Oversize	⑥ ⑦ ⑧	SU+SP	SUPR4.01	SP	P3		2.5P	SP-42
				SUPS4.01	SP	P4		2.5P	SP-42	
				SU-SP	(SUS4.01)	SP	P4		2.5P	SP-42
SU-PO	PUMR4.01			PO	P3	52	5	5P	PO-33	
(PUR4.01)	PO			P3		5P	PO-33			
PUMS4.01	PO			P4		5P	PO-33			
(PUS4.01)	PO	P4		5P	PO-33					
For deep hole use	⑥ ⑦ ⑧	SU-S-SP	SSMQ4.01-SU	SP		52	2.5P	SP-50		
		(SSQ4.01-SU)	SP		52	2.5P	SP-50			
		LS-SU-S-SP	-	SP	P2	100	5	2.5P	SP-51	
		-	SP		150	2.5P	SP-51			
LS-SU-S-PO	-	-	-	PO		100	5P	PO-38		
									-	PO
For hard-to-machine materials	⑤ ⑥ ⑦	SU2-SP	SU2MQ4.01	SP	P2	52	5	3P		
			(SU2Q4.01)	SP			3P	SP-48		
For cast irons	①	FC-O	TFCM4.015				5P	HT-77		
		TFCM4.011	HT	④-⑤	52	5	1.5P	HT-77		
		(TFC4.015)				5P	HT-77			
		(TFC4.011)				1.5P	HT-77			
Carbide	① ⑫ ⑬	N-CT FC	TCNR4.013	HT	P3	52	5	3P	CT-4	
		TCNR4.011				1.5P	CT-4			
Long shank, carbide	① ⑫ ⑬	LS-N-CT	-	HT	P3	100	5	3P	CT-7	
		-				1.5P	CT-7			
For aluminum alloys	⑪ ⑫ ⑬	AL+SP	ASHPR4.01	SP	P3	52	5	2.5P	SP-61	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For aluminum alloys	⑪ ⑫ ⑬	AL-SP	ASHMR4.011					1.5P	SP-61		
		(ASHR4.01)	SP	P3	52	5	2.5P	SP-61			
		(ASHR4.011)				1.5P	SP-61				
	⑪ ⑫	LA-O	TLAM4.015					5P	HT-81		
		TLAM4.011					1.5P	HT-81			
		(TLA4.015)	HT	④-⑤	52	5	5P	HT-81			
		(TLA4.011)				1.5P	HT-81				
Carbide	⑪ ⑫ ⑬	N-CT LA	TCNR4.013A	HT	P3	52	5	3P	CT-1		
		TCNR4.011A				1.5P	CT-1				
Carbide spiral fluted taps	⑪ ⑫ ⑬	N-CT-SP	-	SP	P3	52	5	2.5P	CT-8		
Carbide spiral pointed taps	⑪ ⑫ ⑬	N-CT-PO	PCNR4.01	PO	P3	52	5	5P	CT-8		
Thread forming taps for non-ferrous metals	⑪ ⑫	N+RS	NRSP54.01P		G5			4P	RO-14		
		NRSP54.01B		G5		2P	RO-14				
		NRSP64.01P		G6		4P	RO-14				
		NRSP64.01B		G6		2P	RO-14				
		NRSP74.01P		G7		4P	RO-15				
		NRSP74.01B		G7		2P	RO-15				
		NRSP84.01P		G8		4P	RO-15				
		NRSP84.01B		G8		2P	RO-15				
		N-RS	(NRS54.01P)	RO	G5	52	5	4P	RO-14		
		(NRS54.01B)		G5		2P	RO-14				
		(NRS64.01P)		G6		4P	RO-14				
		(NRS64.01B)		G6		2P	RO-15				
		(NRS74.01P)		G7		4P	RO-15				
		(NRS74.01B)		G7		2P	RO-15				
		(NRS84.01P)		G8		4P	RO-15				
(NRS84.01B)		G8		2P	RO-15						
Long shank	⑪ ⑫	LS-N-RS	NRSM64.01P10		G6			4P	RO-21		
		NRSM64.01B10		G6		2P	RO-21				
		(NRS64.01P10)		G6		4P	RO-21				
		(NRS64.01B10)		G6		2P	RO-21				
		NRSM74.01P10		G7	100	5	4P	RO-21			
		NRSM74.01B10		G7		2P	RO-21				
		(NRS74.01P10)		G7		4P	RO-21				
		(NRS74.01B10)		G7		2P	RO-21				
		For thermosetting plastics	⑬	PL-1	TPLM4.013	HT	P5	52	5	3P	HT-90
				(TPL4.013)				3P	HT-90		
For high speed	⑤ ⑥ ⑧ ⑪ ⑫ ⑬	F-SP	VFSHMQ4.01	SP		52	2.5P	SP-71			
		(VFSHQ4.01)	SP		52	2.5P	SP-71				
		LS-F-SP	-	SP	P2	100	5	2.5P	SP-72		
		F-SL	VFSHMQ4.01L	SL		52	5P	SL-4			
		(VFSHQ4.01L)	SL		52	5P	SL-4				
		LS-F-SL	-	SL		100	5P	SL-5			
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL+RZ	OLRZP64.01P		G6			RO-28			
		OLRZP74.01P		G7		RO-28					
		OL-RZ	(OLRZ64.01P)	RO	G6	52	5	4P	RO-28		
		(OLRZ74.01P)		G7		RO-28					
Thread forming taps for high carbon steels	⑤ ⑥ ⑦ ⑪ ⑫	HP+RZ	HRZP64.01P		G6			4P	RO-31		
		HRZP64.01B		G6		2P	RO-31				
		HRZP74.01P	RO	G7	52	5	4P	RO-31			
		HP+RZ	HRZP74.01B		G7		2P	RO-31			
		HP-RZ	(HRZ64.01P)		G6		4P	RO-31			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	(HRZ64.0IB)	G6				2P	RO-31	
			(HRZ74.0IP)	RO	G7	52	5	4P	RO-31	
			(HRZ74.0IB)		G7				2P	RO-31
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM64.011	RO	G6	52	5	1P	RO-36	
			(SRZ64.011)		G6				1P	RO-36
For deep hole use	5 6 8	S-SP	SSMQ4.0I	SP				2.5P	SP-52	
			(SSQ4.0I)	SP				2.5P	SP-52	
		S-PO	PSMQ4.0I	PO	P2	52	5		5P	PO-39
			(PSQ4.0I)	PO					5P	PO-39
		Enlarge	S-SP	SSMR4.0I	SP	P3	52	5	2.5P	SP-52
		(SSR4.0I)		P3				2.5P	SP-52	
Low spiral	1 5 6 11 12	LO-SP 8°	LSHMQ4.0I8						SP-64	
			(LSHQ4.0I8)						SP-64	
		LO-SP 15°	LSHMQ4.0I15	SP	P2	52	5	2.5P		SP-64
			(LSHQ4.0I15)		P2					SP-64
		LO-SP 20°	LSHMQ4.0I20							SP-64
		(LSHQ4.0I20)						SP-64		
Spiral fluted taps, universal use, BLF design	5 6 8 11 12	U-SP	USNMQ4.0I	SP	P2	52	5	2.5P	SP-59	
			(USNQ4.0I)		P2				2.5P	SP-59
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC4.0I	SP	1b			2.5P	SP-62	
			(STIC4.0I)	SP	1b			2.5P	SP-62	
		PO STI	-	PO	1b				5P	PO-43
		N-PO STI	(-)	PO	1b				5P	PO-43
		STI-HT	TICM4.0I5	HT	1b				5P	HT-85
			TICM4.0I1	HT	1b	60	5.5		1.5P	HT-85
			(TIC4.0I5)	HT	1b				5P	HT-85
			(TIC4.0I1)	HT	1b				1.5P	HT-85
		N-RS STI	NRSM4IC4.0IP	RO	G4				4P	RO-23
			(NRS4IC4.0IB)	RO	G4				2P	RO-23
			(NRS4IC4.0IP)	RO	G4				4P	RO-23
	(NRS4IC4.0IB)	RO	G4				2P	RO-23		
Carbide	11 12	N-CT STI	TCNIC4.0I5	HT	1b	60	5.5	5P	CT-9	
			TCNIC4.0I1		1b			1.5P	CT-9	
Nut taps	6 8 10 12	NT	NH24.0I	HT	II b	100	2.8	27P	etc-1	
Taps 4M 0.75										
Standard	5 6 8 11 12	SP	SPQ4.0J	SP				2.5P	SP-5	
		N-SP	(SNQ4.0J)	SP				2.5P	SP-5	
		PO	POQ4.0J	PO	P2	52	5		5P	PO-4
			(PNMQ4.0J)	PO					5P	PO-4
			(PNQ4.0J)	PO					5P	PO-4
		1 5 6 12	HT	(TNMQ4.0J9)					9P	HT-9
			(TNMQ4.0J93)						9P	HT-9
			TNMQ4.0J5						5P	HT-9
			TNMQ4.0J53						5P	HT-9
			TNMQ4.0J1	HT	P2	52	5	1.5P		HT-9
			TNMQ4.0J13					1.5P		HT-9
			(TNQ4.0J9)					9P		HT-9
			(TNQ4.0J5)					5P		HT-9
			(TNQ4.0J1)					1.5P		HT-9
		For left hand threads	1 5 6 12	HT(LH)	(TNMQ4.0J9-L)	HT	P2	52	5	9P
	TNMQ4.0J5-L				P2			5P	HT-41	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For left hand threads	1 5 6 12	HT(LH)	TNMQ4.0J1-L	HT	P2	52	5	1.5P	HT-41		
Oxidizing	5 6 8	N-PO OX	PNMQ4.0JX	PO	P2	52	5	5P	PO-17		
For stainless steels	6 7 8	SU+SP	SUPQ4.0J	SP	P2	52	5	2.5P	SP-42		
		SU-PO	PUMQ4.0J	PO				5P	PO-33		
Taps M4x0.5											
Standard	5 6 8 11 12	SP	SPP4.0G	SP	P1			2.5P	SP-5		
		N-SP	(SNMP4.0G)	SP	P1			2.5P	SP-5		
			(SNP4.0G)	SP	P1			52	5	2.5P	SP-5
		PO	POQ4.0G	PO	P2				5P	PO-4	
			(PNMQ4.0G)	PO	P2				5P	PO-4	
			(PNQ4.0G)	PO	P2				5P	PO-4	
		1 5 6 12	HT	(TNMQ4.0G9)					9P	HT-9	
			TNMQ4.0G5						5P	HT-9	
			TNMQ4.0G1	HT	P2	52	5	1.5P		HT-9	
			(TNQ4.0G9)					9P		HT-9	
	(TNQ4.0G5)					5P		HT-9			
	(TNQ4.0G1)					1.5P		HT-9			
For left hand threads	1 5 6 12	HT(LH)	(TNMQ4.0G9-L)					9P	HT-41		
			TNMQ4.0G5-L	HT	P2	52	5	5P	HT-41		
			TNMQ4.0G1-L					1.5P	HT-42		
Oxidizing	5 6 8	N-SP-OX	SNMP4.0GX	SP	P1	52	5	2.5P	SP-23		
Thread forming taps for steels	6 8	N-RZ	NRZM54.0GP	G5				4P	RO-5		
			NRZM54.0GB	G5				2P	RO-5		
			(NRZ54.0GP)	G5				4P	RO-5		
			(NRZ54.0GB)	RO	G5	52	5	2P	RO-5		
			NRZM64.0GP	G6				4P	RO-5		
			NRZM64.0GB	G6				2P	RO-5		
			NRZM74.0GB	G7				2P	RO-5		
For cast irons	Carbide	1 12 13	N-CT FC	TCNR4.0G3	HT	P3	52	5	3P	CT-4	
				TCNR4.0G1				1.5P	CT-4		
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR4.0G3A	HT	P3	52	5	3P	CT-1	
				TCNR4.0G1A				1.5P	CT-1		
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM64.0GP	G6				4P	RO-15		
			NRSM64.0GB	G6				2P	RO-15		
			(NRS64.0GP)	RO	G6	52	5	4P	RO-15		
			(NRS64.0GB)		G6			2P	RO-15		
			NRSM74.0GP	G7				4P	RO-15		
			NRSM74.0GB	G7				2P	RO-15		
										RO-15	

Dies selection	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page	
Dies M4x0.7									
Solid round dies	HSS	6 8 11 12	SD-Y	6G	20	7	2~2.5P	DEG4.0I	Di-1
Adjustable dies	SKS		AR-D		16	5		GD24.0I	Di-2
	SKS		AR-D		20	7		GE24.0I	Di-2
	SKS	6 8	AR-D	II	25	9	2~2.5P	GG24.0I	Di-2
	SKS	11 12	AR-D		38	13		GJ24.0I	Di-2
	HSS		AR-D HSS		20	7		HE24.0I	Di-13
	HSS		AR-D HSS		25	9		HG24.0I	Di-13

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on stamping machines Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

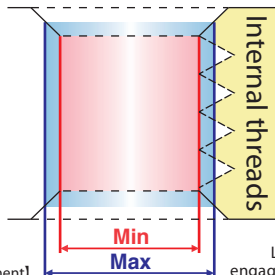
- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page	
Dies 4M 0.75										
Adjustable dies	HSS	⑥ ⑧ ⑪ ⑫	AR-D HSS	II	38	13	2~2.5P	HJ24.0I	Di-13	
For left hand threads	SKS		AR-D LH		20	7		GE24.0I-L	Di-7	
	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	25	9	2~2.5P	GG24.0I-L	Di-7	
	HSS		AR-D HSS LH		20	7		HE24.0I-L	Di-14	
	HSS		AR-D HSS LH		25	9		HG24.0I-L	Di-14	
Solid dies for auto lathe	For steels				P1	16	5	FDP4.0I	Di-10	
					P2	16	5	FDQ4.0I	Di-10	
		SKS	⑥ ⑧	AD-S ST		20	7	2~2.5P	FEP4.0I	Di-10
					P2	20	7		FEQ4.0I	Di-10
	For brass					P1	16	5	EDP4.0I	Di-12
						P2	16	5	EDQ4.0I	Di-12
		SKS	⑪ ⑫	AD-S BR		20	7	2~2.5P	EEP4.0I	Di-12
					P2	20	7		EEQ4.0I	Di-12
	For stainless steels					P1	16	5	HDP4.0I	Di-15
						P2	16	5	HDQ4.0I	Di-15
		HSS	⑥ ⑦ ⑧	HS-D		20	7	2~2.5P	HEP4.0I	Di-15
					P2	20	7		HEQ4.0I	Di-15
Spiral fluted dies	HSS	⑥ ⑧ ⑪ ⑫	SP-D	P1	20	7	1~1.5P	SEP4.0I	Di-17	
Spiral pointed dies	HSS	⑥ ⑧ ⑪ ⑫	PO-D	P1	20	7	1~1.5P	PEP4.0I	Di-17	
Dies 4M 0.75										
Adjustable dies						16	5	GD24.0J	Di-2	
	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	20	7	2~2.5P	GE24.0J	Di-2	
						25	9	GG24.0J	Di-2	
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	20	7	2~2.5P	GE24.0J-L	Di-7	
Dies M4x0.5										
Adjustable dies	SKS		AR-D		20	7		GE24.0G	Di-2	
	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	25	9	2~2.5P	GG24.0G	Di-2	
	HSS		AR-D HSS		20	7		HE24.0G	Di-13	
	For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	20	7	2~2.5P	GE24.0G-L	Di-7
Solid dies for auto lathe	For steels				P1	16	5	FDP4.0G	Di-10	
					P2	16	5	FDQ4.0G	Di-10	
		SKS	⑥ ⑧	AD-S ST		20	7	2~2.5P	FEP4.0G	Di-10
					P2	20	7		FEQ4.0G	Di-10
	For brass					P1	16	5	EDP4.0G	Di-12
						P2	16	5	EDQ4.0G	Di-12
		SKS	⑪ ⑫	AD-S BR		20	7	2~2.5P	EEP4.0G	Di-12
					P2	20	7		EEQ4.0G	Di-12
	For stainless steels					P1	16	5	HDP4.0G	Di-15
						P2	16	5	HDQ4.0G	Di-15
		HSS	⑥ ⑦ ⑧	HS-D		20	7	2~2.5P	HEP4.0G	Di-15
					P2	20	7		HEQ4.0G	Di-15
Rolling dies	HSS	⑥ ⑦ ⑧ ⑪ ⑫	RS-D	R5	20	7		RET4.0G	Di-16	
				R6			REU4.0G	Di-16		
Dies M4x0.35										
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	20	7	2~2.5P	GE24.0D	Di-2	

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Small threads and irregular pitches Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

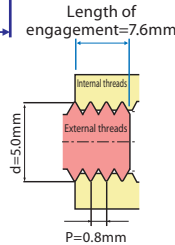
Flow chart : M5 tapping

Check 1 — Boring before tapping

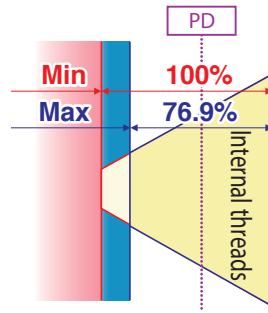


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 2.5(\text{mm})$
M	Normal engagement length	5H	6H	7H	$2.5 < N \leq 7.5(\text{mm})$
L	Long engagement length	6H	7H	8H	$7.5 < L(\text{mm})$



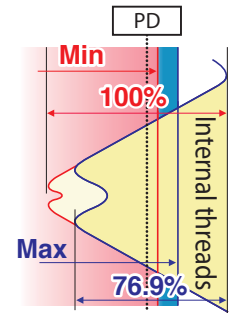
Engagement ratio on cutting taps



	Drill size (ref.)	D1	
		Min	Max
Bored hole size	4.2	4.134	4.334
Engagement ratio	92.4%	100%	76.9%

Unit : mm
D1 is minor diameter of JIS 2Class of internal threads

Engagement ratio on roll taps



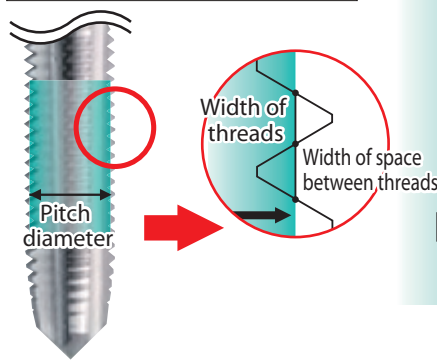
Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

*Hole size for thread forming taps	Unit : mm	
	Min	Max
	4.59	4.67

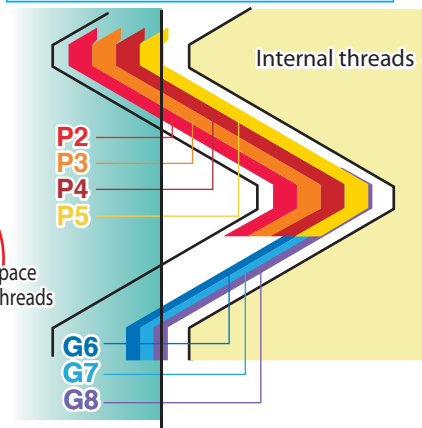
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

Class	PD tolerance
P2	20μm ~ 40μm
P3	40μm ~ 60μm
P4	60μm ~ 80μm
P5	80μm ~ 100μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

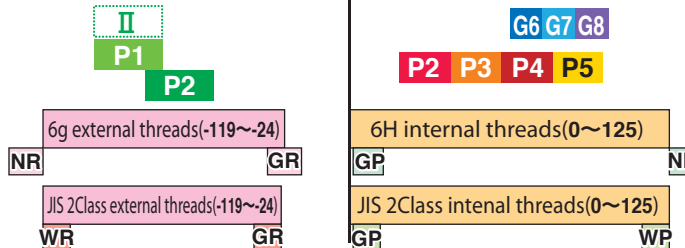
Class	PD tolerance
G6	64μm ~ 76μm
G7	76μm ~ 89μm
G8	89μm ~ 102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Relative position of PD tolerance area of external threads and internal threads, taps and gages.

Check 3 — Gage check

Ring gage pitch diameter (for external threads inspection)				Unit : μm
NR6g	-133 ~ -119	GR6g	-33 ~ -19	
WR II	-119 ~ -111	GR II	-36 ~ -28	

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Accuracy of external threads				Unit : mm
	Major diameter	Pitch diameter	Minor diameter	
6g	4.826~4.976	4.361~4.456	—	
JIS 2class	4.826~4.976	4.361~4.456	~3.994	

Plug gage pitch diameter (for internal threads inspection)				Unit : μm
GP6H	2 ~ 10	NP6H	125 ~ 133	
GP II	4 ~ 12	WP II	117 ~ 125	

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Accuracy of internal threads				Unit : mm
	Major diameter	Pitch diameter	Minor diameter	
6H	—	4.480~4.605	4.134~4.334	
JIS 2Class	—	4.480~4.605	4.134~4.334	

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3/8" threads and other machines Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M5×0.8											
General purpose	8	ISP	SI75.0K	SP	-			2.5P	SP-1		
		SP-Y	(SY5.0K)	SP	-			2.5P	SP-1		
		IPO	PI7Q5.0K	PO	-	60	5.5	5P	PO-1		
		IHT	HI75.0K5	HT	-			5P	HT-1		
			HI75.0K2	HT	-			2P	HT-1		
Standard	5 6 8 11 12	SP	SPQ5.0K	SP				2.5P	SP-5		
			SPQ5.0K1	SP				1.5P	SP-5		
		+SP(N+SP)	SNPQ5.0K	SP				2.5P	SP-22		
		N-SP	(SNMQ5.0K1)	SP	P2	60	5.5	1.5P	SP-5		
			(SNQ5.0K1)	SP				1.5P	SP-5		
		PO	POQ5.0K	PO				5P	PO-4		
		+PO(N+PO)	PNPQ5.0K	PO				5P	PO-16		
		1 5 6 12	1 5 6 12	HT	(TNMR5.0K9)					9P	HT-10
				4F	(TNMR5.0K94)					9P	HT-10
					TNMR5.0K5					5P	HT-10
				4F	TNMR5.0K54					5P	HT-10
					TNMR5.0K1					1.5P	HT-10
				4F	TNMR5.0K14	HT	P3	60	5.5	1.5P	HT-10
					(TNR5.0K9)					9P	HT-10
				4F	(TNR5.0K94)					9P	HT-10
	(TNR5.0K5)							5P	HT-10		
4F	(TNR5.0K54)							5P	HT-10		
	(TNR5.0K1)							1.5P	HT-10		
4F	(TNR5.0K14)							1.5P	HT-10		
Oversize	5 6 8 11 12			SP	SPR5.0K	SP	P3			2.5P	SP-5
					SP55.0K	SP	P4			2.5P	SP-5
				+SP(N+SP)	SNPR5.0K	SP	P3			2.5P	SP-22
			SNP55.0K	SP	P4	60	5.5	2.5P	SP-22		
		PO	POR5.0K	PO	P3			5P	PO-4		
			POS5.0K	PO	P4			5P	PO-4		
		+PO(N+PO)	PNPR5.0K	PO	P3			5P	PO-16		
			PNP55.0K	PO	P4			5P	PO-16		
		1 5 6 12	1 5 6 12	HT	(TNM55.0K9)					9P	HT-10
					TNM55.0K5					5P	HT-10
					TNM55.0K1					1.5P	HT-10
					(TNS5.0K9)					9P	HT-10
					(TNS5.0K5)	HT	P4	60	5.5	5P	HT-10
					(TNS5.0K1)					1.5P	HT-10
					(TNMT5.0K9)					9P	HT-10
	TNMT5.0K5							5P	HT-10		
	TNMT5.0K1							1.5P	HT-10		
For left hand threads	5 6 8 11 12			SP(LH)	SPQ5.0K-L	SP				2.5P	SP-26
				N-SP(LH)	(SNMQ5.0K-L)	SP				2.5P	SP-26
					(SNQ5.0K-L)	SP	P2	60	5.5	2.5P	SP-26
				PO(LH)	POQ5.0K-L	PO				5P	PO-19
				N+PO(LH)	(PNPQ5.0K-L)	PO				5P	PO-25
				N-PO(LH)	(PNQ5.0K-L)	PO				5P	PO-19
		1 5 6 12	1 5 6 12	HT(LH)	(TNMR5.0K9-L)	HT	P3	60	5.5	9P	HT-42
					TNMR5.0K5-L					5P	HT-42

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For left hand threads	1 5 6 12	HT(LH)	TNMR5.0K1-L					1.5P	HT-42		
			(TNR5.0K9-L)	HT	P3	60	5.5	9P	HT-42		
			(TNR5.0K5-L)					5P	HT-42		
			(TNR5.0K1-L)				1.5P	HT-42			
Oxidizing	5 6 8	SP-OX	SPQ5.0KX	SP				2.5P	SP-23		
		+SP-OX(N+SP-OX)	SNPQ5.0KX	SP				2.5P	SP-25		
		N-SP-OX	(SNQ5.0KX)	SP				2.5P	SP-23		
		PO-OX	POQ5.0KX	PO	P2	60	5.5	5P	PO-17		
		+PO-OX(N+PO-OX)	PNPQ5.0KX	PO				5P	PO-18		
			(PNQ5.0KX)	PO				5P	PO-17		
		Oversize	5 6 8	SP-OX	SPR5.0KX	SP				2.5P	SP-23
				+SP-OX(N+SP-OX)	SNPR5.0KX	SP	P3	60	5.5	2.5P	SP-25
				+PO-OX(N+PO-OX)	PNPR5.0KX	PO				5P	SP-18
		TiN coated	7 8 11 12	AU+SP	VSAPQ5.0K	SP	P2	60	5.5	2.5P	SP-30
AU+SL	VSAPR5.0KL			SL	P3			5P	SL-1		
5 6 8 11 12	5 6 8 11 12			PO-V	VPOQ5.0K						PO-22
				N-PO-V	(VPNMQ5.0K)	PO	P2	60	5.5	5P	PO-22
					(VPNQ5.0K)						PO-22
6 7 8 11 12	6 7 8 11 12			R+V	RVP55.0KP		G5			4P	RO-26
					RVP55.0KB		G5			2P	RO-26
					RVP65.0KP		G6			4P	RO-26
					RVP65.0KB		G6			2P	RO-26
					RVP75.0KP		G7			4P	RO-26
					RVP75.0KB		G7			2P	RO-26
					RVP85.0KP		G8			4P	RO-27
					RVP85.0KB	RO	G8	60	5.5	2P	RO-27
				R-V	(RV55.0KP)		G5			4P	RO-26
					(RV65.0KP)		G6			4P	RO-26
					(RV65.0KB)		G6			2P	RO-26
					(RV75.0KP)		G7			4P	RO-26
					(RV75.0KB)		G7			2P	RO-27
					(RV85.0KP)		G8			4P	RO-27
					(RV85.0KB)		G8			2P	RO-27
Long shank	5 6 8 11 12	LS-SP	SPQ5.0KL10	SP		100		2.5P	SP-32		
			SPQ5.0KL12	SP		120		2.5P	SP-32		
			SPQ5.0KL15	SP		150		2.5P	SP-32		
		LS-N-SP	(SNMQ5.0KL10)	SP		100		2.5P	SP-32		
			(SNMQ5.0KL12)	SP		120		2.5P	SP-32		
			(SNQ5.0KL10)	SP		150		2.5P	SP-32		
			(SNQ5.0KL12)	SP		120		2.5P	SP-32		
			(SNQ5.0KL15)	SP	P2	150	5.5	2.5P	SP-32		
		LS-PO	POQ5.0KL10	PO		100		5P	PO-24		
			POQ5.0KL12	PO		120		5P	PO-24		
			POQ5.0KL15	PO		150		5P	PO-24		
		LS-N-PO	(PNMQ5.0KL10)	PO		100		5P	PO-24		
			(PNMQ5.0KL12)	PO		120		5P	PO-24		
			(PNMQ5.0KL15)	PO		150		5P	PO-24		
			(PNQ5.0KL10)	PO		100		5P	PO-24		
			(PNQ5.0KL12)	PO		120		5P	PO-24		
			(PNQ5.0KL15)	PO		150		5P	PO-24		
		1 5 6 12	1 5 6 12	LS-HT	TNMQ5.0K507	HT	P2	70	5.5	5P	HT-49

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	1 5 6 8 12	LS-HT	TNMQ5.0K510			100	5P	HT-49				
			TNMQ5.0K512			120	5P	HT-49				
			TNMQ5.0K515			150	5P	HT-49				
			TNMQ5.0K107			70	1.5P	HT-49				
			TNMQ5.0K110			100	1.5P	HT-49				
			TNMQ5.0K112			120	1.5P	HT-49				
			TNMQ5.0K115			150	1.5P	HT-49				
			(L075.0K5-Q)	HT	P2	70	5.5	5P	HT-49			
			(L105.0K5-Q)			100		5P	HT-49			
			(L125.0K5-Q)			120		5P	HT-49			
			(L155.0K5-Q)			150		5P	HT-49			
			(L075.0K1-Q)			70		1.5P	HT-49			
			(L105.0K1-Q)			100		1.5P	HT-49			
			(L125.0K1-Q)			120		1.5P	HT-49			
			(L155.0K1-Q)			150		1.5P	HT-49			
			Oversize	5 6 8 11 12	LS-SP	SPR5.0KL10	SP	P3	100	2.5P	SP-32	
						SPR5.0KL15	SP	P3	150	2.5P	SP-32	
						(SNMR5.0KL10)	SP	P3	100	2.5P	SP-32	
(SNMR5.0KL15)	SP	P3				150	2.5P	SP-32				
(SNR5.0KL10)	SP	P3				100	2.5P	SP-32				
(SNR5.0KL15)	SP	P3				150	2.5P	SP-32				
LS-PO	POR5.0KL10	PO				P3	100		5P	PO-24		
	POR5.0KL15	PO				P3	150	5.5	5P	PO-24		
POS5.0KL15	PO	P4				150		5P	PO-24			
	(PNMR5.0KL10)	PO				P3	100		5P	PO-24		
(PNMR5.0KL15)	PO	P3				150		5P	PO-24			
	(PNR5.0KL10)	PO				P3	100		5P	PO-24		
(PNR5.0KL15)	PO	P3				150		5P	PO-24			
	(PNM55.0KL15)	PO				P4	150		5P	PO-24		
(PNS5.0KL15)	PO	P4				150		5P	PO-24			
1 5 6 8 12	LS-HT	TNMR5.0K510						100	5P	HT-49		
		TNMR5.0K515						150	5P	HT-49		
		TNMR5.0K110						100	1.5P	HT-49		
		TNMR5.0K115	HT	P3	150	5.5	1.5P	HT-49				
		(L105.0K5-R)			100		5P	HT-49				
		(L155.0K5-R)			150		5P	HT-49				
		(L105.0K1-R)			100		1.5P	HT-49				
		(L155.0K1-R)			150		1.5P	HT-49				
5 6 8 11 12	LS-SP-K	-	SP	P2	100	5.5	2.5P	SP-41				
		LS-PO-K	PO				5P	PO-32				
5 6 8 11 12	LS-SP(LH)	SPQ5.0KL10-L						SP-39				
		(SNMQ5.0KL10L)	SP	P2	100	5.5	2.5P	SP-39				
		(SNQ5.0KL10-L)							SP-39			
		1 5 6 8 12	LS-HT(LH)	TNMQ5.0K510L					5P	HT-65		
				TNMQ5.0K110L					1.5P	HT-65		
		(L105.0K5-QL)	HT	P2	100	5.5		5P	HT-65			
(L105.0K1-QL)						1.5P	HT-65					
5 6 8 11 12	LS-SP-V	VSPQ5.0KL10	SP				2.5P	SP-40				
		(VSNMQ5.0KL10)	SP				2.5P	SP-40				
		(VSNQ5.0KL10)	SP	P2	100	5.5	2.5P	SP-40				
		VPOQ5.0KL10	PO					5P	PO-31			
		(VPMQ5.0KL10)	PO					5P	PO-31			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	TiN coated	5 6 8 11 12	LS-N-PO-V	(VPNQ5.0KL10)	PO	P2	100	5.5	5P	PO-31		
			LS-HT-V	TNMQ5.0K510V					5P	HT-68		
				TNMQ5.0K110V					1.5P	HT-68		
				(VL105.0K5-Q)	HT	P2	100	5.5	5P	HT-68		
				(VL105.0K1-Q)					1.5P	HT-68		
			For soft structural steels	8	E-SP	ESHMQ5.0K	SP	P2	60	5.5	2.5P	SP-55
						(ESHQ5.0K)						SP-55
			Thread forming taps for steels	6 8	N+RZ	NRZP55.0KP	G5				4P	RO-5
						NRZP55.0KB	G5				2P	RO-5
						NRZP65.0KP	G6				4P	RO-5
NRZP65.0KB	G6							2P	RO-5			
NRZP75.0KP	G7							4P	RO-5			
NRZP75.0KB	G7							2P	RO-5			
NRZP85.0KP	G8							4P	RO-5			
NRZP85.0KB	G8							2P	RO-6			
N-RZ	(NRZ55.0KP)	RO				G5	60	5.5	4P	RO-5		
(NRZ55.0KB)						G5			2P	RO-5		
(NRZ65.0KP)			G6			4P	RO-5					
(NRZ65.0KB)			G6			2P	RO-5					
(NRZ75.0KP)			G7			4P	RO-5					
(NRZ75.0KB)			G7			2P	RO-5					
(NRZ85.0KP)			G8			4P	RO-5					
(NRZ85.0KB)			G8			2P	RO-6					
Long shank	6 8	LS-N-RZ	NRZM65.0KP10	G6				4P	RO-9			
			NRZM65.0KB10	G6				2P	RO-9			
			(NRZ65.0KP10)					4P	RO-9			
			(NRZ65.0KB10)					2P	RO-9			
			NRZM75.0KP10	RO	G7	100	5.5	4P	RO-9			
			NRZM75.0KB10	G7				2P	RO-10			
			(NRZ75.0KP10)			G7			4P	RO-10		
			(NRZ75.0KB10)			G7			2P	RO-10		
			For high carbon steels	5 6	HC+SP	SCPQ5.0K	SP	P2	60	5.5	2.5P	SP-56
						(SCQ5.0K)					SP-56	
HC-PO	PCMQ5.0K	PO				P2	60	5.5	5P	PO-41		
(PCQ5.0K)								PO-41				
Oxidizing	5 6	HC+SP-OX	SCPQ5.0KX	SP	P2	60	5.5	2.5P	SP-59			
			(SCQ5.0KX)					SP-59				
For hard-to-machine materials	1 4 5	EH-PO	EPHMR5.0K	PO				4.5P	PO-45			
			(EPHR5.0K)	PO				4.5P	PO-45			
			EH-HT	ETHMR5.0K5	HT	P3	60	5.5	5P	HT-93		
			(ETHMR5.0K1)	HT				2.5P	HT-93			
		(ETHR5.0K5)	HT				5P	HT-93				
		(ETHR5.0K1)	HT				2.5P	HT-93				
		Powdered HSS	4 5	PM-SP	-	SP			60	3P	SP-69	
					LS-PM-SP	SP			100	3P	SP-70	
PM-PO	PO				P3	60	5.5	5.5P	PO-47			
LS-PM-PO	PO						100	5.5P	PO-48			
For titanium alloys	4 5 6 9	ZET-B	ZETBMR5.0K	SP				3P	SP-67			
			(ZETBR5.0K)	SP	P3	60	5.5	3P	SP-67			
		ZET-P	ZETPMR5.0K	SL				5P	SL-3			
		(ZETPR5.0K)	SL				5P	SL-3				
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR5.0K	SP	P3	60	5.5	3P	SP-68			

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamp machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small thread and opening machine Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For nickel base alloys	⑥ ⑦ ⑧ ⑩	ZEN-B	(ZENBR5.0K)	SP				3P	SP-68		
		ZEN-P	ZENPMR5.0K	PO	P3	60	5.5	4.5P	PO-46		
			(ZENPR5.0K)	PO				4.5P	PO-46		
Carbide taps for hard materials	② ③	UH-CT	UHCR5.0K5	HT	P3	60	6	5P	CT-10		
		EH-CT	EHCR5.0K5	HT	P3	60	5.5	5P	CT-10		
For stainless steels	⑥ ⑦ ⑧	SU+SP	SUPQ5.0K	SP	P2			2.5P	SP-42		
		SU+SL	SUPR5.0KL	SL	P3			5P	SL-2		
		SU-PO	PUMQ5.0K	PO	P2			5P	PO-33		
			(PUQ5.0K)	PO	P2			5P	PO-33		
		SU-HT	TUMQ5.0K9	HT	P2			9P	HT-71		
			(TUMQ5.0K4)	HT	P2	60	5.5	4P	HT-71		
			(TUMQ5.0K1)	HT	P2			1.5P	HT-71		
			(TUQ5.0K9)	HT	P2			9P	HT-71		
			(TUQ5.0K4)	HT	P2			4P	HT-71		
			(TUQ5.0K1)	HT	P2			1.5P	HT-71		
		Oversize	⑥ ⑦ ⑧	SU+SP	SUPR5.0K	SP	P3			2.5P	SP-42
					SUP55.0K	SP	P4			2.5P	SP-42
				SU-SP	(SUR5.0K)	SP	P3			2.5P	SP-42
					(SUS5.0K)	SP	P4			2.5P	SP-42
				SU-PO	PUMR5.0K	PO	P3	60	5.5	5P	PO-33
	(PUR5.0K)			PO	P3			5P	PO-33		
For deep hole use	⑥ ⑦ ⑧	SU-S-SP	SSMQ5.0K-SU	SP		60		2.5P	SP-50		
			(SSQ5.0K-SU)	SP		60		2.5P	SP-50		
		LS-SU-S-SP	-	SP		100	5.5	2.5P	SP-51		
			-	SP	P2	150		2.5P	SP-51		
For hard-to-machine materials	⑤ ⑥ ⑦	SU2-SP	SU2MQ5.0K	SP	P2	60	5.5	3P	SP-49		
			(SU2Q5.0K)	SP	P2	60	5.5	3P	SP-49		
For cast irons	①	FC-O	TFCM5.0K5					5P	HT-77		
			(TFCM5.0K1)	HT	③-⑩	60	5.5	1.5P	HT-78		
			(TFC5.0K5)					5P	HT-77		
			(TFC5.0K1)					1.5P	HT-78		
Carbide	① ⑫ ⑬	N-CT FC	TCNR5.0K3	HT	P3	60	5.5	3P	CT-4		
			(TCNR5.0K1)					3P	CT-4		
Long shank, carbide	① ⑫ ⑬	LS-N-CT	-	HT	P3	100	5.5	3P	CT-7		
			-					1.5P	CT-7		
For aluminum alloys	⑪ ⑫ ⑬	AL+SP	ASHPR5.0K					2.5P	SP-61		
			(ASHMR5.0K1)	SP	P3	60	5.5	1.5P	SP-61		
			(ASHR5.0K)					2.5P	SP-61		
			(ASHR5.0K1)					1.5P	SP-61		
	⑪ ⑫	LA-O	TLAM5.0K5					5P	HT-81		
			(TLA5.0K5)	HT	③-⑩	60	5.5	5P	HT-81		
			(TLA5.0K1)					1.5P	HT-81		
			(TLA5.0K1)					1.5P	HT-81		
Carbide	⑪ ⑫ ⑬	N-CT LA	TCNR5.0K3A	HT	P3	60	5.5	3P	CT-1		
			(TCNR5.0K1A)					1.5P	CT-1		
Carbide spiral fluted taps	⑪ ⑫ ⑬	N-CT-SP	-	SP	P3	60	5.5	2.5P	CT-8		
Carbide spiral pointed taps	⑪ ⑫ ⑬	N-CT-PO	PCNR5.0K	PO	P3	60	5.5	5P	CT-8		
Thread forming taps for non-ferrous metals	⑪ ⑫	N+RS	NRSP55.0KP	RO	G5	60	5.5	4P	RO-15		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for non-ferrous metals	⑪ ⑫	N+RS	NRSP55.0KB		G5			2P	RO-15
			(NRSP65.0KP)		G6			4P	RO-15
			(NRSP65.0KB)		G6			2P	RO-15
			(NRSP75.0KP)		G7			4P	RO-15
			(NRSP75.0KB)		G7			2P	RO-15
			(NRSP85.0KB)		G8			2P	RO-15
		N-RS	(NRS55.0KP)	RO	G5	60	5.5	4P	RO-15
			(NRS55.0KB)		G5			2P	RO-15
			(NRS65.0KP)		G6			4P	RO-15
			(NRS65.0KB)		G6			2P	RO-15
			(NRS75.0KP)		G7			4P	RO-15
			(NRS75.0KB)		G7			2P	RO-15
			(NRS85.0KP)		G8			4P	RO-15
			(NRS85.0KB)		G8			2P	RO-15
		Long shank	⑪ ⑫	LS-N-RS	NRSM65.0KP10		G6		
	(NRSM65.0KB10)				G6			2P	RO-21
	(NRS65.0KP10)				G6			4P	RO-21
	(NRS65.0KB10)				G6			2P	RO-21
	(NRSM75.0KP10)			RO	G7	100	5.5	4P	RO-21
	(NRSM75.0KB10)				G7			2P	RO-21
	(NRS75.0KP10)				G7			4P	RO-21
	(NRS75.0KB10)				G7			2P	RO-22
For thermosetting plastics	⑬	PL-1	TPLM5.0K3	HT	P5	60	5.5	3P	HT-90
			(TPL5.0K3)					3P	HT-90
For high speed	⑤ ⑥ ⑧ ⑪ ⑫ ⑬	F-SP	VFSHMQ5.0K	SP		60		2.5P	SP-71
			(VFSHQ5.0K)	SP		60		2.5P	SP-71
		LS-F-SP	-	SP		100		2.5P	SP-72
			(VFSHMQ5.0KL)	SL	P2	60	5.5	5P	SL-4
			(VFSHQ5.0KL)	SL		60		5P	SL-4
	LS-F-SL	-	SL		100		5P	SL-5	
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL+RZ	OLRZP65.0KP		G6				RO-28
			(OLRZP75.0KP)	RO	G7	60	5.5	4P	RO-28
			(OLRZ65.0KP)		G6				RO-28
			(OLRZ75.0KP)		G7				RO-28
Thread forming taps for high carbon steels	⑤ ⑥ ⑦ ⑪ ⑫	HP+RZ	HRZP65.0KP		G6			4P	RO-31
			(HRZP65.0KB)		G6			2P	RO-31
			(HRZP75.0KP)		G7			4P	RO-31
			(HRZP75.0KB)	RO	G7	60	5.5	2P	RO-31
			(HRZ65.0KP)		G6			4P	RO-31
			(HRZ65.0KB)		G6			2P	RO-31
Torqueless thread forming taps	⑥ ⑦ ⑧ ⑪ ⑫	SC-TL-RZ	SRZM65.0K1	RO	G6	60	5.5	1P	RO-36
			(SRZ65.0K1)						RO-36
For deep hole use	⑤ ⑥ ⑧	S-SP	SSMQ5.0K	SP				2.5P	SP-52
			(SSQ5.0K)	SP				2.5P	SP-52
		S-PO	PSMQ5.0K	PO	P2	60	5.5	5P	PO-39
			(PSQ5.0K)	PO				5P	PO-39
Oversize	⑤ ⑥ ⑧	S-SP	SSMR5.0K	SP	P3	60	5.5	2.5P	SP-52
			(SSR5.0K)					2.5P	SP-52
Low spiral	① ⑤ ⑥ ⑪ ⑫	LO-SP 8°	LSHMQ5.0K8	SP	P2	60	5.5	2.5P	SP-64
			(LSHQ5.0K8)					2.5P	SP-64

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Low spiral	1 5 6 11 12	LO-SP 15°	LSHMQ5.0K15						SP-64		
			(LSHQ5.0K15)	SP	P2	60	5.5	2.5P	SP-64		
		LO-SP 20°	LSHMQ5.0K20						SP-64		
			(LSHQ5.0K20)					SP-64			
Spiral fluted taps, universal use, BLF design	5 6 8 11 12	U-SP	USNMQ5.0K	SP	P2	60	5.5	2.5P	SP-59		
			(USNQ5.0K)						SP-59		
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC5.0K	SP	1b			2.5P	SP-63		
			(STIC5.0K)	SP	1b			2.5P	SP-63		
		PO STI	-	PO	1b			5P	PO-43		
		N-PO STI	(-)	PO	1b			5P	PO-43		
		STI-HT	TICM5.0K5	HT	1b			5P	HT-85		
			TICM5.0K1	HT	1b			1.5P	HT-85		
			(TIC5.0K5)	HT	1b	62	6	5P	HT-85		
			(TIC5.0K1)	HT	1b			1.5P	HT-85		
		N-RS STI	NRSM4IC5.0KP	RO	G4			4P	RO-23		
			NRSM4IC5.0KB	RO	G4			2P	RO-23		
			(NRS4IC5.0KP)	RO	G4			4P	RO-23		
			(NRS4IC5.0KB)	RO	G4			2P	RO-23		
		Carbide	11 12	N-CT STI	TCNIC5.0K5	HT	1b	62	6	5P	CT-9
					TCNIC5.0K1	HT	1b			1.5P	CT-9
Nut taps	6 8 11 12	NT	NH25.0K	HT	II b	110	3.6	29P	etc-1		
Taps 5M 0.9											
Standard	5 6 8 11 12	SP	SPQ5.0L	SP				2.5P	SP-5		
		+SP(N+SP)	SNPQ5.0L	SP				2.5P	SP-22		
		N-SP	(SNQ5.0L)	SP	P2	60	5.5	2.5P	SP-5		
		PO	POQ5.0L	PO				5P	PO-4		
		N-PO	(PNMQ5.0L)	PO				5P	PO-4		
				(PNQ5.0L)	PO			5P	PO-4		
	1 5 6 12	HT	(TNMQ5.0L9)						9P	HT-10	
		3F	TNMQ5.0L93						9P	HT-10	
			TNMQ5.0L5						5P	HT-10	
		3F	TNMQ5.0L53						5P	HT-10	
			TNMQ5.0L1	HT	P2	60	5.5	1.5P	HT-10		
		3F	TNMQ5.0L13					1.5P	HT-10		
			(TNQ5.0L9)					9P	HT-10		
			(TNQ5.0L5)					5P	HT-10		
		(TNQ5.0L1)					1.5P	HT-10			
		(TNQ5.0L1)					1.5P	HT-10			
For left hand threads	1 5 6 12	HT(LH)	(TNMQ5.0L9-L)					9P	HT-42		
			TNMQ5.0L5-L	HT	P2	60	5.5	5P	HT-42		
			TNMQ5.0L1-L					1.5P	HT-42		
Oxidizing	5 6 8	N-PO-OX	(PNMQ5.0LX)	PO	P2	60	5.5	5P	PO-17		
For stainless steels	6 7 8	SU+SP	SUPQ5.0L	SP				2.5P	SP-42		
		SU-PO	PUMQ5.0L	PO	P2	60	5.5	5P	PO-33		
Taps M5×0.75											
Standard	5 6 8 11 12	SP	SPQ5.0J	SP	P2	60	5.5	2.5P	SP-5		
		N-SP	(SNQ5.0J)	SP	P2	60	5.5	2.5P	SP-5		
	1 5 6 12	HT	(TNMQ5.0J9)						9P	HT-10	
			TNMQ5.0J5	HT	P2	60	5.5	5P	HT-11		
			TNMQ5.0J1					1.5P	HT-11		
		(TNQ5.0J9)					9P	HT-11			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	1 5 6 12	HT	(TNQ5.0J5)	HT	P2	60	5.5	5P	HT-11	
			(TNQ5.0J1)					1.5P	HT-11	
Taps M5×0.5										
Standard	5 6 8 11 12	SP	SPP5.0G	SP	P1	60		2.5P	SP-5	
		N-SP	(SNMP5.0G)	SP	P1	60		2.5P	SP-5	
			(SNP5.0G)	SP	P1	55		2.5P	SP-5	
		PO	POQ5.0G	PO	P2	60		5P	PO-4	
		N-PO	(PNMQ5.0G)	PO	P2	60		5P	PO-4	
				(PNQ5.0G)	PO	P2	55	5P	PO-4	
	1 5 6 12	HT	(TNMQ5.0G9)						9P	HT-11
			TNMQ5.0G5						5P	HT-11
			TNMQ5.0G1	HT	P2	60		1.5P	HT-11	
			(TNQ5.0G9)					55	5.5	9P
		(TNQ5.0G5)					55	5P	HT-11	
			(TNQ5.0G1)				55	1.5P	HT-11	
Over size	1 5 6 12	HT	TNMR5.0G5	HT	P3	60	5.5	5P	HT-11	
			TNMR5.0G1					1.5P	HT-11	
For left hand threads	1 5 6 12	HT(LH)	(TNMQ5.0G9-L)					9P	HT-42	
			TNMQ5.0G5-L					5P	HT-42	
			TNMQ5.0G1-L					1.5P	HT-42	
			(TNQ5.0G9-L)	HT	P2	55		5.5	9P	HT-42
			(TNQ5.0G5-L)					55	5P	HT-42
			(TNQ5.0G1-L)				55	1.5P	HT-42	
Thread forming taps for steels	6 8	N-RZ	NRZM65.0GP					4P	RO-6	
			NRZM65.0GB					2P	RO-6	
			(NRZ65.0GP)	RO	G6	55	5.5	4P	RO-6	
			(NRZ65.0GB)					55	2P	RO-6
For cast irons	Carbide	1 12 13	N-CT FC	TCNR5.0G3	HT	P3	52	5.5	3P	CT-4
				TCNR5.0G1					1.5P	CT-4
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR5.0G3A	HT	P3	52	5.5	3P	CT-1
				TCNR5.0G1A					1.5P	CT-1
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM65.0GP	G6		60		4P	RO-15	
			NRSM65.0GB	G6		60		2P	RO-15	
			(NRS65.0GP)	G6		55		4P	RO-15	
			(NRS65.0GB)	G6		55		2P	RO-15	
			NRSM75.0GP	RO	G7	60	5.5	4P	RO-15	
			NRSM75.0GB			60		2P	RO-15	
			(NRS75.0GP)			55		4P	RO-15	
			(NRS75.0GB)			55		2P	RO-15	

Dies selection	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M5×0.8								
Solid round dies	HSS	6 8 11 12	SD-Y	6G	20	7	2~2.5P	DEG5.0K Di-1
Adjustable dies	SKS	6 8 11 12	AR-D		20	7		GE25.0K Di-2
	SKS	6 8 11 12	AR-D		25	9		GG25.0K Di-2
	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ25.0K Di-2
	HSS	6 8 11 12	AR-D HSS		20	7		HE25.0K Di-13
	HSS	6 8 11 12	AR-D HSS		25	9		HG25.0K Di-13

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on stamping machines Dies (SMA)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

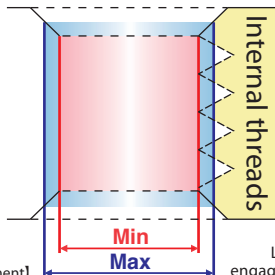
- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Adjustable dies	For left hand threads	HSS	AR-D HSS	II	38	13	2~2.5P	HJ25.0K	Di-13
		SKS	AR-D LH		20	7		GE25.0K-L	Di-7
		SKS	AR-D LH		25	9		GG25.0K-L	Di-7
		HSS	AR-D HSS LH	II	20	7	2~2.5P	HE25.0K-L	Di-14
		HSS	AR-D HSS LH		25	9		HG25.0K-L	Di-14
Solid dies for auto lathe	For steels	SKS	AD-S ST	P1	20	7	2~2.5P	FEP5.0K	Di-10
				P2				FEQ5.0K	Di-10
	For brass	SKS	AD-S BR	P1	20	7	2~2.5P	EEP5.0K	Di-12
				P2				EEQ5.0K	Di-12
	For stainless steels	HSS	HS-D	P1	20	7	2~2.5P	HEP5.0K	Di-15
				P2				HEQ5.0K	Di-15
Spiral fluted dies	HSS	SP-D	P1	20	7	1~1.5P	SEP5.0K	Di-17	
Spiral pointed dies	HSS	PO-D	P1	20	7	1~1.5P	PEP5.0K	Di-17	
Dies 5M 0.9									
Adjustable dies	For left hand threads	SKS	AR-D	II	20	7	2~2.5P	GE25.0L	Di-2
					25	9		GG25.0L	Di-2
		SKS	AR-D LH	II	20	7	2~2.5P	GE25.0L-L	Di-7
					25	9		GG25.0L-L	Di-7
Dies M5×0.75									
Adjustable dies	For left hand threads	SKS	AR-D	II	20	7	2~2.5P	GE25.0J	Di-2
					25	9		GG25.0J	Di-2
		SKS	AR-D LH	II	20	7	2~2.5P	GE25.0J-L	Di-7
Dies M5×0.5									
Adjustable dies	For left hand threads	SKS	AR-D		20	7		GE25.0G	Di-2
		SKS	AR-D	II	25	9	2~2.5P	GG25.0G	Di-2
		HSS	AR-D HSS		20	7		HE25.0G	Di-13
		SKS	AR-D LH	II	20	7	2~2.5P	GE25.0G-L	Di-7
Solid dies for auto lathe	For steels	SKS	AD-S ST	P1	20	7	2~2.5P	FEP5.0G	Di-10
				P2				FEQ5.0G	Di-10
	For brass	SKS	AD-S BR	P1	20	7	2~2.5P	EEP5.0G	Di-12
				P2				EEQ5.0G	Di-12
	For stainless steels	HSS	HS-D	P1	20	7	2~2.5P	HEP5.0G	Di-15
				P2				HEQ5.0G	Di-15
Rolling dies				R3				RER5.0G	Di-16
		HSS	RS-D	R4	20	7		RES5.0G	Di-16
				R5				RET5.0G	Di-16
Rolling dies	HSS	RS-D	R6	20	7		REU5.0G	Di-17	

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Small threads and irregular pitches Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

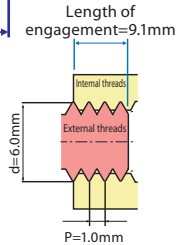
Flow chart : M6 tapping

Check 1 — Boring before tapping

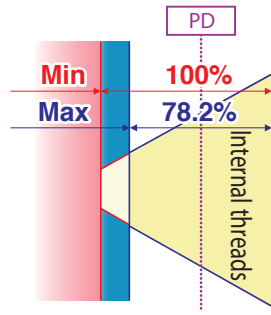


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

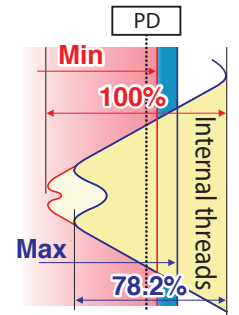
Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 3$ (mm)
M	Normal engagement length	5H	6H	7H	$3 < N \leq 9$ (mm)
L	Long engagement length	6H	7H	8H	$9 < L$ (mm)



Engagement ratio on cutting taps



Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

Bored hole size	D1		
	Drill size (ref.)	Min	Max
Engagement ratio	5.0	4.917	5.153
	92.4%	100%	78.2%

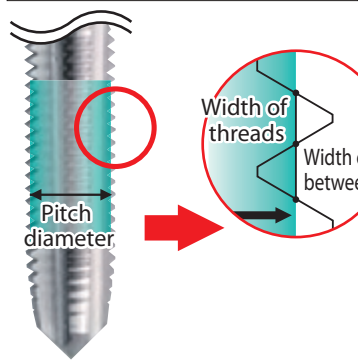
Unit : mm
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

*Hole size for thread forming taps	
Min	Max
5.49	5.59

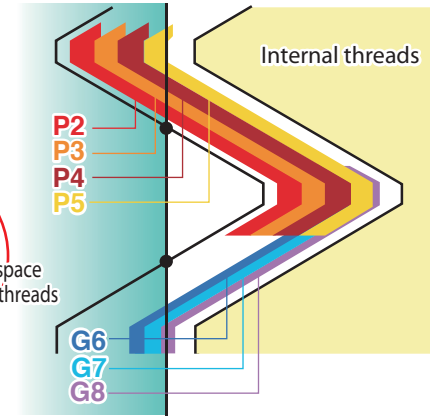
Unit : mm
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



Class	PD tolerance
P2	20μm ~ 40μm
P3	40μm ~ 60μm
P4	60μm ~ 80μm
P5	80μm ~ 100μm

*Above shows the plus tolerance by setting PD basic size as "0".

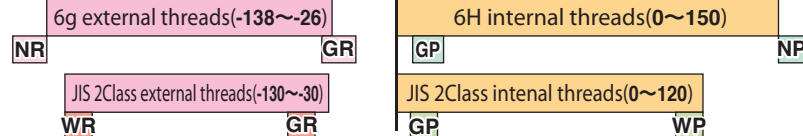
Class	PD tolerance
G6	64μm ~ 76μm
G7	76μm ~ 89μm
G8	89μm ~ 102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Relative position of PD tolerance area of external threads and internal threads, taps and gages.

Check 3 — Gage check

Ring gage pitch diameter (for external threads inspection)			
NR6g	-152 ~ -138	GR6g	-35 ~ -21
WR II	-130 ~ -122	GR II	-42 ~ -34

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	5.794~5.974	5.212~5.324	—
JIS 2class	5.820~5.970	5.220~5.320	~4.743

Plug gage pitch diameter (for internal threads inspection)			
GP6H	7 ~ 17	NP6H	150 ~ 160
GP II	4 ~ 12	WP II	112 ~ 120

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	—	5.350~5.500	4.917~5.153
JIS 2class	—	5.350~5.470	4.917~5.153

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and other metric Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Taps M6×1										
General purpose	⑧	ISP	SI76.0M	SP	-			2.5P	SP-1	
		SP-Y	SY6.0M	SP	-			2.5P	SP-1	
		IPO	PI76.0M	PO	-	62	6	5P	PO-1	
		IHT	HI76.0M5	HT	-			5P	HT-1	
			HI76.0M2	HT	-			2P	HT-1	
		R-Y	RY6.0M3	RO	6HX			3P	RO-1	
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ6.0M	SP				2.5P	SP-5	
			SPQ6.0M-T	SP				2.5P	SP-5	
			SPQ6.0M1	SP				1.5P	SP-5	
		+SP(N+SP)	SNPQ6.0M	SP				2.5P	SP-22	
		N-SP	(SNMQ6.0M1)	SP	P2	62	6	1.5P	SP-5	
			SNQ6.0M-T	SP				2.5P	SP-5	
			(SNQ6.0M1)	SP				1.5P	SP-5	
		PO	POQ6.0M	PO				5P	PO-4	
		+PO(N+PO)	PNPQ6.0M	PO				5P	PO-16	
		① ⑤ ⑥ ⑧ ⑫	HT	(TNMQ6.0M9)					9P	HT-11
			4F	(TNMQ6.0M94)					9P	HT-11
				TNMQ6.0M5					5P	HT-11
			4F	TNMQ6.0M54					5P	HT-11
				TNMQ6.0M1					1.5P	HT-11
			4F	TNMQ6.0M14	HT	P2	62	6	1.5P	HT-11
				(TNQ6.0M9)					9P	HT-11
			4F	(TNQ6.0M94)					9P	HT-11
				(TNQ6.0M5)					5P	HT-11
			4F	(TNQ6.0M54)					5P	HT-11
				(TNQ6.0M1)					1.5P	HT-11
4F	(TNQ6.0M14)						1.5P	HT-11		
Oversize	⑤ ⑥ ⑧ ⑪ ⑫		SP	SPR6.0M	SP	P3			2.5P	SP-5
				SPS6.0M	SP	P4			2.5P	SP-5
		+SP(N+SP)	SNPR6.0M	SP	P3			2.5P	SP-22	
			SNPS6.0M	SP	P4			2.5P	SP-22	
		PO	POR6.0M	PO	P3	62	6	5P	PO-4	
			POS6.0M	PO	P4			5P	PO-4	
		+PO(N+PO)	PNPR6.0M	PO	P3			5P	PO-16	
			PNPS6.0M	PO	P4			5P	PO-16	
		① ⑤ ⑥ ⑧ ⑫	HT	(TNMR6.0M9)					9P	HT-12
			3F	(TNMR6.0M93)					9P	HT-11
				TNMR6.0M5					5P	HT-12
			3F	TNMR6.0M53					5P	HT-11
				TNMR6.0M1					1.5P	HT-12
			3F	TNMR6.0M13					1.5P	HT-12
				(TNR6.0M9)					9P	HT-12
				(TNR6.0M5)	HT	P3	62	6	5P	HT-12
				(TNR6.0M1)					1.5P	HT-12
				(TNMS6.0M9)					9P	HT-12
				TNMS6.0M5					5P	HT-12
				TNMS6.0M1					1.5P	HT-12
	(TNS6.0M9)						9P	HT-12		
	(TNS6.0M5)						5P	HT-12		
	(TNS6.0M1)					1.5P	HT-12			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	Oversize	⑤ ⑥ ⑧ ⑪ ⑫	HT	(TNMT6.0M9)				9P	HT-12	
				TNMT6.0M5	HT	P5	62	6	5P	HT-12
				TNMT6.0M1					1.5P	HT-12
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPQ6.0M-L	SP				2.5P	SP-26	
		N-SP(LH)	(SNMQ6.0M-L)	SP				2.5P	SP-26	
			(SNQ6.0M-L)	SP	P2	62	6	2.5P	SP-26	
		PO(LH)	POQ6.0M-L	PO				5P	PO-19	
		N-PO(LH)	(PNQ6.0M-L)	PO				5P	PO-19	
		① ⑤ ⑥ ⑧ ⑫	HT(LH)	(TNMQ6.0M9-L)					9P	HT-42
				TNMQ6.0M5-L					5P	HT-42
				TNMQ6.0M1-L					1.5P	HT-42
				(TNQ6.0M9-L)	HT	P2	62	6	9P	HT-42
				(TNQ6.0M5-L)					5P	HT-42
	(TNQ6.0M1-L)						1.5P	HT-42		
Oxidizing	⑤ ⑥ ⑧		SP-OX	SPQ6.0MX	SP				2.5P	SP-23
		+SP-OX(N+SP-OX)	SNPQ6.0MX	SP				2.5P	SP-25	
		N-SP-OX	(SNQ6.0MX)	SP				2.5P	SP-23	
		PO-OX	POQ6.0MX	PO	P2	62	6	5P	PO-17	
		+PO-OX(N+PO-OX)	PNPQ6.0MX	PO				5P	PO-18	
		N-PO-OX	(PNQ6.0MX)	PO				5P	PO-17	
		Oversize	⑤ ⑥ ⑧	SP-OX	SPR6.0MX	SP	P3			2.5P
+SP-OX(N+SP-OX)	SNPR6.0MX			SP	P3			2.5P	SP-25	
+PO-OX(N+PO-OX)	PNPR6.0MX			PO	P3	62	6	5P	PO-18	
		PNPS6.0MX	PO	P4			5P	PO-18		
TiN coated	⑦ ⑧ ⑪ ⑫	AU+SP	VSAPQ6.0M	SP	P2			2.5P	SP-30	
		AU+SL	VSAPR6.0ML	SL	P3	62	6	5P	SL-1	
		⑤ ⑥ ⑧ ⑪ ⑫	PO-V	VPOQ6.0M	PO	P2			5P	PO-22
			N-PO-V	(VPNMQ6.0M)	PO	P2			5P	PO-22
			(VPNQ6.0M)	PO	P2			5P	PO-22	
		R+V	RVP66.0MP	RO	G6			4P	RO-27	
			RVP66.0MB	RO	G6			2P	RO-27	
			RVP76.0MP	RO	G7			4P	RO-27	
			RVP76.0MB	RO	G7	62	6	2P	RO-27	
		R-V	(RV66.0MP)	RO	G6			4P	RO-27	
	(RV66.0MB)	RO	G6			2P	RO-27			
	(RV76.0MP)	RO	G7			4P	RO-27			
	(RV76.0MB)	RO	G7			2P	RO-27			
	(RV86.0MP)	RO	G8			4P	RO-27			
	(RV86.0MB)	RO	G8			2P	RO-27			
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPQ6.0ML10	SP		100		2.5P	SP-32	
			SPQ6.0ML12	SP		120		2.5P	SP-32	
			SPQ6.0ML15	SP		150		2.5P	SP-32	
			SPQ6.0ML20	SP		200		2.5P	SP-32	
		LS-N-SP	(SNMQ6.0ML10)	SP		100		2.5P	SP-32	
			(SNMQ6.0ML12)	SP		120		2.5P	SP-32	
			(SNMQ6.0ML15)	SP	P2	150	6	2.5P	SP-32	
			(SNQ6.0ML10)	SP		100		2.5P	SP-32	
			(SNQ6.0ML12)	SP		120		2.5P	SP-32	
			(SNQ6.0ML15)	SP		150		2.5P	SP-32	
			(SNQ6.0ML20)	SP		200		2.5P	SP-32	
		LS-PO	POQ6.0ML10	PO		100		5P	PO-24	
			POQ6.0ML12	PO		120		5P	PO-24	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	5 6 8 11 12	LS-PO	POQ6.0ML15			150			PO-25		
			POQ6.0ML20			200			PO-25		
		LS-N-PO	(PNMQ6.0ML10)			100			PO-24		
			(PNMQ6.0ML12)			120			PO-24		
			(PNMQ6.0ML15)	PO	P2	150	6	5P	PO-25		
			(PNQ6.0ML10)			100			PO-24		
			(PNQ6.0ML12)			120			PO-24		
			(PNQ6.0ML15)			150			PO-25		
			(PNQ6.0ML20)			200			PO-25		
			1 5 6 8 12	LS-HT	TNMQ6.0M510			100		5P	HT-49
		TNMQ6.0M512					120		5P	HT-49	
		TNMQ6.0M515				150		5P	HT-49		
	TNMQ6.0M520				200		5P	HT-49			
	TNMQ6.0M110				100	1.5P		HT-49			
	TNMQ6.0M112				120	1.5P		HT-49			
	TNMQ6.0M115				150	1.5P		HT-49			
	TNMQ6.0M120				200	1.5P		HT-50			
	(L106.0M5-Q)	HT		P2	100	6	5P	HT-49			
	(L126.0M5-Q)				120		5P	HT-49			
	(L156.0M5-Q)				150		5P	HT-49			
	(L206.0M5-Q)				200		5P	HT-49			
	(L106.0M1-Q)				100	1.5P		HT-49			
	(L126.0M1-Q)			120	1.5P		HT-49				
	(L156.0M1-Q)			150	1.5P		HT-49				
	(L206.0M1-Q)			200	1.5P		HT-50				
Oversize	5 6 8 11 12	LS-SP	SPR6.0ML10	SP	P3	100		2.5P	SP-33		
			SPR6.0ML15	SP	P3	150		2.5P	SP-33		
		LS-N-SP	(SNMR6.0ML10)	SP	P3	100		2.5P	SP-32		
			(SNMR6.0ML15)	SP	P3	150		2.5P	SP-33		
			(SNR6.0ML10)	SP	P3	100		2.5P	SP-32		
			(SNR6.0ML15)	SP	P3	150		2.5P	SP-33		
		LS-PO	POR6.0ML10	PO	P3	100		5P	PO-25		
			POR6.0ML15	PO	P3	150	6	5P	PO-25		
			POS6.0ML15	PO	P4	150		5P	PO-25		
			LS-N-PO	(PNMR6.0ML10)	PO	P3	100		5P	PO-25	
		(PNMR6.0ML15)		PO	P3	150		5P	PO-25		
		(PNR6.0ML10)		PO	P3	100		5P	PO-25		
	(PNR6.0ML15)	PO		P3	150		5P	PO-25			
	(PNMS6.0ML15)	PO		P4	150		5P	PO-25			
	(PNS6.0ML15)	PO		P4	150		5P	PO-25			
	1 5 6 8 12	LS-HT		TNMR6.0M510			100		5P	HT-50	
			TNMR6.0M515			150		5P	HT-50		
		TNMR6.0M110			100	1.5P		HT-50			
		TNMR6.0M115			150	1.5P		HT-50			
		(L106.0M5-R)	HT	P3	100	6	5P	HT-50			
		(L156.0M5-R)			150		5P	HT-50			
		(L106.0M1-R)			100	1.5P		HT-50			
		(L156.0M1-R)			150	1.5P		HT-50			
		With neck	5 6 8 11 12	LS-SP-K	-	SP	P2	100	6	2.5P	SP-41
				LS-PO-K	-	PO				5P	PO-32
For left hand threads		5 6 8 11 12	LS-SP(LH)	SPQ6.0ML10-L	SP	P2	100	6	2.5P	SP-39	
				SPQ6.0ML15-L	SP	P2	150	6	2.5P	SP-39	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	5 6 8 11 12	LS-N-SP(LH)	(SNMQ6.0ML10L)			100			SP-39		
			(SNMQ6.0ML15L)			150			SP-39		
			(SNQ6.0ML10-L)	SP	P2	100	6	2.5P	SP-39		
			(SNQ6.0ML15-L)			150			SP-39		
		1 5 6 8 12	LS-HT(LH)	TNMQ6.0M510L			100		5P	HT-65	
				TNMQ6.0M515L			150		5P	HT-65	
			TNMQ6.0M110L			100	1.5P		HT-65		
			TNMQ6.0M115L			150	1.5P		HT-65		
			(L106.0M5-QL)	HT	P2	100	6	5P	HT-65		
			(L156.0M5-QL)			150		5P	HT-65		
			(L106.0M1-QL)			100	1.5P		HT-65		
			(L156.0M1-QL)			150	1.5P		HT-65		
	5 6 8 11 12		LS-SP-V	VSPQ6.0ML10	SP		100		2.5P	SP-40	
				VSPQ6.0ML15	SP		150		2.5P	SP-40	
			LS-N-SP-V	(VSNMQ6.0ML10)	SP		100		2.5P	SP-40	
				(VSNMQ6.0ML15)	SP		150		2.5P	SP-40	
				(VSNQ6.0ML10)	SP		100		2.5P	SP-40	
		(VSNQ6.0ML15)		SP		150		2.5P	SP-40		
		LS-PO-V	VPOQ6.0ML10	PO	P2	100	6	5P	PO-31		
			VPOQ6.0ML15	PO		150		5P	PO-31		
		LS-N-PO-V	(VPNMQ6.0ML10)	PO		100		5P	PO-31		
			(VPNMQ6.0ML15)	PO		150		5P	PO-31		
			(VPNQ6.0ML10)	PO		100		5P	PO-31		
			(VPNQ6.0ML15)	PO		150		5P	PO-31		
		1 5 6 8 12	LS-HT-V	TNMQ6.0M510V			100		5P	HT-68	
TNMQ6.0M515V					150		5P	HT-68			
TNMQ6.0M110V				100	1.5P		HT-68				
TNMQ6.0M115V				150	1.5P		HT-68				
(VL106.0M5-Q)	HT		P2	100	6	5P	HT-68				
(VL156.0M5-Q)				150		5P	HT-68				
(VL106.0M1-Q)				100	1.5P		HT-68				
(VL156.0M1-Q)				150	1.5P		HT-68				
For soft structural steels	8		E-SP	ESHMQ6.0M	SP	P2	62	6	2.5P	SP-55	
				(ESHQ6.0M)						SP-55	
Thread forming taps for steels	6 8		N+RZ	NRZP56.0MP	G5				4P	RO-6	
				NRZP56.0MB	G5				2P	RO-6	
				NRZP66.0MP	G6				4P	RO-6	
		NRZP66.0MB		G6				2P	RO-6		
		NRZP76.0MP		G7				4P	RO-6		
		NRZP76.0MB		G7				2P	RO-6		
		N-RZ		(NRZ56.0MP)	RO	G5		62	6	4P	RO-6
				(NRZ56.0MB)		G5				2P	RO-6
			(NRZ66.0MP)		G6				4P	RO-6	
			(NRZ66.0MB)		G6				2P	RO-6	
			(NRZ76.0MP)		G7				4P	RO-6	
		Long shank	6 8	LS-N-RZ	NRZM76.0MP10	G7		100		4P	RO-10
					NRZM76.0MP15	G7		150		4P	RO-10
			(NRZM76.0MB10)	RO	G7	100	6	2P	RO-10		
			(NRZM76.0MB15)		G7	150		2P	RO-10		

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamp machines Taps
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and integral machine Taps (SU)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Thread forming taps for steels	Long shank	6 8	LS-N-RZ	(NRZ76.0MP10)	G7	100	4P	RO-10					
			(NRZ76.0MP15)	G7							150	4P	RO-10
			(NRZ76.0MB10)	G7							100	2P	RO-10
			(NRZ76.0MB15)	G7							150	2P	RO-10
				RO	6	4P	RO-10						
			NRZM86.0MP10	G8				100			4P	RO-10	
			NRZM86.0MB10	G8				100			2P	RO-10	
			(NRZ86.0MP10)	G8				100			4P	RO-10	
	G8	100	2P	RO-10									
	G8	100	2P	RO-10									
	G8	100	2P	RO-10									
For high carbon steels		5 6	HC+SP	SCPQ6.0M	SP	P2	62	6	2.5P	SP-56			
			HC-SP	(SCQ6.0M)						SP-56			
			1 5 6	HC-PO	PCMQ6.0M	PO	P2	62	6	5P	PO-41		
				(PCQ6.0M)	PO-41								
			Oxidizing	5 6	HC+SP-OX	SCPQ6.0MX	SP	P2	62	6	2.5P	SP-59	
					HC-SP-OX	(SCQ6.0MX)						SP-59	
For hard-to-machine materials		1 4 5	EH-PO	EPHMR6.0M	PO					4.5P	PO-45		
			(EPHR6.0M)	PO						4.5P	PO-45		
			EH-HT	ETHMR6.0M5	HT	P3	62	6	5P	HT-93			
			ETHMR6.0M1	HT						2.5P	HT-93		
				(ETHR6.0M5)	HT	5P	HT-93						
				(ETHR6.0M1)	HT	2.5P	HT-93						
			Powdered HSS	4 5	PM-SP	-	SP		62		3P	SP-70	
					LS-PM-SP	-						SP	100
PM-PO	-	PO			P3	62	6	5.5P	PO-47				
LS-PM-PO	-								PO	100	5.5P	PO-48	
For titanium alloys	4 5 6 9	ZET-B	ZETBMR6.0M	SP				3P	SP-67				
		(ZETBR6.0M)	SP						3P	SP-67			
		ZET-P	ZETPMR6.0M	SL	P3	62	6	5P	SL-3				
		(ZETPR6.0M)	SL						5P	SL-3			
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR6.0M	SP				3P	SP-68				
		(ZENBR6.0M)	SP						3P	SP-68			
		ZEN-P	ZENPMR6.0M	PO	P3	62	6	4.5P	PO-46				
		(ZENPR6.0M)	PO						4.5P	PO-46			
Carbide taps for hard materials	2 3	UH-CT	UHCR6.0M5	HT	P3	62	6.2	5P	CT-10				
		EH-CT	EHCR6.0M5						HT	P3	62	6	5P
For stainless steels		6 7 8	SU+SP	SUPQ6.0M	SP				2.5P	SP-43			
			SU+SL	SUPQ6.0ML						SL	5P	SL-2	
			SU-PO	PUMQ6.0M	PO				5P	PO-33			
			(PUQ6.0M)	PO						5P	PO-33		
			SU-HT	TUMQ6.0M9	HT	P2	62	6	9P	HT-71			
			TUMQ6.0M4	HT						4P	HT-71		
				TUMQ6.0M1	HT	1.5P	HT-71						
				(TUQ6.0M9)	HT	9P	HT-71						
				(TUQ6.0M4)	HT	4P	HT-71						
				(TUQ6.0M1)	HT	1.5P	HT-71						
			Oversize	6 7 8	SU+SP	SUPR6.0M	SP	P3			2.5P	SP-43	
					SUP56.0M	SP						P4	2.5P
					SU-SP	(SUR6.0M)	SP	P3			2.5P	SP-43	
					(SUS6.0M)	SP						P4	2.5P
SU-PO	PUMR6.0M	PO			P3	62	6	5P	PO-33				
(PUR6.0M)	PO								P3	5P	PO-33		
	PUMS6.0M	PO			P4			5P	PO-33				
(PUS6.0M)	PO								P4	5P	PO-33		

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For stainless steels	For deep hole use	6 7 8	SU-S-SP	SSMQ6.0M-SU	SP		62		2.5P	SP-50		
			(SSQ6.0M-SU)	SP						62	2.5P	SP-50
			LS-SU-S-SP	-	SP	P2	100	6	2.5P	SP-51		
			-	SP						150	2.5P	SP-51
				LS-SU-S-PO	-	PO		100		5P	PO-38	
	-	PO	150	5P	PO-38							
	For hard-to-machine materials	5 6 7	SU2-SP	SU2MQ6.0M	SP	P2	62	6	3P	SP-49		
	(SU2Q6.0M)	SP	62	6						3P	SP-49	
For cast irons		1	FC-O	TFCM6.0M5					5P	HT-78		
			TFCM6.0M1	HT						30-30	62	6
			(TFC6.0M5)						5P	HT-78		
				(TFC6.0M1)					1.5P	HT-78		
			Carbide	1 12 13	N-CT FC	TCNR6.0M3					3P	CT-4
					TCNR6.0M3F	HT						P3
					TCNR6.0M1						1.5P	CT-4
					TCNR6.0M1F						1.5P	CT-4
Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	6	3P	CT-7			
		-	HT						P3	100	6	1.5P
For aluminum alloys		11 12 13	AL+SP	ASHPR6.0M					2.5P	SP-61		
			AL-SP	ASHMR6.0M1						SP	P3	62
			(ASHR6.0M)						2.5P			
				(ASHR6.0M1)					1.5P	SP-61		
				LA-O	TLAM6.0M5	HT	30-30	62	6	5P	HT-81	
			TLAM6.0M1	HT	30-30						62	6
				(TLA6.0M5)					5P	HT-81		
				(TLA6.0M1)					1.5P	HT-81		
AXE	12	AXE-HT	TAXEMR6.0M1	HT	P3	62	6	1.5P	HT-83			
(TAXER6.0M1)	HT	P3	62						6	1.5P	HT-83	
Carbide	11 12 13	N-CT LA	TCNR6.0M3A	HT	P3	62	6	3P	CT-1			
		TCNR6.0M1A										
Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	62	6	2.5P	CT-8			
Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNR6.0M						PO	P3	62	6
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADR6.0M1	HT	P3	100	6	1.5P	CT-9		
Thread forming taps for non-ferrous metals		11 12	N+RS	NRSP56.0MP	G5				4P	RO-15		
			NRSP56.0MB	G5						2P	RO-15	
			NRSP66.0MP	G6	4P	RO-15						
			NRSP66.0MB	G6	2P	RO-16						
			NRSP76.0MP	G7	4P	RO-16						
			NRSP76.0MB	G7	2P	RO-16						
			N-RS	(NRS56.0MP)	RO	G5	62	6	4P	RO-15		
			(NRS56.0MB)	G5						2P	RO-15	
				(NRS66.0MP)	G6	4P	RO-16					
				(NRS66.0MB)	G6	2P	RO-16					
				(NRS76.0MP)	G7	4P	RO-16					
				(NRS76.0MB)	G7	2P	RO-16					
				(NRS86.0MP)	G8	4P	RO-16					
				(NRS86.0MB)	G8	2P	RO-16					
			Long shank	11 12	LS-N-RS	NRSM76.0MP10	G7	100			4P	RO-22
					NRSM76.0MP15	G7						150
NRSM76.0MB10	RO	G7			100	6	2P	RO-22				
NRSM76.0MB15	G7	150			2P	RO-22						
(NRS76.0MP10)	G7	100			4P	RO-22						

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page			
Thread forming taps for non-ferrous metals	Long shank	11 12	LS-N-RS (NRS76.0MP15)		G7	150		4P	RO-22			
			(NRS76.0MB10)		G7	100		2P	RO-22			
			(NRS76.0MB15)		G7	150		2P	RO-22			
			NRSM86.0MP10		G8	100		4P	RO-22			
			NRSM86.0MP15		G8	150		4P	RO-22			
			NRSM86.0MB10	RO	G8	100	6	2P	RO-22			
			(NRS86.0MP10)		G8	100		4P	RO-22			
			(NRS86.0MP15)		G8	150		4P	RO-22			
			(NRS86.0MB10)		G8	100		2P	RO-22			
			(NRS86.0MB15)		G8	150		2P	RO-22			
			For thermosetting plastics	13	PL-1	TPLM6.0M3 (TPL6.0M3)	HT	P5	62	6	3P	HT-90
			X series	For general steels	5 6 8 11 12	XSP	SNXQ6.0M	SP	P2	80	6	2.5P
XSL	SNXQ6.0ML	SL								SL-1		
TiN coated	7 8 11 12	AUXSP		VSAXQ6.0M	SP	P2	80	6	2.5P	SP-30		
		AUXSL		VSAXQ6.0ML	SL					SL-2		
For stainless steels	6 7 8	SUXSP		SUXQ6.0M	SP	P2	80	6	2.5P	SP-48		
		SUXSL		SUXQ6.0ML	SL					SL-3		
For high speed	5 6 8 11 12 13	F-SP	VFSHMQ6.0M (VFSHQ6.0M)	SP		62		2.5P	SP-71			
		LS-F-SP	-	SP	P2	100	6	2.5P	SP-72			
		F-SL	VFSHMQ6.0ML (VFSHQ6.0ML)	SL		62		5P	SL-5			
		LS-F-SL	-	SL		100		5P	SL-5			
		Ultra fast tapping (with coolant hole)	For steels	5 6 8 11 12 13	HFIHS	HFIHSS6.0M	SP	P4	62	6	2.5P	SP-73
					HFIHP	HFIHPS6.0M	SP	P4	62	6	2.5P	SP-73
Carbide taps for cast irons	11 12		HFICT-B	HFICTR6.0M	HT	P3	62	6	4P	CT-12		
			HFICT-P	HFICTPR6.0M	HT					CT-12		
For non-ferrous metals	11 12	HFAHS	HFAHSS6.0M	SP	P4	62	6	2.5P	SP-74			
		HFASP	HFASPS6.0M	SP					SP-74			
Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTR6.0M	HT	P3	62	6	2.5P	CT-11			
		HFACT-P	HFACTPR6.0M	HT					CT-11			
For dry tapping (with coolant hole)	For steels	11 12 13	HDISP	HDISPS6.0M	SP	P4	62	6	2.5P	SP-75		
			HDASP	HDASPS6.0M	SP					SP-75		
Ultra fast tapping (with coolant hole)	For both steels and non-ferrous materials	11 12 13	HDISL	HDISLS6.0M	SL	P4	62	6	5P	SL-6		
Thread forming taps for dry tapping	5 6 7 11 12		OL+RZ	OLRZP66.0MP	G6				RO-28			
			OLRZP76.0MP	G7				RO-28				
			OL-RZ	(OLRZ66.0MP)	G6	62	6	4P	RO-28			
			(OLRZ76.0MP)	G7				RO-28				
Thread forming taps for high carbon steels	5 6 7 11 12		HP+RZ	HRZP66.0MP	G6			4P	RO-31			
			HRZP66.0MB	G6			2P	RO-31				
			HRZP76.0MP	G7			4P	RO-31				
			HRZP76.0MB	G7			2P	RO-31				
			HP-RZ	(HRZ66.0MP)	G6	62	6	4P	RO-31			
			(HRZ66.0MB)	G6			2P	RO-31				
			(HRZ76.0MP)	G7			4P	RO-31				
			(HRZ76.0MB)	G7			2P	RO-31				
			Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM66.0M1 (SRZ66.0M1)	RO	G6	62	6	1P	RO-36
			For deep hole use	5 6 8		S-SP	SSMQ6.0M (SSQ6.0M)	SP	P2	62	6	2.5P
		SP							2.5P	SP-52		

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page						
For deep hole use	5 6 8	11 12	S-PO	PSMQ6.0M (PSQ6.0M)	PO	P2	62	6	5P	PO-39					
			PO						5P	PO-39					
Over-size			S-SP	SSMR6.0M (SSR6.0M)	SP	P3	62	6	2.5P	SP-52					
Low spiral	1 5 6 11 12		LO-SP 8°	LSHMQ6.0M8 (LSHQ6.0M8)			62			SP-64					
			LO-SP 15°	LSHMQ6.0M15 (LSHQ6.0M15)			62			SP-64					
			LO-SP 20°	LSHMQ6.0M20 (LSHQ6.0M20)	SP	P2	62	6	2.5P	SP-64					
			LS-LO-SP	LSHMQ6.0ML10 (LSHQ6.0ML10)			100				SP-65				
			Spiral fluted taps, universal use, BLF design	5 6 8 11 12		U-SP	USNMQ6.0M (USNQ6.0M)	SP	P2	62	6	2.5P	SP-60		
			For helical coil wire screw thread inserts	11 12		STI-SP	STIMC6.0M (STIC6.0M)	SP	1b			2.5P	SP-63		
						PO STI	-	PO	1b				5P	PO-43	
						N-PO STI	(-)	PO	1b				5P	PO-43	
						STI-HT	TICM6.0M5 (TIC6.0M5)	HT	1b		70	6.2		5P	HT-85
							TICM6.0M1 (TIC6.0M1)	HT	1b				1.5P	HT-85	
N-RS STI	NRSM4IC6.0MP (NRS4IC6.0MP)	RO				G4				4P	RO-23				
	NRSM4IC6.0MB (NRS4IC6.0MB)	RO				G4				2P	RO-23				
	(NRS4IC6.0MP)	RO				G4				4P	RO-23				
	(NRS4IC6.0MB)	RO				G4				2P	RO-23				
Carbide	11 12					N-CT STI	TCNIC6.0M5 (TCNIC6.0M1)	HT	1b	65	6.2	1.5P	CT-9		
With coolant hole	5 6 8 11 12					MC-SP	MSHQ6.0ML10 (MSHQ6.0ML15)	SP	P2	100	6	2.5P	SP-66		
			MC-PO	MPHQ6.0ML10 (MPHQ6.0ML15)	PO		100			5P	PO-44				
			MC-HT	ML106.0M5-Q (ML156.0M5-Q)	HT	P2	100	6	5P	HT-90					
				ML106.0M1-Q (ML156.0M1-Q)	HT		100			1.5P	HT-90				
				ML156.0M1-Q	HT		150			1.5P	HT-90				
Nut taps	6 8 11 12		NT	NH26.0M	HT	II b	120	4.5	26P	etc-1					
Taps M6×0.75															
Standard	5 6 8 11 12		SP	SPQ6.0J (SNMQ6.0J)	SP			2.5P	SP-5						
			N-SP	(SNQ6.0J)	SP				2.5P	SP-5					
			PO	POQ6.0J (PNMQ6.0J)	PO	P2	62	6	5P	PO-4					
			N-PO	(PNQ6.0J)	PO					5P	PO-4				
			HT	(TNMQ6.0J9) (TNMQ6.0J5)	HT					9P	HT-12				
				(TNMQ6.0J1)	HT	P2	62	6	1.5P	HT-12					
				(TNQ6.0J9) (TNQ6.0J5)	HT					9P	HT-12				
				(TNQ6.0J1)	HT					5P	HT-12				
			Over-size	5 6 8 11 12		SP	SPR6.0J	SP	P3	62	6	2.5P	SP-6		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Standard	Oversize	⑤⑥⑧ ⑪⑫	N-SP	(SNMR6.0J)	SP				2.5P	SP-6			
				(SNR6.0J)	SP				2.5P	SP-6			
			PO	(POR6.0J)	PO	P3	62	6		5P	PO-4		
			N-PO	(PNMR6.0J)	PO					5P	PO-4		
				(PNR6.0J)	PO					5P	PO-4		
			①⑤⑥⑬: HT	TNMR6.0J5		P3				5P	HT-12		
				TNMR6.0J1		P3				1.5P	HT-12		
				TNMS6.0J5		P4	62	6		5P	HT-12		
				TNMS6.0J1		P4				1.5P	HT-12		
			For left hand threads	①⑤⑥⑬: HT(LH)	⑤⑥⑧ ⑪⑫	(TNMQ6.0J9-L)					9P	HT-42	
(TNMQ6.0J5-L)								5P	HT-42				
(TNMQ6.0J1-L)	HT	P2				62	6		1.5P	HT-42			
(TNQ6.0J9-L)									9P	HT-42			
(TNQ6.0J5-L)									5P	HT-42			
(TNQ6.0J1-L)									1.5P	HT-42			
Long shank	⑤⑥⑧ ⑪⑫	⑥⑧	LS-SP	SQ6.0JL10					SP-33				
			LS-N-SP	(SNMQ6.0JL10)	SP	P2	100	6	2.5P	SP-33			
				(SNQ6.0JL10)						SP-33			
Thread forming taps for steels	⑥⑧	⑥⑧	N-RZ	NRZ66.0JP		G6			4P	RO-6			
				NRZ66.0JB		G6			2P	RO-6			
				(NRZ66.0JP)		G6				4P	RO-6		
				(NRZ66.0JB)	RO	G6	62	6		2P	RO-6		
				NRZM76.0JP		G7				4P	RO-6		
				NRZM76.0JB		G7				2P	RO-6		
				(NRZ76.0JP)		G7				4P	RO-6		
				(NRZ76.0JB)		G7				2P	RO-6		
For stainless steels	⑥⑦⑧	⑥⑦⑧	SU-SP	SUMQ6.0J	SP				2.5P	SP-43			
				(SUQ6.0J)	SP				2.5P	SP-43			
			SU-PO	PUMQ6.0J	PO					5P	PO-33		
				(PUQ6.0J)	PO					5P	PO-33		
			SU-HT	TUMQ6.0J4	HT	P2	62	6		4P	HT-71		
				TUMQ6.0J1	HT					1.5P	HT-71		
				(TUQ6.0J4)	HT					4P	HT-71		
	(TUQ6.0J1)	HT					1.5P	HT-71					
For cast irons	Carbide	①⑫⑬	N-CT FC	TCNR6.0J3	HT	P3	62	6	3P	CT-4			
				TCNR6.0J1					1.5P	CT-4			
For aluminum alloys	Carbide	⑪⑫⑬	N-CT LA	TCNR6.0J3A	HT	P3	62	6	3P	CT-1			
				TCNR6.0J1A					1.5P	CT-1			
Thread forming taps for non-ferrous metals	⑪⑫	⑪⑫	N-RS	NRSM66.0JP		G6			4P	RO-16			
				NRSM66.0JB		G6			2P	RO-16			
				(NRS66.0JP)		G6				4P	RO-16		
				(NRS66.0JB)	RO	G6	62	6		2P	RO-16		
				NRSM76.0JP		G7				4P	RO-16		
				NRSM76.0JB		G7				2P	RO-16		
				(NRS76.0JP)		G7				4P	RO-16		
				(NRS76.0JB)		G7				2P	RO-16		
			Nut taps	⑥⑧⑪⑫	⑥⑧⑪⑫	NT	NH26.0J	HT	II	115	4.5	31P	etc-1
			Taps M6×0.5										
Standard	⑤⑥⑧ ⑪⑫	⑤⑥⑧ ⑪⑫	SP	SPP6.0G	SP	P1	62		2.5P	SP-6			
			N-SP	(SNMP6.0G)	SP	P1	62	6	2.5P	SP-6			
				(SNP6.0G)	SP	P1	55		2.5P	SP-6			

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	⑤⑥⑧ ⑪⑫	⑤⑥⑧ ⑪⑫	PO	POQ6.0G	PO	P2	62		5P	PO-4	
			N-PO	(PNMQ6.0G)	PO	P2	62	6	5P	PO-4	
				(PNQ6.0G)	PO	P2	55		5P	PO-4	
			①⑤⑥⑬: HT	(TNMQ6.0G9)					62	9P	HT-12
				TNMQ6.0G5					62	5P	HT-12
				TNMQ6.0G1	HT	P2	62	6	1.5P	HT-12	
				(TNQ6.0G9)					55	9P	HT-12
				(TNQ6.0G5)					55	5P	HT-12
				(TNQ6.0G1)					55	1.5P	HT-12
			Oversize	⑤⑥⑧ ⑪⑫	⑤⑥⑧ ⑪⑫	SP	SPQ6.0G		P2	62	
	SPR6.0G	SP				P3	62	6	2.5P	SP-6	
N-SP	(SNQ6.0G)					P2	55		SP-6		
	(SNR6.0G)					P3	55		SP-6		
For left hand threads	①⑤⑥⑬	①⑤⑥⑬	HT(LH)	(TNMQ6.0G9-L)				62	9P	HT-42	
				TNMQ6.0G5-L				62	5P	HT-42	
				TNMQ6.0G1-L	HT	P2	62	6	1.5P	HT-42	
				(TNQ6.0G9-L)					55	9P	HT-42
				(TNQ6.0G5-L)					55	5P	HT-42
				(TNQ6.0G1-L)					55	1.5P	HT-42
Thread forming taps for steels	⑥⑧	⑥⑧	N-RZ	NRZM66.0GP		G6			4P	RO-6	
				NRZM66.0GB		G6			2P	RO-6	
				(NRZ66.0GP)	RO	G6	55	6	4P	RO-6	
				(NRZ66.0GB)			55		2P	RO-6	
For cast irons	Carbide	①⑫⑬	N-CT FC	TCNR6.0G3	HT	P3	55	6	3P	CT-4	
				TCNR6.0G1					1.5P	CT-4	
For aluminum alloys	Carbide	⑪⑫⑬	N-CT LA	TCNR6.0G3A	HT	P3	55	6	3P	CT-1	
				TCNR6.0G1A					1.5P	CT-1	
Thread forming taps for non-ferrous metals	⑪⑫	⑪⑫	N-RS	NRSM66.0GP		G6			4P	RO-16	
				NRSM66.0GB		G6			2P	RO-16	
				(NRS66.0GP)	RO	G6	55	6	4P	RO-16	
				(NRS66.0GB)			55		2P	RO-16	

Dies selection		Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page			
Dies M6×1												
Solid dies	HSS	⑥⑧ ⑪⑫	SD-Y	G6	20	7	2~2.5P	DEG6.0M	Di-1			
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D		20	7		GE26.0M	Di-2			
					25	9		GG26.0M	Di-2			
					38	13		GJ26.0M	Di-2			
				⑥⑧ ⑪⑫	AR-D	II	50	16	2~2.5P	GM26.0M	Di-2	
				HSS	AR-D HSS		20	7		HE26.0M	Di-13	
				HSS	AR-D HSS		25	9		HG26.0M	Di-13	
				HSS	AR-D HSS		38	13		HJ26.0M	Di-13	
			For left hand threads	SKS	⑥⑧ ⑪⑫	AR-D LH		20	7		GE26.0M-L	Di-7
								25	9		GG26.0M-L	Di-7
								38	13	2~2.5P	GJ26.0M-L	Di-7
	HSS	AR-D HSS LH					20	7		HE26.0M-L	Di-14	
	HSS	AR-D HSS LH		25	9		HG26.0M-L	Di-14				
Solid dies for auto lathe	SKS	⑥⑧	AD-S ST		P1	20	7	2~2.5P	FEP6.0M	Di-10		
					P2				FEQ6.0M	Di-10		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Solid dies for auto lathe	For brass	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEP6.0M	Di-12
					P2			EEQ6.0M	Di-12	
	For stainless steels	HSS	6 7 8	HS-D	P1	20	7	2~2.5P	HEP6.0M	Di-15
					P2			HEQ6.0M	Di-15	
Spiral fluted dies		HSS	6 8 11 12	SP-D	P1	20	7	1~1.5P	SEP6.0M	Di-17
Spiral pointed dies		HSS	6 8 11 12	PO-D	P1	20	7	1~1.5P	PEP6.0M	Di-17
Dies M6×0.75										
Adjustable dies		SKS	6 8 11 12	AR-D		20	7		GE26.0J	Di-2
					II	25	9	2~2.5P	GG26.0J	Di-2
						38	13		GJ26.0J	Di-2
						20	7		HE26.0J	Di-13
	For left hand threads	SKS	6 8 11 12	AR-D LH	II	20	7	2~2.5P	GE26.0J-L	Di-7
						25	9		GG26.0J-L	Di-7
Solid dies for auto lathe	For steels	SKS	6 8	AD-S ST	P1	20	7	2~2.5P	FEP6.0J	Di-10
					P2			FEQ6.0J	Di-10	
	For brass	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEP6.0J	Di-12
					P2			EEQ6.0J	Di-12	
	For stainless steels	HSS	6 7 8	HS-D	P1	20	7	2~2.5P	HEP6.0J	Di-15
					P2			HEQ6.0J	Di-15	
Dies M6×0.5										
Adjustable dies		SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE26.0G	Di-2
						25	9		GG26.0G	Di-2
	For left hand threads	SKS	6 8 11 12	AR-D LH	II	20	7	2~2.5P	GE26.0G-L	Di-7
Solid dies for auto lathe	For steels	SKS	6 8	AD-S ST	P1	20	7	2~2.5P	FEP6.0G	Di-10
					P2			FEQ6.0G	Di-10	
	For brass	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEP6.0G	Di-12
					P2			EEQ6.0G	Di-12	
	For stainless steels	HSS	6 7 8	HS-D	P1	20	7	2~2.5P	HEP6.0G	Di-15
					P2			HEQ6.0G	Di-15	

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on stamping machines Dies (SAMI)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Q & A

Q1. Please teach us the difference of taper, plug and bottoming in Hand Taps and how to choose them.

- A1. · Hand Taps are the general discription of straight fluted cutting taps.
· Basically there are 3 kinds of chamfers depending on the length difference in taper portion.
Taper tap (No.1) has 9 thread chamfer, plug tap (No.2) has 5 thread chamfer and bottoming (No.3) has 1.5 thread chamfer.
· Tapping by hand using tap wrench is the origin of tapping. By using taper tap, you can tap the entrance portion of the hole. By using plug or bottoming tap, you can cut threads down to the bottom of the hole.
Today, many end users make machine tapping. Depending on the cutting condition, they choose either of taper, plug or bottoming tap, and finish their tapping by using one among them.

Q2. Please teach us difference between unified threads and whitworth threads.

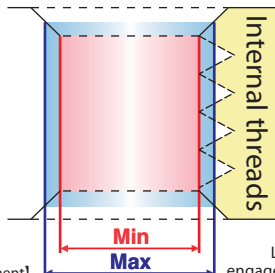
- A2. · They have different thread profiles.
· Thread angle of unified threads is 60° , and that of whitworth threads is 55° .
They have difference in their crest truncation and root truncation.
Some of the threads have the same size and pitch, however, they have different pitch diameter. It is your must that you confirm the kind of threads.
It is customers' responsibility to confirm the kind of threads required.

Q3. Why is the end of tap threads cut in a slanting direction ?

- A3. This is to protect the cutting edge from chipping when starting tapping.
If we try to cut the full threads in the material from the beginning, it puts the excessive load on the tap and can cause chippings.
By having threads cut slantingly on tap end, the tap can cut threads little by little and can minimize the load.

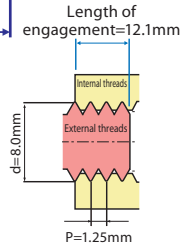
Flow chart : M8 tapping

Check 1 — Boring before tapping

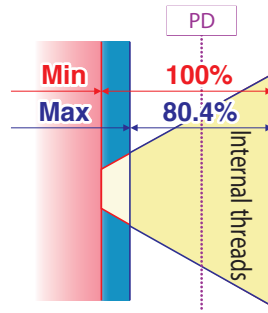


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 4(\text{mm})$
M	Normal engagement length	5H	6H	7H	$4 < N \leq 12(\text{mm})$
L	Long engagement length	6H	7H	8H	$12 < L(\text{mm})$



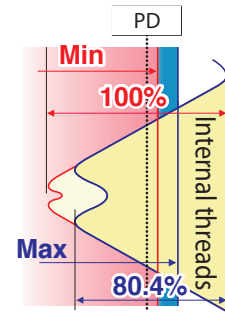
Engagement ratio on cutting taps



	D1	
	Drill size (ref.)	Min Max
Bored hole size	6.8	6.647 6.912
Engagement ratio	88.7%	100% 80.4%

Unit : mm
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

*Hole size for thread forming taps	
Min	Max
7.36	7.49

Unit : mm

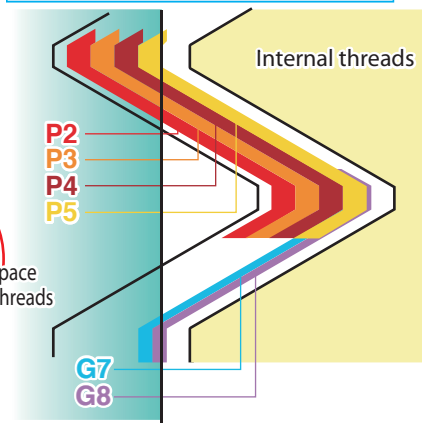
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

Class	PD tolerance
P2	20μm~40μm
P3	40μm~60μm
P4	60μm~80μm
P5	80μm~100μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

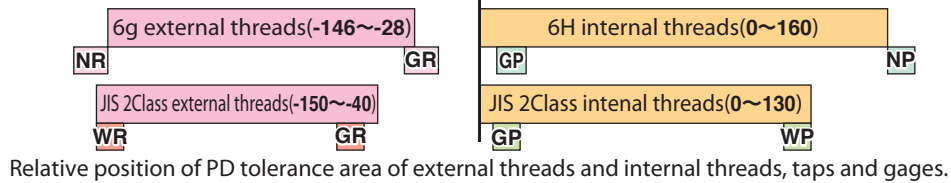
Class	PD tolerance
G7	76μm~89μm
G8	89μm~102μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Check 3 — Gage check

Ring gage pitch diameter (for external threads inspection)			
NR6g	-160 ~ -146	GR6g	-37 ~ -23
WR II	-150 ~ -142	GR II	-52 ~ -44

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	7.760~7.972	7.042~7.160	-
JIS 2class	7.790~7.960	7.038~7.148	~6.427

Plug gage pitch diameter (for internal threads inspection)			
GP6H	7 ~ 17	NP6H	160 ~ 170
GP II	4 ~ 12	WP II	122 ~ 130

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	-	7.188~7.348	6.647~6.912
JIS 2class	-	7.188~7.318	6.647~6.912

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and other machines Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page							
Taps M8×1.25																
General purpose	⑧	ISP	SI78.0N	SP	-			2.5P	SP-1							
		SP-Y	(SY8.0N)	SP	-			2.5P	SP-1							
		IPO	PI78.0N	PO	-	70	6.2	5P	PO-1							
		IHT	HI78.0N5	HT	-			5P	HT-1							
			HI78.0N2	HT	-			2P	HT-1							
		R-Y	RY8.0N3	RO	6HX			3P	RO-1							
Standard	⑤⑥⑧ ⑪⑫	SP	SPQ8.0N	SP	P2			2.5P	SP-6							
			SPQ8.0N1	SP	P2			1.5P	SP-6							
		N-SP	(SNQ8.0N)	SP	P2	70	6.2	2.5P	SP-6							
			(SNQ8.0N1)	SP	P2			1.5P	SP-6							
		PO	POR8.0N	PO	P3			5P	PO-5							
			(PNR8.0N)	PO	P3			5P	PO-5							
		①⑤⑥⑧⑫	①⑤⑥⑧⑫	HT	(TNMR8.0N9)					9P	HT-13					
				4F	(TNMR8.0N9F)					9P	HT-13					
					TNMR8.0N5					5P	HT-13					
				4F	TNMR8.0N5F					5P	HT-13					
					TNMR8.0N1					1.5P	HT-13					
				4F	TNMR8.0N1F					1.5P	HT-13					
					(TNR8.0N9)	HT	P3	70	6.2	9P	HT-13					
				4F	(TNR8.0N9F)					9P	HT-13					
					(TNR8.0N5)					5P	HT-13					
4F	(TNR8.0N5F)							5P	HT-13							
	(TNR8.0N1)							1.5P	HT-13							
4F	(TNR8.0N1F)							1.5P	HT-13							
Oversize	⑤⑥⑧ ⑪⑫			SP	SPR8.0N	SP	P3			2.5P	SP-6					
					SPS8.0N	SP	P4			2.5P	SP-6					
				SP-OX	SPR8.0NX	SP	P3			2.5P	SP-23					
		N-SP	(SNR8.0N)	SP	P3	70	6.2	2.5P	SP-6							
			(SNS8.0N)	SP	P4			2.5P	SP-6							
		PO	POS8.0N	PO	P4			5P	PO-5							
			(PNS8.0N)	PO	P4			5P	PO-5							
		①⑤⑥⑧⑫	①⑤⑥⑧⑫	HT	4F	TNMS8.0N5F				5P	HT-13					
					4F	TNMS8.0N1F				1.5P	HT-13					
					4F	(TNS8.0N9F)	HT	P4	70	6.2	9P	HT-13				
					4F	(TNS8.0N5F)				5P	HT-13					
					4F	(TNS8.0N1F)				1.5P	HT-13					
					4F	(TNS8.0N1F)				1.5P	HT-13					
		For left hand threads	⑤⑥⑧ ⑪⑫	SP(LH)	SPQ8.0N-L	SP	P2			2.5P	SP-26					
				N-SP(LH)	(SNQ8.0N-L)	SP	P2	70	6.2	2.5P	SP-26					
PO(LH)	POR8.0N-L			PO	P3			5P	PO-19							
	(PNR8.0N-L)			PO	P3			5P	PO-19							
①⑤⑥⑧⑫	①⑤⑥⑧⑫			HT(LH)	(TNMR8.0N9-L)					9P	HT-42					
					TNMR8.0N5-L					5P	HT-43					
					TNMR8.0N1-L					1.5P	HT-43					
					(TNR8.0N9-L)	HT	P3	70	6.2	9P	HT-42					
					(TNR8.0N5-L)					5P	HT-43					
					(TNR8.0N1-L)					1.5P	HT-43					
Oxidizing	⑤⑥⑧			SP-OX	SPQ8.0NX	SP	P2			2.5P	SP-23					
				N-SP-OX	(SNQ8.0NX)	SP	P2	70	6.2	2.5P	SP-23					
		PO-OX	POR8.0NX	PO	P3			5P	PO-17							
			(PNR8.0NX)	PO	P3			5P	PO-17							
			(PNR8.0NX)	PO	P3			5P	PO-17							
TiN coated																
	⑤⑥⑧ ⑪⑫	SP-V	VSPQ8.0N	SP	P2			2.5P	SP-29							
		N-SP-V	(VSNQ8.0N)	SP	P2	70	6.2	2.5P	SP-29							
		PO-V	VPOR8.0N	PO	P3			5P	PO-22							
			(VPNR8.0N)	PO	P3			5P	PO-22							
Long shank																
	⑤⑥⑧ ⑪⑫	⑤⑥⑧ ⑪⑫	LS-SP	SPQ8.0NL10	SP	P2	100		2.5P	SP-33						
				SPQ8.0NL12	SP	P2	120		2.5P	SP-33						
				SPQ8.0NL15	SP	P2	150		2.5P	SP-33						
				SPQ8.0NL20	SP	P2	200		2.5P	SP-33						
			①⑤⑥⑧⑫	①⑤⑥⑧⑫	①⑤⑥⑧⑫	LS-N-SP	(SNQ8.0NL10)	SP	P2	100		2.5P	SP-33			
							(SNQ8.0NL12)	SP	P2	120		2.5P	SP-33			
							(SNQ8.0NL15)	SP	P2	150		2.5P	SP-33			
							(SNQ8.0NL20)	SP	P2	200		2.5P	SP-33			
						①⑤⑥⑧⑫	①⑤⑥⑧⑫	①⑤⑥⑧⑫	LS-PO	POR8.0NL10	PO	P3	100	6.2	5P	PO-25
										POR8.0NL12	PO	P3	120		5P	PO-25
										POR8.0NL15	PO	P3	150		5P	PO-25
										POR8.0NL20	PO	P3	200		5P	PO-25
									LS-N-PO	(PNR8.0NL10)	PO	P3	100		5P	PO-25
							(PNR8.0NL12)	PO	P3	120		5P	PO-25			
				(PNR8.0NL15)	PO	P3	150		5P	PO-25						
				(PNR8.0NL20)	PO	P3	200		5P	PO-25						
			①⑤⑥⑧⑫	①⑤⑥⑧⑫	①⑤⑥⑧⑫	LS-HT	TNMQ8.0N510			100		5P	HT-50			
							TNMQ8.0N512			120		5P	HT-50			
							TNMQ8.0N515			150		5P	HT-50			
							TNMQ8.0N520			200		5P	HT-50			
	TNMQ8.0N110						100		1.5P	HT-50						
	TNMQ8.0N112						120		1.5P	HT-50						
	TNMQ8.0N115						150		1.5P	HT-50						
	TNMQ8.0N120						200		1.5P	HT-50						
	(L108.0N5-Q)	HT				P2	100	6.2	5P	HT-50						
	(L128.0N5-Q)						120		5P	HT-50						
	(L158.0N5-Q)						150		5P	HT-50						
	(L208.0N5-Q)						200		5P	HT-50						
	(L108.0N1-Q)						100		1.5P	HT-50						
	(L128.0N1-Q)						120		1.5P	HT-50						
	(L158.0N1-Q)						150		1.5P	HT-50						
	(L208.0N1-Q)			200		1.5P	HT-50									
Oversize																
	⑤⑥⑧ ⑪⑫	⑤⑥⑧ ⑪⑫	LS-SP	SPR8.0NL10	SP	P3	100		2.5P	SP-33						
				SPR8.0NL15	SP	P3	150		2.5P	SP-33						
			LS-N-SP	(SNR8.0NL10)	SP	P3	100	6.2	2.5P	SP-33						
				(SNR8.0NL15)	SP	P3	150		2.5P	SP-33						
			LS-PO	POS8.0NL15	PO	P4	150		5P	PO-25						
				(PNS8.0NL15)	PO	P4	150		5P	PO-25						
			①⑤⑥⑧⑫	①⑤⑥⑧⑫	①⑤⑥⑧⑫	LS-HT	TNMR8.0N510			100		5P	HT-50			
							TNMR8.0N515			150		5P	HT-50			
							TNMR8.0N520			200		5P	HT-50			
							TNMR8.0N110			100		1.5P	HT-50			
	TNMR8.0N115	HT				P3	150	6.2	1.5P	HT-50						
	TNMR8.0N120			200		1.5P	HT-50									
	(L108.0N5-R)			100		5P	HT-50									
	(L158.0N5-R)			150		5P	HT-50									
	(L208.0N5-R)			200		5P	HT-50									
	(L108.0N1-R)			100		1.5P	HT-50									

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Long shank	Oversize	①⑤⑥⑫	LS-HT	(L158.0N1-R) (L208.0N1-R)	HT	P3	150 200	6.2	1.5P	HT-50 HT-50	
	For left hand threads	⑤⑥⑧ ⑪⑫	LS-SP(LH)	SPQ8.0NL15-L	SP	P2	150	6.2	2.5P	SP-39	
LS-N-SP(LH)			(SNQ8.0NL15-L)	SP	P2	150	6.2	2.5P	SP-39		
①⑤⑥⑫		LS-HT(LH)	TNMQ8.0N510L	HT	P2	100			5P	HT-65	
		TNMQ8.0N515L	HT	P2	150				5P	HT-65	
		TNMQ8.0N110L	HT	P2	100				1.5P	HT-65	
		TNMQ8.0N115L	HT	P2	150				1.5P	HT-65	
		(L108.0N5-QL)	HT	P2	100				5P	HT-65	
		(L158.0N5-QL)	HT	P2	150				5P	HT-65	
		(L108.0N1-QL)	HT	P2	100				1.5P	HT-65	
		(L158.0N1-QL)	HT	P2	150				1.5P	HT-65	
		TiN coated	⑤⑥⑧ ⑪⑫	LS-SP-V	VSPQ8.0NL10	SP	P2	100		2.5P	SP-40
VSPQ8.0NL15	SP	P2		150				2.5P	SP-40		
LS-N-SP-V	(VSNQ8.0NL10)	SP		P2	100			2.5P	SP-40		
(VSNQ8.0NL15)	SP	P2		150				2.5P	SP-40		
LS-PO-V	VPOR8.0NL10	PO		P3	100			5P	PO-31		
VPOR8.0NL15	PO	P3		150				5P	PO-31		
LS-N-PO-V	(VPNR8.0NL10)	PO		P3	100			5P	PO-31		
(VPNR8.0NL15)	PO	P3		150				5P	PO-31		
①⑤⑥⑫	LS-HT-V	VTNMQ8.0N510		HT	P2	100			5P	HT-68	
	VTNMQ8.0N515	HT		P2	150				5P	HT-68	
	VTNMQ8.0N110	HT		P2	100				1.5P	HT-68	
	VTNMQ8.0N115	HT		P2	150				1.5P	HT-68	
	(VL108.0N5-Q)	HT		P2	100				5P	HT-68	
	(VL158.0N5-Q)	HT	P2	150				5P	HT-68		
	(VL108.0N1-Q)	HT	P2	100				1.5P	HT-68		
(VL158.0N1-Q)	HT	P2	150				1.5P	HT-68			
For soft structural steels	⑧	E-SP	ESHMQ8.0N (ESHQ8.0N)	SP	P2	70	6.2	2.5P	SP-55 SP-55		
Thread forming taps for steels	⑥⑧	N-RZ	NRZM78.0NP	G7				4P	RO-6		
			NRZM78.0NB	G7				2P	RO-6		
			(NRZ78.0NP)	G7				4P	RO-6		
		RO	NRZM88.0NP	G8	70	6.2	2P	RO-6			
			NRZM88.0NB	G8			2P	RO-7			
			(NRZ88.0NP)	G8			4P	RO-7			
		Long shank	⑥⑧	LS-N-RZ	NRZM78.0NP10			100		4P	RO-10
					NRZM78.0NP15			150		4P	RO-10
					NRZM78.0NB10			100		2P	RO-10
	⑥⑧	LS-N-RZ	NRZM78.0NB15	NRZM78.0NB15	RO	G7	150	6.2	2P	RO-10	
				(NRZ78.0NP10)	RO	G7	100		4P	RO-10	
				(NRZ78.0NP15)	RO	G7	150		4P	RO-10	
			NRZ78.0NB10	NRZ78.0NB10			100		2P	RO-10	
				(NRZ78.0NB10)			100		2P	RO-10	
				(NRZ78.0NB15)			150		2P	RO-10	
For high carbon steels	⑤⑥	HC-SP	SCMQ8.0N (SCQ8.0N)	SP	P2	70	6.2	2.5P	SP-56 SP-56		
			①⑤⑥	HC-PO	PCMR8.0N (PCR8.0N)	PO	P3	70	6.2	5P	PO-41 PO-41
	Oxidizing	⑤⑥	HC-SP-OX	SCMQ8.0NX (SCQ8.0NX)	SP	P2	70	6.2	2.5P	SP-59 SP-59	

Tap selection		Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
For hard-to-machine materials	①④⑤	EH-PO	EPHMS8.0N	PO					4.5P	PO-45	
			(EPHS8.0N)	PO					4.5P	PO-45	
			EH-HT	HT	P4	70	6.2	5P	HT-93		
			(ETHS8.0N5)	HT	P4	70	6.2	2.5P	HT-93		
			(ETHS8.0N1)	HT	P4	70	6.2	2.5P	HT-93		
	Powder HSS	④⑤	PM-SP	-	SP	P3	70		3P	SP-70	
				LS-PM-SP	SP	P3	100		3P	SP-70	
				-	SP	P3	150	6.2	3P	SP-70	
				PM-PO	PO	P4	70		5.5P	PO-47	
				LS-PM-PO	PO	P4	100		5.5P	PO-48	
For titanium alloys	④⑤⑥⑨	ZET-B	ZETBMR8.0N	SP	P3			3P	SP-67		
			(ZETBR8.0N)	SP	P3	70	6.2	3P	SP-67		
		ZET-P	ZETPMS8.0N	SL	P4			5P	SL-3		
			(ZETPS8.0N)	SL	P4			5P	SL-3		
For nickel base alloys	⑥⑦⑧⑩	ZEN-B	ZENBMR8.0N	SP	P3			3P	SP-68		
			(ZENBR8.0N)	SP	P3	70	6.2	3P	SP-68		
		ZEN-P	ZENPMS8.0N	PO	P4			4.5P	PO-46		
			(ZENPS8.0N)	PO	P4			4.5P	PO-46		
Cemented carbide taps for hard materials	②③	UH-CT	UHC8.0N5	HT	P4	70	7	5P	CT-10		
			EH-CT	HT	P4	70	6.2	5P	CT-10		
For stainless steels	⑥⑦⑧	SU-SP	SUMQ8.0N	SP	P2			2.5P	SP-43		
			(SUQ8.0N)	SP	P2			2.5P	SP-43		
			SU-PO	PO	P3			5P	PO-33		
		SU-PO	PUMR8.0N	PO	P3			5P	PO-33		
			(PUR8.0N)	PO	P3			5P	PO-33		
			SU-HT	HT	P3	70	6.2	9P	HT-71		
		SU-HT	TUMR8.0N9	HT	P3	70	6.2	4P	HT-71		
			TUMR8.0N4	HT	P3			1.5P	HT-71		
			TUMR8.0N1	HT	P3			9P	HT-71		
			(TUR8.0N9)	HT	P3			9P	HT-71		
			(TUR8.0N4)	HT	P3			4P	HT-71		
			(TUR8.0N1)	HT	P3			1.5P	HT-71		
		Oversize	⑥⑦⑧	SU-SP	SUMR8.0N	SP	P3			2.5P	SP-43
					(SUR8.0N)	SP	P3			2.5P	SP-43
					SUMS8.0N	SP	P4			2.5P	SP-43
SU-PO	(SUS8.0N)			SP	P4	70	6.2	2.5P	SP-43		
	PUMS8.0N			PO	P4			5P	PO-34		
	(PUS8.0N)			PO	P4			5P	PO-34		
PUMT8.0N	(PUT8.0N)			PO	P5			5P	PO-34		
	For deep hole use			⑥⑦⑧	SU-S-SP	SP	P2	70	6.2	2.5P	SP-50
					(SSQ8.0N-SU)	SP	P2	70	6.2	2.5P	SP-50
LS-SU-S-SP		SP	P2		100	6.2	2.5P	SP-51			
For hard-to-machine materials	⑤⑥⑦	SU2-SP	SU2MR8.0N	SP	P3	70	6.2	3P	SP-49		
			(SU2R8.0N)	SP	P3	70	6.2	3P	SP-49		
			LS-SU-S-PO	PO	P3	100	2.5	5P	PO-38		
		For cast irons	①	FC-O	TFCM8.0N5					5P	HT-78
					(TFCM8.0N1)	HT	60-35	70	6.2	1.5P	HT-78
					(TFC8.0N5)					5P	HT-78
Carbide	①⑫⑬	N-CT FC	TCNR8.0N3	HT	P3	70	6.2	3P	CT-4		

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For 3mm thread and drawing machine Taps (mm)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Cast irons	Carbide	1 12 13 N-CT FC	TCNR8.0N1	P3				1.5P	CT-4
			TCNS8.0N3	HT P4	70	6.2	3P	CT-4	
			TCNS8.0N1	P4			1.5P	CT-4	
Long shank, carbide	1 12 13 LS-N-CT	-		HT P3	100	6.2	3P	CT-7	
		-				1.5P	CT-7		
For aluminum alloys	11 12 13 AL-SP	ASHMR8.0N						2.5P	SP-61
		ASHMR8.0N1	SP P3	70	6.2	1.5P	SP-61		
		(ASHR8.0N)				2.5P	SP-61		
		(ASHR8.0N1)				1.5P	SP-61		
		(ASHR8.0N1)				1.5P	SP-61		
	11 12 LA-O	TLAM8.0N5						5P	HT-81
		TLAM8.0N1						1.5P	HT-81
		(TLA8.0N5)	HT 65-40	70	6.2	5P	HT-81		
		(TLA8.0N1)				1.5P	HT-81		
	AXE	12 AXE-HT	TAXEMR8.0N1	HT P3	70	6.2	1.5P	HT-83	
		(TAXER8.0N1)					HT-83		
Carbide	11 12 13 N-CT LA	TCNR8.0N3A	HT P3	70	6.2	3P	CT-2		
		TCNR8.0N1A				1.5P	CT-2		
Carbide spiral fluted taps	11 12 13 N-CT-SP	-	SP P3	70	6.2	2.5P	CT-8		
Carbide spiral pointed taps	11 12 13 N-CT-PO	PCNR8.0N	PO P3	70	6.2	5P	CT-8		
For aluminum alloys (with coolant hole)	Carbide	11 12 MC-AD-CT	MCADR8.0N1	HT P3	100	6.2	1.5P	CT-9	
Thread forming taps for non-ferrous materials	11 12 N-RS	NRSM78.0NP	G7				4P	RO-16	
		NRSM78.0NB	G7			2P	RO-16		
		(NRS78.0NP)	G7			4P	RO-16		
		(NRS78.0NB)	RO G7	70	6.2	2P	RO-16		
		NRSM88.0NP	G8			4P	RO-16		
		NRSM88.0NB	G8			2P	RO-16		
		(NRS88.0NP)	G8			4P	RO-16		
		(NRS88.0NB)	G8			2P	RO-16		
		NRSM78.0NP10			100		4P	RO-22	
		NRSM78.0NP15			150		4P	RO-22	
Long shank	11 12 LS-N-RS	NRSM78.0NB10			100		2P	RO-22	
		NRSM78.0NB15			150		2P	RO-22	
		(NRS78.0NP10)	RO G7	100	6.2	4P	RO-22		
		(NRS78.0NP15)			150		4P	RO-22	
		(NRS78.0NB10)			100		2P	RO-22	
		(NRS78.0NB15)			150		2P	RO-22	
		NRSM78.0NP10			100		4P	RO-22	
		NRSM78.0NP15			150		4P	RO-22	
		NRSM78.0NB10			100		2P	RO-22	
		NRSM78.0NB15			150		2P	RO-22	
For plastics	13 PL-1	TPLM8.0N3	HT P6	70	6.2	3P	HT-90		
		(TPL8.0N3)					HT-90		
X series	For general steels	5 6 8 11 12 XSP	SNXR8.0N	SP P3	90	8	2.5P	SP-22	
			XSL	SL			5P	SL-1	
	TiN coated	7 8 11 12 AUXSP	VSA XR8.0N	SP P3	90	8	2.5P	SP-30	
			AUXSL	SL			5P	SL-2	
	For stainless steels	6 7 8 SUXSP	SUXR8.0N	SP P3	90	8	2.5P	SP-48	
			SUXSL	SL			5P	SL-3	
High speed tapping	5 6 8 11 12 13 F-SP	VFSHR8.0N	SP		70		2.5P	SP-71	
		(VFSHR8.0N)	SP		70		2.5P	SP-71	
		LS-F-SP	SP		100		2.5P	SP-72	
		F-SL	P3		70	6.2	5P	SL-5	
		(VFSHR8.0NL)	SL		70		5P	SL-5	
		(VFSHR8.0NL)	SL		70		5P	SL-5	
		LS-F-SL	SL		100		5P	SL-5	
Ultra fast tapping (with coolant hole)	For steels	5 6 8 11 12 HFHS	HFIHSS8.0N	SP P4	70	8	2.5P	SP-73	
			HFISP	SP P4	70	8	2.5P	SP-73	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Ultra fast tapping (with coolant hole)	Carbide taps for cast irons	1 12 HFICT-B	HFICTBR8.0N	HT P3	70	8	2.5P	CT-12	
			HFICTPR8.0N			4P	CT-12		
	For non-ferrous materials	11 12 HFAHS	HFAHSS8.0N	SP P4	70	8	2.5P	SP-74	
			HFASP8.0N				SP-74		
Carbide taps for non-ferrous materials	11 12 13 HFACT-B	HFACTBR8.0N	HT P3	70	8	2.5P	CT-11		
		HFACTPR8.0N			4P	CT-11			
For dry tapping (with coolant hole)	For steels	1 5 6 HDISP	HDISP8.0N	SP P4	70	8	2.5P	SP-75	
			HDAASP8.0N	SP P4	70	8	2.5P	SP-75	
Ultra fast tapping (with coolant hole)	For both steels and non-ferrous materials	1 5 6 11 12 HDISL	HDISL8.0N	SL P4	70	8	5P	SL-6	
High performance thread forming taps, TiCN coated	5 6 7 11 12 HP-RZ	HRZM78.0NP	G7			4P	RO-31		
		HRZM78.0NB	G7			2P	RO-31		
		(HRZ78.0NP)	G7			4P	RO-31		
		(HRZ78.0NB)	RO G7	70	6.2	2P	RO-31		
		HRZM88.0NP	G8			4P	RO-31		
		HRZM88.0NB	G8			2P	RO-31		
		(HRZ88.0NP)	G8			4P	RO-31		
		(HRZ88.0NB)	G8			2P	RO-31		
		HRZM88.0NP	RO G8	70	6.2	4P	RO-31		
		HRZM88.0NB	G8			2P	RO-31		
For deep hole use	5 6 8 S-SP	SSMQ8.0N	SP P2			2.5P	SP-52		
		(SSQ8.0N)	SP P2			2.5P	SP-52		
		S-PO	PO P3	70	6.2	5P	PO-39		
		(PSR8.0N)	PO P3			5P	PO-39		
Oversize	5 6 8 S-SP	SSMR8.0N	SP P3	70	6.2	2.5P	SP-52		
		(SSR8.0N)					SP-52		
Low spiral fluted taps	1 5 6 11 12 LO-SP 8°	LSHMQ8.0N8			70			SP-64	
		(LSHQ8.0N8)			70			SP-64	
		LO-SP 15°	LSHMQ8.0N15			70			SP-64
		(LSHQ8.0N15)			70			SP-64	
		LO-SP 20°	LSHMQ8.0N20			70			SP-64
		(LSHQ8.0N20)	SP P2	70	6.2	2.5P	SP-64		
		LS-LO-SP	LSHMQ8.0NL10			100			SP-65
		(LSHQ8.0NL10)			100			SP-65	
(LSHQ8.0NL15)			150			SP-65			
Spiral fluted taps, universal use, BLF design	5 6 8 11 12 U-SP	USNR8.0N	SP P3	70	6.2	2.5P	SP-60		
For helical coil wire screw thread inserts	11 12 STI-SP	STIMC8.0N	SP 1b			2.5P	SP-63		
		(STIC8.0N)	SP 1b			2.5P	SP-63		
		PO STI	PO 1b			5P	PO-43		
		N-PO STI	PO 1b			5P	PO-43		
		STI-HT	TICM8.0N5	HT 1b	75	7	5P	HT-85	
		(TICM8.0N1)	HT 1b			1.5P	HT-85		
		(TIC8.0N5)	HT 1b			5P	HT-85		
		(TIC8.0N1)	HT 1b			1.5P	HT-85		
		N-RS STI	NRSM4IC8.0NB	RO G4			2P	RO-23	
		(NRS4IC8.0NB)	RO G4			2P	RO-23		
Carbide	11 12 N-CT STI	TCNIC8.0N5	HT 1b	75	7	5P	CT-9		
		TCNIC8.0N1	HT 1b	75	7	1.5P	CT-9		
With coolant hole	5 6 8 11 12 MC-SP	MSHQ8.0NL10	SP P2	100	6.2	2.5P	SP-66		
		MSHQ8.0NL15	SP P2	150	6.2	2.5P	SP-66		
	1 5 6 11 12 MC-PO	MPHR8.0NL10	PO P3	100			PO-44		
		MPHR8.0NL15	PO P3	150			PO-44		
	MC-HT	ML108.0N5-Q	HT P2	100	6.2	5P	HT-90		
		ML158.0N5-Q	HT P2	150			HT-90		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
With coolant hole	1 5 6 11 12	MC-HT	ML108.0N1-Q	HT	P2	100	6.2	1.5P	HT-90				
			ML158.0N1-Q						HT-90				
Nut taps	6 8 10 12	NT	NH28.0N	HT	II b	140	6.2	24P	etc-1				
Taps M8×1													
Standard	5 6 8 11 12	SP	SPQ8.0M	SP	P2				2.5P	SP-6			
			SPQ8.0M1						1.5P	SP-6			
			N-SP	(SNQ8.0M)	SP	P2	70	6.2			2.5P	SP-6	
				(SNQ8.0M1)							1.5P	SP-6	
			PO	POR8.0M	PO	P3					5P	PO-5	
				(PNR8.0M)							5P	PO-5	
		1 5 6 8 12	HT	(TNMQ8.0M9)						9P	HT-13		
				(TNMQ8.0M5)						5P	HT-13		
				(TNMQ8.0M1)	HT	P2	70	6.2			1.5P	HT-13	
				(TNQ8.0M9)							9P	HT-13	
				(TNQ8.0M5)	5P	HT-13							
				(TNQ8.0M1)	1.5P	HT-13							
				5 6 8 11 12	SP	SPR8.0M	SP	P3				2.5P	SP-6
						SPS8.0M						2.5P	SP-6
		N-SP	(SNR8.0M)			SP	P3	70	6.2			2.5P	SP-6
			(SNS8.0M)									2.5P	SP-6
		PO	POS8.0M			PO	P4					5P	PO-5
			(PNS8.0M)									5P	PO-5
		1 5 6 8 12	HT			TNMS8.0M5						5P	HT-13
						TNMS8.0M1						1.5P	HT-13
(TNS8.0M9)	HT			P4	70	6.2			9P	HT-13			
(TNS8.0M5)									5P	HT-13			
(TNS8.0M1)	1.5P			HT-13									
For left hand threads	5 6 8 11 12			SP(LH)	SPO8.0M-L	SP	P2				2.5P	SP-26	
		(SNQ8.0M-L)	2.5P		SP-26								
		PO(LH)	POR8.0M-L		PO	P3					5P	PO-19	
			(PNR8.0M-L)								5P	PO-19	
		1 5 6 8 12	HT(LH)	(TNMQ8.0M9-L)						9P	HT-43		
				(TNMQ8.0M5-L)						5P	HT-43		
				(TNMQ8.0M1-L)	HT	P2	70	6.2			1.5P	HT-43	
				(TNQ8.0M9-L)							9P	HT-43	
				(TNQ8.0M5-L)	5P	HT-43							
				(TNQ8.0M1-L)	1.5P	HT-43							
				Oxidizing	5 6 8	SP-OX	SPQ8.0MX	SP	P2	70	6.2	2.5P	SP-23
Long shank	5 6 8 11 12	LS-SP	SPQ8.0ML10	SP	P2	100			2.5P	SP-33			
			SPQ8.0ML15						2.5P	SP-33			
			LS-N-SP	(SNQ8.0ML10)	SP	P2	100				2.5P	SP-33	
				(SNQ8.0ML15)							2.5P	SP-33	
			LS-PO	POR8.0ML10	PO	P3	100	6.2			5P	PO-25	
				POR8.0ML15							5P	PO-25	
		LS-N-PO	(PNR8.0ML10)	PO	P3	100				5P	PO-25		
			(PNR8.0ML15)							5P	PO-25		
		1 5 6 8 12	LS-HT	TNMQ8.0M510						100	5P	HT-50	
				TNMQ8.0M512						120	5P	HT-50	
				TNMQ8.0M515	HT	P2	150	6.2			5P	HT-51	
				TNMQ8.0M110							100	1.5P	HT-51
				TNMQ8.0M112	120	1.5P	HT-51						

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
Long shank	1 5 6 8 12	LS-HT	TNMQ8.0M115						150	1.5P	HT-51			
			(L108.0M5-Q)						100	5P	HT-50			
			(L128.0M5-Q)						120	5P	HT-50			
			(L158.0M5-Q)						HT	P2	150	6.2	5P	HT-51
			(L108.0M1-Q)						100	1.5P	HT-51			
			(L158.0M1-Q)						150	1.5P	HT-51			
Thread forming taps for steels	6 8	N-RZ	NRZM78.0MP						4P	RO-7				
			NRZM78.0MB						RO	G7	70	6.2	2P	RO-7
			(NRZ78.0MP)							4P	RO-7			
			(NRZ78.0MB)							2P	RO-7			
For high carbon steels	5 6	HC-SP	SCMQ8.0M	SP	P2	70	6.2	2.5P	SP-56					
			(SCQ8.0M)						SP-56					
For stainless steels	6 7 8	SU-SP	SUMQ8.0M	SP	P2				2.5P	SP-43				
			(SUQ8.0M)						2.5P	SP-43				
			SU-PO	PUMR8.0M	PO	P3					5P	PO-34		
				(PUR8.0M)							5P	PO-34		
		SU-HT	TUMR8.0M4	HT	P3	70	6.2			4P	HT-71			
			TUMR8.0M1							1.5P	HT-71			
			(TUR8.0M4)	HT	P3					4P	HT-71			
			(TUR8.0M1)	HT	P3					1.5P	HT-71			
For cast irons	1	FC-O	TFCM8.0M5						5P	HT-78				
			TFCM8.0M1						HT	55-30	70	6.2	5P	HT-78
			(TFC8.0M5)							5P	HT-78			
			(TFC8.0M1)							1.5P	HT-78			
Carbide	1 12 13	N-CT FC	TCNR8.0M3	HT	P3	70	6.2		3P	CT-4				
			TCNR8.0M1						1.5P	CT-4				
For aluminum alloys	11 12	LA-O	TLAM8.0M5						5P	HT-81				
			TLAM8.0M1						HT	55-30	70	6.2	1.5P	HT-81
			(TLA8.0M5)							5P	HT-81			
			(TLA8.0M1)							1.5P	HT-81			
Carbide	11 12 13	N-CT LA	TCNR8.0M3A	HT	P3	70	6.2		3P	CT-2				
			TCNR8.0M1A						1.5P	CT-2				
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM78.0MP						4P	RO-16				
			NRSM78.0MB						RO	G7	70	6.2	2P	RO-16
			(NRS78.0MP)							4P	RO-16			
			(NRS78.0MB)							2P	RO-16			
X series	For general steels	5 6 8 11 12	XSP	SP	P3	90	8		2.5P	SP-22				
			XSL						SL	5P	SL-1			
	TiN coated	7 8 11 12	AUXSP	SP	P3	90	8		2.5P	SP-30				
			AUXSL						SL	5P	SL-2			
	For stainless steels	6 7 8	SUXSP	SP	P3	90	8		2.5P	SP-48				
SUXSL			SL						5P	SL-3				
For deep hole use	5 6 8	S-SP	SSMQ8.0M	SP	P2				2.5P	SP-52				
			(SSQ8.0M)						SP	P2				
			S-PO	PSMR8.0M	PO	P3	70	6.2			5P	PO-39		
				(PSR8.0M)							PO	P3		
			Nut taps	6 8 10 12	NT	NH28.0M	HT	II	130	6.2	30P	etc-1		
Taps M8×0.75														
Standard	5 6 8 11 12	SP	SPQ8.0J	SP	P2	70	6.2	2.5P	SP-6					
			N-SP						(SNQ8.0J)	SP-6				

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Small threads and pipe threads Dies (small)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	l _c	Product page		
Standard	⑤⑥⑧ ⑪⑫	PO	POR8.OJ		P3	70	6.2	5P	PO-5		
		N-PO	(PNR8.OJ)	PO	P3	70	6.2	5P	PO-5		
	①⑤⑥⑧⑫	HT	(TNMQ8.0J9)						9P	HT-13	
			TNMQ8.0J5						5P	HT-14	
			TNMQ8.0J1		HT	P2	70	6.2	1.5P	HT-14	
			(TNQ8.0J9)						9P	HT-13	
			(TNQ8.0J5)						5P	HT-14	
			(TNQ8.0J1)						1.5P	HT-14	
	Oversize	⑤⑥⑧ ⑪⑫	SP	SPR8.OJ		P3	70	6.2	2.5P	SP-6	
			N-SP	(SNR8.OJ)	SP	P3	70	6.2	2.5P	SP-6	
For left hand threads	①⑤⑥⑧⑫	HT(LH)	(TNMQ8.0J9-L)					9P	HT-43		
			TNMQ8.0J5-L					5P	HT-43		
			TNMQ8.0J1-L		HT	P2	70	6.2	1.5P	HT-43	
			(TNQ8.0J9-L)					9P	HT-43		
			(TNQ8.0J5-L)					5P	HT-43		
Thread forming taps for steels	⑥⑧	N-RZ	NRZM78.0JP					4P	RO-7		
			NRZM78.0JB		RO	G7	70	6.2	2P	RO-7	
			(NRZ78.0JP)					4P	RO-7		
			(NRZ78.0JB)					2P	RO-7		
For stainless steels	⑥⑦⑧	SU-SP	SUMQ8.OJ		P2	70	6.2	2.5P	SP-43		
			(SUQ8.OJ)	SP	P2	70	6.2	2.5P	SP-43		
For cast irons	Carbide	①⑫⑬	N-CT FC	TCNR8.0J3		HT	P3	62	6.2	3P	CT-4
				TCNR8.0J1					1.5P	CT-4	
For aluminum alloys	Carbide	⑪⑫⑬	N-CT LA	TCNR8.0J3A		HT	P3	62	6.2	3P	CT-2
				TCNR8.0J1A					1.5P	CT-2	
Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRSM78.0JP					4P	RO-16		
			NRSM78.0JB		RO	G7	70	6.2	2P	RO-17	
			(NRS78.0JP)					4P	RO-17		
Nut taps	⑥⑧⑪⑫	NT	NH28.OJ	HT	II	120	6.2	31P	etc-1		
Taps M8×0.5											
Standard	⑤⑥⑧ ⑪⑫	SP	SPQ8.0G			70		2.5P	SP-6		
			N-SP	(SNQ8.0G)	SP	P2	55	6.2	2.5P	SP-7	
			PO	POQ8.0G	PO		70		5P	PO-5	
			N-PO	(PNQ8.0G)	PO		55		5P	PO-5	
	①⑤⑥⑧⑫	HT	(TNMQ8.0G9)				70		9P	HT-14	
			TNMQ8.0G5				70		5P	HT-14	
			TNMQ8.0G1		HT	P2	70	6.2	1.5P	HT-14	
			(TNQ8.0G9)				55		9P	HT-14	
			(TNQ8.0G5)				55		5P	HT-14	
			(TNQ8.0G1)				55		1.5P	HT-14	
For left hand threads	①⑤⑥⑧⑫	HT(LH)	(TNMQ8.0G9-L)			70		9P	HT-43		
			TNMQ8.0G5-L			70		5P	HT-43		
			TNMQ8.0G1-L		HT	P2	70	6.2	1.5P	HT-43	
			(TNQ8.0G9-L)				55		9P	HT-43	
			(TNQ8.0G5-L)				55		5P	HT-43	
For left hand threads	①⑤⑥⑧⑫	HT(LH)	(TNMQ8.0G1-L)			55		1.5P	HT-43		

Dies selection	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page							
Dies M8×1.25															
Solid dies	HSS	⑥⑧ ⑪⑫	SD-Y	6G	25	9	2~2.5P	DGG8.0N Di-1							
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	50	16	2~2.5P	GG28.0N Di-2							
								GM28.0N Di-2							
	HSS	⑥⑧ ⑪⑫	AR-D HSS	II	25	9		HG28.0N Di-13							
								HJ28.0N Di-13							
	For left hand threads	SKS	⑥⑧ ⑪⑫	AR-D LH	II	25	9	2~2.5P	GG28.0N-L Di-7						
									GJ28.0N-L Di-7						
HSS									⑥⑧ ⑪⑫	AR-D HSS LH	II	25	9		HG28.0N-L Di-14
HSS									⑥⑧ ⑪⑫	AR-D HSS LH	II	38	13		HJ28.0N-L Di-14
Solid dies for auto lathe	SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP8.0N Di-10							
								FEQ8.0N Di-10							
								FGP8.0N Di-10							
	SKS	⑥⑧	AD-S BR	P1	25	9	2~2.5P	FGQ8.0N Di-10							
								EEP8.0N Di-12							
								EEQ8.0N Di-12							
For stainless steels	HSS	⑥⑦⑧	HS-D	P1	20	7	2~2.5P	HEP8.0N Di-15							
								HEQ8.0N Di-15							
								HGP8.0N Di-15							
								HGQ8.0N Di-15							
Spiral fluted dies	HSS	⑥⑧ ⑪⑫	SP-D	P1	25	9	1~1.5P	SGP8.0N Di-17							
Spiral pointed dies	HSS	⑥⑧ ⑪⑫	PO-D	P1	20	7	1~1.5P	PEP8.0N Di-17							
Dies M8×1															
Spiral pointed dies	HSS	⑥⑧ ⑪⑫	PO-D	P1	25	9	1~1.5P	PGP8.0N Di-17							
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	50	16	2~2.5P	GG28.0M Di-2							
								GJ28.0M Di-2							
	HSS	⑥⑧ ⑪⑫	AR-D HSS	II	25	9		HG28.0M Di-13							
								HJ28.0M Di-13							
	For left hand threads	SKS	⑥⑧ ⑪⑫	AR-D LH	II	25	9	2~2.5P	GG28.0M-L Di-7						
Solid dies for auto lathe	SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP8.0M Di-10							
								FEQ8.0M Di-10							
	SKS	⑥⑧	AD-S BR	P1	20	7	2~2.5P	EEP8.0M Di-12							
								EEQ8.0M Di-12							
For stainless steels	HSS	⑥⑦⑧	HS-D	P1	20	7	2~2.5P	HEP8.0M Di-15							
								HEQ8.0M Di-15							
								HGP8.0M Di-15							
								HGQ8.0M Di-15							
Dies M8×0.75															
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	38	13	2~2.5P	GG28.0J Di-2							
								GJ28.0J Di-2							
	HSS	⑥⑧ ⑪⑫	AR-D HSS	II	25	9		HG28.0J Di-13							
	For left hand threads	SKS	⑥⑧ ⑪⑫	AR-D LH	II	25	9	2~2.5P	GG28.0J-L Di-7						
Solid dies for auto lathe	SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP8.0J Di-10							
								FEQ8.0J Di-10							
	SKS	⑥⑧	AD-S BR	P1	20	7	2~2.5P	EEP8.0J Di-12							

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Solid dies for auto lathe	For brass	SKS	11 12	AD-S BR	P2	20	7	2~2.5P	EEQ8.0J	Di-12
	For stainless steels	HSS	6 7 8	HS-D	P1	20	7		HEP8.0J	Di-15
					P2	20	7		HEQ8.0J	Di-15
					P1	25	9		HGP8.0J	Di-15
					P2	25	9		HGQ8.0J	Di-15
Dies M8x0.5										
Adjustable dies		SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG28.0G	Di-2
						38	13		GJ28.0G	Di-2
Solid dies for auto lathe	For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG28.0G-L	Di-7
	For steels	SKS	6 8	AD-S ST	P1	20	7	2~2.5P	FEP8.0G	Di-10
					P2				FEQ8.0G	Di-10
	For brass	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEP8.0G	Di-12
					P2				EEQ8.0G	Di-12
	For stainless steels	HSS	6 7 8	HS-D	P1	20	7	2~2.5P	HEP8.0G	Di-15
					P2				HEQ8.0G	Di-15

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used at screw machines Dies (SMA)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Q & A

Q4. Tell the features and choices of spiral fluted tap and spiral pointed tap.

- A4. · When hand taps are used by using machines, troubles caused by chips occur frequently.
It is very important to dispose and eject particularly continuous chips.
- Spiral fluted taps and spiral pointed taps are the type taps developed specially to eject continuous chips.
 - Spiral fluted taps make tapping while retracting chips toward hole entrance and are used for blind holes and not-through internal threads.
 - Spiral pointed taps make tapping while pushing chips forward and are used for through holes.
 - Both spiral fluted taps and spiral pointed taps are required to run in such high tapping speed as they smoothly eject chips.

Q5. Why do not roll taps produce chips ?

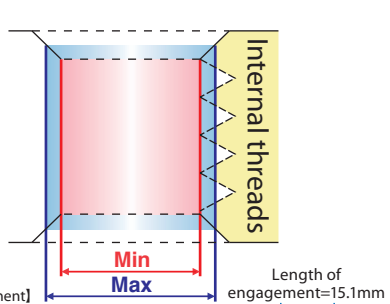
- A5. Cutting type taps produce chips because they make internal threads by cutting materials.
Roll taps (also called forming taps or fluteless taps) have no cutting edge, and form internal threads by displacing the material while forcing taps' threads into bored holes, and hence do not produce chips.

Q6. When is the tap for insert coil used ?

- A6. · This tap is used to make such internal threads as accommodate insert coil (also called helisert, sprew, recoil). Its thread part is large enough for the thickness of coil.
- Insert coils are used to strengthen internal threads of soft materials such as aluminum and to re-thread damaged internal threads.

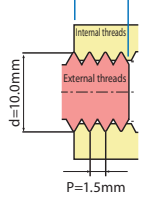
Flow chart : M10 tapping

Check 1 — Boring before tapping

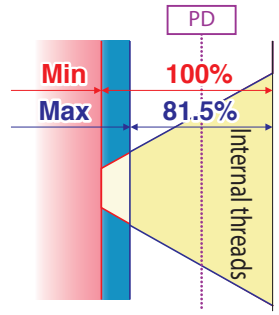


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 5(\text{mm})$
M	Normal engagement length	5H	6H	7H	$5 < N \leq 15(\text{mm})$
L	Long engagement length	6H	7H	8H	$15 < L(\text{mm})$



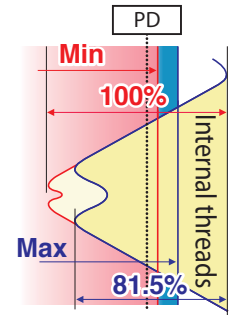
Engagement ratio on cutting taps



	Drill size (ref.)	D1	
		Min	Max
Bored hole size	8.5	8.376	8.676
Engagement ratio	92.4%	100%	81.5%

Unit: mm
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Engagement ratio on roll taps



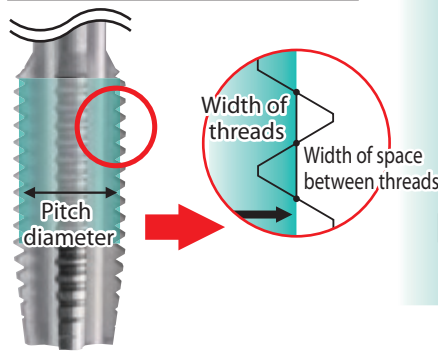
Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

*Hole size for thread forming taps	
Min	Max
9.22	9.34

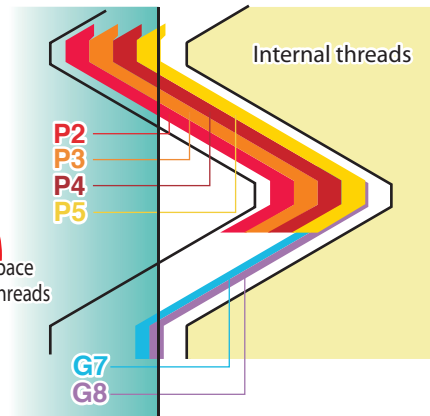
Unit: mm
Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

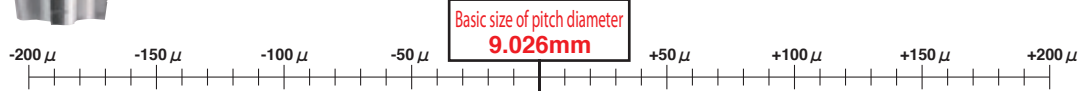
Class	PD tolerance
P2	20 μm ~ 40 μm
P3	40 μm ~ 60 μm
P4	60 μm ~ 80 μm
P5	80 μm ~ 100 μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

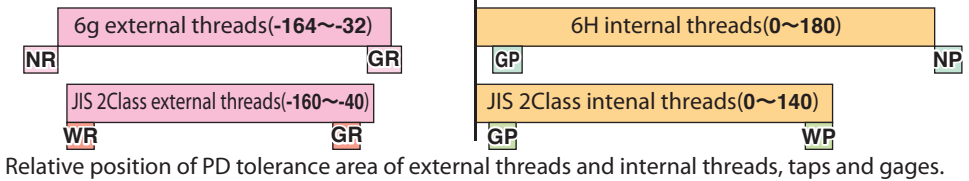
Class	PD tolerance
G7	76 μm ~ 89 μm
G8	89 μm ~ 102 μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	
II	Adjustable dies
P1	Solid dies
P2	



Check 3 — Gage check

Unit: μm

Ring gage pitch diameter (for external threads inspection)			
NR6g	-182 ~ -164	GR6g	-49 ~ -31
WR II	-160 ~ -152	GR II	-52 ~ -44

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

Unit: μm

Plug gage pitch diameter (for internal threads inspection)			
GP6H	7 ~ 17	NP6H	180 ~ 190
GP II	4 ~ 12	WP II	132 ~ 140

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Unit: mm

Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	9.732 ~ 9.968	8.862 ~ 8.994	—
JIS 2class	9.770 ~ 9.960	8.866 ~ 8.986	~ 8.119

Unit: mm

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	—	9.026 ~ 9.206	8.376 ~ 8.676
JIS 2class	—	9.026 ~ 9.166	8.376 ~ 8.676

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and drawing machines Taps (cm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Taps M10×1.5										
General purpose	⑧	ISP	SI70100	SP				2.5P	SP-1	
		SP-Y	(SY0100)	SP				2.5P	SP-1	
		IPO	PI70100	PO	-	75	7	5P	PO-1	
		IHT	HI70100S	HT				5P	HT-1	
			HI701002	HT				2P	HT-1	
Standard	⑤⑥⑧ ⑪⑫	SP	SPQ0100	SP	P2			2.5P	SP-7	
			SPQ01001	SP	P2			1.5P	SP-7	
		N-SP	(SNQ0100)	SP	P2	75	7	2.5P	SP-7	
			(SNQ01001)	SP	P2			1.5P	SP-7	
		PO	POR0100	PO	P3			5P	PO-5	
			(PNR0100)	PO	P3			5P	PO-5	
		①⑤⑥⑧⑫	HT	(TNMR01009)					9P	HT-14
			3F	(TNMR01009T)					9P	HT-14
				TNMR01005					5P	HT-15
			3F	TNMR01005T					5P	HT-14
			TNMR01001					1.5P	HT-15	
	3F		TNMR01001T					1.5P	HT-14	
			(TNR01009)	HT	P3	75	7	9P	HT-14	
	3F		(TNR01009T)					9P	HT-14	
			(TNR01005)					5P	HT-15	
	3F		(TNR01005T)					5P	HT-14	
		(TNR01001)					1.5P	HT-15		
	3F	(TNR01001T)					1.5P	HT-14		
	Oversize	⑤⑥⑧ ⑪⑫	SP	SPR0100	SP	P3			2.5P	SP-7
				SPS0100	SP	P4			2.5P	SP-7
N-SP			(SNR0100)	SP	P3	75	7	2.5P	SP-7	
			(SNS0100)	SP	P4			2.5P	SP-7	
PO			POS0100	PO	P4			5P	PO-5	
		(PNS0100)	PO	P4			5P	PO-5		
①⑤⑥⑧⑫		HT	TNMS0100S					5P	HT-15	
			TNMS01001					1.5P	HT-15	
			(TNS01009)	HT	P4	75	7	9P	HT-15	
			(TNS0100S)					5P	HT-15	
		(TNS01001)					1.5P	HT-15		
For left hand threads	⑤⑥⑧ ⑪⑫	SP(LH)	SPQ0100-L	SP	P2			2.5P	SP-26	
		N-SP(LH)	(SNQ0100-L)	SP	P2	75	7	2.5P	SP-26	
		PO(LH)	POR0100-L	PO	P3			5P	PO-19	
			(PNR0100-L)	PO	P3			5P	PO-19	
		①⑤⑥⑧⑫	HT(LH)	(TNMR01009-L)					9P	HT-43
			TNMR01005-L					5P	HT-43	
			TNMR01001-L					1.5P	HT-43	
			(TNR01009-L)	HT	P3	75	7	9P	HT-43	
			(TNR01005-L)					5P	HT-43	
		(TNR01001-L)					1.5P	HT-43		
Oxidizing	⑤⑥⑧	SP-OX	SPQ0100X	SP	P2			2.5P	SP-23	
		N-SP-OX	(SNQ0100X)	SP	P2	75	7	2.5P	SP-23	
		PO-OX	POR0100X	PO	P3			5P	PO-17	
			(PNR0100X)	PO	P3			5P	PO-17	
		TiN coated	⑤⑥⑧ ⑪⑫	SP-V	VSPQ0100	SP	P2	75	7	2.5P
N-SP-V	(VSNQ0100)	SP		P2	75	7	2.5P	SP-29		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
TiN coated	⑤⑥⑧ ⑪⑫	PO-V	VPOR0100						PO-22	
		N-PO-V	(VPNR0100)	PO	P3	75	7	5P	PO-22	
Long shank	⑤⑥⑧ ⑪⑫	LS-SP	SPQ0100L10	SP	P2	100		2.5P	SP-33	
			SPQ0100L12	SP	P2	120		2.5P	SP-33	
			SPQ0100L15	SP	P2	150		2.5P	SP-33	
			SPQ0100L20	SP	P2	200		2.5P	SP-33	
		LS-N-SP	(SNQ0100L10)	SP	P2	100		2.5P	SP-33	
			(SNQ0100L12)	SP	P2	120		2.5P	SP-33	
			(SNQ0100L15)	SP	P2	150		2.5P	SP-33	
			(SNQ0100L20)	SP	P2	200		2.5P	SP-33	
		LS-PO	POR0100L10	PO	P3	100		5P	PO-25	
			POR0100L12	PO	P3	120		5P	PO-25	
			POR0100L15	PO	P3	150		5P	PO-25	
			POR0100L20	PO	P3	200		5P	PO-25	
		LS-N-PO	(PNR0100L10)	PO	P3	100		5P	PO-25	
			(PNR0100L12)	PO	P3	120		5P	PO-25	
			(PNR0100L15)	PO	P3	150		5P	PO-25	
		(PNR0100L20)	PO	P3	200		5P	PO-25		
	①⑤⑥⑧⑫	LS-HT	TNMQ0100S10				100		5P	HT-51
			TNMQ0100S12				120		5P	HT-51
			TNMQ0100S15				150		5P	HT-51
			TNMQ0100S20				200		5P	HT-51
			TNMQ0100S25				250		5P	HT-51
			TNMQ0100110				100		1.5P	HT-51
			TNMQ0100112				120		1.5P	HT-51
			TNMQ0100115				150		1.5P	HT-51
			TNMQ0100120				200		1.5P	HT-51
		TNMQ0100125				250		1.5P	HT-51	
Oversize	⑤⑥⑧ ⑪⑫							5P	HT-51	
			(L1001005-Q)	HT	P2	100	7	5P	HT-51	
			(L1201005-Q)			120		5P	HT-51	
			(L1501005-Q)			150		5P	HT-51	
			(L2001005-Q)			200		5P	HT-51	
		(L2501005-Q)			250		5P	HT-51		
		(L1001001-Q)			100		1.5P	HT-51		
		(L1201001-Q)			120		1.5P	HT-51		
		(L1501001-Q)			150		1.5P	HT-51		
		(L2001001-Q)			200		1.5P	HT-51		
		(L2501001-Q)			250		1.5P	HT-51		
	①⑤⑥⑧⑫	LS-SP	SPR0100L10	SP	P3	100		2.5P	SP-33	
			SPR0100L15	SP	P3	150		2.5P	SP-33	
		LS-N-SP	(SNR0100L10)	SP	P3	100		2.5P	SP-33	
			(SNR0100L15)	SP	P3	150		2.5P	SP-33	
LS-PO		POS0100L15	PO	P4	150		5P	PO-25		
LS-N-PO		(PNS0100L15)	PO	P4	150		5P	PO-25		
①⑤⑥⑧⑫		LS-HT	TNMR0100S10				100		5P	HT-51
			TNMR0100S15				150		5P	HT-51
			TNMR0100110				100		1.5P	HT-51
			TNMR0100115				150		1.5P	HT-52
		(L1001005-R)	HT	P3	100	7	5P	HT-51		
	(L1501005-R)			150		5P	HT-51			
	(L1001001-R)			100		1.5P	HT-51			
	(L1501001-R)			150		1.5P	HT-51			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	Oversize	①⑤⑥⑫	LS-HT	TNMS0100510		100		5P	HT-51			
				TNMS0100515		150		5P	HT-51			
				TNMS0100110		100	1.5P			HT-51		
				TNMS0100115		150	1.5P			HT-51		
				(L1001005-S)		100	7	5P		HT-51		
				(L1501005-S)		150	5P			HT-51		
				(L1001001-S)		100	1.5P			HT-51		
				(L1501001-S)		150	1.5P			HT-52		
			For left hand threads	⑤⑥⑧⑫ ⑪⑫	LS-SP(LH)	SPQ0100L15-L	SP	P2	150	7	2.5P	SP-39
					LS-N-SP(LH)	(SNQ0100L15-L)						SP-39
				①⑤⑥⑫	LS-HT(LH)	TNMQ0100510L			100		5P	HT-65
						TNMQ0100515L			150		5P	HT-65
		TNMQ0100110L					100	1.5P		HT-65		
		TNMQ0100115L					150	1.5P		HT-65		
		(L1001005-QL)					100	7	5P	HT-65		
		(L1501005-QL)					150	5P		HT-65		
		(L1001001-QL)					100	1.5P		HT-65		
		(L1501001-QL)					150	1.5P		HT-65		
	TiN coated	⑤⑥⑧⑫ ⑪⑫			LS-SP-V	VSPQ0100L15	SP	P2	150	7	2.5P	SP-40
					LS-N-SP-V	(VSNQ0100L15)	SP	P2	150	7	2.5P	SP-40
			LS-PO-V	VPOR0100L15	PO	P3			5P	PO-31		
			LS-N-PO-V	(VPNR0100L15)	PO	P3			5P	PO-31		
		①⑤⑥⑫	LS-HT-V	TNMQ0100510V			100		5P	HT-69		
				TNMQ0100515V			150		5P	HT-69		
For soft structural steels	⑧	E-SP	ESHMQ0100	SP	P2	75	7	2.5P	SP-55			
			(ESHQ0100)						SP-55			
		Thread forming taps for steels	⑥⑧	N-RZ	NRZM70100P	G7				4P	RO-7	
					NRZM70100B	G7				2P	RO-7	
					(NRZ70100P)	G7				4P	RO-7	
					(NRZ70100B)	G7				2P	RO-7	
					NRZM80100P	G8	75	7	4P	RO-7		
					(NRZ80100P)	G8			2P	RO-7		
Long shank	⑥⑧	LS-N-RZ	NRZM70100P10			100		4P	RO-10			
			NRZM70100P15			150		4P	RO-10			
			NRZM70100B10			100	2P		RO-10			
			NRZM70100B15			150	2P		RO-10			
			(NRZ70100P10)	RO	G7	100	7	4P	RO-10			
			(NRZ70100P15)			150	4P		RO-10			
			(NRZ70100B10)			100	2P		RO-10			
			(NRZ70100B15)			150	2P		RO-10			
For high carbon steels	⑤⑥	HC-SP	SCMQ0100	SP	P2	75	7	2.5P	SP-56			
			(SCQ0100)						SP-56			
	①⑤⑥	HC-PO	PCMR0100	PO	P3	75	7	5P	PO-41			
			(PCR0100)						PO-41			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
For high carbon steels	Oxidizing	⑤⑥	HC-SP-OX	SCMQ0100X	SP	P2	75	7	2.5P	SP-59		
			(SCQ0100X)						SP-59			
For hard-to-machine materials	Powder HSS	①④⑤	EH-PO	EPHMS0100	PO				4.5P	PO-45		
				(EPHS0100)	PO				4.5P	PO-45		
			EH-HT	ETHMS0100S	HT	P4	75	7	5P	HT-93		
				ETHMS01001	HT				2.5P	HT-93		
				(ETHS0100S)	HT				5P	HT-93		
				(ETHS01001)	HT				2.5P	HT-93		
			For titanium alloys	④⑤⑥⑨	ZET-B	ZETBMR0100	SP	P3			3P	SP-67
						(ZETBR0100)	SP	P3	75	7	3P	SP-67
ZET-P	ZETPMS0100	SL			P4			5P	SL-3			
	(ZETPS0100)	SL	P4			5P	SL-3					
For nickel base alloys	⑥⑦⑧⑩	ZEN-B	ZENBMR0100	SP	P3			3P	SP-68			
			(ZENBR0100)	SP	P3	75	7	3P	SP-68			
		ZEN-P	ZENPMS0100	PO	P4			4.5P	PO-46			
			(ZENPS0100)	PO	P4			4.5P	PO-46			
Carbide taps for hard materials	②③	UH-CT	UHCS0100S	HT	P4	75	8.5	5P	CT-10			
		EH-CT	EHCS0100S	HT	P4	75	7	5P	CT-10			
For stainless steels	⑥⑦⑧	SU-SP	SUMQ0100	SP	P2			2.5P	SP-43			
			(SUQ0100)	SP	P2			2.5P	SP-43			
			SU-PO	PUMR0100	PO	P3			5P	PO-34		
				(PUR0100)	PO	P3			5P	PO-34		
			SU-HT	TUMR01009	HT	P3	75	7	9P	HT-71		
				TUMR01004	HT	P3			4P	HT-71		
				TUMR01001	HT	P3			1.5P	HT-71		
				(TUR01009)	HT	P3			9P	HT-71		
				(TUR01004)	HT	P3			4P	HT-71		
				(TUR01001)	HT	P3			1.5P	HT-71		
			Oversize	⑥⑦⑧	SU-SP	SUMR0100	SP	P3			2.5P	SP-43
						(SUR0100)	SP	P3			2.5P	SP-43
						SUMS0100	SP	P4	75	7	2.5P	SP-43
						(SUS0100)	SP	P4			2.5P	SP-43
SU-PO	PUMS0100	PO				P4			5P	PO-34		
(PUS0100)	PO	P4						5P	PO-34			
For deep hole use	⑥⑦⑧	SU-S-SP	SSMQ0100-SU	SP	P2	75		2.5P	SP-50			
			(SSQ0100-SU)	SP	P2	75		2.5P	SP-50			
			LS-SU-S-SP		SP	P2	100	7	2.5P	SP-51		
			LS-SU-S-PO		PO	P3	100		5P	PO-38		
				PO	P3	150		5P	PO-38			
For cast irons	①	FC-O	TFCM01005					5P	HT-78			
				TFCM01001	HT	(6-4)	75	7	1.5P	HT-78		
				(TFC01005)					5P	HT-78		
				(TFC01001)					1.5P	HT-78		
			Carbide	①⑫⑬	N-CT-FC	TCNR01003					3P	CT-4
							TCNR01001				1.5P	CT-4
	TCNS01003								3P	CT-4		
	TCNS01001								1.5P	CT-4		

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
 2 High hardness material
 3 Heat treated steel (45-55HRC)
 4 Heat treated steel (25-45HRC)
 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
 6 Medium carbon steel, Cast steel
 7 Stainless steel
- 8 Low carbon steel
 9 Titanium alloy
 10 Nickel base alloy
 11 Rolled aluminum, Copper, Copper alloy
 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
 13 Thermosetting plastic

- M2 Taps
 M3 Taps
 M4 Taps
 M5 Taps
 M6 Taps
 M8 Taps
 M10 Taps
 M12 Taps
 M1-M7 Taps
 M9-M24 Taps
 M25-M48 Taps
 For Unified threads Taps
 For Whitworth threads Taps
 For 3mm thread and drawing machine Taps (CMT)
 For Pipe threads Taps
 For American pipe threads Taps
 For Miniature threads Taps

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
For cast irons	Long shank, carbide	1 12 13	LS-N-CT	-	HT	P3	100	7	3P	CT-7				
				-					1.5P	CT-7				
For aluminum alloys	11 12 13	AL-SP	ASHMR0100						2.5P	SP-61				
			ASHMR01001		SP	P3	75	7	1.5P	SP-61				
			(ASHR0100)						2.5P	SP-61				
			(ASHR01001)					1.5P	SP-61					
			LA-O	TLAM0100S					5P	HT-81				
				TLAM01001		HT	70-6	75	7	1.5P	HT-81			
		(TLA0100S)					5P	HT-81						
		(TLA01001)					1.5P	HT-81						
	AXE	12	AXE-HT	TAXEMR01001		HT	P3	75	7	1.5P	HT-83			
				(TAXER01001)						HT-83				
	Carbide	11 12 13	N-CT LA	TCNR01003A		HT	P3	75	7	3P	CT-2			
				TCNR01001A					1.5P	CT-2				
Carbide spiral fluted taps	11 12 13	N-CT-SP	-		SP	P3	75	7	2.5P	CT-8				
Carbide spiral pointed taps	11 12 13	N-CT-PO	PCNS0100		PO	P4	75	7	5P	CT-8				
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS01001		HT	P4	100	7	1.5P	CT-9			
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM70100P		G7				4P	RO-17				
				NRSM70100B		G7			2P	RO-17				
				(NRS70100P)		G7		4P	RO-17					
				(NRS70100B)		G7		2P	RO-17					
				NRSM80100P		RO	G8	75	7	4P	RO-17			
				NRSM80100B		G8		2P	RO-17					
				(NRS80100P)		G8		4P	RO-17					
				(NRS80100B)		G8		2P	RO-17					
				NRSM70100P10					100	4P	RO-22			
				NRSM70100P15					150	4P	RO-22			
	NRSM70100B10					100	2P	RO-22						
	NRSM70100B15					150	2P	RO-22						
	(NRS70100P10)					100	4P	RO-22						
	(NRS70100P15)					150	4P	RO-22						
	(NRS70100B10)					100	2P	RO-22						
	(NRS70100B15)					150	2P	RO-22						
X series	For general steels	5 6 8 11 12	XSP	SNXR0100		SP	P3	100	10	2.5P	SP-22			
			XSL	SNXR0100L		SL			5P	SL-1				
	TiN coated	7 8 11 12	AUXSP	VSAXR0100		SP	P3	100	10	2.5P	SP-30			
			AUXSL	VSAXR0100L		SL		5P	SL-2					
	For stainless steels	6 7 8	SUXSP	SUXR0100		SP	P3	100	10	2.5P	SP-48			
			SUXSL	SUXR0100L		SL		5P	SL-3					
High speed tapping	5 6 8 11 12 13	F-SP	VFSHR0100		SP		75		2.5P	SP-71				
			(VFSHR0100)		SP		75		2.5P	SP-71				
			LS-F-SP	-		SP		100	7	2.5P	SP-72			
			F-SL	VFSHR0100L		SL	P3	75	7	5P	SL-5			
				(VFSHR0100L)		SL		75		5P	SL-5			
				LS-F-SL	-		SL		100		5P	SL-5		
			Ultra fast tapping (with coolant hole)	For steels	5 6 8 11 12	HFIHS	HFIHSS0100		SP	P4	75	10	2.5P	SP-73
						HFISP	HFISP0100		SP	P4	75	10	2.5P	SP-73
Carbide taps for cast irons	1 12	HFICT-B		HFICTBR0100		HT	P3	75	10	2.5P	CT-12			
		HFICT-P		HFICTPR0100		HT	P3	75	10	4P	CT-12			
For non-ferrous materials	11 12	HFAHS		HFAHSS0100		SP	P4	75	10	2.5P	SP-74			
		HFAASP	HFAASP0100		SP	P4	75	10	2.5P	SP-74				
Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR0100		HT	P3	75	10	2.5P	CT-11				
Ultra fast tapping (with coolant hole)	Carbide taps for non-ferrous materials	11 12 13	HFACT-P	HFACTPR0100		HT	P3	75	10	4P	CT-11			

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Ultra fast tapping (with coolant hole)	Carbide taps for non-ferrous materials	11 12 13	HFACT-P	HFACTPR0100		HT	P3	75	10	4P	CT-11			
			HDISP	HDISP0100		SP	P4	75	10	2.5P	SP-75			
For dry tapping (with coolant hole)	For steels	1 5 6	HDISP	HDISP0100		SP	P4	75	10	2.5P	SP-75			
			HDASP	HDASP0100		SP	P4	75	10	2.5P	SP-75			
Ultra fast tapping (with coolant hole)	For non-ferrous materials	11 12	HDISP	HDISP0100		SP	P4	75	10	2.5P	SP-75			
			HDASP	HDASP0100		SP	P4	75	10	2.5P	SP-75			
High performance thread forming taps, TiCN coated	For both steels and non-ferrous materials	1 5 6 7 11 12	HDISL	HDISL0100		SL	P4	75	10	5P	SL-6			
			HP-RZ	HRZM70100P		G7			4P	RO-31				
				HRZM70100B		G7		2P	RO-32					
				(HRZ70100P)		G7		4P	RO-32					
				(HRZ70100B)		G7		2P	RO-32					
				HRZM80100P		RO	G8	75	7	4P	RO-32			
				HRZM80100B		G8		2P	RO-32					
				(HRZ80100P)		G8		4P	RO-32					
				(HRZ80100B)		G8		2P	RO-32					
			For deep hole use	5 6 8	S-SP	SSMQ0100		SP	P2			2.5P	SP-52	
						(SSQ0100)		SP	P2		75	7	2.5P	SP-52
						S-PO	PSMR0100		PO	P3			5P	PO-39
	(PSR0100)					PO	P3			5P	PO-39			
SSMR0100		SP				P3	75	7	2.5P	SP-53				
	(SSR0100)		SP	P3	75	7	2.5P	SP-53						
Low spiral fluted taps	1 5 6 11 12	LO-SP 8°	LSHMQ01008				75		SP-64					
		(LSHQ01008)					75		SP-64					
		LO-SP 15°	LSHMQ010015				75		SP-64					
		(LSHQ010015)					75		SP-64					
		LO-SP 20°	LSHMQ010020		SP	P2	75	7	2.5P	SP-65				
		(LSHQ010020)					75		SP-65					
		LS-LO-SP	LSHMQ0100L15				150		SP-65					
		(LSHQ0100L15)					150		SP-65					
Spiral fluted taps, universal use, BLF design	5 6 8 11 12	U-SP	USNR0100		SP	P3	75	7	2.5P	SP-60				
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC0100		SP	1b			2.5P	SP-63				
			(STIC0100)		SP	1b			2.5P	SP-63				
		PO STI	-		PO	1b			5P	PO-43				
		N-PO STI	(-)		PO	1b			5P	PO-43				
		STI-HT	TICM0100S		HT	1b	82	8.5	5P	HT-85				
			(TIC0100S)		HT	1b			5P	HT-85				
			(TIC01001)		HT	1b			1.5P	HT-85				
			N-RS STI	NRSM5IC0100B		RO	G5		2P	RO-23				
			(NRS5IC0100B)		RO	G5		2P	RO-23					
		Carbide	11 12	N-CT STI	TCNIC0100S		HT	1b	82	8.5	5P	CT-9		
			TCNIC01001		HT	1b		1.5P	CT-9					
With coolant hole	5 6 8 11 12	MC-SP	MSHQ0100L10		SP	P2	100	7	2.5P	SP-66				
				(MSHQ0100L10)		SP	P2	150	7	2.5P	SP-66			
			MSHQ0100L15		SP	P2	150	7	2.5P	SP-66				
	1 5 6 11 12	MC-PO	MPHR0100L10		PO	P3	100		5P	PO-44				
				(MPHR0100L10)		PO	P3	150		5P	PO-44			
			ML100100S-Q		HT	P2	100		5P	HT-90				
		ML150100S-Q		HT	P2	150		5P	HT-90					
		ML100100I-Q		HT	P2	100		1.5P	HT-90					
		ML150100I-Q		HT	P2	150		1.5P	HT-90					
Nut taps	6 8 11 12	NT	NH20100		HT	II b	160	7.8	25P	etc-1				
Taps M10×1.25														
Standard	5 6 8 11 12	SP	SPO010N		SP	P2	75	7	2.5P	SP-7				
			SPO010N1		SP	P2	75	7	1.5P	SP-7				

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	5 6 8 11 12	N-SP	(SNQ010N)	SP	P2			2.5P	SP-7		
			(SNQ010N1)	SP	P2	75	7	1.5P	SP-7		
		PO	(POR010N)	PO	P3				5P	PO-5	
			(PNR010N)	PO	P3				5P	PO-5	
		1 5 6 12	HT	(TNMR010N9)						9P	HT-15
				(TNMR010N5)						5P	HT-15
			(TNMR010N1)	HT	P3	75	7	1.5P	HT-15		
			(TNR010N9)						9P	HT-15	
			(TNR010N5)						5P	HT-15	
			(TNR010N1)						1.5P	HT-15	
	Oversize	5 6 8 11 12	SP	(SPR010N)	SP	P3			2.5P	SP-7	
				(SPS010N)	SP	P4			2.5P	SP-7	
			N-SP	(SNR010N)	SP	P3	75	7	2.5P	SP-7	
				(SNS010N)	SP	P4			2.5P	SP-7	
		PO	(POS010N)	PO	P4			5P	PO-5		
			(PNS010N)	PO	P4			5P	PO-5		
		1 5 6 12	HT	(TNMS010N5)						5P	HT-15
				(TNMS010N1)	HT	P4	75	7	1.5P	HT-15	
			(TNS010N5)						5P	HT-15	
			(TNS010N1)						1.5P	HT-15	
For left hand threads	5 6 8 11 12		SP(LH)	(SPQ010N-L)	SP	P2			2.5P	SP-26	
				(SNQ010N-L)	SP	P2	75	7	2.5P	SP-26	
		PO(LH)	(POR010N-L)	PO	P3			5P	PO-19		
			(PNR010N-L)	PO	P3			5P	PO-19		
	1 5 6 12	HT(LH)	(TNMR010N9-L)						9P	HT-43	
			(TNMR010N5-L)					5P	HT-44		
(TNMR010N1-L)		HT	P3	75	7	1.5P	HT-44				
(TNR010N9-L)						9P	HT-43				
(TNR010N5-L)						5P	HT-44				
(TNR010N1-L)						1.5P	HT-44				
TiN coated	5 6 8 11 12	SP-V	(VSPQ010N)	SP	P2			2.5P	SP-29		
			(VSNQ010N)	SP	P2	75	7	2.5P	SP-29		
		PO-V	(VPOR010N)	PO	P3			5P	PO-22		
			(VPNR010N)	PO	P3			5P	PO-22		
Long shank	5 6 8 11 12	LS-SP	(SPQ010NL10)	SP	P2	100		2.5P	SP-33		
			(SPQ010NL12)	SP	P2	120		2.5P	SP-33		
		(SPQ010NL15)	SP	P2	150		2.5P	SP-33			
		(SPQ010NL20)	SP	P2	200		2.5P	SP-33			
		LS-N-SP	(SNQ010NL10)	SP	P2	100		2.5P	SP-33		
			(SNQ010NL12)	SP	P2	120		2.5P	SP-33		
			(SNQ010NL15)	SP	P2	150		2.5P	SP-33		
			(SNQ010NL20)	SP	P2	200		2.5P	SP-34		
			LS-PO	(POR010NL10)	PO	P3	100		5P	PO-25	
				(POR010NL15)	PO	P3	150		5P	PO-25	
		LS-N-PO	(PNR010NL10)	PO	P3	100		5P	PO-25		
			(PNR010NL15)	PO	P3	150		5P	PO-25		
			(PNR010NL20)	PO	P3	200		5P	PO-26		
			1 5 6 12	LS-HT	(TNMQ010N510)				100		HT-52
	(TNMQ010N512)				HT	P2	120	7	5P	HT-52	
	(TNMQ010N515)							150		HT-52	
	(TNMQ010N520)						200		HT-52		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	1 5 6 12	LS-HT	(TNMQ010N110)					100	1.5P	HT-52	
			(TNMQ010N112)					120	1.5P	HT-52	
			(TNMQ010N115)					150	1.5P	HT-52	
			(TNMQ010N120)					200	1.5P	HT-52	
			(L10010N5-Q)					100	5P	HT-52	
			(L12010N5-Q)	HT	P2	120	7	5P	HT-52		
			(L15010N5-Q)					150	5P	HT-52	
			(L20010N5-Q)					200	5P	HT-52	
			(L10010N1-Q)					100	1.5P	HT-52	
			(L12010N1-Q)					120	1.5P	HT-52	
	(L15010N1-Q)					150	1.5P	HT-52			
	(L20010N1-Q)					200	1.5P	HT-52			
	Oversize	1 5 6 12	LS-HT	(TNMR010N510)					100	5P	HT-52
				(TNMR010N110)					100	1.5P	HT-52
				(L10010N5-R)					100	5P	HT-52
				(L10010N1-R)					100	1.5P	HT-52
				(TNMS010N510)					100	5P	HT-52
				(TNMS010N515)	HT	P4	150	7	5P	HT-52	
				(TNMS010N110)					100	1.5P	HT-52
				(TNMS010N115)					150	1.5P	HT-52
(L10010N5-S)								100	5P	HT-52	
(L15010N5-S)								150	5P	HT-52	
For left hand threads	5 6 8 11 12	LS-SP(LH)	(SPQ010NL15-L)					150	7	2.5P	SP-39
			(SNQ010NL15-L)	SP	P2			150	7	2.5P	SP-39
	1 5 6 12	LS-HT(LH)	(TNMQ010N515L)						5P	HT-66	
			(TNMQ010N115L)					1.5P	HT-66		
		(L15010N5-QL)	HT	P2	150	7	5P	HT-66			
		(L15010N1-QL)					1.5P	HT-66			
Long shank	TiN coated	5 6 8 11 12	LS-SP-V	(VSPQ010NL15)	SP	P2			2.5P	SP-40	
				(VSNQ010NL15)	SP	P2	150	7	2.5P	SP-40	
			LS-PO-V	(VPOR010NL15)	PO	P3			5P	PO-31	
				(VPNR010NL15)	PO	P3			5P	PO-31	
			1 5 6 12	LS-HT-V	(TNMQ010N510V)					100	5P
	(TNMQ010N515V)							150	5P	HT-69	
	(TNMQ010N110V)							100	1.5P	HT-69	
	(TNMQ010N115V)	HT			P2	150	7	1.5P	HT-69		
	(VL10010N5-Q)							100	5P	HT-69	
	(VL15010N5-Q)					150	5P	HT-69			
(VL10010N1-Q)					100	1.5P	HT-69				
(VL15010N1-Q)					150	1.5P	HT-69				
For soft structural steels	8	E-SP	(ESHMQ010N)					75	7	2.5P	SP-55
			(ESHQ010N)	SP	P2			75	7	2.5P	SP-55
Thread forming taps for steels	6 8	N-RZ	(NRZM7010NP)					G7	4P	RO-7	
			(NRZM7010NB)					G7	2P	RO-7	
			(NRZ7010NP)					G7	4P	RO-7	
			(NRZ7010NB)					G7	2P	RO-7	
			(NRZM8010NP)	RO	G8	75	7	4P	RO-7		
			(NRZM8010NB)		G8			2P	RO-7		
			(NRZ8010NP)		G8			4P	RO-7		
			(NRZ8010NB)		G8			2P	RO-7		

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamp machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For high carbon steels	5 6	HC-SP	SCMQ010N (SCQ010N)	SP	P2	75	7	2.5P	SP-56	
	1 5 6	HC-PO	PCMR010N (PCR010N)	PO	P3	75	7	5P	PO-41	
For hard-to-machine materials	1 4 5	EH-PO	EPHMS010N (EPHS010N)	PO				4.5P	PO-45	
		EH-HT	ETHMS010N5 (ETHS010N5)	HT	P4	75	7	5P	HT-93	
			ETHMS010N1	HT					2.5P	HT-93
			(ETHS010N5)	HT					5P	HT-93
			(ETHS010N1)	HT					2.5P	HT-93
Powder HSS	4 5	PM-SP	-	SP	P3	75	7	3P	SP-70	
		PM-PO	-	PO	P4			5.5P	PO-47	
For titanium alloys	4 5 6 9	ZET-B	ZETBMR010N (ZETBR010N)	SP	P3			3P	SP-67	
			ZETPMS010N (ZETPS010N)	SL	P4	75	7	5P	SL-3	
				SL	P4			5P	SL-4	
				RO	G7	75	7	2P	RO-17	
				G8	75	7	4P	RO-17		
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR010N (ZENBR010N)	SP	P3			3P	SP-69	
			ZENPMS010N (ZENPS010N)	PO	P4	75	7	4.5P	PO-46	
				PO	P4			4.5P	PO-46	
				RO	G7	75	7	2P	RO-17	
				G8	75	7	4P	RO-17		
Carbide taps for hard materials	2	UH-CT	UHCS010N5	HT	P4	75	8.5	5P	CT-10	
For stainless steels	6 7 8	SU-SP	SUMQ010N (SUQ010N)	SP	P2			2.5P	SP-43	
		SU-PO	PUMR010N (PUR010N)	PO	P3			5P	PO-34	
			TUMR010N4 (TUR010N4)	HT	P3	75	7	4P	HT-71	
			TUMR010N1 (TUR010N1)	HT	P3			1.5P	HT-72	
				HT	P3			4P	HT-71	
				HT	P3			1.5P	HT-72	
				SP	P3			2.5P	SP-43	
				SP	P3			2.5P	SP-43	
				SP	P4	75	7	2.5P	SP-43	
				PO	P4			5P	PO-34	
Oversize	6 7 8	SU-SP	SUMR010N (SUR010N)	SP	P3			2.5P	SP-43	
			SUMS010N (SUS010N)	SP	P4	75	7	2.5P	SP-43	
				SP	P4			2.5P	SP-43	
			SU-PO	PUMS010N (PUS010N)	PO	P4			5P	PO-34
				PO	P4			5P	PO-34	
For hard-to-machine materials	5 6 7	SU2-SP	SU2MR010N (SU2R010N)	SP	P3	75	7	3P	SP-49	
								3P	SP-49	
For cast irons	1	FC-O	TFCM010N5 (TFC010N5)					5P	HT-78	
			TFCM010N1 (TFC010N1)	HT	65-40	75	7	1.5P	HT-78	
								5P	HT-78	
								1.5P	HT-78	
Carbide	1 12 13	N-CT FC	TCNR010N3 (TCNR010N1)		P3			3P	CT-4	
			TCNS010N3 (TCNS010N1)	HT	P4	75	7	3P	CT-4	
					P4			3P	CT-4	
					P4			1.5P	CT-4	
For aluminum alloys	11 12 13	AL-SP	ASHMR010N (ASHR010N)					2.5P	SP-61	
			ASHMR010N1 (ASHR010N1)	SP	P3	75	7	1.5P	SP-61	
								2.5P	SP-61	
								1.5P	SP-61	
			LA-O	TLAM010N5 (TLA010N5)					5P	HT-81
				HT	65-40	75	7	1.5P	HT-81	
						5P	HT-81			
For deep hole use	Standard	5 6 8	S-SP	SSMQ010N (SSQ010N)	SP	P2		2.5P	SP-53	
			S-PO	PSMR010N (PSR010N)	PO	P3	75	7	5P	PO-39
Low spiral fluted taps	1 5 6	11 12	LS-LO-SP	LSHM0010N15 (LSHQ010N15)	SP	P2	150	7	2.5P	
									2.5P	SP-65

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
For aluminum alloys	AXE	12	LA-O	(TLA010N1)	HT	65-40	75	7	1.5P	HT-81			
			AXE-HT	TAXEMR010N1 (TAXER010N1)	HT	P3	75	7	1.5P	HT-83			
	Carbide	11 12 13	N-CT LA	TCNR010N3A		P3			3P	CT-2			
				TCNR010N1A	HT	P3	75	7	1.5P	CT-2			
				TCNS010N3A	HT	P4	75	7	3P	CT-2			
				TCNS010N1A	HT	P4			1.5P	CT-2			
	Carbide spiral fluted taps	11 12 13	N-CT-SP	-	SP	P3	75	7	2.5P	CT-8			
	For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS010N1	HT	P4	100	7	1.5P	CT-9		
	Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM7010NP		G7			4P	RO-17			
NRSM7010NB					G7			2P	RO-17				
(NRS7010NP)					G7			4P	RO-17				
(NRS7010NB)				RO	G7	75	7	2P	RO-17				
NRSM8010NP					G8			4P	RO-17				
NRSM8010NB					G8			2P	RO-17				
(NRS8010NP)					G8			4P	RO-17				
(NRS8010NB)					G8			2P	RO-17				
X series				For general steels	5 6 8	XSP	SNXR010N	SP	P3	100	10	2.5P	SP-22
XSL						SNXR010NL	SL			5P	SL-1		
TiN coated	7 8 11 12	AUXSP	VSAXR010N			SP	P3	100	10	2.5P	SP-30		
		AUXSL	VSAXR010NL	SL			5P	SL-2					
For stainless steels	6 7 8	SUXSP	SUXR010N	SP	P3	100	10	2.5P	SP-48				
		SUXSL	SUXR010NL	SL			5P	SL-3					
High speed tapping	5 6 8	11 12 13	F-SP	VFSHR010N	SP			2.5P	SP-71				
				(VFSHR010N)	SP			2.5P	SP-71				
			F-SL	VFSHR010NL	SL	P3	75	7	5P	SL-5			
				(VFSHR010NL)	SL			5P	SL-5				
Ultra fast tapping (with coolant hole)	For steels	5 6 8	HFIHS	HFIHSS010N	SP	P4	75	10	2.5P	SP-73			
			1 5 6	HFIISP	HFIISP010N	SP	P4	75	10	2.5P	SP-73		
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR010N	HT	P3	75	10	2.5P	CT-12			
			HFICT-P	HFICTPR010N	HT	P3	75	10	4P	CT-12			
	For non-ferrous materials	11 12	HFAHS	HFAHSS010N	SP	P4	75	10	2.5P	SP-74			
HFAFP			HFAFSP010N	SP	P4	75	10	2.5P	SP-74				
Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR010N	HT	P3	75	10	2.5P	CT-11				
		HFACT-P	HFACTPR010N	HT	P3	75	10	4P	CT-11				
For dry tapping (with coolant hole)	For steels	1 5 6	HDISP	HDISP010N	SP	P4	75	10	2.5P	SP-75			
			11 12	HDAASP	HDAASP010N	SP	P4	75	10	2.5P	SP-75		
Ultra fast tapping (with coolant hole)	For both steels and non-ferrous materials	1 5 6 11 12	HDISL	HDISLS010N	SL	P4	75	10	5P	SL-6			
High performance thread forming taps, TiCN coated	5 6 7	11 12	HP-RZ	HRZM7010NP		G7		4P	RO-32				
				HRZM7010NB		G7		2P	RO-32				
				(HRZ7010NP)		G7		4P	RO-32				
				(HRZ7010NB)	RO	G7	75	7	2P	RO-32			
				HRZM8010NP		G8		4P	RO-32				
				HRZM8010NB		G8		2P	RO-32				
				(HRZ8010NP)		G8		4P	RO-32				
				(HRZ8010NB)		G8		2P	RO-32				
			For deep hole use	Standard	5 6 8	S-SP	SSMQ010N (SSQ010N)	SP	P2		2.5P	SP-53	
						S-PO	PSMR010N (PSR010N)	PO	P3	75	7	5P	PO-39
Low spiral fluted taps	1 5 6	11 12	LS-LO-SP	LSHM0010N15 (LSHQ010N15)	SP	P2	150	7	2.5P				
									2.5P	SP-65			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Spiral fluted taps, universal use, BLF design	5 6 8 11 12	U-SP	USNR010N	SP	P3	75	7	2.5P	SP-60		
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC010N	SP				2.5P	SP-63		
			(STIC010N)	SP				2.5P	SP-63		
		STI-HT	TICM010N5	HT	1b	82	8.5	5P	HT-85		
			TICM010N1	HT				1.5P	HT-85		
			(TIC010N5)	HT				5P	HT-85		
		(TIC010N1)	HT				1.5P	HT-85			
With coolant hole	5 6 8 11 12 1 5 6 11 12	MC-SP	MSHQ010NL10	SP	P2	100	7	2.5P	SP-67		
		MC-PO	MPHR010NL15	PO	P3	150		5P	PO-44		
		MC-HT	ML10010N5-Q	HT	P2	100		5P	HT-91		
			ML15010N5-Q	HT	P2	150	7	5P	HT-91		
			ML10010N1-Q	HT	P2	100		1.5P	HT-91		
		ML15010N1-Q	HT	P2	150		1.5P	HT-91			
Nut taps	6 8 11 12	NT	NH2010N	HT	II	150	7.8	27P	etc-1		
Taps M10x1											
Standard	5 6 8 11 12	SP	SPQ010M	SP	P2			2.5P	SP-7		
			SPQ010M1	SP	P2			1.5P	SP-7		
		N-SP	(SNQ010M)	SP	P2	75	7	2.5P	SP-7		
			(SNQ010M1)	SP	P2			1.5P	SP-7		
		PO	POR010M	PO	P3			5P	PO-5		
		(PNR010M)	PO	P3			5P	PO-5			
	1 5 6 12	HT	(TNMR010M9)						9P	HT-15	
			TNMR010M5						5P	HT-15	
			TNMR010M1					1.5P	HT-15		
			(TNR010M9)	HT	P3	75	7	9P	HT-15		
			(TNR010M5)					5P	HT-15		
			(TNR010M1)					1.5P	HT-15		
		Oversize	5 6 8 11 12	SP	SPR010M	SP	P3			2.5P	SP-7
					SPS010M	SP	P4			2.5P	SP-7
	N-SP			(SNR010M)	SP	P3	75	7	2.5P	SP-7	
	(SNS010M)			SP	P4			2.5P	SP-7		
PO	POS010M			PO	P4			5P	PO-5		
	(PNS010M)		PO	P4			5P	PO-5			
1 5 6 12	HT		TNMS010M5						5P	HT-15	
			TNMS010M1					1.5P	HT-15		
			(TNS010M5)	HT	P4	75	7	5P	HT-15		
			(TNS010M1)					1.5P	HT-15		
	For left hand threads	5 6 8 11 12	SP(LH)	SPQ010M-L	SP	P2			2.5P	SP-27	
N-SP(LH)			(SNQ010M-L)	SP	P2	75	7	2.5P	SP-27		
PO(LH)			POR010M-L	PO	P3			5P	PO-19		
			(PNR010M-L)	PO	P3			5P	PO-19		
1 5 6 12		HT(LH)	(TNMR010M9-L)						9P	HT-44	
			TNMR010M5-L						5P	HT-44	
			TNMR010M1-L					1.5P	HT-44		
			(TNR010M9-L)	HT	P3	75	7	9P	HT-44		
			(TNR010M5-L)					5P	HT-44		
			(TNR010M1-L)					1.5P	HT-44		
		Long shank	5 6 8 11 12	LS-SP	SPQ010ML10			100			SP-34
					SPQ010ML15			150			SP-34
LS-N-SP	(SNQ010ML10)			SP	P2	100	7	2.5P	SP-34		
	(SNQ010ML15)					150			SP-34		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	5 6 8 11 12	LS-PO	POR010ML10			100			PO-26	
			POR010ML15			150			PO-26	
		LS-N-PO	(PNR010ML10)	PO	P3	100	7	5P	PO-26	
			(PNR010ML15)			150			PO-26	
		1 5 6 12	LS-HT	TNMQ010M510			100		5P	HT-52
			TNMQ010M512			120		5P	HT-52	
			TNMQ010M515			150		5P	HT-52	
			TNMQ010M110			100		1.5P	HT-52	
			TNMQ010M112			120		1.5P	HT-52	
			TNMQ010M115			150		1.5P	HT-52	
			(L10010M5-Q)	HT	P2	100	7	5P	HT-52	
			(L12010M5-Q)			120		5P	HT-52	
			(L15010M5-Q)			150		5P	HT-52	
			(L10010M1-Q)			100		1.5P	HT-52	
			(L12010M1-Q)			120		1.5P	HT-52	
		(L15010M1-Q)			150		1.5P	HT-52		
Thread forming taps for steels	6 8	N-RZ	NRZM7010MP					4P	RO-7	
			NRZM7010MB					2P	RO-7	
			(NRZ7010MP)	RO	G7	75	7	4P	RO-7	
			(NRZ7010MB)					2P	RO-7	
For high carbon steels	5 6	HC-SP	SCMQ010M	SP	P2	75	7	2.5P	SP-57	
			(SCQ010M)					SP-57		
For stainless steels	6 7 8	SU-SP	SUMQ010M	SP	P2			2.5P	SP-43	
			(SUQ010M)	SP	P2			2.5P	SP-43	
		SU-PO	PUMR010M	PO	P3			5P	PO-34	
		(PUR010M)	PO	P3	75	7	5P	PO-34		
		SU-HT	TUMR010M4	HT	P3			4P	HT-72	
			TUMR010M1	HT	P3			1.5P	HT-72	
Oversize	6 7 8		(TUR010M4)	HT	P3			4P	HT-72	
			(TUR010M1)	HT	P3			1.5P	HT-72	
		For hard-to-machine materials	5 6 7	SU2-SP	SUMS010M	SP	P4	75	7	2.5P
		(SUS010M)					SP-43			
		SU2MR010M	SP	P3	75	7	3P	SP-49		
		(SU2R010M)					SP-49			
For cast irons	1	FC-O	TFCM010M5					5P	HT-78	
			TFCM010M1					1.5P	HT-78	
			(TFC010M5)	HT	57-31	75	7	5P	HT-78	
			(TFC010M1)					1.5P	HT-78	
Carbide	1 12 13	N-CT FC	TCNR010M3					3P	CT-4	
			TCNR010M1					1.5P	CT-4	
			TCNS010M3	HT	P3	70	7	3P	CT-4	
			TCNS010M1					1.5P	CT-4	
For aluminum alloys	11 12 13	AL-SP	ASHMR010M					2.5P	SP-61	
			ASHMR010M1					1.5P	SP-61	
			(ASHR010M)	SP	P3	75	7	2.5P	SP-61	
			(ASHR010M1)					1.5P	SP-61	
	11 12	LA-O	TLAM010M5						5P	HT-81
			TLAM010M1					1.5P	HT-81	
			(TLA010M5)	HT	57-31	75	7	5P	HT-81	
			(TLA010M1)					1.5P	HT-81	
AXE	12	AXE-HT	TAXEMR010M1	HT	P3	75	7	1.5P	HT-83	
			(TAXER010M1)					HT-83		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	l _c	Product page
For aluminum alloys	Carbide	⑪⑫⑬	N-CT LA TCNR010M3A TCNR010M1A	HT	P3	70	7	3P 1.5P	CT-2 CT-2
For aluminum alloys (with coolant hole)	Carbide	⑪⑫	MC-AD-CT MCADS010M1	HT	P4	100	7	1.5P	CT-9
Thread forming taps for non-ferrous materials		⑪⑫	N-RS NRSM7010MP NRSM7010MB (NRS7010MP) (NRS7010MB)					4P 2P 4P 2P	RO-17 RO-17 RO-17 RO-17
X series	For general steels	⑤⑥⑧⑪⑫	XSP SNXR010M XSL SNXR010ML	SP SL	P3	100	10	2.5P 5P	SP-22 SL-1
	TiN coated	⑦⑧⑪⑫⑬	AUXSP VSAXR010M AUXSL VSAXR010ML	SP SL	P3	100	10	2.5P 5P	SP-30 SL-2
	For stainless steels	⑥⑦⑧	SUXSP SUXR010M SUXSL SUXR010ML	SP SL	P3	100	10	2.5P 5P	SP-48 SL-3
For dry tapping (with coolant hole)	For steels	①⑤⑥	HDISP HDISPS010M	SP	P4	75	10	2.5P	SP-75
For deep hole use		⑤⑥⑧	S-SP SSMQ010M	SP	P2			2.5P	SP-53
			(SSQ010M)	SP	P2	75	7	2.5P	SP-53
			S-PO PSMR010M	PO	P3			5P	PO-39
			(PSR010M)	PO	P3			5P	PO-39
For helical coil wire screw thread inserts		⑪⑫	STI-HT TICM010M5					5P	HT-85
			TICM010M1	HT	1b	82	8.5	1.5P	HT-86
			(TIC010M5)					5P	HT-85
			(TIC010M1)					1.5P	HT-86
Nut taps		⑥⑧⑪⑫	NT NH2010M	HT	II	140	7.8	30P	etc-1
Taps M10×0.75									
Standard		⑤⑥⑧⑪⑫	SP SPQ010J	SP	P2			2.5P	SP-7
			N-SP (SNQ010J)	SP	P2	75	7	2.5P	SP-7
			PO POR010J	PO	P3			5P	PO-5
			N-PO (PNR010J)	PO	P3			5P	PO-5
		①⑤⑥⑫	HT (TNMR010J9)					9P	HT-15
			TNMR010J5					5P	HT-15
			TNMR010J1	HT	P3	75	7	1.5P	HT-15
			(TNR010J9)					9P	HT-15
			(TNR010J5)					5P	HT-15
			(TNR010J1)					1.5P	HT-15
Taps M10×0.5									
Standard		⑤⑥⑧⑪⑫	SP SPQ010G	SP	P2	75		2.5P	SP-7
			N-SP (SNQ010G)	SP	P2	55	7	2.5P	SP-7
			PO POQ010G	PO	P2	75		5P	PO-5
			N-PO (PNQ010G)	PO	P2	55		5P	PO-6
		①⑤⑥⑫	HT (TNMQ010G9)			75		9P	HT-15
			TNMQ010G5			75		5P	HT-15
			TNMQ010G1	HT	P2	75	7	1.5P	HT-15
			(TNQ010G9)			55		9P	HT-15
			(TNQ010G5)			55		5P	HT-15
			(TNQ010G1)			55		1.5P	HT-15

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page		
Dies M10×1.5											
Solid dies	HSS	⑥⑧⑪⑫	SD-Y	6G	25	9	2~2.5P	DGG0100	Di-1		
Adjustable dies	SKS		AR-D		25	9		GG20100	Di-2		
	SKS		AR-D		38	13		GJ20100	Di-2		
	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM20100	Di-2		
	HSS		AR-D HSS		25	9		HG20100	Di-13		
	HSS		AR-D HSS		38	13		HJ20100	Di-13		
	For left hand threads	SKS		AR-D LH		25	9		GG20100-L	Di-7	
		SKS		AR-D LH		38	13		GJ20100-L	Di-7	
		SKS	⑥⑧⑪⑫	AR-D LH	II	50	16	2~2.5P	GM20100-L	Di-7	
		HSS		AR-D HSS LH		25	9		HG20100-L	Di-14	
	HSS		AR-D HSS LH		38	13		HJ20100-L	Di-14		
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	25	9	2~2.5P	FGP0100	Di-10	
				P2				FGQ0100	Di-10		
	For brass	SKS	⑪⑫	AD-S BR	P1	25	9	2~2.5P	EGP0100	Di-12	
				P2				EGQ0100	Di-12		
	For stainless steels	HSS	⑥⑦⑧	HS-D	P1	25	9	2~2.5P	HGP0100	Di-15	
				P2				HGQ0100	Di-15		
Dies M10×1.25											
Adjustable dies	SKS		AR-D		25	9		GG2010N	Di-2		
	SKS		AR-D		38	13		GJ2010N	Di-2		
	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2010N	Di-3		
	HSS		AR-D HSS		25	9		HG2010N	Di-13		
	HSS		AR-D HSS		38	13		HJ2010N	Di-13		
	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	25	9	2~2.5P	GG2010N-L	Di-7	
				38	13			GJ2010N-L	Di-7		
	Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P1	25	9	2~2.5P	EGP010N	Di-12
					P2				HGP010N	Di-16	
		For stainless steels	HSS	⑥⑦⑧	HS-D	P1	25	9	2~2.5P	HGP010N	Di-16
			P2				HGQ010N	Di-16			
Dies M10×1											
Adjustable dies	SKS		AR-D		25	9		GG2010M	Di-3		
	SKS		AR-D		38	13		GJ2010M	Di-3		
	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2010M	Di-3		
	HSS		AR-D HSS		25	9		HG2010M	Di-13		
	HSS		AR-D HSS		38	13		HJ2010M	Di-13		
	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	25	9	2~2.5P	GG2010M-L	Di-7	
				38	13			GJ2010M-L	Di-7		
	Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	25	9	2~2.5P	FGP010M	Di-10
					P2				EGP010M	Di-12	
		For brass	SKS	⑪⑫	AD-S BR	P1	25	9	2~2.5P	EGP010M	Di-12
				P2				HGP010M	Di-15		
	For stainless steels	HSS	⑥⑦⑧	HS-D	P1	25	9	2~2.5P	HGP010M	Di-15	
			P2				HGQ010M	Di-15			
Dies M10×0.75											
Adjustable dies					25	9		GG2010J	Di-3		
	SKS	⑥⑧⑪⑫	AR-D	II	38	13	2~2.5P	GJ2010J	Di-3		
					50	16		GM2010J	Di-3		
	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	25	9	2~2.5P	GG2010J-L	Di-8	
	Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P1	25	9	2~2.5P	EGP010J	Di-12

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M10×0.5									
Adjustable dies	SKS		AR-D	II	25	9	2~2.5P	GG2010G	Di-3
					38	13		GJ2010G	Di-3
For left hand threads	SKS		AR-D LH	II	25	9	2~2.5P	GG2010G-L	Di-8

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on reaming machines Dies (SMA)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Q & A

Q7. Please teach how to tell the basic size of screw threads.

- A7. · There are many kinds of threads such as metric threads, unified threads, whitworth threads, pipe threads, trapezoidal threads and others.
- Each thread specifies its own basic thread profiles with thread angle, and truncation of thread crest and thread root.
Depending on the kind of threads and thread size, there define basic size of major diameter of external threads and internal threads, minor diameter of external threads and internal threads and pitch diameter.
 - By defining the tolerance in each basic size, we can define the standard of thread portion in external threads, internal threads, taps, dies, thread plug gages and thread ring gauges.

Q8. Please teach us about Pitch Diameter (PD).

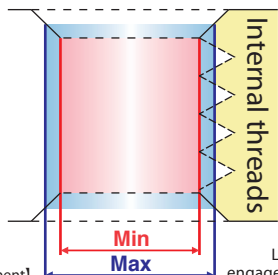
- A8. · Definition tells that PD is the diameter of imaginary cylinder (or cone) where the width of threads equals that of space.
- Mating of external thread and internal thread works when flanks of both threads contact.
 - When the difference between PD of external thread and that of internal thread is small, tight and good engagement comes out, on the other hand, when the difference is big, the engagement is loose and poor.
 - By thread gage inspection, we confirm if PD is finished within the specified tolerance.
We use GO and NO-GO gage of ring gage for external threads and plug gage for internal threads.

Q9. Please teach us how to get pitch from TPI (Threads per inch)

- A9. · TPI of inch threads means the number of threads within an inch.
- Since 1 inch equals 25.4mm, pitch is obtained by formula $25.4 \div \text{number of threads}$.
The pitch of 1/4-20UNC is 1.27mm ($25.4 \div 20$).

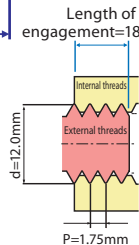
Flow chart : M12 tapping

Check 1 — Boring before tapping

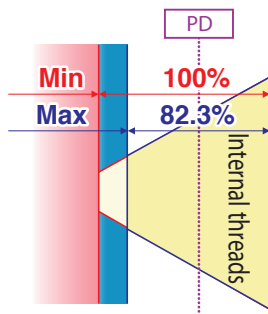


[Length of engagement]
On "middle" engagement class, 7H class can be chosen in case of "L" engagement length.

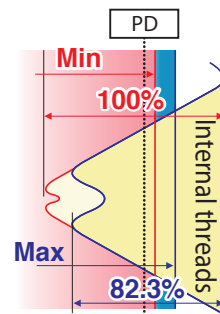
Symbol	Engagement length classification	Engagement classification			Engagement length
		Fine	Middle	Coarse	
S	Short engagement length	4H	5H	—	$S \leq 6(\text{mm})$
M	Normal engagement length	5H	6H	7H	$6 < N \leq 18(\text{mm})$
L	Long engagement length	6H	7H	8H	$18 < L(\text{mm})$



Engagement ratio on cutting taps



Engagement ratio on roll taps



Internal threads made by roll taps are different from those made by cutting taps on the shape of minor diameter.

*Hole size for thread forming taps

Unit: mm	
Min	Max
11.09	11.23

Forming condition changes depending on workpiece's Material, shape. Above is for customer's reference.

	Drill size (ref.)	D1	
		Min	Max
Bored hole size	10.3	10.106	10.441
Engagement ratio	89.7%	100%	82.3%

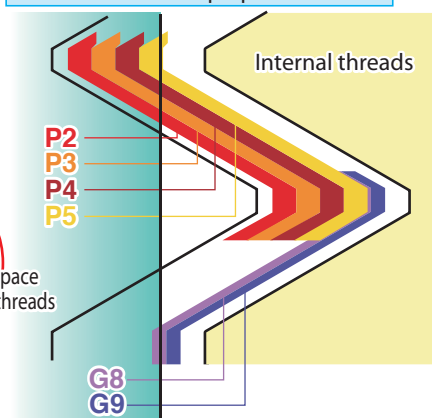
D1 is minor diameter of JIS 6H(2nd Class) of internal threads

Check 2 — Threading

[Pitch diameter]
Diameter of imaginary cylinder or cone which makes equal the width of threads and width of space between the threads



Tolerance area of tap's pitch diameter



[Thread class of cutting taps]

Class	PD tolerance
P2	20μm~40μm
P3	40μm~60μm
P4	60μm~80μm
P5	80μm~100μm

*Above shows the plus tolerance by setting PD basic size as "0".

[Thread class of roll taps]

Class	PD tolerance
G8	89μm~102μm
G9	102μm~114μm

*Above shows the plus tolerance by setting PD basic size as "0".



Tolerance of dies is the target of external threads

Class of dies	6g external threads(-184~-34)	JIS 2Class external threads(-180~-50)
II Adjustable dies	NR GR	WR GR
P1 Solid dies		
P2 Solid dies		

Class of taps	6H internal threads(0~200)	JIS 2Class internal threads(0~160)
G8 G9	GP NP	GP WP
P2 P3 P4 P5		

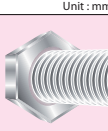
Relative position of PD tolerance area of external threads and internal threads, taps and gages.

Check 3 — Gage check

Ring gage pitch diameter(for external threads inspection)			
NR6g	-202 ~ -184	GR6g	-51 ~ -33
WR II	-180 ~ -172	GR II	-62 ~ -54

NR : NOT GO ring gage GR : GO ring gage
WR : NOT GO working ring gage

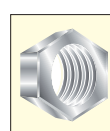
Accuracy of external threads			
	Major diameter	Pitch diameter	Minor diameter
6g	11.701~11.966	10.679~10.829	-
JIS 2class	11.760~11.950	10.683~10.813	~9.803



Plug gage pitch diameter(for internal threads inspection)			
GP6H	7 ~ 17	NP6H	200 ~ 210
GP II	4 ~ 12	WP II	152 ~ 160

GP : GO plug gage NP : NOT GO plug gage
WP : NOT GO working plug gage

Accuracy of internal threads			
	Major diameter	Pitch diameter	Minor diameter
6H	-	10.863~11.063	10.106~10.441
JIS 2class	-	10.863~11.023	10.106~10.441



Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm threads and drawing machines Taps (cm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Taps M12×1.75										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ012P	SP	P2			2.5P	SP-8	
			SPQ012P1	SP	P2			1.5P	SP-8	
		N-SP	(SNQ012P)	SP	P2	82	8.5	2.5P	SP-8	
			(SNQ012P1)	SP	P2			1.5P	SP-8	
		PO	POS012P	PO	P4			5P	PO-6	
		N-PO	(PNS012P)	PO	P4			5P	PO-6	
		① ⑤ ⑥ ⑮ ⑫	HT	(TNMR012P9)					9P	HT-16
			TNMR012P5						5P	HT-16
			TNMR012P1	HT	P3	82	8.5	1.5P	HT-16	
			(TNR012P9)					9P	HT-16	
		(TNR012P5)					5P	HT-16		
		(TNR012P1)					1.5P	HT-16		
	Oversize	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR012P	SP	P3			2.5P	SP-8
				SPS012P	SP	P4			2.5P	SP-8
			N-SP	(SNR012P)	SP	P3	82	8.5	2.5P	SP-8
				(SNS012P)	SP	P4			2.5P	SP-8
			PO	POT012P	PO	P5			5P	PO-6
		N-PO	(PNT012P)	PO	P5			5P	PO-6	
		① ⑤ ⑥ ⑮ ⑫	HT	TNMS012P5					5P	HT-16
			TNMS012P1					1.5P	HT-16	
		(TNS012P9)	HT	P4	82	8.5	9P	HT-16		
		(TNS012P5)					5P	HT-16		
	(TNS012P1)					1.5P	HT-16			
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPQ012P-L	SP	P2			2.5P	SP-27	
		N-SP(LH)	(SNQ012P-L)	SP	P2	82	8.5	2.5P	SP-27	
		PO(LH)	POS012P-L	PO	P4			5P	PO-19	
		N-PO(LH)	(PNS012P-L)	PO	P4			5P	PO-19	
		① ⑤ ⑥ ⑮ ⑫	HT(LH)	(TNMR012P9-L)					9P	HT-44
		TNMR012P5-L					5P	HT-44		
		TNMR012P1-L	HT	P3	82	8.5	1.5P	HT-44		
		(TNR012P9-L)					9P	HT-44		
		(TNR012P5-L)					5P	HT-44		
		(TNR012P1-L)					1.5P	HT-44		
Oxidizing	⑤ ⑥ ⑧	SP-OX	SPQ012PX	SP	P2			2.5P	SP-23	
		N-SP-OX	(SNQ012PX)	SP	P2	82	8.5	2.5P	SP-24	
		PO-OX	POS012PX	PO	P4			5P	PO-17	
		N-PO-OX	(PNS012PX)	PO	P4			5P	PO-17	
TiN coated	⑤ ⑥ ⑧ ⑪ ⑫	SP-V	VSPQ012P	SP	P2			2.5P	SP-29	
		N-SP-V	(VSNQ012P)	SP	P2	82	8.5	2.5P	SP-29	
		PO-V	VPOS012P	PO	P4			5P	PO-22	
		N-PO-V	(VPNS012P)	PO	P4			5P	PO-22	
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPQ012PL10	SP	P2	100		2.5P	SP-34	
			SPQ012PL12	SP	P2	120		2.5P	SP-34	
			SPQ012PL15	SP	P2	150		2.5P	SP-34	
			SPQ012PL20	SP	P2	200		2.5P	SP-34	
		LS-N-SP	(SNQ012PL10)	SP	P2	100	8.5	2.5P	SP-34	
			(SNQ012PL12)	SP	P2	120		2.5P	SP-34	
		(SNQ012PL15)	SP	P2	150		2.5P	SP-34		
		(SNQ012PL20)	SP	P2	200		2.5P	SP-34		
		LS-PO	POS012PL10	PO	P4	100		5P	PO-26	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-PO	POS012PL12			120			PO-26	
			POS012PL15			150			PO-26	
			POS012PL20			200			PO-26	
		LS-N-PO	(PNS012PL10)	PO	P4	100	8.5	5P	PO-26	
			(PNS012PL12)			120			PO-26	
			(PNS012PL15)			150			PO-26	
			(PNS012PL20)			200			PO-26	
		① ⑤ ⑥ ⑮ ⑫	LS-HT	TNMQ012P510			100		5P	HT-53
			TNMQ012P512			120		5P	HT-53	
			TNMQ012P515			150		5P	HT-53	
		TNMQ012P520			200		5P	HT-53		
		TNMQ012P525			250		5P	HT-53		
		TNMQ012P110			100		1.5P	HT-53		
		TNMQ012P112			120		1.5P	HT-53		
		TNMQ012P115			150		1.5P	HT-53		
		TNMQ012P120			200		1.5P	HT-53		
		TNMQ012P125	HT	P2	250	8.5	1.5P	HT-53		
		(L10012P5-Q)			100		5P	HT-53		
		(L12012P5-Q)			120		5P	HT-53		
		(L15012P5-Q)			150		5P	HT-53		
	(L20012P5-Q)			200		5P	HT-53			
	(L25012P5-Q)			250		5P	HT-53			
	(L10012P1-Q)			100		1.5P	HT-53			
	(L12012P1-Q)			120		1.5P	HT-53			
	(L15012P1-Q)			150		1.5P	HT-53			
	(L20012P1-Q)			200		1.5P	HT-53			
	(L25012P1-Q)			250		1.5P	HT-53			
Oversize	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPR012PL15	SP	P3			2.5P	SP-34	
		LS-N-SP	(SNR012PL15)	SP	P3	150	8.5	2.5P	SP-34	
		LS-PO	POT012PL15	PO	P5			5P	PO-26	
		LS-N-PO	(PNT012PL15)	PO	P5			5P	PO-26	
	① ⑤ ⑥ ⑮ ⑫	LS-HT	TNMR012P515			P3	150	5P	HT-53	
		TNMR012P115			P3	150	1.5P	HT-53		
		(L15012P5-R)			P3	150	5P	HT-53		
		(L15012P1-R)			P3	150	1.5P	HT-53		
		TNMS012P515			P4	150	5P	HT-53		
		TNMS012P520	HT	P4	200	8.5	5P	HT-53		
	TNMS012P115			P4	150	1.5P	HT-53			
	TNMS012P120			P4	200	1.5P	HT-53			
	(L15012P5-S)			P4	150	5P	HT-53			
	(L20012P5-S)			P4	200	5P	HT-53			
	(L15012P1-S)			P4	150	1.5P	HT-53			
	(L20012P1-S)			P4	200	1.5P	HT-53			
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP(LH)	SPQ012PL15-L	SP	P2	150	8.5	2.5P	SP-39	
		LS-N-SP(LH)	(SNQ012PL15-L)	SP	P2				SP-39	
	① ⑤ ⑥ ⑮ ⑫	LS-HT(LH)	TNMQ012P515L					5P	HT-66	
		TNMQ012P115L			HT	P2	150	8.5	1.5P	HT-66
	(L15012P5-QL)					5P	HT-66			
	(L15012P1-QL)					1.5P	HT-66			
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP-V	VSPQ012PL15	SP	P2			2.5P	SP-40	
		LS-N-SP-V	(VSNQ012PL15)	SP	P2	150	8.5	2.5P	SP-40	
		LS-PO-V	VPOS012PL15	PO	P4			5P	PO-31	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank TiN coated		5 6 8 10 12	LS-N-PO-V (VPNS012PL15)	PO	P4	150	8.5	5P	PO-31		
			1 5 6 12	LS-HT-V (TNMQ012P510V)			100		5P	HT-69	
					TNMQ012P515V			150		5P	HT-69
					TNMQ012P110V			100		1.5P	HT-69
					TNMQ012P115V	HT	P2	150	8.5	1.5P	HT-69
					(VL10012P5-Q)			100		5P	HT-69
					(VL15012P5-Q)			150		5P	HT-69
					(VL10012P1-Q)			100		1.5P	HT-69
					(VL15012P1-Q)			150		1.5P	HT-69
					For soft structural steels	8		E-SP (ESHMQ012P)	SP	P2	82
(ESHQ012P)									SP-55		
Thread forming taps for steels	6 8		N-RZ (NRZM8012PP)		G8			4P	RO-7		
			(NRZM8012PB)		G8			2P	RO-7		
			(NRZ8012PP)		G8			4P	RO-7		
			(NRZ8012PB)	RO	G8	82	8.5	2P	RO-7		
			(NRZM9012PP)		G9			4P	RO-7		
			(NRZM9012PB)		G9			2P	RO-7		
			(NRZ9012PP)		G9			4P	RO-7		
For high carbon steels	5 6		HC-SP (SCMQ012P)	SP	P2	82	8.5	2.5P	SP-57		
			(SCQ012P)						SP-57		
Oxidizing	5 6		HC-PO (PCMS012P)	PO	P4	82	8.5	5P	PO-41		
			(PCS012P)						PO-41		
For hard-to-machine materials	1 4 5		EH-PO (EPHMS012P)	PO				4.5P	PO-45		
			(EPHS012P)	PO				4.5P	PO-45		
			EH-HT (ETHMS012P5)	HT					5P	HT-93	
			(ETHMS012P1)	HT	P4	82	8.5	2.5P	HT-93		
			(ETHS012P5)	HT					5P	HT-93	
			(ETHS012P1)	HT					2.5P	HT-93	
	Powder HSS	4 5		PM-SP	SP	P3	82		3P	SP-70	
				LS-PM-SP	SP	P3	150	8.5	3P	SP-71	
				PM-PO	PO	P4	82		5.5P	PO-47	
For titanium alloys	4 5 6 9		ZET-B (ZETBMR012P)	SP	P3			3P	SP-67		
			(ZETBR012P)	SP	P3			3P	SP-67		
			ZET-P (ZETPMT012P)	SL	P5	82	8.5	5P	SL-4		
			(ZETPT012P)	SL	P5			5P	SL-4		
For nickel base alloys	6 7 8 10		ZEN-B (ZENBMR012P)	SP	P3			3P	SP-69		
			(ZENBR012P)	SP	P3			3P	SP-69		
			ZEN-P (ZENPMT012P)	PO	P5	82	8.5	4.5P	PO-46		
			(ZENPT012P)	PO	P5			4.5P	PO-46		
Carbide taps for hard materials	2 3		UH-CT (UHCS012P5)	HT	P4	82	10.5	5P	CT-10		
			EH-CT (EHCS012P5)	HT	P4	82	8.5	5P	CT-10		
For stainless steels	6 7 8		SU-SP (SUMQ012P)	SP	P2			2.5P	SP-43		
			(SUQ012P)	SP	P2			2.5P	SP-43		
			SU-PO (PUMS012P)	PO	P4			5P	PO-34		
			(PUS012P)	PO	P4			5P	PO-34		
			SU-HT (TUMS012P9)	HT	P4	82	8.5	9P	HT-72		
			TUMS012P4	HT	P4			4P	HT-72		
			TUMS012P1	HT	P4			1.5P	HT-72		
			(TUS012P9)	HT	P4			9P	HT-72		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
For stainless steels	6 7 8		SU-HT (TUS012P4)	HT	P4	82	8.5	4P	HT-72			
			(TUS012P1)					1.5P	HT-72			
			Oversize	6 7 8		SU-SP (SUMR012P)	SP	P3		2.5P	SP-43	
						(SUR012P)	SP	P3		2.5P	SP-43	
						SUMS012P	SP	P4	82	8.5	2.5P	SP-43
						(SUS012P)	SP	P4			2.5P	SP-43
						SU-PO (PUMT012P)	PO	P5			5P	PO-34
						(PUT012P)	PO	P5			5P	PO-34
			For deep hole use	6 7 8		SU-S-SP (SSMQ012P-SU)	SP	P2	82		2.5P	SP-50
						(SSQ012P-SU)	SP	P2	82		2.5P	SP-50
LS-SU-S-SP	SP	P2				150	8.5	2.5P	SP-51			
LS-SU-S-PO	PO	P4				150		5P	PO-38			
For hard-to-machine materials	5 6 7		SU2-SP (SU2MR012P)	SP	P3	82	8.5	3P	SP-49			
			(SU2R012P)						SP-49			
For cast irons	1		FC-O (TFCM012P5)					5P	HT-78			
			(TFCM012P1)	HT	70-40	82	8.5	1.5P	HT-78			
			(TFC012P5)					5P	HT-78			
			(TFC012P1)					1.5P	HT-78			
			Carbide	1 12 13		N-CT-FC (TCNR012P3)		P3			3P	CT-4
						(TCNR012P1)	HT				1.5P	CT-5
						(TCNS012P3)		P4	82	8.5	3P	CT-4
For aluminum alloys	Carbide spiral fluted taps 1 12 13		N-CT-SP	SP	P4	82	8.5	2.5P	CT-8			
			Carbide spiral pointed taps 1 12 13	N-CT-PO (PCNS012P)	PO	P4	82	8.5	5P	CT-8		
For aluminum alloys	11 12		AL-SP (ASHMR012P)	SP	P3			2.5P	SP-61			
			(ASHMR012P1)	SP	P3			1.5P	SP-61			
			(ASHR012P)	SP	P3			2.5P	SP-61			
			(ASHR012P1)	SP	P3			1.5P	SP-61			
			LA-O (TLAM012P5)	HT	75-45	82	8.5	5P	HT-81			
			(TLAM012P1)	HT	75-45			1.5P	HT-82			
			(TLA012P5)	HT	75-45			5P	HT-82			
			(TLA012P1)	HT	75-45			1.5P	HT-82			
			AXE	12		AXE-HT (TAXEMR012P1)	HT	P3	82	8.5	1.5P	HT-84
						(TAXER012P1)						HT-84
Carbide	11 12 13		N-CT-LA (TCNR012P3A)	HT	P3	82	8.5	3P	CT-2			
			(TCNR012P1A)					1.5P	CT-2			
For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT (MCADS012P1)	HT	P4	100	8.5	1.5P	CT-9			
Thread forming taps for non-ferrous materials	11 12		N-RS (NRSM8012PP)		G8			4P	RO-17			
			(NRSM8012PB)		G8			2P	RO-17			
			(NRS8012PP)		G8			4P	RO-17			
			(NRS8012PB)	RO	G8	82	8.5	2P	RO-17			
			(NRSM9012PP)		G9			4P	RO-17			
			(NRSM9012PB)		G9			2P	RO-17			
			(NRS9012PP)		G9			4P	RO-17			
			(NRS9012PB)		G9			2P	RO-17			
			X series	For general steels	5 6 8 10 12	XSP (SNXR012P)	SP	P3			2.5P	SP-22
						XSL (SNXS012PL)	SL	P4	110	12	5P	SL-1
TiN coated	7 8 11 12			AUXSP (VSAXR012P)	SP	P3		2.5P	SP-30			
				AUXSL (VSAXS012PL)	SL	P4	110	12	5P	SL-2		
For stainless steels	6 7 8			SUXSP (SUXS012P)	SP	P4	110	12	2.5P	SP-48		
				SUXSL (SUXS012PL)	SL	P4	110	12	5P	SL-3		
High speed tapping	5 6 8 11 12 13		F-SP (VFSHMS012P)	SP	P4	82	8.5	2.5P	SP-71			

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
High speed tapping	⑤⑥⑧ ⑪⑫⑬	F-SP	(VFSHS012P)	SP		82		2.5P	SP-71
		LS-F-SP	-	SP		150		2.5P	SP-72
		F-SL	VFSHMS012PL	SL	P4	82	8.5	5P	SL-5
			(VFSHS012PL)	SL		82		5P	SL-5
		LS-F-SL	-	SL		150		5P	SL-5
Ultra fast tapping (with coolant hole)	For steels	⑤⑥⑧ HFIHS	HFIHSS012P	SP	P4	82	12	2.5P	SP-73
		①⑤⑥ HFISP	HFISPS012P	SP	P4	82	12	2.5P	SP-73
	Carbide taps for cast irons	①⑫ HFICT-B	HFICTBR012P	HT	P3	82	12	2.5P	CT-12
		HFICT-P	HFICTPR012P	HT				4P	CT-12
For non-ferrous materials	⑪⑫ HFAHS	HFAHSS012P	SP	P4	82	12	2.5P	SP-74	
	HFASP	HFASPS012P	SP					SP-74	
Carbide taps for non-ferrous materials	⑪⑫⑬	HFACT-B	HFACTBR012P	HT	P3	82	12	2.5P	CT-11
		HFACT-P	HFACTPR012P	HT				4P	CT-11
For dry tapping (with coolant hole)	For steels	①⑤⑥ HDISP	HDISPS012P	SP	P4	82	12	2.5P	SP-75
	For non-ferrous materials	⑪⑫ HDASP	HDASPS012P	SP	P4	82	12	2.5P	SP-75
Ultra fast tapping (with coolant hole)	For both steels and non ferrous materials	①⑤⑥⑪⑫ HDISL	HDISLS012P	SL	P4	82	12	5P	SL-6
High performance thread forming taps, TiCN coated	⑤⑥⑦ ⑪⑫	HP-RZ	HRZM8012PP	G8				4P	RO-32
			HRZM8012PB	G8				2P	RO-32
			(HRZ8012PP)	G8				4P	RO-32
			(HRZ8012PB)	G8				2P	RO-32
			HRZM9012PP	RO	G9	82	8.5	4P	RO-32
			HRZM9012PB	G9				2P	RO-32
			(HRZ9012PP)	G9				4P	RO-32
For deep hole use	⑤⑥⑧	S-SP	SSMQ012P	SP	P2			2.5P	SP-53
			(SSQ012P)	SP	P2			2.5P	SP-53
		S-PO	PSMS012P	PO	P4	82	8.5	5P	PO-39
			(PSS012P)	PO	P4			5P	PO-39
		⑤⑥⑧ S-SP	SSMR012P	SP	P3	82	8.5	2.5P	SP-53
	(SSR012P)	SP					SP-53		
Low spiral fluted taps	①⑤⑥ ⑪⑫	LO-SP 8°	LSHMQ012P8			82			SP-65
			(LSHQ012P8)			82			SP-65
		LO-SP 15°	LSHMQ012P15			82			SP-65
			(LSHQ012P15)	SP	P2	82	8.5	2.5P	SP-65
		LO-SP 20°	LSHMQ012P20			82			SP-65
			(LSHQ012P20)			82			SP-65
LS-LO-SP	LSHMQ012PL15			150				SP-65	
	(LSHQ012PL15)			150				SP-65	
Spiral fluted taps, universal use, BLF design	⑤⑥⑧⑪⑫	U-SP	USNR012P	SP	P3	82	8.5	2.5P	SP-60
For helical coil wire screw thread inserts	⑪⑫	STI-SP	STIMC012P	SP	1b	95	12.5	2.5P	SP-63
			(STIC012P)	SP	1b	90	10.5	2.5P	SP-63
		PO STI	(-)	PO	1b	95	12.5	5P	PO-43
		N-PO STI	-	PO	1b	90	10.5	5P	PO-43
		STI-HT	TICM012P5	HT	1b	95	12.5	5P	HT-86
			TICM012P1	HT	1b	95	12.5	1.5P	HT-86
			(TIC012P5)	HT	1b	90	10.5	5P	HT-86
			(TIC012P1)	HT	1b	90	10.5	1.5P	HT-86
N-RS STI	NRSM6IC012PB	RO	G6	95	12.5	2P	RO-23		
	(NRS6IC012PB)	RO	G6	90	10.5	2P	RO-23		
With coolant hole	⑤⑥⑧ ⑪⑫	MC-SP	MSHQ012PL10	SP	P2	100	8.5	2.5P	SP-67
			MSHQ012PL15	SP	P2	150			SP-67
		①⑤⑥⑪⑫ MC-PO	MPHS012PL10	PO	P4	100	8.5	5P	PO-44

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
With coolant hole	①⑤⑥ ⑪⑫	MC-PO	MPHS012PL15	PO	P4	150		5P	PO-44		
		MC-HT	ML10012P5-Q	HT	P2	100		5P	HT-91		
			ML15012P5-Q	HT	P2	150		5P	HT-91		
			ML20012P5-Q	HT	P2	200	8.5	5P	HT-91		
			ML10012P1-Q	HT	P2	100		1.5P	HT-91		
			ML15012P1-Q	HT	P2	150		1.5P	HT-91		
			ML20012P1-Q	HT	P2	200		1.5P	HT-91		
			ML20012P1-Q	HT	P2	200		1.5P	HT-91		
Nut taps	⑥⑧⑪⑫	NT	NH2012P	HT	II b	170	9	26P	etc-1		
Taps M12×1.5											
Standard	⑤⑥⑧ ⑪⑫	SP	SPQ0120	SP	P2			2.5P	SP-8		
			SPQ01201	SP	P2			1.5P	SP-8		
		N-SP	(SNQ0120)	SP	P2		82	8.5	2.5P	SP-8	
			(SNQ01201)	SP	P2				1.5P	SP-8	
		PO	POR0120	PO	P3				5P	PO-6	
			(PNR0120)	PO	P3				5P	PO-6	
		①⑤⑥⑪⑫ HT	(TNMR01209)						9P	HT-16	
			TNMR01205						5P	HT-17	
			TNMR01201	HT	P3	82	8.5		1.5P	HT-17	
			(TNR01209)						9P	HT-16	
			(TNR01205)						5P	HT-17	
			(TNR01201)						1.5P	HT-17	
		Oversize	⑤⑥⑧ ⑪⑫	SP	SPR0120	SP	P3			2.5P	SP-8
					SPS0120	SP	P4			2.5P	SP-8
				N-SP	(SNR0120)	SP	P3			2.5P	SP-8
	(SNS0120)			SP	P4			2.5P	SP-8		
PO	POS0120			PO	P4	82	8.5	5P	PO-6		
	POT0120			PO	P5			5P	PO-6		
	(PNS0120)			PO	P4			5P	PO-6		
	(PNT0120)			PO	P5			5P	PO-6		
①⑤⑥⑪⑫ HT	TNMS01205								5P	HT-17	
	TNMS01201			HT	P4	82	8.5		1.5P	HT-17	
	(TNS01205)						5P	HT-17			
	(TNS01201)						1.5P	HT-17			
For left hand threads	⑤⑥⑧ ⑪⑫	SP(LH)	SPQ0120-L	SP	P2			2.5P	SP-27		
		N-SP(LH)	(SNQ0120-L)	SP	P2			2.5P	SP-27		
			(SNQ0120-L)	SP	P2		82	8.5	2.5P	SP-27	
		PO(LH)	POR0120-L	PO	P3			5P	PO-19		
			(PNR0120-L)	PO	P3			5P	PO-19		
		①⑤⑥⑪⑫ HT(LH)	(TNMR01209-L)						9P	HT-44	
			TNMR01205-L						5P	HT-44	
			TNMR01201-L	HT	P3	82	8.5		1.5P	HT-44	
	(TNR01209-L)						9P	HT-44			
	(TNR01205-L)						5P	HT-44			
	(TNR01201-L)						1.5P	HT-44			
TiN coated	⑤⑥⑧ ⑪⑫	SP-V	VSPQ0120	SP	P2			2.5P	SP-29		
		N-SP-V	(VSNQ0120)	SP	P2			2.5P	SP-29		
			(VSNQ0120)	SP	P2		82	8.5	2.5P	SP-29	
		PO-V	VPOR0120	PO	P3			5P	PO-22		
	(VPNR0120)	PO	P3			5P	PO-22				
Long shank	⑤⑥⑧ ⑪⑫	LS-SP	SPQ0120L10			100			SP-34		
			SPQ0120L15	SP	P2	150	8.5	2.5P	SP-34		
			SPQ0120L20	SP	P2	200			SP-34		
		LS-N-SP	(SNQ0120L10)			100			SP-34		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	5 6 8 11 12	LS-N-SP	(SNQ0120L15)	SP	P2	150		2.5P	SP-34			
			(SNQ0120L20)	SP	P2	200		2.5P	SP-34			
		LS-PO	(POR0120L10)	PO	P3	100			5P	PO-26		
			(POR0120L15)	PO	P3	150		8.5	5P	PO-26		
		POR0120L20	(POR0120L20)	PO	P3	200			5P	PO-26		
			(PNR0120L10)	PO	P3	100			5P	PO-26		
		(PNR0120L15)	(PNR0120L15)	PO	P3	150			5P	PO-26		
			(PNR0120L20)	PO	P3	200			5P	PO-26		
		1 5 6 12	LS-HT	(TNMQ0120S10)				100		5P	HT-53	
				(TNMQ0120S12)				120		5P	HT-53	
	(TNMQ0120S15)						150		5P	HT-53		
	(TNMQ0120S20)						200		5P	HT-53		
	(TNMQ0120H10)						100		1.5P	HT-53		
	(TNMQ0120H12)						120		1.5P	HT-54		
	(TNMQ0120H15)						150		1.5P	HT-54		
	(TNMQ0120H20)						200		1.5P	HT-54		
	(L100120S-Q)			HT	P2	100		8.5	5P	HT-53		
	(L120120S-Q)					120			5P	HT-53		
	Oversize	1 5 6 12	LS-HT	(TNMS0120S15)			150		5P	HT-54		
				(TNMS0120S20)			200		5P	HT-54		
(TNMS0120H15)						150		1.5P	HT-54			
(TNMS0120H20)						200		1.5P	HT-54			
(L150120S-S)				HT	P4	150		8.5	5P	HT-54		
(L200120S-S)						200			5P	HT-54		
(L150120I-S)						150		1.5P	HT-54			
(L200120I-S)						200		1.5P	HT-54			
For left hand threads				5 6 8 11 12	LS-SP(LH)	(SPQ0120L15-L)	SP	P2	150	8.5	2.5P	SP-39
						(SNQ0120L15-L)						SP-39
	1 5 6 12	LS-HT(LH)	(TNMQ0120S15L)						5P	HT-66		
			(TNMQ0120H15L)						1.5P	HT-66		
			(L150120S-QL)		HT	P2	150	8.5	5P	HT-66		
	TIN coated	5 6 8 11 12	LS-SP-V	(VSPQ0120L15)	SP	P2			2.5P	SP-40		
				(VSNQ0120L15)	SP	P2	150	8.5	2.5P	SP-40		
			LS-PO-V	(VPOR0120L15)	PO	P3				5P	PO-31	
				(VPNR0120L15)	PO	P3				5P	PO-31	
			1 5 6 12	LS-HT-V	(TNMQ0120S10V)				100		5P	HT-69
(TNMQ0120S15V)						150		5P	HT-69			
(TNMQ0120H10V)						100		1.5P	HT-69			
(TNMQ0120H15V)						150		1.5P	HT-69			
(VL100120S-Q)	HT	P2			100	8.5	5P	HT-69				
For soft structural steels	8	E-SP	(ESHMQ0120)	SP	P2	82	8.5	2.5P	SP-55			
			(ESHQ0120)						SP-55			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Thread forming taps for steels	6 8	N-RZ	(NRZM80120P)					4P	RO-7		
			(NRZM80120B)	RO	G8	82	8.5	2P	RO-8		
			(NRZ80120P)						4P	RO-7	
For high carbon steels	5 6	HC-SP	(SCMQ0120)	SP	P2	82	8.5	2.5P	SP-57		
			(SCQ0120)						SP-57		
For hard-to-machine materials	1 5 6	HC-PO	(PCMR0120)	PO	P3	82	8.5	5P	PO-41		
			(PCR0120)						PO-41		
For titanium alloys	4 5 6 9	ZET-B	(ZETBMR0120)	SP	P3			3P	SP-67		
			(ZETBR0120)	SP	P3	82	8.5	3P	SP-67		
		ZET-P	(ZETPMS0120)	SL	P4				5P	SL-4	
			(ZETPS0120)	SL	P4				5P	SL-4	
			(ZETPS0120)	SL	P4				5P	SL-4	
For nickel base alloys	6 7 8 10	ZEN-B	(ZENBMR0120)	SP	P3			3P	SP-69		
			(ZENBR0120)	SP	P3	82	8.5	3P	SP-69		
		ZEN-P	(ZENPMS0120)	PO	P4				4.5P	PO-46	
			(ZENPS0120)	PO	P4				4.5P	PO-46	
Carbide taps for hard materials	2	UH-CT	(UHCS0120S)	HT	P4	82	10.5	5P	CT-10		
For stainless steels	6 7 8	SU-SP	(SUMQ0120)	SP	P2			2.5P	SP-44		
			(SUQ0120)	SP	P2			2.5P	SP-44		
			(PUMR0120)	PO	P3				5P	PO-34	
			(PUR0120)	PO	P3	82	8.5	5P	PO-34		
			(TUMR0120A)	HT	P3			4P	HT-72		
		Oversize	6 7 8	SU-SP	(SUMR0120)	SP	P3			2.5P	SP-44
					(SUR0120)	SP	P3			2.5P	SP-44
					(SUMS0120)	SP	P4	82	8.5	2.5P	SP-44
					(SUS0120)	SP	P4			2.5P	SP-44
					(PUMT0120)	PO	P5			5P	PO-34
For hard-to-machine materials	5 6 7	SU2-SP	(SU2MR0120)	SP	P3	82	8.5	3P	SP-49		
			(SU2R0120)					SP-49			
For cast irons	1	FC-O	(TFCM0120S)					5P	HT-78		
			(TFCM0120I)	HT	70-40	82	8.5	1.5P	HT-78		
			(TFC0120S)					5P	HT-78		
			(TFC0120I)					1.5P	HT-78		
Carbide	1 12 13	N-CT FC	(TCNR01203)	P3				3P	CT-5		
			(TCNR0120I)	P3				1.5P	CT-5		
			(TCNS01203)	HT	P4	82	8.5	3P	CT-5		
			(TCNS0120I)	P4				1.5P	CT-5		
For aluminum alloys	11 12 13	AL-SP	(ASHMR0120)					2.5P	SP-61		
			(ASHMR0120I)					1.5P	SP-61		
			(ASHR0120)	SP	P3	82	8.5	2.5P	SP-61		
			(ASHR0120I)					1.5P	SP-62		
For aluminum alloys	11 12	LA-O	(TLAM0120S)	HT	75-45	82	8.5	5P	HT-82		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamp machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Note 1													
For aluminum alloys	11 12	LA-O	TLAM01201					1.5P	HT-82				
			(TLA01205)	HT	J5-6	82	8.5	5P	HT-82				
			(TLA01201)					1.5P	HT-82				
	AXE	12	AXE-HT	TAXEMR01201	HT	P3	82	8.5	1.5P	HT-84			
				(TAXER01201)						HT-84			
	Carbide	11 12 13	N-CT LA	TCNR01203A		P3			3P	CT-2			
				TCNR01201A	HT	P3	82	8.5	1.5P	CT-2			
				TCNS01203A		P4			3P	CT-2			
				TCNS01201A		P4			1.5P	CT-2			
	For aluminum alloys (with coolant hole)	Carbide	11 12	MC-AD-CT	MCADS01201	HT	P4	100	8.5	1.5P	CT-9		
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM80120P		G8			4P	RO-17				
			NRSM80120B		G8			2P	RO-17				
			(NRS80120P)		G8			4P	RO-17				
			(NRS80120B)	RO	G8	82	8.5	2P	RO-17				
			NRSM90120P		G9			4P	RO-17				
			(NRS90120P)		G9			2P	RO-17				
			(NRS90120B)		G9			4P	RO-17				
			(NRS90120B)		G9			2P	RO-17				
			X series	For general steels	5 6 8 11 12	XSP	SNXR0120	SP	P3	110	12	2.5P	SP-22
						XSL	SNXR0120L	SL	P3	110	12	5P	SL-1
	TiN coated	7 8 11 12	AUXSP	VSAXR0120	SP	P3	110	12	2.5P	SP-30			
			AUXSL	VSAXR0120L	SL	P3	110	12	5P	SL-2			
	For stainless steels	6 7 8	SUXSP	SUXS0120	SP	P3	110	12	2.5P	SP-48			
			SUXSL	SUXS0120L	SL	P4			5P	SL-3			
High speed tapping	5 6 8 11 12 13	F-SP	VFSHMR0120	SP				2.5P	SP-71				
			(VFSHR0120)	SP	P3	82	8.5	2.5P	SP-71				
			F-SL	VFSHMR0120L	SL			5P	SL-5				
			(VFSHR0120L)	SL			5P	SL-5					
Ultra fast tapping (with coolant hole)	For steels	5 6 8 11 12	HFIHS	HFIHS0120	SP	P4	82	12	2.5P	SP-73			
			1 5 6	HFISP	HFISP0120	SP	P4	82	12	2.5P	SP-73		
	Carbide taps for cast irons	1 12	HFICT-B	HFICTBR0120	HT	P3	82	12	2.5P	CT-12			
				HFICT-P	HFICTPR0120	HT	P3	82	12	4P	CT-12		
	For non-ferrous materials	11 12	HFAHS	HFAHS0120	SP	P4	82	12	2.5P	SP-74			
				HFAFP	HFAFSP0120	SP	P4	82	12	2.5P	SP-74		
	Carbide taps for non-ferrous materials	11 12 13	HFACT-B	HFACTBR0120	HT	P3	82	12	2.5P	CT-12			
				HFACT-P	HFACTPR0120	HT	P3	82	12	4P	CT-11		
	For dry tapping (with coolant hole)	For steels	1 5 6	HDISP	HDISP0120	SP	P4	82	12	2.5P	SP-75		
				11 12	HDAFP	HDAFSP0120	SP	P4	82	12	2.5P	SP-75	
Ultra fast tapping (with coolant hole)	For both steels and non-ferrous materials	1 5 6 11 12	HDISL	HDISL0120	SL	P4	82	12	5P	SL-6			
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM80120P		G8			4P	RO-32				
			HRZM80120B		G8			2P	RO-32				
			(HRZ80120P)		G8			4P	RO-32				
			(HRZ80120B)	RO	G8	82	8.5	2P	RO-32				
			HRZM90120P		G9			4P	RO-32				
			(HRZ90120P)		G9			2P	RO-32				
			(HRZ90120B)		G9			4P	RO-32				
			(HRZ90120B)		G9			2P	RO-32				
			For deep hole use	5 6 8	S-SP	SSMQ0120	SP	P2			2.5P	SP-53	
			(SSQ0120)			SP	P2	82	8.5	2.5P	SP-53		
S-PO	PSMR0120	PO	P3					5P	PO-39				
			(PSR0120)	PO	P3			5P	PO-39				
Low spiral fluted taps	1 5 6 11 12	LS-LO-SP	LSHMQ0120L15	SP	P2	150	8.5	2.5P	SP-65				

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Note 1										
Low spiral fluted taps	1 5 6 11 12	LS-LO-SP	(LSHQ0120L15)	SP	P2	150	8.5	2.5P	SP-65	
			U-SP	USNR0120	SP	P3	82	8.5	2.5P	SP-60
Spiral fluted taps, universal use, BLF design	5 6 8 11 12	STI-SP	STIMC0120	SP				2.5P	SP-63	
			(STIC0120)	SP				2.5P	SP-63	
			STI-HT	TICM0120S	HT	1b	88	10.5	5P	HT-86
			TICM01201	HT				1.5P	HT-86	
			(TIC0120S)	HT				5P	HT-86	
			(TIC01201)	HT				1.5P	HT-86	
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC0120	SP				2.5P	SP-63	
(STIC0120)			SP				2.5P	SP-63		
STI-HT			TICM0120S	HT	1b	88	10.5	5P	HT-86	
TICM01201			HT				1.5P	HT-86		
(TIC0120S)			HT				5P	HT-86		
(TIC01201)			HT				1.5P	HT-86		
With coolant hole	5 6 8 11 12	MC-SP	MSHQ0120L10	SP	P2	100	8.5	2.5P	SP-67	
			1 5 6	MC-PO	MPHR0120L10	PO	P3	100		5P
	11 12	MC-PO	MPHR0120L15	PO	P3	150		5P	PO-44	
			MC-HT	ML100120S-Q	HT	P2	100		5P	HT-91
	11 12	MC-HT	ML150120S-Q	HT	P2	150		5P	HT-91	
			ML200120S-Q	HT	P2	200	8.5	5P	HT-91	
	11 12	MC-HT	ML100120I-Q	HT	P2	100		1.5P	HT-91	
			ML150120I-Q	HT	P2	150		1.5P	HT-91	
	11 12	MC-HT	ML200120I-Q	HT	P2	200		1.5P	HT-91	
Nut taps	6 8 11 12	NT	NH20120	HT	II	160	9	27P	etc-1	

Taps M12×1.25												
Standard	5 6 8 11 12	SP	SPQ012N	SP	P2			2.5P	SP-8			
			SPQ012N1	SP	P2			1.5P	SP-8			
			N-SP	(SNQ012N)	SP	P2	82	8.5	2.5P	SP-8		
			SNQ012N1	SP	P2			1.5P	SP-8			
			PO	POS012N	PO	P4			5P	PO-6		
			N-PO	(PNS012N)	PO	P4			5P	PO-6		
			1 5 6 12	HT	(TNMS012N9)					9P	HT-17	
					TNMS012N5					5P	HT-17	
					TNMS012N1	HT	P4	82	8.5	1.5P	HT-17	
					(TNS012N9)				9P	HT-17		
					(TNS012N5)				5P	HT-17		
					(TNS012N1)				1.5P	HT-17		
			Oversize	5 6 8 11 12	SP	SPR012N	SP	P3			2.5P	SP-8
						SPS012N	SP	P4			2.5P	SP-8
						N-SP	(SNR012N)	SP	P3	82	8.5	2.5P
(SNS012N)	SP	P4						2.5P	SP-8			
PO	POT012N	PO				P5			5P	PO-6		
N-PO	(PNT012N)	PO				P5			5P	PO-6		
For left hand threads	5 6 8 11 12	SP(LH)	SPQ012N-L	SP	P2			2.5P	SP-27			
			N-SP(LH)	(SNQ012N-L)	SP	P2	82	8.5	2.5P	SP-27		
			PO(LH)	POS012N-L	PO	P4			5P	PO-19		
			N-PO(LH)	(PNS012N-L)	PO	P4			5P	PO-19		
			1 5 6 12	HT(LH)	(TNMS012N9-L)					9P	HT-44	
					TNMS012N5-L					5P	HT-44	
					TNMS012N1-L	HT	P4	82	8.5	1.5P	HT-44	
					(TNS012N9-L)				9P	HT-44		
					(TNS012N5-L)				5P	HT-44		
					(TNS012N1-L)				1.5P	HT-44		
TiN coated	5 6 8 11 12	SP-V	VSPQ012N	SP	P2			2.5P	SP-29			
			N-SP-V	(VSNQ012N)	SP	P2	82	8.5	2.5P	SP-29		
			PO-V	VPOS012N	PO	P4			5P	PO-22		
			N-PO-V	(VPNS012N)	PO	P4			5P	PO-22		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	5 6 8 11 12	LS-SP	SPQ012NL10	SP	P2	100		2.5P	SP-34			
			SPQ012NL12	SP	P2	120		2.5P	SP-34			
			SPQ012NL15	SP	P2	150		2.5P	SP-34			
			SPQ012NL20	SP	P2	200		2.5P	SP-34			
		LS-N-SP	(SNQ012NL10)	SP	P2	100		2.5P	SP-34			
			(SNQ012NL12)	SP	P2	120		2.5P	SP-34			
			(SNQ012NL15)	SP	P2	150		2.5P	SP-34			
			(SNQ012NL20)	SP	P2	200		2.5P	SP-34			
		LS-PO	POS012NL10	PO	P4	100			5P	PO-26		
			POS012NL15	PO	P4	150			5P	PO-26		
			POS012NL20	PO	P4	200			5P	PO-26		
			LS-N-PO	(PNS012NL10)	PO	P4	100		5P	PO-26		
		1 5 6 12	LS-HT	TNMQ012N510				100		5P	HT-54	
				TNMQ012N512				120		5P	HT-54	
				TNMQ012N515				150		5P	HT-54	
	TNMQ012N520						200		5P	HT-54		
	TNMQ012N110						100		1.5P	HT-54		
	TNMQ012N112						120		1.5P	HT-54		
	TNMQ012N115						150		1.5P	HT-54		
	TNMQ012N120						200		1.5P	HT-54		
	(L10012N5-Q)			HT	P2		100		8.5	5P	HT-54	
	(L12012N5-Q)						120			5P	HT-54	
	(L15012N5-Q)				150			5P	HT-54			
	(L20012N5-Q)				200			5P	HT-54			
	(L10012N1-Q)				100			1.5P	HT-54			
	(L12012N1-Q)				120			1.5P	HT-54			
	(L15012N1-Q)				150			1.5P	HT-54			
	(L20012N1-Q)				200			1.5P	HT-54			
	Oversize	1 5 6 12	LS-HT	TNMS012N515			150		5P	HT-54		
				TNMS012N520			200		5P	HT-54		
				TNMS012N115			150		1.5P	HT-54		
				TNMS012N120			200		1.5P	HT-54		
				(L15012N5-S)	HT	P4		150		8.5	5P	HT-54
				(L20012N5-S)				200			5P	HT-54
				(L15012N1-S)				150			1.5P	HT-54
(L20012N1-S)							200			1.5P	HT-54	
For left hand threads				5 6 8 11 12	LS-SP(LH)	SPQ012NL15-L	SP	P2	150	8.5	2.5P	SP-39
						LS-N-SP(LH)	(SNQ012NL15-L)					
	1 5 6 12	LS-HT(LH)	TNMQ012N515L						5P	HT-66		
			TNMQ012N115L						1.5P	HT-66		
			(L15012N5-QL)	HT	P2	150	8.5		5P	HT-66		
			(L15012N1-QL)							1.5P	HT-66	
TiN coated	5 6 8 11 12	LS-SP-V	VSPQ012NL15	SP	P2			2.5P	SP-40			
			LS-N-SP-V	(VSNQ012NL15)	SP	P2	150	8.5	2.5P	SP-40		
			LS-PO-V	VPOS012NL15	PO	P4			5P	PO-31		
			LS-N-PO-V	(VPNS012NL15)	PO	P4			5P	PO-31		
	1 5 6 12	LS-HT-V	TNMQ012N510V			100		5P	HT-69			
			TNMQ012N515V			150		5P	HT-69			
			TNMQ012N110V	HT	P2	100	8.5		1.5P	HT-69		
					150		1.5P	HT-69				
Long shank	TiN coated	1 5 6 12	LS-HT-V	(VL10012N5-Q)			100		5P	HT-69		
				(VL15012N5-Q)	HT	P2	150	8.5	5P	HT-69		
				(VL10012N1-Q)			100		1.5P	HT-69		
				(VL15012N1-Q)			150		1.5P	HT-69		
				For soft structural steels	8	E-SP	ESHMQ012N	SP	P2	82	8.5	2.5P
				(ESHQ012N)					SP-55			
	Thread forming taps for steels	6 8	N-RZ	NRZM8012NP			G8		4P	RO-8		
				NRZM8012NB			G8		2P	RO-8		
				(NRZ8012NP)			G8		4P	RO-8		
				(NRZ8012NB)	RO		G8	82	8.5	2P	RO-8	
				NRZM9012NP			G9		4P	RO-8		
				NRZM9012NB			G9		2P	RO-8		
				(NRZ9012NP)			G9		4P	RO-8		
				(NRZ9012NB)			G9		2P	RO-8		
	For high carbon steels	5 6	HC-SP	SCMQ012N	SP	P2	82	8.5	2.5P	SP-57		
(SCQ012N)									SP-57			
1 5 6		HC-PO	PCMS012N	PO	P4	82	8.5	5P	PO-41			
			(PCS012N)						PO-41			
For hard-to-machine materials	1 4 5	EH-PO	EPHMS012N	PO				4.5P	PO-45			
			(EPHS012N)	PO				4.5P	PO-45			
		EH-HT	ETHMS012N5	HT		P4	82	8.5	5P	HT-94		
			ETHMS012N1	HT					2.5P	HT-94		
			(ETHS012N5)	HT					5P	HT-94		
(ETHS012N1)	HT					2.5P	HT-94					
For titanium alloys	4 5 6 9	ZET-B	ZETBMR012N	SP	P3			3P	SP-67			
			(ZETBR012N)	SP	P3	82	8.5	3P	SP-68			
		ZET-P	ZETPMT012N	SL	P5			5P	SL-4			
			(ZETPT012N)	SL	P5			5P	SL-4			
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR012N	SP	P3	82	8.5	3P	SP-69			
			(ZENBR012N)						SP-69			
		ZEN-P	ZENPMT012N	PO	P5	8.5	8.5	4.5P	PO-46			
			(ZENPT012N)						PO-47			
Carbide taps for hard materials	2	UH-CT	UHCS012N5	HT	P4	82	10.5	5P	CT-10			
For stainless steels	6 7 8	SU-SP	SUMQ012N	SP	P2			2.5P	SP-44			
			(SUQ012N)	SP	P2			2.5P	SP-44			
			SU-PO	PUMS012N	PO	P4			5P	PO-34		
			(PUS012N)	PO	P4			5P	PO-34			
			SU-HT	TUMS012N4	HT	P4	82	8.5	4P	HT-72		
		TUMS012N1	HT	P4			1.5P	HT-72				
		(TUS012N4)	HT	P4			4P	HT-72				
		(TUS012N1)	HT	P4			1.5P	HT-72				
	Oversize	6 7 8	SU-SP	SUMR012N	SP	P3			2.5P	SP-44		
				(SUR012N)	SP	P3	82	8.5	2.5P	SP-44		
SU-PO				PUMT012N	PO	P5			5P	PO-34		
(PUT012N)				PO	P5			5P	PO-34			
For hard-to-machine materials				5 6 7	SU2-SP	SU2MR012N	SP	P3	82	8.5	3P	SP-49
			(SU2R012N)					SP-49				
For cast irons	1	FC-O	TFCM012N5					5P	HT-78			
			TFCM012N1					1.5P	HT-78			
			(TFC012N5)	HT	70-40	82	8.5	5P	HT-78			
			(TFC012N1)					1.5P	HT-78			
Carbide	1 12 13	N-CT FC	TCNR012N3	HT	P3	80	8.5	3P	CT-5			

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material ② High hardness material ③ Heat treated steel (45-55HRC) ④ Heat treated steel (25-45HRC) ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel ⑥ Medium carbon steel, Cast steel ⑦ Stainless steel
- ⑧ Low carbon steel ⑨ Titanium alloy ⑩ Nickel base alloy ⑪ Rolled aluminum, Copper, Copper alloy ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For cast irons	Carbide	N-CT FC	TCNR012N1		P3			1.5P	CT-5	
			TCNS012N3	HT	P4	80	8.5	3P	CT-5	
			TCNS012N1		P4			1.5P	CT-5	
For aluminum alloys	AL-SP	ASHMR012N						2.5P	SP-62	
			ASHMR012N1	SP	P3	82	8.5	1.5P	SP-62	
			(ASHR012N)					2.5P	SP-62	
			(ASHR012N1)					1.5P	SP-62	
									1.5P	SP-62
									1.5P	SP-62
	LA-O	TLAM012N5							5P	HT-82
			TLAM012N1	HT	P3	75-85	82	8.5	1.5P	HT-82
			(TLA012N5)						5P	HT-82
			(TLA012N1)						1.5P	HT-82
AXE	AXE-HT	TAXEMR012N1		HT	P3	82	8.5	1.5P	HT-84	
			(TAXER012N1)						1.5P	HT-84
Carbide	N-CT LA	TCNR012N3A			P3			3P	CT-2	
			TCNR012N1A	HT	P3	80	8.5	1.5P	CT-2	
			TCNS012N3A		P4			3P	CT-2	
			TCNS012N1A		P4			1.5P	CT-2	
Carbide spiral fluted taps	N-CT-SP	-	SP	P4	80	8.5	2.5P	CT-8		
For aluminum alloys (with coolant hole)	Carbide	MC-AD-CT	MCADS012N1	HT	P4	100	8.5	1.5P	CT-9	
Thread forming taps for non-ferrous materials	N-RS	NRSM8012NP			G8			4P	RO-17	
			NRSM8012NB		G8			2P	RO-17	
			(NRS8012NP)		G8			4P	RO-17	
			(NRS8012NB)		G8			2P	RO-18	
			NRSM9012NP	RO	G9	82	8.5	4P	RO-18	
			NRSM9012NB		G9			2P	RO-18	
			(NRS9012NP)		G9			4P	RO-18	
			(NRS9012NB)		G9			2P	RO-18	
X series	For general steels	XSP	SNXR012N	SP	P3	110	12	2.5P	SP-22	
		XSL	SNXR012NL	SL				5P	SL-1	
	TiN coated	AUXSP	VSAXR012N	SP	P3	110	12	2.5P	SP-30	
	AUXSL	VSAXR012NL	SL				5P	SL-2		
For stainless steels	SUXSP	SUXR012N	SP	P3	110	12	2.5P	SP-48		
	SUXSL	SUXS012NL	SL	P4			5P	SL-3		
High speed tapping	F-SP	VFSHMS012N						2.5P	SP-71	
			(VFSHS012N)	SP				2.5P	SP-71	
			F-SL	VFSHMS012NL	SL	P4	82	8.5	5P	SL-5
			(VFSHS012NL)	SL				5P	SL-5	
Ultra fast tapping (with coolant hole)	For steels	HFIHS	HFIHSS012N	SP	P4	82	12	2.5P	SP-73	
		HFIHP	HFIHPS012N	SP	P4	82	12	2.5P	SP-73	
	Carbide taps for cast irons	HFICT-B	HFICTBR012N	HT	P3	82	12	2.5P	CT-12	
		HFICT-P	HFICTPR012N					4P	CT-12	
	For non-ferrous materials	HFAHS	HFAHSS012N	SP	P4	82	12	2.5P	SP-74	
		HFAHP	HFAHPS012N					2.5P	SP-74	
	Carbide taps for non-ferrous materials	HFACT-B	HFACTBR012N	HT	P3	82	12	2.5P	CT-12	
		HFACT-P	HFACTPR012N					4P	CT-11	
For dry tapping (with coolant hole)	For steels	HDISP	HDISPS012N	SP	P4	82	12	2.5P	SP-75	
		HDISP	HDISPS012N	SP	P4	82	12	2.5P	SP-75	
	For non-ferrous materials	HDASP	HDASPS012N	SP	P4	82	12	2.5P	SP-75	
Ultra fast tapping (with coolant hole)	For both steels and non-ferrous materials	HDISL	HDISLS012N	SL	P4	82	12	5P	SL-6	
High performance thread forming taps, TiCN coated	HP-RZ	HRZM8012NP						4P	RO-32	
			HRZM8012NB	RO	G8	82	8.5	2P	RO-32	
			(HRZ8012NP)					4P	RO-32	
			(HRZ8012NB)					2P	RO-32	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
High performance thread forming taps, TiCN coated	HP-RZ	HRZM9012NP						4P	RO-32	
			HRZM9012NB	RO	G9	82	8.5	2P	RO-32	
			(HRZ9012NP)					4P	RO-32	
			(HRZ9012NB)				2P	RO-32		
For deep hole use	S-SP	SSMQ012N			SP	P2		2.5P	SP-53	
			(SSQ012N)	SP	P2	82	8.5	2.5P	SP-53	
			S-PO	PSMS012N	PO	P4		5P	PO-39	
			(PSS012N)	PO	P4		5P	PO-39		
Low spiral fluted taps	LS-LO-SP	LSHM012NL15			SP	P2	150	8.5	2.5P	
			(LSHQ012NL15)						2.5P	
For helical coil wire screw thread inserts	STI-SP	STIMC012N			SP			2.5P	SP-63	
			(STIC012N)	SP				2.5P	SP-63	
			STI-HT	TICM012N5	HT	1b	88	10.5	5P	HT-86
				TICM012N1	HT				1.5P	HT-86
				(TIC012N5)	HT				5P	HT-86
				(TIC012N1)	HT				1.5P	HT-86
With coolant hole	MC-SP	(MSHQ012NL10)			SP	P2	100	8.5	2.5P	
			(LSHQ012NL15)					2.5P		
	MC-PO	(MPHS012NL10)			PO	P4	100	5P	PO-44	
			(MPHS012NL15)	PO	P4	150	5P	PO-44		
	MC-HT	ML10012N5-Q			HT	P2	100	5P	HT-91	
			ML15012N5-Q	HT	P2	150	8.5	5P	HT-91	
			ML20012N5-Q	HT	P2	200	8.5	5P	HT-91	
			ML10012N1-Q	HT	P2	100	1.5P	HT-91		
			ML15012N1-Q	HT	P2	150	1.5P	HT-91		
			ML20012N1-Q	HT	P2	200	1.5P	HT-91		
Nut taps	NT	NH2012N			HT	II	160	9	27P etc-1	
Taps M12x1										
Standard	SP	SPQ012M			SP	P2		2.5P	SP-8	
			(SNQ012M)	SP	P2	82	8.5	2.5P	SP-8	
			POR012M	PO	P3		5P	PO-6		
			(PNR012M)	PO	P3		5P	PO-6		
			HT	(TNMR012M9)			9P	HT-17		
				TNMR012M5			5P	HT-17		
				TNMR012M1	HT	P3	82	8.5	1.5P	HT-17
				(TNR012M9)			9P	HT-17		
				(TNR012M5)			5P	HT-17		
				(TNR012M1)			1.5P	HT-17		
Oversize	SP	SPR012M			SP	P3		2.5P	SP-8	
			SPS012M	SP	P4		2.5P	SP-8		
			N-SP	(SNR012M)	SP	P3	82	8.5	2.5P	SP-8
				(SNS012M)	SP	P4		2.5P	SP-8	
			PO	POS012M	PO	P4		5P	PO-6	
			N-PO	(PNS012M)	PO	P4		5P	PO-6	
For left hand threads	SP(LH)	SPQ012M-L			SP	P2	82	8.5	2.5P	
			(SNQ012M-L)					2.5P		
			HT(LH)	(TNMR012M9-L)			9P	HT-44		
				TNMR012M5-L			5P	HT-45		
				TNMR012M1-L	HT	P3	82	8.5	1.5P	HT-45
				(TNR012M9-L)			9P	HT-44		
	(TNR012M5-L)			5P	HT-45					
	(TNR012M1-L)			1.5P	HT-45					

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	5 6 8 11 12	LS-SP	SPQ012ML12	SP	P2	120	2.5P	SP-34		
			SPQ012ML15	SP	P2	150	2.5P	SP-34		
		LS-N-SP	(SNQ012ML12)	SP	P2	120	2.5P	SP-34		
			(SNQ012ML15)	SP	P2	150	2.5P	SP-34		
		LS-PO	POR012ML10	PO	P3	100	8.5	5P	PO-26	
			POR012ML15	PO	P3	150	5P	PO-26		
		LS-N-PO	(PNR012ML10)	PO	P3	100	5P	PO-26		
			(PNR012ML15)	PO	P3	150	5P	PO-26		
		1 5 6 12	LS-HT	TNMQ012M510				100	5P	HT-54
				TNMQ012M515				150	5P	HT-54
				TNMQ012M110				100	1.5P	HT-55
				TNMQ012M115				150	1.5P	HT-55
				(L10012M5-Q)	HT	P2	100	8.5	5P	HT-54
				(L15012M5-Q)				150	5P	HT-54
				(L10012M1-Q)				100	1.5P	HT-55
(L15012M1-Q)						150	1.5P	HT-55		
Thread forming taps for steels	6 8			N-RZ	NRZM7012MP				4P	RO-8
					NRZM7012MB	RO	G7	82	8.5	2P
		(NRZ7012MP)					4P	RO-8		
For high carbon steels	5 6	HC-SP	SCMQ012M	SP	P2	82	8.5	2.5P	SP-57	
			(SCQ012M)				2.5P	SP-57		
			For stainless steels	6 7 8	SU-SP	SUMQ012M	SP	P2		2.5P
(SUQ012M)	SP	P2					2.5P	SP-44		
SU-PO	PUMR012M	PO			P3		5P	PO-34		
	(PUR012M)	PO			P3	82	8.5	5P	PO-34	
SU-HT	TUMR012M4	HT			P3		4P	HT-72		
	TUMR012M1	HT			P3		1.5P	HT-72		
	(TUR012M4)	HT			P3		4P	HT-72		
For hard-to-machine materials	5 6 7	SU2-SP	SU2MR012M	SP	P3	82	8.5	3P	SP-49	
			(SU2R012M)				3P	SP-49		
For cast irons	1	FC-O	TFCM012M5				5P	HT-78		
			TFCM012M1	HT	6H-35	82	8.5	1.5P	HT-78	
			(TFC012M5)				5P	HT-78		
			(TFC012M1)				1.5P	HT-78		
		Carbide	1 12 13	N-CTFC	TCNR012M3				3P	CT-5
TCNR012M1	HT				P3	70	8.5	1.5P	CT-5	
TCNS012M3							3P	CT-5		
For aluminum alloys	11 12 13	AL-SP	ASHMR012M				2.5P	SP-62		
			ASHMR012M1	SP	P3	82	8.5	1.5P	SP-62	
			(ASHR012M)				2.5P	SP-62		
			(ASHR012M1)				1.5P	SP-62		
			11 12	LA-O	TLAM012M5				5P	HT-82
	TLAM012M1	HT	6H-35		82	8.5	1.5P	HT-82		
	(TLA012M5)					5P	HT-82			
	(TLA012M1)					1.5P	HT-82			
	Carbide	11 12 13	N-CTLA		TCNR012M3A	HT	P3	70	8.5	3P
	TCNR012M1A						1.5P	CT-2		
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM7012MP	RO	G7	82	8.5	4P	RO-18	
			NRSM7012MB				2P	RO-18		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for non-ferrous materials	11 12	N-RS	(NRS7012MP)	RO	G7	82	8.5	4P	RO-18
			(NRS7012MB)				2P	RO-18	
For deep hole use	5 6 8	S-SP	SSMQ012M	SP	P2		2.5P	SP-53	
			(SSQ012M)	SP	P2	82	8.5	2.5P	SP-53
			S-PO	PSMR012M	PO	P3		5P	PO-40
Nut taps	6 8 11 12	NT	NH2012M	HT	II	150	9	30P	etc-1
			Taps M12×0.75						
Standard	5 6 8 11 12	SP	SPQ012J	SP	P2	82	2.5P	SP-8	
			N-SP	(SNQ012J)	SP	P2	75	2.5P	SP-8
			PO	POR012J	PO	P3	82	5P	PO-6
			N-PO	(PNR012J)	PO	P3	75	5P	PO-6
			1 5 6 12	HT	(TNMR012J9)			82	9P
	(TNMR012J5)				82	5P	HT-17		
	(TNMR012J1)	HT	P3		82	8.5	1.5P	HT-17	
	(TNR012J9)				75	9P	HT-17		
	(TNR012J5)				75	5P	HT-17		
	Taps M12×0.5	5 6 8 11 12	SP	SPQ012G	SP	P2	82	2.5P	SP-8
N-SP				(SNQ012G)	SP	P2	55	2.5P	SP-8
PO				POQ012G	PO	P3	82	5P	PO-6
N-PO				(PNQ012G)	PO	P3	55	5P	PO-6
1 5 6 12				HT	(TNMQ012G9)			82	9P
(TNMQ012G5)					82	5P	HT-17		
(TNMQ012G1)		HT	P2		82	8.5	1.5P	HT-17	
(TNQ012G9)					55	9P	HT-17		
(TNQ012G5)					55	5P	HT-17		
(TNQ012G1)				55	1.5P	HT-17			

Dies selection	Main material	Symbol	Class	Thickness	Front face	Code	Product page	
Dies M12×1.75								
Solid dies	HSS	6 8 11 12 SD-Y	6G	38	13	2~2.5P	DJG012P Di-1	
Adjustable dies	SKS	AR-D		38	13		GJ2012P Di-3	
	SKS	6 8 AR-D	II	50	16	2~2.5P	GM2012P Di-3	
	HSS	11 12 AR-D HSS		38	13		HJ2012P Di-13	
	HSS	AR-D HSS		50	16		HM2012P Di-13	
For left hand threads	SKS	AR-D(LH)		38	13		GJ2012P-L Di-8	
	SKS	6 8 AR-D(LH)	II	50	16	2~2.5P	GM2012P-L Di-8	
	HSS	AR-D HSS(LH)		38	13		HJ2012P-L Di-14	
Solid dies for auto lathe	For steels	SKS	6 8 AD-S ST	P1	25	9	2~2.5P	FGP012P Di-10
	For brass	SKS	11 12 AD-S BR	P1	25	9	2~2.5P	EGP012P Di-12
Dies M12×1.5								
Adjustable dies	SKS	AR-D		38	13		GJ2012O Di-3	
	SKS	6 8 AR-D	II	50	16	2~2.5P	GM2012O Di-3	
	HSS	AR-D HSS		38	13		HJ2012O Di-13	

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on some machines Dies (JIS)

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Screw threads used on machine tools Dies (SM)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Adjustable dies	For left hand threads	SKS	AR-D (LH)	II	38	13	2~2.5P	GJ2012O-L	Di-8
Dies M12×1.25									
Adjustable dies		SKS	AR-D		38	13		GJ2012N	Di-3
		SKS	AR-D	II	50	16	2~2.5P	GM2012N	Di-3
		HSS	AR-D HSS		38	13		HJ2012N	Di-13
	For left hand threads	SKS	AR-D (LH)	II	38	13	2~2.5P	GJ2012N-L	Di-8
Solid dies for auto lathe	For brass	SKS	AD-S BR	P1	25	9	2~2.5P	EGP012N	Di-12
Dies M12×1									
Adjustable dies		SKS	AR-D		38	13		GJ2012M	Di-3
		SKS	AR-D	II	50	16	2~2.5P	GM2012M	Di-3
		HSS	AR-D HSS		38	13		HJ2012M	Di-13
	For left hand threads	SKS	AR-D (LH)	II	38	13	2~2.5P	GJ2012M-L	Di-8
Solid dies for auto lathe	For steels	SKS	AD-S ST	P1	25	9	2~2.5P	FGP012M	Di-10
	For brass	SKS	AD-S BR	P1	25	9	2~2.5P	EGP012M	Di-12
Dies M12×0.75									
Adjustable dies		SKS	AR-D	II	38	13	2~2.5P	GJ2012J	Di-3
	For left hand threads	SKS	AR-D (LH)	II	38	13	2~2.5P	GJ2012J-L	Di-8
Dies M12×0.5									
Adjustable dies		SKS	AR-D	II	38	13	2~2.5P	GJ2012G	Di-3
	For left hand threads	SKS	AR-D (LH)	II	38	13	2~2.5P	GJ2012G-L	Di-8

Explanation of catalogue contents

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
General purpose	8	PO-Y	PY62.0E	PO	6HX	40		5P	PO-1
		HT-Y	TY62.0E5	HT	6HX	40	3	5P	HT-2
			TY62.0E1	HT	6HX	40		1.5P	HT-2
		R-Y	RY2.0E3	RO	6HX	42		3P	RO-1
Standard	5 6 8 11 12	SP	SPP2.0E	SP	P1			2.5P	SP-2
			SPP2.0E1	SP	P1			1.5P	SP-2

Page shown in line-ups depending on products

Classification of materials

Kind	Chip shape after boring (drilling)	No.	Examples of materials
Ferrous	<p>Chip or powder like</p> <p>↑</p> <p>↓</p> <p>Continuous</p>	①	Cast iron, Ductile cast iron, Sintered material
		②	High hardness material
		③	Heat treated steel (45-55HRC)
		④	Heat treated steel (25-45HRC)
		⑤	High carbon steel, Tool steel, Alloy steel, Heat treated steel
		⑥	Medium carbon steel, Cast steel
		⑦	Stainless steel
		⑧	Low carbon steel
Non-ferrous	<p>Continuous</p> <p>↑</p> <p>↓</p> <p>Chip or powder like</p>	⑨	Titanium alloy
		⑩	Nickel base alloy
		⑪	Rolled aluminum, Copper, Copper alloy
		⑫	Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
		⑬	Thermosetting plastic

Hardness of materials : Please refer to material composition table shown in technical data.

Flute shape of taps and chip ejection

SP= Spiral	PO= Spiral point	SL= LH spiral	HT= Straight	RO= Forming

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and drawing machine Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M1×0.25											
Standard	⑤ ⑥ ⑧ ⑪ ⑫	N-SP	(SNP1.0B)	SP		32		2.5P	SP-2		
			(SNP1.0B1)	SP	P1	32	3	1.5P	SP-2		
		N-PO	(PNP1.0B)	PO		32		5P	PO-2		
	① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.0B9)				36		9P	HT-2	
			TNMP1.0B5				36		5P	HT-2	
			TNMP1.0B1		HT	P1	36	3	1.5P	HT-2	
			(TNP1.0B9)				32		9P	HT-2	
			(TNP1.0B5)				32		5P	HT-2	
			(TNP1.0B1)				32		1.5P	HT-2	
			(TNP1.0B1)				32		1.5P	HT-2	
For left hand threads	① ⑤ ⑥ ⑧ ⑫	HT(LH)	(TNMP1.0B9-L)					9P	HT-40		
			TNMP1.0B5-L	HT	P1	36	3	5P	HT-40		
			TNMP1.0B1-L					1.5P	HT-40		
TiN coated	⑥ ⑦ ⑧ ⑪ ⑫	R+V	RVP41.0BP		G4	36		4P	RO-24		
			RVP41.0BB		G4	36		2P	RO-24		
			RVP51.0BP		G5	36		4P	RO-24		
			RVP51.0BB		G5	36		2P	RO-24		
		R-V	(RV41.0BP)	RO	G4	32	3	4P	RO-24		
			(RV41.0BB)		G4	32		2P	RO-24		
			(RV51.0BP)		G5	32		4P	RO-24		
			(RV51.0BB)		G5	32		2P	RO-24		
		Thread forming taps for steels	⑥ ⑧	N+RZ	NRZP41.0BP		G4	36		4P	RO-1
					NRZP41.0BB		G4	36		2P	RO-1
	NRZP51.0BP				G5	36		4P	RO-1		
	NRZP51.0BB				G5	36		2P	RO-1		
N-RZ	(NRZ41.0BP)			RO	G4	32	3	4P	RO-1		
	(NRZ41.0BB)				G4	32		2P	RO-1		
	(NRZ51.0BP)				G5	32		4P	RO-1		
	(NRZ51.0BB)				G5	32		2P	RO-1		
Thread forming taps for non-ferrous metals	⑪ ⑫			N+RS	NRSP41.0BP		G4	36		4P	RO-11
					NRSP41.0BB		G4	36		2P	RO-11
			NRSP51.0BP		G5	36		4P	RO-11		
			NRSP51.0BB		G5	36		2P	RO-11		
		N-RS	(NRS41.0BP)	RO	G4	32	3	4P	RO-11		
			(NRS41.0BB)		G4	32		2P	RO-11		
			(NRS51.0BP)		G5	32		4P	RO-11		
			(NRS51.0BB)		G5	32		2P	RO-11		
		Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL+RZ	OLRZP41.0BP	RO	G4	36	3	4P	RO-27
				OL-RZ	(OLRZ41.0BP)			32			RO-27
Thread forming taps for high carbon steels	⑤ ⑥ ⑦ ⑪ ⑫	HP+RZ	HRZP41.0BB	RO	G4	36	3	2P	RO-30		
		HP-RZ	(HRZ41.0BB)			32			RO-30		
Torqueless thread forming taps	⑥ ⑦ ⑧ ⑪ ⑫	SC-TL-RZ	SRZM41.0B1	RO	G4	36	3	1P	RO-35		
			(SRZ41.0B1)			32			RO-35		
Taps M1×0.2											
Standard	① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.0A9)			36		9P	HT-2		
			TNMP1.0A5			36		5P	HT-3		
			TNMP1.0A1			36		1.5P	HT-3		
			(TNP1.0A9)	HT	P1	32	3	9P	HT-3		
			(TNP1.0A5)			32		5P	HT-3		
			(TNP1.0A1)			32		1.5P	HT-3		
			(TNP1.0A1)			32		1.5P	HT-3		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M1.1×0.25											
Standard	⑤ ⑥ ⑧ ⑪ ⑫	N-SP	(SNP1.1B)	SP		32		2.5P	SP-2		
			(PNP1.1B)	PO		32	3	5P	PO-2		
		N-PO	(PNP1.1B)	PO		32		5P	PO-2		
	① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.1B9)				36		9P	HT-3	
			TNMP1.1B5				36		5P	HT-3	
			TNMP1.1B1		HT	P1	36	3	1.5P	HT-3	
			(TNP1.1B9)				32		9P	HT-3	
			(TNP1.1B5)				32		5P	HT-3	
			(TNP1.1B1)				32		1.5P	HT-3	
			(TNP1.1B1)				32		1.5P	HT-3	
Taps M1.1×0.2											
Standard	① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.1A9)					9P	HT-3		
			TNMP1.1A5	HT	P1	36	3	5P	HT-3		
			TNMP1.1A1					1.5P	HT-3		
Taps M1.2×0.25											
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPP1.2B	SP		36		2.5P	SP-2		
			SPP1.2B1	SP		36		1.5P	SP-2		
		N+SP	(SNPP1.2B)	SP		36		2.5P	SP-21		
		N-SP	(SNMP1.2B1)	SP		36		1.5P	SP-2		
			(SNP1.2B)	SP	P1	32	3	2.5P	SP-2		
			(SNP1.2B1)	SP		32		1.5P	SP-2		
		PO	POP1.2B	PO		36		5P	PO-2		
		N+PO	(PNPP1.2B)	PO		36		5P	PO-15		
		N-PO	(PNP1.2B)	PO		32		5P	PO-2		
		① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.2B9)				36		9P	HT-3
				TNMP1.2B5				36		5P	HT-3
				TNMP1.2B1		HT	P1	36	3	1.5P	HT-3
				(TNP1.2B9)				32		9P	HT-3
				(TNP1.2B5)				32		5P	HT-3
				(TNP1.2B1)				32		1.5P	HT-3
Oversize	① ⑤ ⑥ ⑧ ⑫	HT	(TNMR1.2B9)					9P	HT-3		
			TNMR1.2B5	HT	P3	36	3	5P	HT-3		
			TNMR1.2B1					1.5P	HT-3		
For left hand threads	① ⑤ ⑥ ⑧ ⑫	HT(LH)	(TNMP1.2B9-L)					9P	HT-40		
			TNMP1.2B5-L	HT	P1	36	3	5P	HT-40		
			TNMP1.2B1-L					1.5P	HT-40		
TiN coated	⑥ ⑦ ⑧ ⑪ ⑫	R+V	RVP41.2BP		G4	36		4P	RO-24		
			RVP41.2BB		G4	36		2P	RO-24		
			RVP51.2BP		G5	36		4P	RO-24		
			RVP51.2BB		G5	36		2P	RO-24		
		R-V	(RV41.2BP)	RO	G4	32	3	4P	RO-24		
			(RV41.2BB)		G4	32		2P	RO-24		
			(RV51.2BP)		G5	32		4P	RO-24		
			(RV51.2BB)		G5	32		2P	RO-24		
		Thread forming taps for steels	⑥ ⑧	N+RZ	NRZP41.2BP		G4	36		4P	RO-1
					NRZP41.2BB		G4	36		2P	RO-1
	NRZP51.2BP				G5	36		4P	RO-1		
	NRZP51.2BB				G5	36		2P	RO-2		
N-RZ	(NRZ41.2BP)			RO	G4	32	3	4P	RO-1		
	(NRZ41.2BB)				G4	32		2P	RO-1		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Thread forming taps for steels	6 8	N-RZ	(NRZ51.2BP)	RO	G5	32	3	4P	RO-1				
			(NRZ51.2BB)						2P	RO-2			
Thread forming taps for non-ferrous metals	11 12	N+RS	(NRSP41.2BP)	RO	G4	36	3	4P	RO-11				
			(NRSP41.2BB)						2P	RO-11			
			(NRSP51.2BP)						4P	RO-11			
			(NRSP51.2BB)						2P	RO-11			
		N-RS	(NRS41.2BP)	RO	G4	32	3	4P	RO-11				
			(NRS41.2BB)						2P	RO-11			
			(NRS51.2BP)						4P	RO-11			
			(NRS51.2BB)						2P	RO-11			
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	(OLRZP41.2BP)	RO	G4	36	3	4P	RO-27				
			(OLRZ41.2BP)						RO-27				
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	(HRZP41.2BB)	RO	G4	36	3	2P	RO-30				
			(HRZ41.2BB)						RO-30				
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	(SRZM41.2B1)	RO	G4	36	3	1P	RO-35				
			(SRZ41.2B1)						RO-35				
Taps M1.2×0.2													
Standard	1 5 6 12	HT	(TNMP1.2A9)	HT	P1	36	3	9P	HT-3				
			(TNMP1.2A5)						5P	HT-3			
			(TNMP1.2A1)						1.5P	HT-3			
			(TNP1.2A9)						32	9P	HT-3		
			(TNP1.2A5)						32	5P	HT-3		
			(TNP1.2A1)						32	1.5P	HT-3		
Taps M1.4×0.3													
General purpose	8	PO-Y	(PY51.4C)	HT	SHX	34	3	5P	PO-1				
			(TY51.4C5)						5P	HT-2			
			(TY51.4C1)						1.5P	HT-2			
Standard	5 6 8 11 12	SP	(SPP1.4C)	SP		36	3	2.5P	SP-2				
			(SPP1.4C1)						1.5P	SP-2			
			(SNPP1.4C)						2.5P	SP-21			
		N+SP	(SNMP1.4C1)	SP	P1	36	3	2.5P	SP-2				
			(SNP1.4C)						1.5P	SP-2			
			(SNP1.4C1)						1.5P	SP-2			
		PO	(POP1.4C)	PO		36	3	5P	PO-2				
			(PNPP1.4C)						5P	PO-15			
			(PNP1.4C)						5P	PO-2			
		1 5 6 12	HT	(TNMP1.4C9)		HT	P1	36	3	9P	HT-3		
											(TNMP1.4C5)	5P	HT-3
											(TNMP1.4C1)	1.5P	HT-3
											(TNP1.4C9)	9P	HT-3
											(TNP1.4C5)	5P	HT-3
											(TNP1.4C1)	1.5P	HT-3
Oversize	5 6 8 11 12	PO	(POQ1.4C)	PO		36	3	5P	PO-2				
			(POR1.4C)						PO-2				
			(PNPQ1.4C)						PO-15				
		N+PO	(PNPR1.4C)	PO	P2	36	3	5P	PO-15				
			(PNQ1.4C)						PO-2				
			(PNR1.4C)						PO-2				
1 5 6 12	HT	(TNMR1.4C9)		HT	P3	36	3	9P	HT-3				
									(TNMR1.4C5)	5P	HT-3		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
Standard	Oversize	1 5 6 12	HT	TNMR1.4C1	HT	P3	36	3	1.5P	HT-3				
									(TNR1.4C9)	9P	HT-3			
									(TNR1.4C5)	5P	HT-3			
For left hand threads	1 5 6 12	HT(LH)	(TNMP1.4C9-L)	HT	P1	36	3	9P	HT-40					
			(TNMP1.4C5-L)						5P	HT-40				
			(TNMP1.4C1-L)						1.5P	HT-40				
			(TNP1.4C9-L)						9P	HT-40				
			(TNP1.4C5-L)						5P	HT-40				
			(TNP1.4C1-L)						1.5P	HT-40				
Oxidizing	5 6 8	N-SP-OX	(SNMP1.4CX)	SP		36	3	2.5P	SP-23					
			(POP1.4CX)						PO	P1	36	3	5P	PO-17
			(PNPP1.4CX)						PO				5P	PO-18
			(PNPQ1.4CX)						PO	P2	36	3	5P	PO-17
TiN coated	6 7 8 11 12	R+V	(RVP41.4CP)	RO	G4	36	3	4P	RO-24					
			(RVP41.4CB)						2P	RO-24				
			(RVP51.4CP)						4P	RO-24				
		R-V	(RV41.4CP)	RO	G4	36	3	4P	RO-24					
			(RV41.4CB)						2P	RO-24				
			(RV51.4CP)						4P	RO-24				
(RV51.4CB)	2P	RO-24												
Thread forming taps for steels	6 8	N+RZ	(NRZP41.4CP)	RO	G4	36	3	4P	RO-2					
			(NRZP41.4CB)						2P	RO-2				
			(NRZP51.4CP)						4P	RO-2				
			(NRZP51.4CB)						2P	RO-2				
			(NRZ41.4CP)						4P	RO-2				
(NRZ41.4CB)	2P	RO-2												
(NRZ51.4CP)	4P	RO-2												
(NRZ51.4CB)	2P	RO-2												
For high carbon steels	1 5 6 12	HC+PO	(PCPP1.4C)	PO	P1	36	3	5P	PO-41					
			(PCP1.4C)						PO	P1	36	3	5P	PO-41
			(SUMP1.4C)						SP				2.5P	SP-41
For stainless steels	6 7 8	SU-SP	(SUP1.4C)	SP		36	3	2.5P	SP-41					
			(PUPP1.4C)						PO	P1	36	3	5P	PO-32
			(PUP1.4C)						PO				5P	PO-32
For cast irons	Carbide	1 12 13	(TCNR1.4C3)	HT	P3	34	3	3P	CT-3					
			(TCNR1.4C1)						1.5P	CT-3				
For aluminum alloys	11 12	LA-O	(TLAM1.4C5)	HT	36-21	36	3	5P	HT-80					
			(TLA1.4C5)						1.5P	HT-80				
			(TLA1.4C1)						1.5P	HT-80				
Carbide	11 12 13	N-CT LA	(TCNR1.4C3A)	HT	P3	34	3	3P	CT-1					
			(TCNR1.4C1A)						1.5P	CT-1				
Thread forming taps for non-ferrous metals	11 12	N+RS	(NRSP41.4CP)	RO	G4	36	3	4P	RO-11					
			(NRSP41.4CB)						2P	RO-11				
			(NRSP51.4CP)						4P	RO-11				
			(NRSP51.4CB)						2P	RO-11				
			(NRS41.4CP)						4P	RO-11				
			(NRS41.4CB)						2P	RO-11				
(NRS51.4CP)	4P	RO-11												

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for non-ferrous metals	⑪ ⑫	N-RS	(NRS51.4CB)	RO	G5	36	3	2P	RO-11
Short chamfer	⑪ ⑫	MG-HT	TMGMQ1.4C1 (TMGQ1.4C1)	HT	P2	36	3	1P	HT-84 HT-84
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL+RZ	OLRZP41.4CP	RO	G4	36	3	4P	RO-27
		OL-RZ	(OLRZ41.4CP)						RO-27
Thread forming taps for high carbon steels	⑤ ⑥ ⑦ ⑪ ⑫	HP+RZ	HRZP41.4CB	RO	G4	36	3	2P	RO-30
		HP-RZ	(HRZ41.4CB)						RO-30
Torqueless thread forming taps	⑥ ⑦ ⑧ ⑪ ⑫	SC-TL-RZ	SRZM41.4C1 (SRZ41.4C1)	RO	G4	36	3	1P	RO-35 RO-35
Taps M1.4×0.2									
Standard	① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.4A9)					9P	HT-3
			TNMP1.4A5					5P	HT-4
			TNMP1.4A1					1.5P	HT-4
			(TNP1.4A9)	HT	P1	36	3	9P	HT-4
			(TNP1.4A5)					5P	HT-4
			(TNP1.4A1)					1.5P	HT-4
Torqueless thread forming taps	⑥ ⑦ ⑧ ⑪ ⑫	SC-TL-RZ	SRZM31.4A1 (SRZ31.4A1)	RO	G3	36	3	1P	RO-35 RO-35
Taps M1.6×0.35									
General purpose	⑧	PO-Y	(PY61.6D)	PO				5P	PO-1
		HT-Y	(TY61.6D5)	HT	6HX	36	3	5P	HT-2
			(TY61.6D1)	HT				1.5P	HT-2
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPP1.6D	SP	P1			2.5P	SP-2
			SPP1.6D1	SP	P1			1.5P	SP-2
		N+SP	(SNPP1.6D)	SP	P1			2.5P	SP-21
		N-SP	(SNMP1.6D1)	SP	P1			1.5P	SP-2
			(SNP1.6D)	SP	P1	36	3	2.5P	SP-2
			(SNP1.6D1)	SP	P1			1.5P	SP-2
		PO	POQ1.6D	PO	P2			5P	PO-2
		N+PO	(PNPQ1.6D)	PO	P2			5P	PO-15
		N-PO	(PNQ1.6D)	PO	P2			5P	PO-2
	① ⑤ ⑥ ⑧ ⑫	HT	(TNMQ1.6D9)					9P	HT-4
			TNMQ1.6D5					5P	HT-4
			TNMQ1.6D1	HT	P2	36	3	1.5P	HT-4
			(TNQ1.6D9)					9P	HT-4
			(TNQ1.6D5)					5P	HT-4
			(TNQ1.6D1)					1.5P	HT-4
Oversize	⑤ ⑥ ⑧ ⑪ ⑫	PO	POR1.6D						PO-2
		N+PO	(PNPR1.6D)	PO	P3	36	3	5P	PO-15
		N-PO	(PNR1.6D)						PO-2
For left hand threads	① ⑤ ⑥ ⑧ ⑫	HT(LH)	(TNMQ1.6D9-L)					9P	HT-40
			TNMQ1.6D5-L					5P	HT-40
			TNMQ1.6D1-L	HT	P2	36	3	1.5P	HT-40
			(TNQ1.6D9-L)					9P	HT-40
			(TNQ1.6D5-L)					5P	HT-40
			(TNQ1.6D1-L)					1.5P	HT-40
Oxidizing	⑤ ⑥ ⑧	N-SP-OX	(SNMP1.6DX)	SP	P1			2.5P	SP-23
		PO OX	POQ1.6DX	PO	P2	36	3	5P	PO-17
		N+PO-OX	(PNPQ1.6DX)	PO	P2			5P	PO-18
TiN coated	⑥ ⑦ ⑧ ⑪ ⑫	R+V	RVP41.6DP	RO	G4	36	3	4P	RO-24

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
TiN coated	⑥ ⑦ ⑧ ⑪ ⑫	R+V	RVP41.6DB		G4			2P	RO-24
			RVP51.6DP		G5			4P	RO-24
			RVP51.6DB		G5			2P	RO-24
			RVP61.6DB	RO	G6	36	3	2P	RO-24
		R-V	(RV41.6DP)		G4			4P	RO-24
			(RV41.6DB)		G4			2P	RO-24
			(RV51.6DP)		G5			4P	RO-24
			(RV51.6DB)		G5			2P	RO-24
Thread forming taps for steels	⑥ ⑧	N+RZ	NRZP41.6DP		G4			4P	RO-2
			NRZP41.6DB		G4			2P	RO-2
			NRZP51.6DP		G5			4P	RO-2
			NRZP51.6DB	RO	G5	36	3	2P	RO-2
		N-RZ	(NRZ41.6DP)		G4			4P	RO-2
			(NRZ41.6DB)		G4			2P	RO-2
			(NRZ51.6DP)		G5			4P	RO-2
			(NRZ51.6DB)		G5			2P	RO-2
For high carbon steels	① ⑤ ⑥ ⑧ ⑫	HC+PO	PCQ1.6D	PO	P2	36	3	5P	PO-41
	① ⑤ ⑥	HC-PO	(PCQ1.6D)	PO	P2	36	3	5P	PO-41
For stainless steels	⑥ ⑦ ⑧	SU+PO	PUPQ1.6D	PO	P2	36	3	5P	PO-32
		SU-PO	(PUQ1.6D)	PO	P2	36	3	5P	PO-32
For cast irons	①	FC-O	TFCM1.6D5					5P	HT-77
			TFCM1.6D1					1.5P	HT-77
			(TFC1.6D5)	HT	4-25	36	3	5P	HT-77
			(TFC1.6D1)					1.5P	HT-77
Carbide	① ② ⑩ ⑬	N-CT FC	TCNR1.6D3	HT	P3	36	3	3P	CT-3
			TCNR1.6D1					1.5P	CT-3
For aluminum alloys	⑪ ⑫	LA-O	TLAM1.6D5					5P	HT-80
			TLAM1.6D1	HT	4-25	36	3	1.5P	HT-80
			(TLA1.6D5)					5P	HT-80
			(TLA1.6D1)					1.5P	HT-80
Carbide	⑩ ⑫ ⑬	N-CT LA	TCNR1.6D3A	HT	P3	36	3	3P	CT-1
			TCNR1.6D1A					1.5P	CT-1
Thread forming taps for non-ferrous metals	⑪ ⑫	N+RS	NRSP41.6DP		G4			4P	RO-11
			NRSP41.6DB		G4			2P	RO-11
			NRSP51.6DP		G5			4P	RO-11
			NRSP51.6DB	RO	G5	36	3	2P	RO-11
		N-RS	(NRS41.6DP)		G4			4P	RO-11
			(NRS41.6DB)		G4			2P	RO-11
			(NRS51.6DP)		G5			4P	RO-11
			(NRS51.6DB)		G5			2P	RO-11
Short chamfer	⑪ ⑫	MG-HT	TMGMQ1.6D1 (TMGQ1.6D1)	HT	P2	36	3	1P	HT-84 HT-84
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL+RZ	OLRZP41.6DP	RO	G4	36	3	4P	RO-27
		OL-RZ	(OLRZ41.6DP)						RO-27
Thread forming taps for high carbon steels	⑤ ⑥ ⑦ ⑪ ⑫	HP+RZ	HRZP41.6DB	RO	G4	36	3	2P	RO-30
		HP-RZ	(HRZ41.6DB)						RO-30
Torqueless thread forming taps	⑥ ⑦ ⑧ ⑪ ⑫	SC-TL-RZ	SRZM41.6D1 (SRZ41.6D1)	RO	G4	36	3	1P	RO-35 RO-35
Taps M1.6×0.2									
Standard	① ⑤ ⑥ ⑧ ⑫	HT	(TNMP1.6A9)	HT	P1	36	3	9P	HT-4
			TNMP1.6A5					5P	HT-4

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page		
Standard	1 5 6 12	HT	TNMP1.6A1					1.5P	HT-4		
			(TNP1.6A9)	HT	P1	36	3	9P	HT-4		
			(TNP1.6A5)						5P	HT-4	
			(TNP1.6A1)						1.5P	HT-4	
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM31.6A1	RO	G3	36	3	1P	RO-35		
			(SRZ31.6A1)							RO-35	
Taps M1.7×0.35											
General purpose	8	PO-Y	(PY61.7D)	PO				5P	PO-1		
			(TY61.7D5)	HT	6HX	36	3	5P	HT-2		
			(TY61.7D1)	HT					1.5P	HT-2	
Standard	5 6 8 11 12	SP	SPP1.7D					2.5P	SP-2		
			SPP1.7D1					1.5P	SP-2		
			N+SP	(SNPP1.7D)	SP	P1	36	3	2.5P	SP-21	
			N-SP	(SNMP1.7D1)					1.5P	SP-2	
				(SNP1.7D)				2.5P	SP-2		
				(SNP1.7D1)				1.5P	SP-2		
	5 6 8 11 12	PO	POQ1.7D							PO-2	
			N+PO	(PNPQ1.7D)	PO	P2	36	3	5P	PO-15	
			N-PO	(PNQ1.7D)							PO-2
	1 5 6 12	HT	(TNMP1.7D9)						9P	HT-4	
			TNMP1.7D5						5P	HT-4	
			TNMP1.7D1	HT	P1	36	3	1.5P		HT-4	
			(TNP1.7D9)						9P	HT-4	
			(TNP1.7D5)						5P	HT-4	
			(TNP1.7D1)						1.5P	HT-4	
			Oversize	5 6 8 11 12	SP	SPQ1.7D	SP	P2			2.5P
SPR1.7D						SP	P3			2.5P	SP-2
N+SP	(SNPQ1.7D)	SP				P2			2.5P	SP-21	
(SNPR1.7D)	SP	P3						2.5P	SP-21		
N-SP	(SNQ1.7D)	SP				P2			2.5P	SP-2	
(SNR1.7D)	SP	P3				36	3	2.5P	SP-2		
PO	POR1.7D	PO				P3			5P	PO-2	
POS1.7D	PO	P4						5P	PO-2		
N+PO	(PNPR1.7D)	PO				P3			5P	PO-15	
(PNPS1.7D)	PO	P4						5P	PO-15		
N-PO	(PNR1.7D)	PO	P3			5P	PO-2				
(PNS1.7D)	PO	P4			5P	PO-2					
1 5 6 12	HT	(TNMR1.7D9)						9P	HT-4		
		TNMR1.7D5						5P	HT-4		
		TNMR1.7D1	HT	P3	36	3	1.5P		HT-4		
		(TNR1.7D9)						9P	HT-4		
		(TNR1.7D5)						5P	HT-4		
		(TNR1.7D1)						1.5P	HT-4		
		For left hand threads	1 5 6 12	HT(LH)	(TNMP1.7D9-L)					9P	HT-40
					TNMP1.7D5-L					5P	HT-40
TNMP1.7D1-L	HT				P1	36	3	1.5P		HT-40	
(TNP1.7D9-L)									9P	HT-40	
(TNP1.7D5-L)									5P	HT-40	
(TNP1.7D1-L)									1.5P	HT-40	
Oxidizing	5 6 8	N-SP-OX	(SNMP1.7DX)	SP	P1			2.5P	SP-23		
			POQ1.7DX	PO	P2	36	3	5P	PO-17		

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page		
Oxidizing	5 6 8	N+PO-OX	(PNPQ1.7DX)	PO	P2	36	3	5P	PO-18		
TiN coated	6 7 8 11 12	R+V	RVP41.7DP	G4				4P	RO-24		
			RVP41.7DB	G4				2P	RO-24		
			RVP51.7DP	G5				4P	RO-24		
			RVP51.7DB	G5				2P	RO-24		
			RVP61.7DP	G6				4P	RO-24		
			RVP61.7DB	G6				2P	RO-24		
			R-V	(RV41.7DP)	RO	G4	36	3	4P	RO-24	
			(RV41.7DB)		G4			2P	RO-24		
			(RV51.7DP)		G5			4P	RO-24		
			(RV51.7DB)		G5			2P	RO-24		
			(RV61.7DP)		G6			4P	RO-24		
			(RV61.7DB)		G6			2P	RO-24		
		Thread forming taps for steels	6 8	N+RZ	NRZP41.7DP	G4				4P	RO-2
					NRZP41.7DB	G4				2P	RO-2
NRZP51.7DP	G5							4P	RO-2		
NRZP51.7DB	G5							2P	RO-2		
NRZP61.7DP	G6							4P	RO-2		
NRZP61.7DB	G6							2P	RO-2		
N-RZ	(NRZ41.7DP)			RO	G4	36	3	4P	RO-2		
	(NRZ41.7DB)				G4			2P	RO-2		
	(NRZ51.7DP)				G5			4P	RO-2		
	(NRZ51.7DB)				G5			2P	RO-2		
	(NRZ61.7DP)				G6			4P	RO-2		
	(NRZ61.7DB)				G6			2P	RO-2		
For high carbon steels	1 5 6 12	HC+PO	PCPQ1.7D	PO	P2	36	3	5P	PO-41		
			(PCQ1.7D)	PO	P2	36	3	5P	PO-41		
For stainless steels	6 7 8	SU-SP	SUMP1.7D	SP	P1			2.5P	SP-41		
			(SUP1.7D)	SP	P1			2.5P	SP-41		
			SU+PO	PUPQ1.7D	PO	P2	36	3	5P	PO-32	
			SU-PO	(PUQ1.7D)	PO	P2			5P	PO-32	
	Oversize	SU-SP	SUMQ1.7D	SP	P2	36	3	2.5P	SP-41		
		(SUQ1.7D)						SP-41			
For cast irons	1 12 13	N-CT FC	TCNR1.7D3	HT	P3	36	3	3P	CT-3		
			TCNR1.7D1					1.5P	CT-3		
For aluminum alloys	11 12 13	N-CT LA	TCNR1.7D3A	HT	P3	36	3	3P	CT-1		
			TCNR1.7D1A					1.5P	CT-1		
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP41.7DP	G4				4P	RO-11		
			NRSP41.7DB	G4				2P	RO-12		
			NRSP51.7DP	G5				4P	RO-12		
			NRSP51.7DB	G5				2P	RO-12		
			NRSP61.7DP	G6				4P	RO-12		
			NRSP61.7DB	G6				2P	RO-12		
			N-RS	(NRS41.7DP)	RO	G4	36	3	4P	RO-11	
			(NRS41.7DB)		G4			2P	RO-12		
	(NRS51.7DP)		G5			4P	RO-12				
	(NRS51.7DB)		G5			2P	RO-12				
	(NRS61.7DP)		G6			4P	RO-12				
	(NRS61.7DB)		G6			2P	RO-12				
Short chamfer	11 12	MG-HT	TMGMQ1.7D1	HT	P2	36	3	1P	HT-84		
			(TMGQ1.7D1)						HT-84		
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP41.7DP	RO	G4	36	3	4P	RO-27		

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and other machines Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	(OLRZ41.7DP)	RO	G4	36	3	4P	RO-27		
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP41.7DB	RO	G4	36	3	2P	RO-30		
		HP-RZ	(HRZ41.7DB)						RO-30		
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM41.7D1	RO	G4	36	3	1P	RO-35		
			(SRZ41.7D1)						RO-35		
Taps M1.7×0.2											
Standard	1 5 6 12	HT	(TNMP1.7A9)					9P	HT-4		
			TNMP1.7A5					5P	HT-4		
			TNMP1.7A1	HT	P1	36	3	1.5P	HT-4		
			(TNP1.7A9)					9P	HT-4		
			(TNP1.7A5)					5P	HT-4		
			(TNP1.7A1)					1.5P	HT-4		
Taps M1.8×0.35											
Standard	5 6 8 11 12	SP	SPP1.8D	SP	P1	42		2.5P	SP-2		
			SPP1.8D1	SP	P1	42		1.5P	SP-2		
		N+SP	(SNPP1.8D)	SP	P1	42		2.5P	SP-21		
		N-SP	(SNMP1.8D1)	SP	P1	42		1.5P	SP-2		
			(SNP1.8D)	SP	P1	36	3	2.5P	SP-2		
		PO	POQ1.8D	PO	P2	42		5P	PO-2		
		N+PO	(PNPQ1.8D)	PO	P2	42		5P	PO-15		
		N-PO	(PNQ1.8D)	PO	P2	36		5P	PO-2		
		1 5 6 12	HT	(TNMQ1.8D9)				42		9P	HT-4
				TNMQ1.8D5				42		5P	HT-4
	TNMQ1.8D1		HT	P2	42	3	1.5P	HT-4			
	(TNQ1.8D9)				36		9P	HT-4			
	(TNQ1.8D5)				36		5P	HT-4			
	(TNQ1.8D1)				36		1.5P	HT-4			
Thread forming taps for steels	6 8	N+RZ	NRZP41.8DP		G4	42		4P	RO-2		
			NRZP41.8DB		G4	42		2P	RO-2		
			NRZP51.8DP		G5	42		4P	RO-2		
			NRZP51.8DB		G5	42		2P	RO-2		
		N-RZ	(NRZ41.8DP)	RO	G4	36	3	4P	RO-2		
			(NRZ41.8DB)		G4	36		2P	RO-2		
			(NRZ51.8DP)		G5	36		4P	RO-2		
			(NRZ51.8DB)		G5	36		2P	RO-2		
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP41.8DP		G4	42		4P	RO-12		
			NRSP41.8DB		G4	42		2P	RO-12		
			NRSP51.8DP		G5	42		4P	RO-12		
			NRSP51.8DB		G5	42		2P	RO-12		
		N-RS	(NRS41.8DP)	RO	G4	36	3	4P	RO-12		
			(NRS41.8DB)		G4	36		2P	RO-12		
			(NRS51.8DP)		G5	36		4P	RO-12		
			(NRS51.8DB)		G5	36		2P	RO-12		
Taps M1.8×0.2											
Standard	1 5 6 12	HT	(TNMP1.8A9)					9P	HT-4		
			TNMP1.8A5					5P	HT-5		
			TNMP1.8A1	HT	P1	42	3	1.5P	HT-5		
			(TNP1.8A9)			36		9P	HT-5		
			(TNP1.8A5)			36		5P	HT-5		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	1 5 6 12	HT	(TNP1.8A1)	HT	P1	36	3	1.5P	HT-5		
Taps M2.2×0.45											
Standard	5 6 8 11 12	SP	SPP2.2F	SP	P1			2.5P	SP-3		
		+SP(N+SP)	SNPP2.2F	SP	P1			2.5P	SP-21		
		N-SP	(SNP2.2F)	SP	P1	42	3	2.5P	SP-3		
		PO	POQ2.2F	PO	P2			5P	PO-2		
		N+PO	(PNPQ2.2F)	PO	P2			5P	PO-16		
		N-PO	(PNQ2.2F)	PO	P2			5P	PO-2		
		1 5 6 12	HT	(TNMQ2.2F9)						9P	HT-5
				TNMQ2.2F5						5P	HT-5
				TNMQ2.2F1	HT	P2	42	3	1.5P	HT-5	
				(TNQ2.2F9)			42		9P	HT-5	
	(TNQ2.2F5)						5P	HT-5			
	(TNQ2.2F1)						1.5P	HT-5			
Standard	5 6 8 11 12	SP	SPR2.2F	SP	P3	42	3	2.5P	SP-3		
Standard		N-SP	(SNR2.2F)					2.5P	SP-3		
Thread forming taps for steels	6 8	N+RZ	NRZP52.2FP					4P	RO-3		
			NRZP52.2FB	RO	G5	42	3	2P	RO-3		
		N-RZ	(NRZ52.2FP)					4P	RO-3		
For cast irons	Carbide	1 12 13	N-CT FC	TCNR2.2F3				3P	CT-3		
				TCNR2.2F1	HT	P3	42	3	1.5P	CT-3	
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR2.2F3A				3P	CT-1		
				TCNR2.2F1A	HT	P3	42	3	1.5P	CT-1	
Taps M2.2×0.25											
Standard	5 6 8 11 12	PO	POQ2.2B					5P	PO-2		
		N+PO	(PNPQ2.2B)	PO	P2	42	3	5P	PO-15		
		N-PO	(PNQ2.2B)					5P	PO-2		
		1 5 6 12	HT	(TNMP2.2B9)					9P	HT-5	
				TNMP2.2B5					5P	HT-5	
				TNMP2.2B1	HT	P1	42	3	1.5P	HT-5	
	(TNP2.2B9)					9P	HT-5				
	(TNP2.2B5)					5P	HT-5				
	(TNP2.2B1)					1.5P	HT-5				
Taps M2.3×0.4											
General purpose	8	PO-Y	(PY62.3E)	PO				5P	PO-1		
		HT-Y	(TY62.3E5)	HT	6HX	42	3	5P	HT-2		
			(TY62.3E1)	HT				1.5P	HT-2		
Standard	5 6 8 11 12	SP	SPP2.3E	SP	P1			2.5P	SP-3		
			SPP2.3E1	SP	P1			1.5P	SP-3		
		+SP(N+SP)	SNPP2.3E	SP	P1			2.5P	SP-21		
		N-SP	(SNMP2.3E1)	SP	P1			1.5P	SP-3		
			(SNP2.3E)	SP	P1	42	3	2.5P	SP-3		
			(SNP2.3E1)	SP	P1			1.5P	SP-3		
		PO	POQ2.3E	PO	P2			5P	PO-3		
		N+PO	(PNPQ2.3E)	PO	P2			5P	PO-15		
		N-PO	(PNQ2.3E)	PO	P2			5P	PO-3		
		1 5 6 12	HT	(TNMP2.3E9)						9P	HT-5
				TNMP2.3E5	HT	P1	42	3	5P	HT-6	
				TNMP2.3E1					1.5P	HT-6	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
Standard	1 5 6 12	HT	(TNP2.3E9)					9P	HT-5					
			(TNP2.3E5)	HT	P1	42	3	5P	HT-6					
			(TNP2.3E1)						1.5P	HT-6				
	Oversize	5 6 8 11 12	SP	SPQ2.3E	SP	P2			2.5P	SP-3				
				SPR2.3E	SP	P3			2.5P	SP-3				
				SPS2.3E	SP	P4			2.5P	SP-3				
				+SP(N+SP)	SNPQ2.3E	SP	P2			2.5P	SP-21			
					SNPR2.3E	SP	P3			2.5P	SP-21			
					SNPS2.3E	SP	P4			2.5P	SP-21			
				N-SP	(SNQ2.3E)	SP	P2			2.5P	SP-3			
					(SNR2.3E)	SP	P3	42	3	2.5P	SP-3			
					(SNS2.3E)	SP	P4			2.5P	SP-3			
				PO	POR2.3E	PO	P3			5P	PO-3			
					POS2.3E	PO	P4			5P	PO-3			
				N+PO	(PNPR2.3E)	PO	P3			5P	PO-15			
					(PNPS2.3E)	PO	P4			5P	PO-15			
				N-PO	(PNR2.3E)	PO	P3			5P	PO-3			
					(PNS2.3E)	PO	P4			5P	PO-3			
				1 5 6 12	HT	(TNMR2.3E9)		P3				9P	HT-6	
						TNMR2.3E5		P3				5P	HT-6	
						TNMR2.3E1		P3				1.5P	HT-6	
						(TNR2.3E9)		P3				9P	HT-6	
						(TNR2.3E5)	HT	P3	42	3	5P	HT-6		
	(TNR2.3E1)		P3						1.5P	HT-6				
	(TNMS2.3E9)		P4						9P	HT-6				
	TNMS2.3E5		P4						5P	HT-6				
	TNMS2.3E1		P4						1.5P	HT-6				
	For left hand threads	5 6 8 11 12	SP(LH)			SPP2.3E-L						SP-26		
						N-SP(LH)	(SNMP2.3E-L)	SP	P1	42	3	2.5P	SP-26	
							(SNP2.3E-L)						SP-26	
		1 5 6 12	HT(LH)	(TNMP2.3E9-L)						9P	HT-40			
				TNMP2.3E5-L						5P	HT-40			
				TNMP2.3E1-L						1.5P	HT-40			
				(TNP2.3E9-L)	HT	P1	42	3	9P	HT-40				
				(TNP2.3E5-L)						5P	HT-40			
				(TNP2.3E1-L)						1.5P	HT-40			
				Oxidizing	5 6 8	PO-OX	POQ2.3EX	PO	P2	42	3	5P	PO-17	
							N+PO-OX	(PNPQ2.3EX)						PO-18
							TiN coated	6 7 8 11 12	R+V	RVP42.3EP		G4		
	RVP42.3EB		G4									2P	RO-25	
	RVP52.3EP		G5									4P	RO-25	
	RVP52.3EB		G5									2P	RO-25	
	R-V	(RV42.3EP)	RO							G4	42	3	4P	RO-25
		(RV42.3EB)								G4			2P	RO-25
		(RV52.3EP)							G5			4P	RO-25	
	(RV52.3EB)		G5								2P	RO-25		
Long shank	5 6 8 11 12	LS-SP	SPP2.3EL07						SP	P1	70		2.5P	SP-31
			SPP2.3EL10						SP	P1	100		2.5P	SP-31
			LS-N-SP	(SNMP2.3EL07)	SP	P1			70		2.5P	SP-31		
				(SNP2.3EL07)	SP	P1			70	3	2.5P	SP-31		
				(SNP2.3EL10)	SP	P1	100		2.5P	SP-31				
			LS-PO	POQ2.3EL07	PO	P2	70		5P	PO-23				

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Long shank	5 6 8 11 12	LS-PO	POQ2.3EL10					100	PO-23				
			LS-N-PO	(PNQ2.3EL07)	PO	P2	70	3	5P	PO-23			
				(PNQ2.3EL10)					100	PO-23			
	1 5 6 12	LS-HT	TNMP2.3E507						70	5P	HT-47		
			TNMP2.3E510						100	5P	HT-47		
			TNMP2.3E107						70	1.5P	HT-47		
			TNMP2.3E110						100	1.5P	HT-47		
				(L072.3E5-P)	HT	P1			70	3	5P	HT-47	
				(L102.3E5-P)					100	5P	HT-47		
				(L072.3E1-P)					70	1.5P	HT-47		
				(L102.3E1-P)					100	1.5P	HT-47		
			Thread forming taps for steels	6 8	N+RZ	NRZP42.3EP		G4			4P	RO-3	
						NRZP42.3EB		G4			2P	RO-3	
						NRZP52.3EP		G5			4P	RO-3	
						NRZP52.3EB		G5			2P	RO-3	
	NRZP62.3EP					G6			4P	RO-3			
	NRZP62.3EB					G6			2P	RO-3			
	N-RZ	(NRZ42.3EP)			RO	G4	42	3	4P	RO-3			
		(NRZ42.3EB)				G4			2P	RO-3			
		(NRZ52.3EP)				G5			4P	RO-3			
(NRZ52.3EB)					G5			2P	RO-3				
(NRZ62.3EP)					G6			4P	RO-3				
(NRZ62.3EB)					G6			2P	RO-3				
For stainless steels	6 7 8	SU+SP	SUPP2.3E	SP	P1			2.5P	SP-41				
			SU-SP	(SUP2.3E)	SP	P1			2.5P	SP-42			
			SU+PO	PUPQ2.3E	PO	P2			5P	PO-32			
			SU-PO	(PUQ2.3E)	PO	P2			5P	PO-32			
			SU-HT	(TUMQ2.3E9)	HT	P2			9P	HT-70			
				TUMQ2.3E4	HT	P2	42	3	4P	HT-70			
		Oversize	6 7 8	SU+SP	SUPQ2.3E	SP	P2			2.5P	SP-42		
					SUPR2.3E	SP	P3			2.5P	SP-42		
					SU-SP	(SUQ2.3E)	SP	P2	42	3	2.5P	SP-42	
						(SUR2.3E)	SP	P3			2.5P	SP-42	
					SU+PO	PUPR2.3E	PO	P3			5P	PO-32	
						TUQ2.3E1	HT	P2			1.5P	HT-70	
For cast irons	1	FC-O	TFCM2.3E5					5P	HT-77				
			TFCM2.3E1					1.5P	HT-77				
			(TFC2.3E5)	HT	40-25	42	3	5P	HT-77				
			(TFC2.3E1)					1.5P	HT-77				
			Carbide	1 12 13	N-CT FC	TCNR2.3E3					3P	CT-3	
						TCNR2.3E1					1.5P	CT-3	
		HT				P3	42	3					
	For aluminum alloys	11 12 13				AL+SP	ASHPQ2.3E					2.5P	SP-60
							ASHMQ2.3E1					1.5P	SP-60
							(ASHQ2.3E)	SP	P2	42	3	2.5P	SP-60
			(ASHQ2.3E1)						1.5P	SP-60			
			11 12	LA-O	TLAM2.3E5						5P	HT-80	
TLAM2.3E1										1.5P	HT-80		
(TLA2.3E5)		HT			40-25	42	3	5P	HT-80				
(TLA2.3E1)								1.5P	HT-80				

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps (S&M)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR2.3E3A	HT	P3	42	3	3P	CT-1	
				TCNR2.3E1A					1.5P	CT-1	
Thread forming taps for non-ferrous metals		11 12	N+RS	NRSP42.3EP	G4				4P	RO-12	
				NRSP42.3EB	G4				2P	RO-12	
				NRSP52.3EP	G5					4P	RO-12
				NRSP52.3EB	G5					2P	RO-13
				NRSP62.3EP	G6					4P	RO-13
				NRSP62.3EB	G6					2P	RO-13
			N-RS	(NRS42.3EP)	RO	G4	42	3		4P	RO-12
				(NRS42.3EB)	G4					2P	RO-12
				(NRS52.3EP)	G5					4P	RO-12
				(NRS52.3EB)	G5					2P	RO-13
				(NRS62.3EP)	G6					4P	RO-13
				(NRS62.3EB)	G6					2P	RO-13
			For thermosetting plastics		13	PL-1	TPLM2.3E3 (TPL2.3E3)	HT	P4	42	3
Thread forming taps for dry tapping		5 6 7 11 12	OL+RZ	OLRZP42.3EP	G4					RO-28	
				OLRZP52.3EP	G5					RO-28	
			OL-RZ	(OLRZ42.3EP)	RO	G4	42	3	4P		RO-28
				(OLRZ52.3EP)	G5						RO-28
Thread forming taps for high carbon steels		5 6 7 11 12	HP+RZ	HRZP42.3EB	G4					RO-30	
				HRZP52.3EB	G5					RO-30	
			HP-RZ	(HRZ42.3EB)	RO	G4	42	3	2P		RO-30
				(HRZ52.3EB)	G5						RO-30
For deep hole use		5 6 8	S-SP	SSMP2.3E	SP	P1			2.5P	SP-52	
				(SSP2.3E)	SP	P1	42	3		2.5P	SP-52
			S-PO	PSMQ2.3E	PO	P2				5P	PO-39
				(PSQ2.3E)	PO	P2				5P	PO-39
Nut taps		6 8 11 12	NT	NH22.3E	HT	II b	80	1.7	28P	etc-1	
Taps M2.3×0.25											
Standard		5 6 8 11 12	SP	SPP2.3B	SP	P1	42	3	2.5P	SP-3	
			N-SP	(SNMP2.3B)						SP-3	
			1 5 6 12 : HT	(TNMP2.3B9)						9P	HT-6
				TNMP2.3B5						5P	HT-6
				TNMP2.3B1	HT	P1	42	3		1.5P	HT-6
				(TNP2.3B9)						9P	HT-6
				(TNP2.3B5)						5P	HT-6
				(TNP2.3B1)						1.5P	HT-6
Taps M2.5×0.45											
General purpose		8	PO-Y	(PY62.5F)	PO				5P	PO-1	
			HT-Y	(TY62.5F5)	HT	6HX	44	3	5P	HT-2	
				(TY62.5F1)	HT					1.5P	HT-2
			R-Y	RY2.5F3	RO					3P	RO-1
Standard		5 6 8 11 12	SP	SPP2.5F	SP	P1	46		2.5P	SP-3	
				SPP2.5F1	SP	P1	46		1.5P	SP-3	
			+SP(N+SP)	SNPP2.5F	SP	P1	46			2.5P	SP-21
			N-SP	(SNMP2.5F1)	SP	P1	46	3		1.5P	SP-3
				(SNP2.5F)	SP	P1	44			2.5P	SP-3
				(SNP2.5F1)	SP	P1	44			1.5P	SP-3
			PO	POQ2.5F	PO	P2	46			5P	PO-3

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Standard		5 6 8 11 12	N+PO	(PNPQ2.5F)		PO	P2	46	3	5P	PO-15		
			N-PO	(PNQ2.5F)					44		5P	PO-3	
			1 5 6 12 : HT	(TNMQ2.5F9)						46		9P	HT-6
				TNMQ2.5F5						46		5P	HT-6
				TNMQ2.5F1	HT	P2	46	3		1.5P	HT-6		
				(TNQ2.5F9)						44		9P	HT-6
				(TNQ2.5F5)						44		5P	HT-6
				(TNQ2.5F1)						44		1.5P	HT-6
			Oversize		5 6 8 11 12	SP	SPQ2.5F	SP	P2	46		2.5P	SP-3
							SPR2.5F	SP	P3	46		2.5P	SP-3
							SPS2.5F	SP	P4	46		2.5P	SP-3
						+SP(N+SP)	SNPQ2.5F	SP	P2	46		2.5P	SP-21
							SNPR2.5F	SP	P3	46		2.5P	SP-21
	SNPS2.5F	SP				P4	46		2.5P	SP-21			
N-SP	(SNQ2.5F)	SP				P2	44		2.5P	SP-3			
	(SNR2.5F)	SP				P3	44	3	2.5P	SP-3			
	(SNS2.5F)	SP				P4	44		2.5P	SP-3			
PO	POR2.5F	PO				P3	46		5P	PO-3			
	POS2.5F	PO				P4	46		5P	PO-3			
N+PO	(PNPR2.5F)	PO				P3	46		5P	PO-15			
	(PNPS2.5F)	PO				P4	46		5P	PO-15			
N-PO	(PNR2.5F)	PO	P3	44		5P	PO-3						
	(PNS2.5F)	PO	P4	44		5P	PO-3						
1 5 6 12 : HT	(TNMR2.5F9)		P3	46		9P	HT-6						
	TNMR2.5F5		P3	46		5P	HT-6						
	TNMR2.5F1		P3	46		1.5P	HT-6						
	(TNR2.5F9)		P3	44		9P	HT-6						
	(TNR2.5F5)	HT	P3	44	3	5P	HT-6						
	(TNR2.5F1)		P3	44		1.5P	HT-6						
	(TNMS2.5F9)		P4	46		9P	HT-6						
	TNMS2.5F5		P4	46		5P	HT-6						
	TNMS2.5F1		P4	46		1.5P	HT-6						
For left hand threads		5 6 8 11 12	SP(LH)	SPP2.5F--L				46		SP-26			
			N-SP(LH)	(SNMP2.5F--L)	SP	P1	46	3	2.5P	SP-26			
				(SNP2.5F--L)						44		SP-26	
			1 5 6 12 : HT(LH)	(TNMQ2.5F9-L)						46		9P	HT-41
				TNMQ2.5F5-L						46		5P	HT-41
				TNMQ2.5F1-L						46		1.5P	HT-41
				(TNQ2.5F9-L)	HT	P2	44	3		9P	HT-41		
	(TNQ2.5F5-L)						44		5P	HT-41			
	(TNQ2.5F1-L)						44		1.5P	HT-41			
Oxidizing		5 6 8	SP-OX	SPP2.5FX	SP	P1	46		2.5P	SP-23			
			+SP-OX(N+SP-OX)	SNPP2.5FX	SP	P1	46		2.5P	SP-25			
			N-SP-OX	(SNP2.5FX)	SP	P1	44	3	2.5P	SP-23			
			PO-OX	POQ2.5FX	PO	P2	46		5P	PO-17			
			N+PO-OX	(PNPQ2.5FX)	PO	P2	46		5P	PO-18			
TiN coated		7 8 11 12 6 7 8 11 12	AU+SP	VSAQ2.5F	SP	P2	46	3	2.5P	SP-29			
			R+V	RVP52.5FP	G5		46		4P	RO-25			
				RVP52.5FB	G5		46		2P	RO-25			
				RVP62.5FP	RO	G6	46	3	4P	RO-25			
				RVP62.5FB	G6		46		2P	RO-25			
			R-V	(RV52.5FP)	G5		44		4P	RO-25			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
TiN coated	6 7 8 11 12	R-V	(RV52.5FB)	G5				2P	RO-25		
			(RV62.5FP)	RO	G6	44	3	4P	RO-25		
			(RV62.5FB)	G6					2P	RO-25	
Long shank	5 6 8 11 12	LS-SP	SPP2.5FL07	SP	P1	70		2.5P	SP-31		
			SPP2.5FL10	SP	P1	100		2.5P	SP-31		
		LS-N-SP	(SNMP2.5FL07)	SP	P1	70		2.5P	SP-31		
			(SNP2.5FL07)	SP	P1	70		2.5P	SP-31		
			(SNP2.5FL10)	SP	P1	100	3	2.5P	SP-31		
		LS-PO	POQ2.5FL07	PO	P2	70		5P	PO-23		
			POQ2.5FL10	PO	P2	100		5P	PO-23		
		LS-N-PO	(PNQ2.5FL07)	PO	P2	70		5P	PO-23		
			(PNQ2.5FL10)	PO	P2	100		5P	PO-23		
		Thread forming taps for steels	6 8	N+RZ	NRZP52.5FP	G5		46		4P	RO-3
					NRZP52.5FB	G5		46		2P	RO-3
					NRZP62.5FP	G6		46		4P	RO-3
	NRZP62.5FB			G6		46		2P	RO-3		
N-RZ	(NRZ52.5FP)			RO	G5	44	3	4P	RO-3		
	(NRZ52.5FB)			G5		44		2P	RO-3		
	(NRZ62.5FP)			G6		44		4P	RO-3		
	(NRZ62.5FB)			G6		44		2P	RO-3		
For high carbon steels	1 5 6 12			HC+PO	PCQ2.5F	PO	P2	46	3	5P	PO-41
					(PCQ2.5F)	PO	P2	44	3	5P	PO-41
				Carbide taps for hard materials	2	UH-CT	UHCR2.5F5	HT	P3	44	4
For stainless steels	6 7 8			SU+SP	SUPP2.5F	SP	P1	46		2.5P	SP-42
			(SUP2.5F)	SP	P1	44		2.5P	SP-42		
		SU+PO	PUPQ2.5F	PO	P2	46		5P	PO-32		
			(PUQ2.5F)	PO	P2	44		5P	PO-33		
		SU-HT	(TUMQ2.5F9)	HT	P2	46		9P	HT-70		
			TUMQ2.5F4	HT	P2	46	3	4P	HT-70		
			TUMQ2.5F1	HT	P2	46		1.5P	HT-70		
			(TUQ2.5F9)	HT	P2	44		9P	HT-70		
			(TUQ2.5F4)	HT	P2	44		4P	HT-70		
			(TUQ2.5F1)	HT	P2	44		1.5P	HT-70		
		Oversize	6 7 8	SU+SP	SUPQ2.5F	SP	P2	46		2.5P	SP-42
					SUPR2.5F	SP	P3	46		2.5P	SP-42
SU-SP	(SUQ2.5F)			SP	P2	44		2.5P	SP-42		
	(SUR2.5F)			SP	P3	44	3	2.5P	SP-42		
SU+PO	PUPR2.5F			PO	P3	46		5P	PO-33		
	(PUR2.5F)			PO	P3	44		5P	PO-33		
For cast irons	1	FC-O	TFCM2.5F5			46		5P	HT-77		
			TFCM2.5F1			46		1.5P	HT-77		
			(TFC2.5F5)	HT	Φ-75	44	3	5P	HT-77		
			(TFC2.5F1)			44		1.5P	HT-77		
		Carbide	1 12 13	N-CT FC	TCNR2.5F3	HT	P3	44	3	3P	CT-3

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For cast irons	Carbide	1 12 13	N-CT FC	TCNR2.5F1	HT	P3	44	3	1.5P	CT-3
For aluminum alloys	11 12 13	AL+SP	ASHPQ2.5F			46		2.5P	SP-60	
		AL-SP	ASHMQ2.5F1			46		1.5P	SP-60	
			(ASHQ2.5F1)	SP	P2	44	3	2.5P	SP-60	
	Carbide	11 12 13	LA-O	TLAM2.5F5			46		5P	HT-80
				TLAM2.5F1			46		1.5P	HT-80
				(TLA2.5F5)	HT	Φ-75	44	3	5P	HT-80
		(TLA2.5F1)			44		1.5P	HT-80		
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP52.5FP	G5				4P	RO-13	
			NRSP52.5FB	G5				2P	RO-13	
			NRSP62.5FP	RO	G6	46	3	4P	RO-13	
	Carbide	11 12 13	N-RS	(NRS52.5FP)	G5				4P	RO-13
				(NRS52.5FB)	G5				2P	RO-13
				(NRS62.5FP)	RO	G6	44	3	4P	RO-13
		(NRS62.5FB)	G6				2P	RO-13		
Short chamfer	11 12	MG-HT	TMGMQ2.5F1	HT	P2	46	3	1P	HT-84	
			(TMGQ2.5F1)			44			HT-84	
For thermosetting plastics	13	PL-1	TPLM2.5F3	HT	P4	46	3	3P	HT-90	
			(TPL2.5F3)			44			HT-90	
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP52.5FP	G5		46			RO-28	
			OLRZP62.5FP	G6		46			RO-28	
		OL-RZ	(OLRZ52.5FP)	RO	G5	44	3	4P	RO-28	
			(OLRZ62.5FP)	G6		44			RO-28	
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP52.5FB	G5		46			RO-30	
			HRZP62.5FB	G6		46			RO-30	
		HP-RZ	(HRZ52.5FB)	RO	G5	44	3	2P	RO-30	
		(HRZ62.5FB)	G6		44			RO-30		
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM52.5F1	RO	G5	46	3	1P	RO-35	
			(SRZ52.5F1)			44			RO-36	
For deep hole use	5 6 8	S-SP	SSMP2.5F	SP	P1	46		2.5P	SP-52	
			(SSP2.5F)	SP	P1	44		2.5P	SP-52	
		S-PO	PSMQ2.5F	PO	P2	46	3	5P	PO-39	
		(PSQ2.5F)	PO	P2	44		5P	PO-39		
Nut taps	6 8 11 12	NT	NH22.5F	HT	II b	85	2	24P	etc-1	
Taps M2.5×0.35										
Standard	5 6 8 11 12	SP	SPP2.5D	SP	P1	46		2.5P	SP-3	
		N-SP	(SNMP2.5D)	SP	P1	46		2.5P	SP-3	
			(SNP2.5D)	SP	P1	44		2.5P	SP-3	
		PO	POQ2.5D	PO	P2	46	3	5P	PO-3	
		N+PO	(PNPQ2.5D)	PO	P2	46		5P	PO-15	
			(PNQ2.5D)	PO	P2	44		5P	PO-3	
	1 5 6 12	HT	(TNMQ2.5D9)				46		9P	HT-6
			TNMQ2.5D5				46		5P	HT-6
			TNMQ2.5D1				46		1.5P	HT-6
			(TNQ2.5D9)	HT	P2	44	3	9P	HT-6	
			(TNQ2.5D5)			44		5P	HT-6	
			(TNQ2.5D1)			44		1.5P	HT-6	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for steels	⑥ ⑧	N-RZ	NRZM52.5DP			46		4P	RO-3
			NRZM52.5DB	RO	G5	46	3	2P	RO-4
			(NRZ52.5DP)			44		4P	RO-3
			(NRZ52.5DB)			44		2P	RO-4
Thread forming taps for non-ferrous metals	⑪ ⑫	N-RS	NRSM42.5DP		G4	46		4P	RO-13
			NRSM42.5DB		G4	46		2P	RO-13
			(NRS42.5DP)		G4	44		4P	RO-13
			(NRS42.5DB)	RO	G4	44	3	2P	RO-13
			NRSM52.5DP		G5	46		4P	RO-13
			NRSM52.5DB		G5	46		2P	RO-13
			(NRS52.5DP)		G5	44		4P	RO-13
			(NRS52.5DB)		G5	44		2P	RO-13
Taps M2.6×0.45									
General purpose	⑧	PO-Y	(PY62.6F)	PO				5P	PO-1
			HT-Y	HT	6HX	44	3	5P	HT-2
			(TY62.6F1)	HT				1.5P	HT-2
			R-Y	RO				3P	RO-1
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPP2.6F	SP	P1	46		2.5P	SP-4
			SPP2.6F1	SP	P1	46		1.5P	SP-4
			+SP(N+SP)	SP	P1	46		2.5P	SP-21
			N-SP	SP	P1	46		1.5P	SP-4
			(SNMP2.6F)	SP	P1	44	3	2.5P	SP-4
			(SNP2.6F1)	SP	P1	44		1.5P	SP-4
			PO	PO	P2	46		5P	PO-3
			N+PO	PO	P2	46		5P	PO-15
			N-PO	PO	P2	44		5P	PO-3
			(TNMP2.6F9)			46		9P	HT-6
			TNMP2.6F5			46		5P	HT-7
			TNMP2.6F1	HT	P1	46	3	1.5P	HT-7
			(TNP2.6F9)			44		9P	HT-7
			(TNP2.6F5)			44		5P	HT-7
(TNP2.6F1)			44		1.5P	HT-7			
Oversize	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ2.6F	SP	P2	46		2.5P	SP-4
			SPR2.6F	SP	P3	46		2.5P	SP-4
			SPS2.6F	SP	P4	46		2.5P	SP-4
			+SP(N+SP)	SP	P2	46		2.5P	SP-21
			SNR2.6F	SP	P3	46		2.5P	SP-21
			SNPS2.6F	SP	P4	46		2.5P	SP-21
			N-SP	SP	P2	44		2.5P	SP-4
			(SNR2.6F)	SP	P3	44	3	2.5P	SP-4
			(SNS2.6F)	SP	P4	44		2.5P	SP-4
			PO	PO	P3	46		5P	PO-3
			POS2.6F	PO	P4	46		5P	PO-3
			N+PO	PO	P3	46		5P	PO-15
			(PNPR2.6F)	PO	P4	46		5P	PO-15
			(PNR2.6F)	PO	P3	44		5P	PO-3
			(PNS2.6F)	PO	P4	44		5P	PO-3
			(TNMR2.6F9)			46		9P	HT-7
			TNMR2.6F5	HT	P3	46	3	5P	HT-7
			TNMR2.6F1	HT	P3	46		1.5P	HT-7
			(TNR2.6F9)			44		9P	HT-7
			Standard	① ⑤ ⑥ ⑧ ⑫	HT	(TNR2.6F5)			44
(TNM52.6F9)	HT	P4				46	3	9P	HT-7
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPP2.6F--L			46			SP-26
			N-SP(LH)	SP	P1	46	3	2.5P	SP-26
			(SNP2.6F--L)			44			SP-26
			(SNMP2.6F9-L)			46		9P	HT-41
			TNMP2.6F5-L			46		5P	HT-41
Oxidizing	⑤ ⑥ ⑧	SP-OX	SPP2.6FX	SP	P1	46		2.5P	SP-23
			+SP-OX(N+SP-OX)	SP	P1	46		2.5P	SP-25
			(SNP2.6FX)	SP	P1	44	3	2.5P	SP-23
			PO-OX	PO	P2	46		5P	PO-17
			N+PO-OX	PO	P2	46		5P	PO-18
Oversize	⑤ ⑥ ⑧	PO-OX	POR2.6FX	PO	P3	46	3	5P	PO-17
			(PNPR2.6FX)	PO	P3	46	3	5P	PO-18
TiN coated	⑦ ⑧ ⑪ ⑫	AU+SP	VSAPQ2.6F	SP	P2	46	3	2.5P	SP-29
			R+V	G5	46		4P	RO-25	
			(RVP52.6FB)	G5	46		2P	RO-26	
			(RVP62.6FB)	G6	46		4P	RO-26	
			(RVP62.6FB)	G6	46		2P	RO-26	
			R-V	RO	G5	44	3	4P	RO-25
			(RV52.6FB)	G5	44		2P	RO-26	
			(RV62.6FB)	G6	44		4P	RO-26	
			(RV62.6FB)	G6	44		2P	RO-26	
			(RV62.6FB)	G6	44		2P	RO-26	
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPP2.6FL07	SP	P1	70		2.5P	SP-31
			SPP2.6FL10	SP	P1	100		2.5P	SP-31
			(SNMP2.6FL07)	SP	P1	70		2.5P	SP-31
			(SNP2.6FL07)	SP	P1	70	3	2.5P	SP-31
			(SNP2.6FL10)	SP	P1	100	3	2.5P	SP-31
			LS-PO	PO	P2	70		5P	PO-23
			POQ2.6FL07	PO	P2	70		5P	PO-23
			POQ2.6FL10	PO	P2	100		5P	PO-23
			LS-N-PO	PO	P2	70		5P	PO-23
			(PNQ2.6FL07)	PO	P2	70		5P	PO-23
			(PNQ2.6FL10)	PO	P2	100		5P	PO-23
			(TNMP2.6F507)			70		5P	HT-47
			TNMP2.6F510			100		5P	HT-47
			TNMP2.6F107			70		1.5P	HT-47
TNMP2.6F110	HT	P1	100	3	1.5P	HT-47			
(L072.6F5-P)			70		5P	HT-47			
(L102.6F5-P)			100		5P	HT-47			
(L072.6F1-P)			70		1.5P	HT-47			
(L102.6F1-P)			100		1.5P	HT-47			
Thread forming taps for steels	⑥ ⑧	N+RZ	NRZP52.6FP	G5	46		4P	RO-4	
			NRZP52.6FB	G5	46		2P	RO-4	
			NRZP62.6FP	RO	G6	46	3	4P	RO-4
			NRZP62.6FB	G6	46		2P	RO-4	
			(NRZ52.6FP)	G5	44		4P	RO-4	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Thread forming taps for steels	6 8	N-RZ	(NRZ52.6FB)	G5	44	2P	RO-4			
			(NRZ62.6FP)	G6	44	4P	RO-4			
			(NRZ62.6FB)	RO	G6	44	3	2P	RO-4	
			(NRZ72.6FP)	G7	44	4P	RO-4			
			(NRZ72.6FB)	G7	44	2P	RO-4			
For high carbon steels	1 5 6 12	HC+PO	PCPQ2.6F	PO	P2	46	3	5P	PO-41	
		HC-PO	(PCQ2.6F)	PO	P2	44	3	5P	PO-41	
Carbide taps for hard materials	2	UH-CT	UHCR2.6F5	HT	P3	44	4	5P	CT-10	
For stainless steels	6 7 8	SU+SP	SUPP2.6F	SP	P1	46	2.5P	SP-42		
		SU-SP	(SUP2.6F)	SP	P1	44	2.5P	SP-42		
		SU+PO	PUPQ2.6F	PO	P2	46	5P	PO-33		
		SU-PO	(PUQ2.6F)	PO	P2	44	5P	PO-33		
		SU-HT	TUMQ2.6F9	HT	P2	46	3	9P	HT-70	
			TUMQ2.6F4	HT	P2	46	4P	HT-70		
			TUMQ2.6F1	HT	P2	46	1.5P	HT-70		
			(TUQ2.6F9)	HT	P2	44	9P	HT-70		
			(TUQ2.6F4)	HT	P2	44	4P	HT-70		
			(TUQ2.6F1)	HT	P2	44	1.5P	HT-70		
Oversize	6 7 8	SU+SP	SUPQ2.6F	SP	P2	46	2.5P	SP-42		
			SUPR2.6F	SP	P3	46	2.5P	SP-42		
		SU-SP	(SUR2.6F)	SP	P3	44	3	2.5P	SP-42	
		SU+PO	PUPR2.6F	PO	P3	46	5P	PO-33		
		SU-PO	(PUR2.6F)	PO	P3	44	5P	PO-33		
For cast irons	1	FC-O	TFCM2.6F5			46	5P	HT-77		
			TFCM2.6F1			46	1.5P	HT-77		
			(TFC2.6F5)	HT	40-75	44	3	5P	HT-77	
			(TFC2.6F1)			44	1.5P	HT-77		
Carbide	1 12 13	N-CT FC	TCNR2.6F3			46	3P	CT-3		
			TCNR2.6F1	HT	P3	44	3	1.5P	CT-3	
For aluminum alloys	11 12 13	AL+SP	ASHPQ2.6F			46	2.5P	SP-60		
		AL-SP	ASHMQ2.6F1	SP	P2	46	3	1.5P	SP-60	
			(ASHQ2.6F)			44	2.5P	SP-60		
	11 12	LA-O	TLAM2.6F5			46	5P	HT-80		
			TLAM2.6F1	HT	40-75	46	3	1.5P	HT-80	
			(TLA2.6F5)			44	3	5P	HT-80	
	(TLA2.6F1)			44	1.5P	HT-81				
Thread forming taps for non-ferrous metals	11 12	N+RS	NRSP52.6FP	G5	46	4P	RO-13			
			NRSP52.6FB	G5	46	2P	RO-13			
			NRSP62.6FP	G6	46	4P	RO-13			
			NRSP62.6FB	G6	46	2P	RO-13			
		N-RS	(NRS52.6FP)	RO	G5	44	3	4P	RO-13	
			(NRS52.6FB)	G5	44	2P	RO-13			
			(NRS62.6FP)	G6	44	4P	RO-13			
			(NRS62.6FB)	G6	44	2P	RO-13			
Short chamfer	11 12	MG-HT	TMGMQ2.6F1	HT	P2	46	3	1P	HT-84	
			(TMGQ2.6F1)			44			HT-84	
For thermosetting plastics	13	PL-1	TPLM2.6F3			46	3	3P	HT-90	
			(TPL2.6F3)	HT	P4	44			HT-90	
Thread forming taps for dry tapping	5 6 7 11 12	OL+RZ	OLRZP52.6FP	G5	46		RO-28			
			OLRZP62.6FP	RO	G6	46	3	4P	RO-28	
		OL-RZ	(OLRZ52.6FP)	G5	44		RO-28			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	(OLRZ62.6FP)	RO	G6	44	3	4P	RO-28
Thread forming taps for high carbon steels	5 6 7 11 12	HP+RZ	HRZP52.6FB	G5	46		RO-30		
			HRZP62.6FB	RO	G6	46	3	2P	RO-30
		HP-RZ	(HRZ52.6FB)	G5	44		RO-30		
			(HRZ62.6FB)	G6	44		RO-30		
Torqueless thread forming taps	6 7 8 11 12	SC-TL-RZ	SRZM52.6F1	RO	G5	46	3	1P	RO-36
			(SRZ52.6F1)			44			RO-36
For deep hole use	5 6 8	S-SP	SSMP2.6F	SP	P1	46	2.5P	SP-52	
			(SSP2.6F)	SP	P1	44	3	2.5P	SP-52
		S-PO	PSMQ2.6F	PO	P2	46	5P	PO-39	
For helical coil wire screw thread inserts	11 12	STI-HT	TICM2.6F5			52	5	5P	HT-85
			TICM2.6F1			52	5	1.5P	HT-85
			(TIC2.6F5)	HT	1b	48	4	5P	HT-85
			(TIC2.6F1)			48	4	1.5P	HT-85
Nut taps	6 8 11 12	NT	NH22.6F	HT	II b	85	2	24P	etc-1
Taps M2.6×0.35									
Standard	5 6 8 11 12	SP	SPP2.6D	SP	P1	46	2.5P	SP-4	
		N-SP	(SNMP2.6D)	SP	P1	46	2.5P	SP-4	
			(SNP2.6D)	SP	P1	44	3	2.5P	SP-4
		PO	POQ2.6D	PO	P2	46	5P	PO-3	
		N+PO	(PNPQ2.6D)	PO	P2	46	5P	PO-15	
		N-PO	(PNQ2.6D)	PO	P2	44	5P	PO-3	
		HT	(TNMQ2.6D9)			46	9P	HT-7	
			TNMQ2.6D5			46	5P	HT-7	
			TNMQ2.6D1	HT	P2	46	3	1.5P	HT-7
			(TNQ2.6D9)			44	9P	HT-7	
			(TNQ2.6D5)			44	5P	HT-7	
			(TNQ2.6D1)			44	1.5P	HT-7	
		Thread forming taps for steels	6 8	N-RZ	NRZM52.6DP			46	4P
	NRZM52.6DB			RO	G5	46	3	2P	RO-4
	(NRZ52.6DP)					44	3	4P	RO-4
	(NRZ52.6DB)					44	2P	RO-4	
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM52.6DP	G5	46	4P	RO-13		
			NRSM52.6DB	G5	46	2P	RO-13		
			(NRS52.6DP)	G5	44	4P	RO-13		
			(NRS52.6DB)	RO	G5	44	3	2P	RO-13
			NRSM62.6DP	G6	46	4P	RO-13		
			NRSM62.6DB	G6	46	2P	RO-13		
			(NRS62.6DP)	G6	44	4P	RO-13		
			(NRS62.6DB)	G6	44	2P	RO-13		
Taps M3.5×0.6									
Standard	5 6 8 11 12	SP	SPP3.5H	SP	P1	52	5	2.5P	SP-4
			SPP3.5H1	SP	P1	52	5	1.5P	SP-4
		+SP(N+SP)	SNPP3.5H	SP	P1	52	5	2.5P	SP-21
		N-SP	(SNMP3.5H1)	SP	P1	52	5	1.5P	SP-4
			(SNP3.5H)	SP	P1	48	4	2.5P	SP-4
			(SNP3.5H1)	SP	P1	48	4	1.5P	SP-4
		PO	POQ3.5H	PO	P2	52	5	5P	PO-3
		+PO(N+PO)	PNPQ3.5H	PO	P2	52	5	5P	PO-15

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small threads and precision machine Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	③④⑤⑥⑪⑫	N-PO	(PNQ3.5H)	PO	P2	48	4	5P	PO-3	
	①⑤⑥⑫	HT	(TNMQ3.5H9)			52	5	9P	HT-8	
Oversize	⑤⑥⑧⑪⑫		TNMQ3.5H5			52	5	5P	HT-8	
			TNMQ3.5H1	HT	P2	52	5	1.5P	HT-8	
			(TNQ3.5H9)			48	4	9P	HT-8	
			(TNQ3.5H5)			48	4	5P	HT-8	
			(TNQ3.5H1)			48	4	1.5P	HT-8	
			SP	SPQ3.5H	SP	P2	52	5	2.5P	SP-4
			SPR3.5H	SP	P3	52	5	2.5P	SP-4	
			SPS3.5H	SP	P4	52	5	2.5P	SP-4	
			+SP(N+SP)	SNPQ3.5H	SP	P2	52	5	2.5P	SP-21
			SNPR3.5H	SP	P3	52	5	2.5P	SP-21	
			SNPS3.5H	SP	P4	52	5	2.5P	SP-21	
			N-SP	(SNQ3.5H)	SP	P2	48	4	2.5P	SP-4
			(SNR3.5H)	SP	P3	48	4	2.5P	SP-4	
			(SNS3.5H)	SP	P4	48	4	2.5P	SP-4	
			PO	POR3.5H	PO	P3	52	5	5P	PO-3
			POS3.5H	PO	P4	52	5	5P	PO-3	
			+PO(N+PO)	PNPR3.5H	PO	P3	52	5	5P	PO-15
			PNPS3.5H	PO	P4	52	5	5P	PO-15	
			N-PO	(PNR3.5H)	PO	P3	48	4	5P	PO-3
			(PNS3.5H)	PO	P4	48	4	5P	PO-3	
For left hand threads	①⑤⑥⑫	HT	(TNMR3.5H9)		P3	52	5	9P	HT-8	
			TNMR3.5H5		P3	52	5	5P	HT-8	
			TNMR3.5H1		P3	52	5	1.5P	HT-8	
			(TNR3.5H9)		P3	48	4	9P	HT-8	
			(TNR3.5H5)		P3	48	4	5P	HT-8	
			(TNR3.5H1)		P3	48	4	1.5P	HT-8	
			(TNMS3.5H9)	HT	P4	52	5	9P	HT-8	
			TNMS3.5H5		P4	52	5	5P	HT-8	
			TNMS3.5H1		P4	52	5	1.5P	HT-8	
			(TNS3.5H9)		P4	48	4	9P	HT-8	
			(TNS3.5H5)		P4	48	4	5P	HT-8	
			(TNS3.5H1)		P4	48	4	1.5P	HT-8	
			HT(LH)	(TNMQ3.5H9-L)					9P	HT-41
				TNMQ3.5H5-L	HT	P2	52	5	5P	HT-41
				TNMQ3.5H1-L					1.5P	HT-41
Oxidizing	⑤⑥⑧	SP-OX	SPP3.5HX	SP	P1	52	5	2.5P	SP-23	
		+SP-OX(N+SP-OX)	SNPP3.5HX	SP	P1	52	5	2.5P	SP-25	
		N-SP-OX	(SNP3.5HX)	SP	P1	48	4	2.5P	SP-23	
		+PO-OX(N+PO-OX)	PNPQ3.5HX	PO	P2	52	5	5P	PO-18	
Soft structural steels	⑧	E-SP	ESHMP3.5H	SP	P1	52	5	2.5P	SP-55	
			(ESH3.5H)			48	4		SP-55	
Thread forming taps for steels	⑥⑧	N+RZ	NRZP53.5HP		G5	52	5	4P	RO-4	
			NRZP53.5HB		G5	52	5	2P	RO-4	
			NRZP63.5HP		G6	52	5	4P	RO-4	
			NRZP63.5HB		G6	52	5	2P	RO-5	
			NRZP73.5HP	RO	G7	52	5	4P	RO-5	
			NRZP73.5HB		G7	52	5	2P	RO-5	
			N-RZ	(NRZ53.5HP)		G5	48	4	4P	RO-4
			(NRZ53.5HB)		G5	48	4	2P	RO-4	
			(NRZ63.5HP)		G6	48	4	4P	RO-4	
			(NRZ63.5HB)		G6	48	4	2P	RO-4	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Thread forming taps for steels	⑥⑧	N-RZ	(NRZ63.5HB)		G6			2P	RO-5	
			(NRZ73.5HP)	RO	G7	48	4	4P	RO-5	
			(NRZ73.5HB)		G7			2P	RO-5	
For stainless steels	⑥⑦⑧	SU+SP	SUPP3.5H	SP	P1	52	5	2.5P	SP-42	
		SU-SP	(SUP3.5H-3)	SP	P1	48	4	2.5P	SP-42	
		SU-PO	PUMQ3.5H	PO	P2	52	5	5P	PO-33	
			(PUQ3.5H)	PO	P2	48	4	5P	PO-33	
		SU-HT	(TUMQ3.5H9)	HT	P2	52	5	9P	HT-70	
			TUMQ3.5H4	HT	P2	52	5	4P	HT-70	
			TUMQ3.5H1	HT	P2	52	5	1.5P	HT-70	
			(TUQ3.5H9)	HT	P2	48	4	9P	HT-70	
			(TUQ3.5H4)	HT	P2	48	4	4P	HT-70	
			(TUQ3.5H1)	HT	P2	48	4	1.5P	HT-70	
Oversize	⑥⑦⑧	SU-SP	(SUR3.5H)	SP	P3	48	4	2.5P	SP-42	
		For hard-to-machine materials	SU2MQ3.5H	SP	P2	52	5	3P	SP-48	
		SU2Q3.5H				48	4	SP-48		
For cast irons	①	FC-O	TFCM3.5H5			52	5	5P	HT-77	
			TFCM3.5H1	HT	④-25	52	5	1.5P	HT-77	
			(TFC3.5H5)			48	4	5P	HT-77	
			(TFC3.5H1)			48	4	1.5P	HT-77	
Carbide	①⑫⑬	N-CT FC	TCNR3.5H3	HT	P3	48	4	3P	CT-3	
			TCNR3.5H1					1.5P	CT-3	
For aluminum alloys	⑪⑫⑬	AL+SP	ASHPQ3.5H			52	5	2.5P	SP-61	
		AL-SP	ASHMQ3.5H1		SP	P2	52	5	1.5P	SP-61
			(ASHQ3.5H)			48	4	2.5P	SP-61	
			(ASHQ3.5H1)			48	4	1.5P	SP-61	
	⑪⑫	LA-O	TLAM3.5H5			52	5	5P	HT-81	
			TLAM3.5H1	HT	④-25	52	5	1.5P	HT-81	
			(TLA3.5H5)			48	4	5P	HT-81	
			(TLA3.5H1)			48	4	1.5P	HT-81	
Carbide	⑪⑫⑬	N-CT LA	TCNR3.5H3A	HT	P3	48	4	3P	CT-1	
			TCNR3.5H1A					1.5P	CT-1	
Thread forming taps for non-ferrous metals	⑪⑫	N+RS	NRSP53.5HP		G5	52	5	4P	RO-14	
			NRSP53.5HB		G5	52	5	2P	RO-14	
			NRSP63.5HP		G6	52	5	4P	RO-14	
			NRSP63.5HB		G6	52	5	2P	RO-14	
			NRSP73.5HP	RO	G7	52	5	4P	RO-14	
			N-RS	(NRS53.5HP)		G5	48	4	4P	RO-14
			(NRS53.5HB)		G5	48	4	2P	RO-14	
			(NRS63.5HP)		G6	48	4	4P	RO-14	
			(NRS63.5HB)		G6	48	4	2P	RO-14	
		For thermosetting plastics	⑬	PL-1	TPLM3.5H3	HT	P5	52	5	3P
	(TPL3.5H3)					48	4		HT-90	
Thread forming taps for dry tapping	⑤⑥⑦⑪⑫	OL+RZ	OLRZP53.5HP		G5	52	5		RO-28	
			OLRZP63.5HP	RO	G6	52	5	4P	RO-28	
			OLRZ	(OLRZ53.5HP)		G5	48	4		RO-28
Thread forming taps for high carbon steels	⑤⑥⑦⑪⑫	HP+RZ	HRZP53.5HP		G5	52	5	4P	RO-31	
			HRZP53.5HB		G5	52	5	2P	RO-31	
			HRZP63.5HP		G6	52	5	4P	RO-31	
			HRZP63.5HB	RO	G6	52	5	2P	RO-31	
			HP-RZ	(HRZ53.5HP)		G5	48	4	4P	RO-31
			(HRZ53.5HB)		G5	48	4	2P	RO-31	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	(HRZ63.5HP) (HRZ63.5HB)	RO	G6	48	4	4P	RO-31
For deep hole use	5 6 8	S-SP	S5MP3.5H-3 (S5P3.5H-3)	SP	P1	52	5	2.5P	SP-52
		S-PO	PSMQ3.5H (PSQ3.5H)	PO	P2	52	5	5P	PO-39
				PO	P2	48	4	5P	PO-39
Taps M3.5×0.35									
Standard	5 6 8 11 12	SP	SPP3.5D	SP	P1	52	5	2.5P	SP-4
		N-SP	(SNMP3.5D) (SNP3.5D)	SP	P1	52	5	2.5P	SP-4
		PO	POQ3.5D	PO	P2	52	5	5P	PO-3
		N-PO	(PNMQ3.5D) (PNQ3.5D)	PO	P2	52	5	5P	PO-3
		HT	(TNMQ3.5D9)			52	5	9P	HT-8
			TNMQ3.5D5			52	5	5P	HT-8
			TNMQ3.5D1	HT	P2	52	5	1.5P	HT-8
			(TNQ3.5D9)			48	4	9P	HT-8
			(TNQ3.5D5)			48	4	5P	HT-8
			(TNQ3.5D1)			48	4	1.5P	HT-8
Thread forming taps for non-ferrous metals	11 12	N-RS	NRSM53.5DP NRSM53.5DB	G5		52	5	4P	RO-14
			NRSM63.5DP NRSM63.5DB	G6		52	5	4P	RO-14
			(NRS63.5DP) (NRS63.5DB)	G6		48	4	4P	RO-14
				G6		48	4	2P	RO-14
Taps M4.5×0.75									
Standard	5 6 8 11 12	SP	SPQ4.5J	SP		60	5.5	2.5P	SP-5
		+SP(N+SP)	SNPQ4.5J	SP		60	5.5	2.5P	SP-22
		N-SP	(SNQ4.5J)	SP	P2	55	5	2.5P	SP-5
		PO	POQ4.5J	PO		60	5.5	5P	PO-4
		N-PO	(PNQ4.5J)	PO		55	5	5P	PO-4
		+PO(N+PO)	PNPQ4.5J	PO		60	5.5	5P	PO-16
		HT	(TNMQ4.5J9)			60	5.5	9P	HT-9
			TNMQ4.5J5			60	5.5	5P	HT-10
			TNMQ4.5J1	HT	P2	60	5.5	1.5P	HT-10
			(TNQ4.5J9)			55	5	9P	HT-10
			(TNQ4.5J5)			55	5	5P	HT-10
			(TNQ4.5J1)			55	5	1.5P	HT-10
Taps M4.5×0.5									
Standard	5 6 8 11 12	SP	SPP4.5G	SP	P1	60	5.5	2.5P	SP-5
		N-SP	(SNMP4.5G) (SNP4.5G)	SP	P1	60	5.5	2.5P	SP-5
		PO	POQ4.5G	PO	P2	60	5.5	5P	PO-4
		N-PO	(PNMQ4.5G) (PNQ4.5G)	PO	P2	60	5.5	5P	PO-4
		HT	(TNMQ4.5G9)			60	5.5	9P	HT-10
			TNMQ4.5G5			60	5.5	5P	HT-10
			TNMQ4.5G1	HT	P2	60	5.5	1.5P	HT-10
			(TNQ4.5G9)			55	5	9P	HT-10

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	1 5 6 12	HT	(TNQ4.5G5)	HT	P2	55	5	5P	HT-10
			(TNQ4.5G1)			55	5	1.5P	HT-10
Oxidizing	5 6 8	SP-OX	SPP4.5GX	SP	P1	60	5.5	2.5P	SP-23
		N-SP OX	(SNMP4.5GX)			60	5.5	2.5P	SP-23
Taps M5.5×0.9									
Standard	5 6 8 11 12	SP	SPQ5.5L	SP		62	6	2.5P	SP-5
		+SP(N+SP)	SNPQ5.5L	SP		62	6	2.5P	SP-22
		N-SP	(SNQ5.5L)	SP	P2	60	5.5	2.5P	SP-5
		PO	POQ5.5L	PO		62	6	5P	PO-4
		N-PO	(PNMQ5.5L) (PNQ5.5L)	PO		62	6	5P	PO-4
		HT	(TNMQ5.5L9)			62	6	9P	HT-11
			TNMQ5.5L5	HT	P2	62	6	5P	HT-11
			TNMQ5.5L1			62	6	1.5P	HT-11
Taps M5.5×0.75									
Standard	1 5 6 12	HT	(TNMQ5.5J9)			62	6	9P	HT-11
			TNMQ5.5J5			62	6	5P	HT-11
			TNMQ5.5J1	HT	P2	62	6	1.5P	HT-11
			(TNQ5.5J9)			60	5.5	9P	HT-11
			(TNQ5.5J5)			60	5.5	5P	HT-11
			(TNQ5.5J1)			60	5.5	1.5P	HT-11
Taps M5.5×0.5									
Standard	5 6 8 11 12	SP	SPP5.5G	SP	P1	62	6	2.5P	SP-5
		N-SP	(SNMP5.5G) (SNP5.5G)	SP	P1	62	6	2.5P	SP-5
		PO	POQ5.5G	PO	P2	62	6	5P	PO-4
		N-PO	(PNMQ5.5G) (PNQ5.5G)	PO	P2	62	6	5P	PO-4
		HT	(TNMQ5.5G9)			62	6	9P	HT-11
			TNMQ5.5G5			62	6	5P	HT-11
			TNMQ5.5G1	HT	P2	62	6	1.5P	HT-11
			(TNQ5.5G9)			55	5.5	9P	HT-11
			(TNQ5.5G5)			55	5.5	5P	HT-11
			(TNQ5.5G1)			55	5.5	1.5P	HT-11
Taps M7×1									
Standard	5 6 8 11 12	SP	SPQ7.0M	SP		70		2.5P	SP-6
		N-SP	(SNQ7.0M)	SP	P2	65	6.2	2.5P	SP-6
		PO	POQ7.0M	PO		70		5P	PO-4
		N-PO	(PNQ7.0M)	PO		65		5P	PO-4
		HT	(TNMQ7.0M9)			70		9P	HT-12
			TNMQ7.0M5			70		5P	HT-12
			TNMQ7.0M1	HT	P2	70		1.5P	HT-12
			(TNQ7.0M9)			65	6.2	9P	HT-12
			(TNQ7.0M5)			65		5P	HT-12
			(TNQ7.0M1)			65		1.5P	HT-12
Over size	5 6 8 11 12	SP	SPR7.0M	P3		70			SP-6
		N-SP	(SNR7.0M)	P3		65			SP-6

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	Oversize	5 6 8 11 12	N-SP	(SNS7.0M)	SP	P4	65		2.5P	SP-6	
			PO	(POR7.0M)	PO	P3	70	6.2	5P	PO-4	
			N-PO	(PNR7.0M)	PO	P3	65		5P	PO-5	
		1 5 6 12	HT	TNMS7.0M5			70		5P	HT-12	
				TNMS7.0M1	HT	P4	70		1.5P	HT-12	
				(TNS7.0M5)			65		5P	HT-12	
				(TNS7.0M1)			65		1.5P	HT-12	
For left hand threads		5 6 8 11 12	SP(LH)	SPQ7.0M-L	SP	P2	70		2.5P	SP-26	
			N-SP(LH)	(SNQ7.0M-L)			65			SP-26	
Oxidizing		5 6 8	SP-OX	SPQ7.0MX	SP	P2	70	6.2	2.5P	SP-23	
Thread forming taps for steels		6 8	N-RZ	NRZM77.0MP			70		4P	RO-6	
				NRZM77.0MB			70		2P	RO-6	
				(NRZ77.0MP)	RO	G7	65		6.2	4P	RO-6
				(NRZ77.0MB)			65		2P	RO-6	
For stainless steels		6 7 8	SU-PO	PUMQ7.0M			70		5P	PO-33	
				(PUQ7.0M)	PO	P2	65		5P	PO-33	
For cast irons	Carbide	1 12 13	N-CT FC	TCNR7.0M3			65		3P	CT-4	
				TCNR7.0M1	HT	P3	65	6.2	1.5P	CT-4	
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR7.0M3A			65		3P	CT-1	
				TCNR7.0M1A	HT	P3	65	6.2	1.5P	CT-1	
Thread forming taps for non-ferrous metals		11 12	N-RS	NRSM67.0MP			70		4P	RO-16	
				NRSM67.0MB			70		2P	RO-16	
				(NRSM77.0MP)	RO	G7	70	6.2	4P	RO-16	
				(NRSM77.0MB)			70		2P	RO-16	

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for non-ferrous metals		11 12	N-RS	(NRS77.0JP)			65		4P	RO-16
				(NRS77.0JB)	RO	G7	65	6.2	2P	RO-16

Taps M7×0.5											
Standard	Oversize	5 6 8 11 12	SP	SPQ7.0G	SP		70		2.5P	SP-6	
			N-SP	(SNQ7.0G)	SP	P2	55		2.5P	SP-6	
			PO	POQ7.0G	PO		70		5P	PO-5	
			N-PO	(PNQ7.0G)	PO		55		5P	PO-5	
		1 5 6 12	HT	(TNMQ7.0G9)			70		9P	HT-13	
				TNMQ7.0G5			70		5P	HT-13	
				TNMQ7.0G1	HT	P2	70		1.5P	HT-13	
				(TNQ7.0G9)			55		6.2	9P	HT-13
				(TNQ7.0G5)			55		5P	HT-13	
				(TNQ7.0G1)			55		1.5P	HT-13	

Taps M7×0.75											
Standard	Oversize	5 6 8 11 12	SP	SPQ7.0J	SP		70		2.5P	SP-6	
			N-SP	(SNQ7.0J)	SP	P2	65		2.5P	SP-6	
			PO	POQ7.0J	PO		70		5P	PO-5	
			N-PO	(PNQ7.0J)	PO		65		5P	PO-5	
		1 5 6 12	HT	(TNMQ7.0J9)			70		9P	HT-13	
				TNMQ7.0J5			70		5P	HT-13	
				TNMQ7.0J1	HT	P2	70		1.5P	HT-13	
				(TNQ7.0J9)			65		6.2	9P	HT-13
				(TNQ7.0J5)			65		5P	HT-13	
				(TNQ7.0J1)			65		1.5P	HT-13	
							65		5P	HT-13	
							65		1.5P	HT-13	
For left hand threads		1 5 6 12	HT(LH)	(TNMQ7.0J9-L)			70		9P	HT-42	
				TNMQ7.0J5-L			70		5P	HT-42	
				TNMQ7.0J1-L	HT	P2	70		1.5P	HT-42	
				(TNQ7.0J9-L)			65		6.2	9P	HT-42
				(TNQ7.0J5-L)			65		5P	HT-42	
				(TNQ7.0J1-L)			65		1.5P	HT-42	
Thread forming taps for steels		6 8	N-RZ	NRZM77.0JP			70		4P	RO-6	
				NRZM77.0JB	RO	G7	70		6.2	2P	RO-6
For cast irons	Carbide	1 12 13	N-CT FC	TCNR7.0J3			62		3P	CT-4	
				TCNR7.0J1	HT	P3	62	6.2	1.5P	CT-4	
For aluminum alloys	Carbide	11 12 13	N-CT LA	TCNR7.0J3A			62		3P	CT-2	
				TCNR7.0J1A	HT	P3	62	6.2	1.5P	CT-2	
Thread forming taps for non-ferrous metals		11 12	N-RS	NRSM77.0JP			70		4P	RO-16	
				NRSM77.0JB	RO	G7	70	6.2	2P	RO-16	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Small threads and odd-size threads Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection		Material	Main material	Symbol	Class	Thickness	Front face	Code	Product page		
Dies M1×0.25											
Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.0B	Di-1		
		SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.0B	Di-1	
		HSS	AR-D HSS	AR-D HSS		16	5		HD21.0B	Di-12	
For left hand threads		SKS	AR-D LH	AR-D LH	II	16	5	GD21.0B-L	Di-7		
		SKS	AR-D LH	AR-D LH	II	20	7	2~2.5P	GE21.0B-L	Di-7	
Solid dies for auto lathe	For steels				P1	10	3	FBP1.0B	Di-9		
		SKS	AD-S ST	AD-S ST	P2	10	3	2~2.5P	FBQ1.0B	Di-9	
					P1	16	5		FDP1.0B	Di-9	
					P2	16	5		FDQ1.0B	Di-9	
		For brass				P1	10	3		EBP1.0B	Di-11
			SKS	AD-S BR	AD-S BR	P2	10	3	2~2.5P	EBQ1.0B	Di-11
					P1	16	5		EDP1.0B	Di-11	
					P2	16	5		EDQ1.0B	Di-11	
	For stainless steels					P2	10	3		HBQ1.0B	Di-14
			HSS	HS-D	HS-D	P1	16	5	2~2.5P	HDP1.0B	Di-14
					P2	16	5		HDQ1.0B	Di-14	
		Dies M1×0.2									
Adjustable dies			SKS	AR-D	AR-D	II	16	5	GD21.0A	Di-1	
			SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.0A	Di-1
Dies M1.1×0.25											
Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.1B	Di-1		
		SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.1B	Di-1	
Solid dies for auto lathe	For steels				P1	10	3	FBP1.1B	Di-9		
		SKS	AD-S ST	AD-S ST	P2	10	3	2~2.5P	FBQ1.1B	Di-9	
					P1	16	5		FDP1.1B	Di-9	
					P2	16	5		FDQ1.1B	Di-9	
		For brass				P1	10	3		EBP1.1B	Di-11
			SKS	AD-S BR	AD-S BR	P2	10	3	2~2.5P	EBQ1.1B	Di-11
					P1	16	5		EDP1.1B	Di-11	
					P2	16	5		EDQ1.1B	Di-11	
	For stainless steels					P1	16	5	2~2.5P	HDP1.1B	Di-14
			HSS	HS-D	HS-D	P2	16	5		HDQ1.1B	Di-14
		Dies M1.2×0.25									
		Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.2B	Di-1
SKS				AR-D	AR-D	II	20	7	2~2.5P	GE21.2B	Di-1
HSS				AR-D HSS	AR-D HSS		16	5		HD21.2B	Di-12
For left hand threads		SKS	AR-D LH	AR-D LH	II	16	5	GD21.2B-L	Di-7		
		SKS	AR-D LH	AR-D LH	II	20	7	2~2.5P	GE21.2B-L	Di-7	
Solid dies for auto lathe	For steels				P1	10	3	FBP1.2B	Di-9		
		SKS	AD-S ST	AD-S ST	P2	10	3	2~2.5P	FBQ1.2B	Di-9	
					P1	16	5		FDP1.2B	Di-9	
					P2	16	5		FDQ1.2B	Di-9	
		For brass				P1	10	3		EBP1.2B	Di-11
			SKS	AD-S BR	AD-S BR	P2	10	3	2~2.5P	EBQ1.2B	Di-11
	Dies M1.4×0.2										
	Adjustable dies			SKS	AR-D	AR-D	II	16	5	GD21.4A	Di-1
				SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.4A
	Dies M1.6×0.35										
	Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.6D	Di-1	
			SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.6D	Di-1
HSS			AR-D HSS	AR-D HSS		16	5		HD21.6D	Di-12	
For left hand threads		SKS	AR-D LH	AR-D LH	II	16	5	GD21.6D-L	Di-7		
		SKS	AR-D LH	AR-D LH	II	20	7	2~2.5P	GE21.6D-L	Di-7	
Solid dies for auto lathe	For steels				P1	10	3	FBP1.6D	Di-9		
		SKS	AD-S ST	AD-S ST	P2	10	3	2~2.5P	FBQ1.6D	Di-9	
					P1	16	5		FDP1.6D	Di-9	
					P2	16	5		FDQ1.6D	Di-9	

Dies selection		Material	Main material	Symbol	Class	Thickness	Front face	Code	Product page		
Solid dies for auto lathe	For brass	SKS	AD-S BR	AD-S BR	P1	16	5	EDP1.2B	Di-11		
					P2	16	5	EDQ1.2B	Di-11		
					P1	10	3	HBP1.2B	Di-14		
	For stainless steels				P2	10	3	HBQ1.2B	Di-14		
		HSS	HS-D	HS-D	P1	16	5	2~2.5P	HDP1.2B	Di-14	
					P2	16	5		HDQ1.2B	Di-14	
Dies M1.2×0.2											
Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.2A	Di-1		
		SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.2A	Di-1	
Dies M1.4×0.3											
Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.4C	Di-1		
		SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.4C	Di-1	
		HSS	AR-D HSS	AR-D HSS		16	5		HD21.4C	Di-12	
For left hand threads		SKS	AR-D LH	AR-D LH	II	16	5	GD21.4C-L	Di-7		
		SKS	AR-D LH	AR-D LH	II	20	7	2~2.5P	GE21.4C-L	Di-7	
Solid dies for auto lathe	For steels				P1	10	3	FBP1.4C	Di-9		
		SKS	AD-S ST	AD-S ST	P2	10	3	2~2.5P	FBQ1.4C	Di-9	
					P1	16	5		FDP1.4C	Di-9	
					P2	16	5		FDQ1.4C	Di-9	
		For brass				P1	10	3		EBP1.4C	Di-11
			SKS	AD-S BR	AD-S BR	P2	10	3	2~2.5P	EBQ1.4C	Di-11
					P1	16	5		EDP1.4C	Di-11	
					P2	16	5		EDQ1.4C	Di-11	
	For stainless steels					P1	10	3		HBP1.4C	Di-14
			HSS	HS-D	HS-D	P1	16	5	2~2.5P	HDP1.4C	Di-14
					P2	16	5		HDQ1.4C	Di-14	
		Dies M1.4×0.2									
Adjustable dies			SKS	AR-D	AR-D	II	16	5	GD21.4A	Di-1	
			SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.4A	Di-1
Dies M1.6×0.35											
Adjustable dies		SKS	AR-D	AR-D	II	16	5	GD21.6D	Di-1		
		SKS	AR-D	AR-D	II	20	7	2~2.5P	GE21.6D	Di-1	
		HSS	AR-D HSS	AR-D HSS		16	5		HD21.6D	Di-12	
For left hand threads		SKS	AR-D LH	AR-D LH	II	16	5	GD21.6D-L	Di-7		
		SKS	AR-D LH	AR-D LH	II	20	7	2~2.5P	GE21.6D-L	Di-7	
Solid dies for auto lathe	For steels				P1	10	3	FBP1.6D	Di-9		
		SKS	AD-S ST	AD-S ST	P2	10	3	2~2.5P	FBQ1.6D	Di-9	
					P1	16	5		FDP1.6D	Di-9	
					P2	16	5		FDQ1.6D	Di-9	

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Screw threads used on tapping machines Dies (SM)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page					
Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P1	10	3		EBP1.6D	Di-11					
					P2	10	3	2~2.5P	EBO1.6D	Di-11					
					P1	16	5		EDP1.6D	Di-11					
					P2	16	5		EDQ1.6D	Di-11					
Solid dies for auto lathe	For stainless steels	HSS	⑥⑦⑧	HS-D	P1	10	3		HBP1.6D	Di-14					
					P1	16	5	2~2.5P	HDP1.6D	Di-14					
					P2	16	5		HDQ1.6D	Di-14					
					R2				RDQ1.6D	Di-16					
Rolling dies		HSS	⑥⑦⑧⑪⑫	RS-D	R3	16	5	—	RDR1.6D	Di-16					
R4							RDS1.6D	Di-16							
Dies M1.6×0.2															
Adjustable dies					SKS	⑥⑧⑪⑫	AR-D	II	16	5	2~2.5P	GD21.6A	Di-1		
		20	7					GE21.6A	Di-1						
Dies M1.7×0.35															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5		GD21.7D	Di-1					
					II	20	7	2~2.5P	GE21.7D	Di-1					
					HSS	AR-D HSS	16	5		HD21.7D	Di-12				
Solid dies for auto lathe	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	16	5	2~2.5P	GD21.7D-L	Di-7					
					20	7		GE21.7D-L	Di-7						
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	10	3		FBP1.7D	Di-9					
					P2	10	3		FBQ1.7D	Di-9					
					P1	16	5	2~2.5P	FDP1.7D	Di-9					
					P2	16	5		FDQ1.7D	Di-9					
					For brass		SKS	⑪⑫	AD-S BR	P1	10	3		EBP1.7D	Di-11
					P2	10				3		EBQ1.7D	Di-11		
	P1	16	5	2~2.5P	EDP1.7D	Di-11									
	For brass		SKS	⑪⑫	AD-S BR	P2	16	5		EDQ1.7D	Di-11				
	For stainless steels					HSS	⑥⑦⑧	HS-D	P1	10	3		HBP1.7D	Di-14	
	P2	10							3	2~2.5P	HBO1.7D	Di-14			
	P1	16	5	2~2.5P	HDP1.7D				Di-14						
	P2	16	5		HDQ1.7D				Di-14						
Rolling dies		HSS	⑥⑦⑧⑪⑫	RS-D	R2				RDQ1.7D	Di-16					
R3	16				5	—	RDR1.7D	Di-16							
R4							RDS1.7D	Di-16							
Dies M1.7×0.2															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5	2~2.5P	GD21.7A	Di-1					
					20	7		GE21.7A	Di-1						
Dies M1.8×0.35															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5	2~2.5P	GD21.8D	Di-1					
					20	7		GE21.8D	Di-1						
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	10	3		FBP1.8D	Di-9					
					P2	10	3		FBQ1.8D	Di-9					
					P1	16	5	2~2.5P	FDP1.8D	Di-9					
					P2	16	5		FDQ1.8D	Di-9					
					For brass		SKS	⑪⑫	AD-S BR	P1	10	3		EBP1.8D	Di-11
					P2	10				3		EBQ1.8D	Di-11		
	P1	16	5	2~2.5P	EDP1.8D	Di-11									
	For brass		SKS	⑪⑫	AD-S BR	P2	16	5		EDQ1.8D	Di-11				

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page					
Solid dies for auto lathe	For stainless steels	HSS	⑥⑦⑧	HS-D	P1	10	3		HBP1.8D	Di-14					
					P1	16	5	2~2.5P	HDP1.8D	Di-14					
					P2	16	5		HDQ1.8D	Di-14					
Rolling dies		HSS	⑥⑦⑧⑪⑫	RS-D	R3	16	5	—	RDR1.8D	Di-16					
Dies M1.8×0.2															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5	2~2.5P	GD21.8A	Di-1					
					20	7		GE21.8A	Di-1						
Dies M2.2×0.45															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5	2~2.5P	GD22.2F	Di-1					
					20	7		GE22.2F	Di-1						
Solid dies for auto lathe	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	20	7	2~2.5P	GE22.2F-L	Di-7					
					For steels		SKS	⑥⑧	AD-S ST	P1	10	3		FBP2.2F	Di-9
					P2	10				3		FBQ2.2F	Di-9		
					P1	16				5	2~2.5P	FDP2.2F	Di-9		
					P2	16				5		FDQ2.2F	Di-9		
					For brass		SKS	⑪⑫	AD-S BR	P1	20	7		FEP2.2F	Di-9
	P2	20	7		FEQ2.2F	Di-9									
	P1	10	3		EBP2.2F	Di-11									
	For brass		SKS	⑪⑫	AD-S BR	P2	10	3		EBQ2.2F	Di-11				
	P1	16				5	2~2.5P	EDP2.2F	Di-11						
	P2	16				5		EDQ2.2F	Di-11						
	For stainless steels		HSS	⑥⑦⑧	HS-D	P1	16	5	2~2.5P	HDP2.2F	Di-15				
P2	20	7					HDQ2.2F	Di-15							
Dies M2.2×0.25															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5	2~2.5P	GD22.2B	Di-1					
					20	7		GE22.2B	Di-1						
Dies M2.3×0.4															
Adjustable dies		SKS	⑥⑧⑪⑫	AR-D	II	16	5		GD22.3E	Di-1					
					20	7	2~2.5P	GE22.3E	Di-1						
					HSS	AR-D HSS	16	5		HD22.3E	Di-13				
					HSS	AR-D HSS	20	7		HE22.3E	Di-13				
Solid dies for auto lathe	For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	16	5		GD22.3E-L	Di-7					
					II	20	7	2~2.5P	GE22.3E-L	Di-7					
					HSS	AR-D HSS LH	20	7		HE22.3E-L	Di-15				
	For steels		SKS	⑥⑧	AD-S ST	P1	10	3		FBP2.3E	Di-9				
	P2	10				3		FBQ2.3E	Di-9						
	P1	16				5	2~2.5P	FDP2.3E	Di-9						
P2	16	5					FDQ2.3E	Di-9							
For brass		SKS	⑪⑫	AD-S BR	P1	20	7		FEP2.3E	Di-9					
P2	20				7		FEQ2.3E	Di-9							
P1	10				3		EBP2.3E	Di-11							
For brass		SKS	⑪⑫	AD-S BR	P2	10	3		EBQ2.3E	Di-11					
P1	16				5	2~2.5P	EDP2.3E	Di-11							
P2	16				5		EDQ2.3E	Di-11							
For stainless steels		HSS	⑥⑦⑧	HS-D	P1	20	7		EHP2.3E	Di-11					
P2	20				7		EQ2.3E	Di-11							

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page				
Solid dies for auto lathe	For stainless steels	HSS	6 7 8	HS-D	P2	10	3		HBQ2.3E	Di-15				
					P1	16	5	2~2.5P	HDP2.3E	Di-15				
					P2	16	5		HDQ2.3E	Di-15				
Rolling dies		HSS	6 7 8	RS-D	R2	16	5		RDQ2.3E	Di-16				
					R3	16	5	—	RDR2.3E	Di-16				
					R4	20	7		RDS2.3E	Di-16				
Dies M2.3×0.25														
Adjustable dies		SKS	6 8	AR-D	II	16	5	2~2.5P	GD22.3B	Di-1				
									GE22.3B	Di-1				
Rolling dies		HSS	6 7 8	RS-D	R3	16	5	—	RDR2.3B	Di-16				
									R4	20	7		RDS2.5D	Di-16
Dies M2.5×0.45														
Adjustable dies		SKS	6 8	AR-D	II	16	5	2~2.5P	GD22.5F	Di-1				
									GE22.5F	Di-1				
									GG22.5F	Di-1				
									HD22.5F	Di-13				
									HE22.5F	Di-13				
									HG22.5F	Di-13				
Solid dies for auto lathe	For left hand threads	SKS	6 8	AR-D LH	II	16	5	2~2.5P	GD22.5F-L	Di-7				
									GE22.5F-L	Di-7				
Solid dies for auto lathe	For steels	SKS	6 8	AD-S ST	P1	10	3		FBP2.5F	Di-9				
					P2	10	3		FBQ2.5F	Di-9				
					P1	16	5	2~2.5P	FDP2.5F	Di-9				
					P2	16	5		FDQ2.5F	Di-9				
					P1	20	7		FEP2.5F	Di-9				
					P2	20	7		FEQ2.5F	Di-9				
	For brass	SKS	11 12	AD-S BR	P1	10	3		EBP2.5F	Di-11				
					P2	10	3		EBQ2.5F	Di-11				
					P1	16	5	2~2.5P	EDP2.5F	Di-11				
					P2	16	5		EDQ2.5F	Di-11				
					P1	20	7		EEP2.5F	Di-11				
					P2	20	7		EEQ2.5F	Di-11				
For stainless steels	HSS	6 7 8	HS-D	P1	16	5		HDP2.5F	Di-15					
				P2	16	5	2~2.5P	HDQ2.5F	Di-15					
				P1	20	7		HEP2.5F	Di-15					
				P2	20	7		HEQ2.5F	Di-15					
				Rolling dies		HSS	6 7 8	RS-D	R2	16	5		RDQ2.5F	Di-16
									R4	16	5		RDS2.5F	Di-16
		R5	16	5	—				RDT2.5F	Di-16				
		R2	20	7					REQ2.5F	Di-16				
		R4	20	7					RES2.5F	Di-16				
		R5	20	7		RET2.5F	Di-16							
Dies M2.5×0.35														
Adjustable dies		SKS	6 8	AR-D	II	16	5	2~2.5P	GD22.5D	Di-1				
									GE22.5D	Di-1				
Solid dies for auto lathe	For steels	SKS	6 8	AD-S ST	P1	10	3		FBP2.5D	Di-9				
					P2	10	3		FBQ2.5D	Di-9				
					P1	16	5	2~2.5P	FDP2.5D	Di-9				
					P2	16	5		FDQ2.5D	Di-9				
		For brass	SKS	11 12	AD-S BR	P1	10	3	2~2.5P	EBP2.5D	Di-11			

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page								
Solid dies for auto lathe	For brass	SKS	11 12	AD-S BR	P2	10	3		EBQ2.5D	Di-11								
					P1	16	5	2~2.5P	EDP2.5D	Di-11								
					P2	16	5		EDQ2.5D	Di-11								
	For stainless steels	HSS	6 7 8	HS-D	P1	10	3		HBP2.5D	Di-15								
					P2	10	3	2~2.5P	HBQ2.5D	Di-15								
					P1	16	5		HDP2.5D	Di-15								
Rolling dies		HSS	6 7 8	RS-D	R2	16	5		RDQ2.5D	Di-16								
					R3	16	5	—	RDR2.5D	Di-16								
					R4	20	7		RDS2.5D	Di-16								
Dies M2.6×0.45																		
Adjustable dies		SKS	6 8	AR-D	II	16	5	2~2.5P	GD22.6F	Di-1								
									GE22.6F	Di-1								
									GG22.6F	Di-1								
									HD22.6F	Di-13								
									HE22.6F	Di-13								
									HG22.6F	Di-13								
Solid dies for auto lathe	For left hand threads	SKS	6 8	AR-D LH	II	16	5	2~2.5P	GD22.6F-L	Di-7								
									GE22.6F-L	Di-7								
									HE22.6F-L	Di-15								
Solid dies for auto lathe	For steels	SKS	6 8	AD-S ST	P1	10	3		FBP2.6F	Di-9								
					P2	10	3		FBQ2.6F	Di-9								
					P1	16	5	2~2.5P	FDP2.6F	Di-9								
					P2	16	5		FDQ2.6F	Di-9								
					P1	20	7		FEP2.6F	Di-9								
					P2	20	7		FEQ2.6F	Di-9								
	For brass	SKS	11 12	AD-S BR	P1	10	3		EBP2.6F	Di-11								
					P2	10	3		EBQ2.6F	Di-11								
					P1	16	5	2~2.5P	EDP2.6F	Di-11								
					P2	16	5		EDQ2.6F	Di-11								
					P1	20	7		EEP2.6F	Di-11								
					P2	20	7		EEQ2.6F	Di-11								
For stainless steels	HSS	6 7 8	HS-D	P2	10	3		HBQ2.6F	Di-15									
				P1	16	5	2~2.5P	HDP2.6F	Di-15									
				P2	16	5		HDQ2.6F	Di-15									
				P1	20	7		HEP2.6F	Di-15									
				P2	20	7		HEQ2.6F	Di-15									
				Rolling dies		HSS	6 7 8	RS-D	R2	16	5		RDQ2.6F	Di-16				
		R4	16	5					RDS2.6F	Di-16								
		R5	16	5	—				RDT2.6F	Di-16								
		R2	20	7					REQ2.6F	Di-16								
		R4	20	7					RES2.6F	Di-16								
Dies M2.6×0.35																		
Adjustable dies		SKS	6 8	AR-D	II	16	5	2~2.5P	GD22.6D	Di-1								
									GE22.6D	Di-1								
Solid dies for auto lathe	For left hand threads	SKS	6 8	AR-D LH	II	20	7	2~2.5P	GD22.6D-L	Di-7								
											GE22.6D-L	Di-7						
									For steels	SKS	6 8	AD-S ST	P1	10	3		FBP2.6D	Di-9
													P2	10	3		FBQ2.6D	Di-9
		SKS	6 8	AD-S ST	P1	16	5	2~2.5P	FDP2.6D	Di-9								
	P2				16	5		FDQ2.6D	Di-9									

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on tapping machines Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page				
Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P1	10	3		EBP2.6D	Di-11				
					P2	10	3	2~2.5P	EBQ2.6D	Di-11				
					P1	16	5		EDP2.6D	Di-11				
					P2	16	5		EDQ2.6D	Di-11				
Solid dies for auto lathe	For stainless steels	HSS	⑥⑦⑧	HS-D	P1	10	3		HBP2.6D	Di-15				
					P2	10	3	2~2.5P	HBQ2.6D	Di-15				
					P1	16	5		HDP2.6D	Di-15				
					P2	16	5		HDQ2.6D	Di-15				
Rolling dies		HSS	⑥⑦⑧⑩⑫	RS-D	R4	16	5	—	RDS2.6D	Di-16				
Dies M3.5×0.6														
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE23.5H	Di-2				
									25	9	GG23.5H	Di-2		
For left hand threads									II	20	7	2~2.5P	GE23.5H-L	Di-7
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	16	5		FDP3.5H	Di-10				
					P2	16	5	2~2.5P	FDQ3.5H	Di-10				
					P1	20	7		FEP3.5H	Di-10				
					P2	20	7		FEQ3.5H	Di-10				
Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P1	16	5		EDP3.5H	Di-12				
					P2	16	5	2~2.5P	EDQ3.5H	Di-12				
					P1	20	7		EEP3.5H	Di-12				
					P2	20	7		EEQ3.5H	Di-12				
Solid dies for auto lathe	For stainless steels	HSS	⑥⑦⑧	HS-D	P1	16	5		HDP3.5H	Di-15				
					P2	16	5	2~2.5P	HDQ3.5H	Di-15				
					P1	20	7		HEP3.5H	Di-15				
					P2	20	7		HEQ3.5H	Di-15				
Dies M3.5×0.5														
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE23.5G	Di-2				
Dies M3.5×0.35														
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE23.5D	Di-2				
									II	25	9	2~2.5P	GG23.5D	Di-2
For left hand threads									AR-D HSS	20	7	HE23.5D	Di-2	
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	16	5		FDP3.5D	Di-10				
					P2	16	5	2~2.5P	FDQ3.5D	Di-10				
					P1	20	7		FEP3.5D	Di-10				
					P2	20	7		FEQ3.5D	Di-10				
Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P2	16	5	2~2.5P	EDQ3.5D	Di-12				
					P2	20	7		EEQ3.5D	Di-12				
Rolling dies		HSS	⑥⑦⑧⑩⑫	RS-D	R4	20	7	—	RES3.5D	Di-16				
					R5	20	7		RET3.5D	Di-16				
Dies M4.5×0.75														
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE24.5J	Di-2				
									25	9	GG24.5J	Di-2		
For left hand threads									II	20	7	2~2.5P	GE24.5J-L	Di-7
Dies M4.5×0.5														
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE24.5G	Di-2				

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page		
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	25	9	2~2.5P	GG24.5G	Di-2		
Dies M5.5×0.9												
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE25.5L	Di-2		
									25	9	GG25.5L	Di-2
Dies M5.5×0.75												
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE25.5J	Di-2		
Dies M5.5×0.5												
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	20	7	2~2.5P	GE25.5G	Di-2		
									25	9	GG25.5G	Di-2
For left hand threads		SKS	⑥⑧⑩⑫	AR-D LH	II	20	7	2~2.5P	GE25.5G-L	Di-7		
Solid dies for auto lathe		SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP3.5G	Di-10		
Dies M7×1												
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	38	13	2~2.5P	GG27.0M	Di-2		
									50	16	GM27.0M	Di-2
For left hand threads									SKS	⑥⑧⑩⑫	AR-D LH	II
						38	13		GJ27.0M-L	Di-7		
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP7.0M	Di-10		
					P2	20	7	2~2.5P	FEQ7.0M	Di-10		
Solid dies for auto lathe	For brass	SKS	⑪⑫	AD-S BR	P1	20	7	2~2.5P	EEP7.0M	Di-12		
					P2	20	7	2~2.5P	EEQ7.0M	Di-12		
Dies M7×0.75												
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	25	9	2~2.5P	GG27.0J	Di-2		
For left hand threads		SKS	⑥⑧⑩⑫	AR-D LH	II	25	9	2~2.5P	GG27.0J-L	Di-7		
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP7.0J	Di-10		
					P2	20	7	2~2.5P	FEQ7.0J	Di-10		
	For brass	SKS	⑪⑫	AD-S BR	P1	20	7	2~2.5P	EEP7.0J	Di-12		
					P2	20	7	2~2.5P	EEQ7.0J	Di-12		
For stainless steels		HSS	⑥⑦⑧	HS-D	P1	20	7	2~2.5P	HEP7.0J	Di-15		
					P2	20	7	2~2.5P	HEQ7.0J	Di-15		
Dies M7×0.5												
Adjustable dies		SKS	⑥⑧⑩⑫	AR-D	II	25	9	2~2.5P	GG27.0G	Di-2		
For left hand threads		SKS	⑥⑧⑩⑫	AR-D LH	II	25	9	2~2.5P	GG27.0G-L	Di-7		
Solid dies for auto lathe	For steels	SKS	⑥⑧	AD-S ST	P1	20	7	2~2.5P	FEP7.0G	Di-10		
					P2	20	7	2~2.5P	FEQ7.0G	Di-10		
	For brass	SKS	⑪⑫	AD-S BR	P1	20	7	2~2.5P	EEP7.0G	Di-12		
					P2	20	7	2~2.5P	EEQ7.0G	Di-12		
For stainless steels	HSS	⑥⑦⑧	HS-D	P1	20	7	2~2.5P	HEP7.0G	Di-15			
				P2	20	7	2~2.5P	HEQ7.0G	Di-15			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Taps M9×1.25												
Standard	5 6 8 11 12	SP	SPQ9.0N	SP	P2	75	2.5P	SP-7				
		N-SP	(SNQ9.0N)	SP	P2	72	2.5P	SP-7				
		PO	POR9.0N	PO	P3	75	7	5P	PO-5			
		N-PO	(PNR9.0N)	PO	P3	72	7	5P	PO-5			
		1 5 6 12	HT	(TNMR9.0N9)				75		9P	HT-14	
				TNMR9.0N5				75		5P	HT-14	
				TNMR9.0N1	HT	P3	75	7	1.5P	HT-14		
				(TNR9.0N9)				72		9P	HT-14	
				(TNR9.0N5)				72		5P	HT-14	
				(TNR9.0N1)				72		1.5P	HT-14	
			Taps M9×1									
			Standard	5 6 8 11 12	SP	SPQ9.0M	SP	P2	75	2.5P	SP-7	
N-SP	(SNQ9.0M)	SP			P2	72	2.5P	SP-7				
PO	POR9.0M	PO			P3	75	7	5P	PO-5			
N-PO	(PNR9.0M)	PO			P3	72	7	5P	PO-5			
1 5 6 12	HT	(TNMQ9.0M9)						75		9P	HT-14	
		TNMQ9.0M5						75		5P	HT-14	
		TNMQ9.0M1			HT	P2	75	7	1.5P	HT-14		
		(TNQ9.0M9)						72		9P	HT-14	
		(TNQ9.0M5)						72		5P	HT-14	
		(TNQ9.0M1)						72		1.5P	HT-14	
	For left hand threads	1 5 6 12			HT(LH)	(TNMQ9.0M9-L)			75		9P	HT-43
						TNMQ9.0M5-L			75		5P	HT-43
			TNMQ9.0M1-L	HT	P2	75	7	1.5P	HT-43			
			(TNQ9.0M9-L)				72		9P	HT-43		
			(TNQ9.0M5-L)				72		5P	HT-43		
			(TNQ9.0M1-L)				72		1.5P	HT-43		
Taps M9×0.75												
Standard	5 6 8 11 12	SP	SPQ9.0J	SP	P2	75	2.5P	SP-7				
		N-SP	(SNQ9.0J)	SP	P2	72	2.5P	SP-7				
		PO	POR9.0J	PO	P3	75	7	5P	PO-5			
		N-PO	(PNR9.0J)	PO	P3	72	7	5P	PO-5			
		1 5 6 12	HT	(TNMQ9.0J9)				75		9P	HT-14	
				TNMQ9.0J5				75		5P	HT-14	
				TNMQ9.0J1	HT	P2	75	7	1.5P	HT-14		
				(TNQ9.0J9)				72		9P	HT-14	
				(TNQ9.0J5)				72		5P	HT-14	
				(TNQ9.0J1)				72		1.5P	HT-14	
			For left hand threads	1 5 6 12	HT(LH)	(TNMQ9.0J9-L)			75		9P	HT-43
						TNMQ9.0J5-L			75		5P	HT-43
	TNMQ9.0J1-L	HT			P2	75	7	1.5P	HT-43			
	(TNQ9.0J9-L)						72		9P	HT-43		
	(TNQ9.0J5-L)						72		5P	HT-43		
	(TNQ9.0J1-L)						72		1.5P	HT-43		
Taps M9×0.5												
Standard	5 6 8 11 12	SP	SPQ9.0G	SP	P2	75	7	2.5P	SP-7			
		N-SP	(SNQ9.0G)	SP	P2	55	7	2.5P	SP-7			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Standard	5 6 8 11 12	PO	POQ9.0G	PO	P2	75	7	5P	PO-5			
		N-PO	(PNQ9.0G)	PO	P2	55	7	5P	PO-5			
		1 5 6 12	HT	(TNMQ9.0G9)				75		9P	HT-14	
				TNMQ9.0G5				75		5P	HT-14	
				TNMQ9.0G1	HT	P2	75	7	1.5P	HT-14		
				(TNQ9.0G9)				55		9P	HT-14	
				(TNQ9.0G5)				55		5P	HT-14	
				(TNQ9.0G1)				55		1.5P	HT-14	
			Taps M11×1.5									
			Standard	5 6 8 11 12	SP	SPQ011O	SP	P2	82	8.5	2.5P	SP-7
		N-SP			(SNQ011O)	SP	P2	80	8	2.5P	SP-7	
		PO			POS011O	PO	P4	82	8.5	5P	PO-6	
N-PO	(PNS011O)	PO			P4	80	8	5P	PO-6			
1 5 6 12	HT	(TNMS011O9)						82	8.5	9P	HT-15	
		TNMS011O5						82	8.5	5P	HT-16	
		TNMS011O1			HT	P4	82	8.5	1.5P	HT-16		
		(TNS011O9)						80	8	9P	HT-16	
		(TNS011O5)						80	8	5P	HT-16	
		(TNS011O1)						80	8	1.5P	HT-16	
	Taps M11×1.25											
	Standard	5 6 8 11 12			SP	SPQ011N	SP	P2	82	8.5	2.5P	SP-7
N-SP			(SNQ011N)	SP	P2	80	8	2.5P	SP-7			
PO			POR011N	PO	P3	82	8.5	5P	PO-6			
N-PO			(PNR011N)	PO	P3	80	8	5P	PO-6			
1 5 6 12			HT	(TNMR011N9)				82	8.5	9P	HT-16	
				TNMR011N5				82	8.5	5P	HT-16	
				TNMR011N1	HT	P3	82	8.5	1.5P	HT-16		
				(TNR011N9)				80	8	9P	HT-16	
				(TNR011N5)				80	8	5P	HT-16	
				(TNR011N1)				80	8	1.5P	HT-16	
			For left hand threads	1 5 6 12	HT(LH)	(TNMR011N9-L)			82	8.5	9P	HT-44
						TNMR011N5-L			82	8.5	5P	HT-44
	TNMR011N1-L	HT			P3	82	8.5	1.5P	HT-44			
	(TNR011N9-L)						80	8	9P	HT-44		
	(TNR011N5-L)						80	8	5P	HT-44		
	(TNR011N1-L)						80	8	1.5P	HT-44		
Taps M11×1												
Standard	5 6 8 11 12	SP	SPQ011M	SP	P2	82	8.5	2.5P	SP-7			
		N-SP	(SNQ011M)	SP	P2	80	8	2.5P	SP-8			
		PO	POR011M	PO	P3	82	8.5	5P	PO-6			
		N-PO	(PNR011M)	PO	P3	80	8	5P	PO-6			
		1 5 6 12	HT	(TNMR011M9)				82	8.5	9P	HT-16	
				TNMR011M5				82	8.5	5P	HT-16	
				TNMR011M1	HT	P3	82	8.5	1.5P	HT-16		
				(TNR011M9)				80	8	9P	HT-16	
				(TNR011M5)				80	8	5P	HT-16	
				(TNR011M1)				80	8	1.5P	HT-16	
			For left hand threads	1 5 6 12	HT(LH)	(TNMR011M9-L)			82	8.5	9P	HT-44
						TNMR011M5-L	HT	P3	82	8.5	5P	HT-44

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Small threads and drawing machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For left hand threads	1 5 6 12	HT(LH)	TNMR011M1-L			82	8.5	1.5P	HT-44		
			TNR011M9-L	HT	P3	80	8	9P	HT-44		
			TNR011M5-L			80	8	5P	HT-44		
			TNR011M1-L			80	8	1.5P	HT-44		
Taps M11×0.75											
Standard	5 6 8 11 12	SP	SPQ011J	SP	P2	82	8.5	2.5P	SP-8		
		N-SP	(SNQ011J)	SP	P2	75	8	2.5P	SP-8		
		PO	POR011J	PO	P3	82	8.5	5P	PO-6		
		N-PO	(PNR011J)	PO	P3	75	8	5P	PO-6		
	1 5 6 12	HT	(TNMR011J9)				82	8.5	9P	HT-16	
			TNMR011J5				82	8.5	5P	HT-16	
			TNMR011J1				82	8.5	1.5P	HT-16	
			(TNR011J9)	HT	P3		75	8	9P	HT-16	
			(TNR011J5)				75	8	5P	HT-16	
			(TNR011J1)				75	8	1.5P	HT-16	
Taps M11×0.5											
Standard	5 6 8 11 12	PO	POQ011G	PO	P2	82	8.5	5P	PO-6		
		N-PO	(PNQ011G)	PO	P2	55	8	5P	PO-6		
	1 5 6 12	HT	(TNMQ011G9)				82	8.5	9P	HT-16	
			TNMQ011G5				82	8.5	5P	HT-16	
			TNMQ011G1				82	8.5	1.5P	HT-16	
			(TNQ011G9)	HT	P2		55	8	9P	HT-16	
			(TNQ011G5)				55	8	5P	HT-16	
			(TNQ011G1)				55	8	1.5P	HT-16	
		Taps M13×1.75									
		Standard	1 5 6 12	HT	(TNMR013P9)			88	10.5	9P	HT-17
	TNMR013P5					88	10.5	5P	HT-17		
	TNMR013P1					88	10.5	1.5P	HT-17		
	(TNR013P9)			HT	P3		85	9.5	9P	HT-17	
	(TNR013P5)						85	9.5	5P	HT-17	
Taps M13×1.5											
Standard	5 6 8 11 12	PO	POR013O	PO	P3	88	10.5	5P	PO-6		
		N-PO	(PNR013O)	PO	P3	85	9.5	5P	PO-6		
	1 5 6 12	HT	(TNMR013O9)				88	10.5	9P	HT-17	
			TNMR013O5				88	10.5	5P	HT-17	
			TNMR013O1				88	10.5	1.5P	HT-18	
			(TNR013O9)	HT	P3		85	9.5	9P	HT-17	
			(TNR013O5)				85	9.5	5P	HT-17	
			(TNR013O1)				85	9.5	1.5P	HT-18	
		Taps M13×1.25									
		Standard	1 5 6 12	HT	(TNMS013N9)			88	10.5	9P	HT-18
	TNMS013N5					88	10.5	5P	HT-18		
	TNMS013N1					88	10.5	1.5P	HT-18		
	(TNS013N9)			HT	P4		85	9.5	9P	HT-18	
	(TNS013N5)						85	9.5	5P	HT-18	
	(TNS013N1)						85	9.5	1.5P	HT-18	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M13×1											
Standard	5 6 8 11 12	SP	SPQ013M	SP	P2	88	10.5	2.5P	SP-8		
		N-SP	(SNQ013M)	SP	P2	85	9.5	2.5P	SP-8		
		PO	POR013M	PO	P3	88	10.5	5P	PO-6		
		N-PO	(PNR013M)	PO	P3	85	9.5	5P	PO-6		
	1 5 6 12	HT	(TNMR013M9)				88	10.5	9P	HT-18	
			TNMR013M5				88	10.5	5P	HT-18	
			TNMR013M1				88	10.5	1.5P	HT-18	
			(TNR013M9)	HT	P3		85	9.5	9P	HT-18	
			(TNR013M5)				85	9.5	5P	HT-18	
			(TNR013M1)				85	9.5	1.5P	HT-18	
Taps M13×0.75											
Standard	1 5 6 12	HT	(TNMR013J9)			88	10.5	9P	HT-18		
			TNMR013J5			88	10.5	5P	HT-18		
			TNMR013J1			88	10.5	1.5P	HT-18		
			(TNR013J9)	HT	P3		75	9.5	9P	HT-18	
			(TNR013J5)				75	9.5	5P	HT-18	
			(TNR013J1)				75	9.5	1.5P	HT-18	
		Taps M13×0.5									
Standard	1 5 6 12	HT	(TNMQ013G9)			88	10.5	9P	HT-18		
			TNMQ013G5			88	10.5	5P	HT-18		
			TNMQ013G1			88	10.5	1.5P	HT-18		
			(TNQ013G9)	HT	P2		55	9.5	9P	HT-18	
			(TNQ013G5)				55	9.5	5P	HT-18	
			(TNQ013G1)				55	9.5	1.5P	HT-18	
Taps M14×2											
Standard	5 6 8 11 12	SP	SPQ014Q	SP	P2			2.5P	SP-8		
			SPQ014Q1	SP	P2			1.5P	SP-8		
		N-SP	(SNQ014Q)	SP	P2	88	10.5	2.5P	SP-8		
			(SNQ014Q1)	SP	P2			1.5P	SP-9		
		PO	POS014Q	PO	P4			5P	PO-6		
	1 5 6 12	N-PO	(PNS014Q)	PO	P4			5P	PO-6		
		HT	(TNMR014Q9)					9P	HT-18		
			TNMR014Q5					5P	HT-18		
			TNMR014Q1					1.5P	HT-18		
			(TNR014Q9)	HT	P3	88	10.5	9P	HT-18		
			(TNR014Q5)					5P	HT-18		
			(TNR014Q1)					1.5P	HT-18		
		Oversize	5 6 8 11 12	SP	SPR014Q	SP	P3			2.5P	SP-9
					SPS014Q	SP	P4			2.5P	SP-9
				N-SP	(SNR014Q)	SP	P3	88	10.5	2.5P	SP-9
	(SNS014Q)			SP	P4			2.5P	SP-9		
PO	POT014Q			PO	P5			5P	PO-6		
1 5 6 12	N-PO	(PNT014Q)	PO	P5			5P	PO-6			
	HT	TNMS014Q5					5P	HT-18			
		TNMS014Q1					1.5P	HT-18			
		(TNS014Q9)	HT	P4	88	10.5	9P	HT-18			
		(TNS014Q5)					5P	HT-18			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	Enlarge	HT	(TNS014Q1)	HT	P4	88	10.5	1.5P	HT-18	
For left hand threads	1 5 6 12									
TiN coated	5 6 8 11 12	SP-V	VSPQ014Q	SP	P2	88	10.5	2.5P	SP-29	
		N-SP-V	(VSNQ014Q)						SP-29	
	1 5 6 12	LS-SP	SPQ014QL12	SP	P2	120		2.5P	SP-34	
			SPQ014QL15	SP	P2	150		2.5P	SP-34	
		SPQ014QL20	SP	P2	200		2.5P	SP-34		
		LS-N-SP	(SNQ014QL12)	SP	P2	120		2.5P	SP-34	
		(SNQ014QL15)	SP	P2	150		2.5P	SP-34		
		(SNQ014QL20)	SP	P2	200		2.5P	SP-34		
		LS-PO	POS014QL12	PO	P4	120	10.5	5P	PO-26	
		POS014QL15	PO	P4	150		5P	PO-26		
		POS014QL20	PO	P4	200		5P	PO-26		
		LS-N-PO	(PNS014QL12)	PO	P4	120		5P	PO-26	
(PNS014QL15)	PO	P4	150		5P	PO-26				
(PNS014QL20)	PO	P4	200		5P	PO-26				
1 5 6 12	LS-HT	TNMQ014Q512				120		5P	HT-55	
		TNMQ014Q515				150		5P	HT-55	
	TNMQ014Q520				200		5P	HT-55		
	TNMQ014Q525				250		5P	HT-55		
	TNMQ014Q112				120		1.5P	HT-55		
	TNMQ014Q115				150		1.5P	HT-55		
	TNMQ014Q120				200		1.5P	HT-55		
	TNMQ014Q125				250		1.5P	HT-55		
	(L12014Q5-Q)	HT	P2	120	10.5	5P	HT-55			
	(L15014Q5-Q)			150		5P	HT-55			
	(L20014Q5-Q)			200		5P	HT-55			
	(L25014Q5-Q)			250		5P	HT-55			
	(L12014Q1-Q)			120		1.5P	HT-55			
	(L15014Q1-Q)			150		1.5P	HT-55			
	(L20014Q1-Q)			200		1.5P	HT-55			
	(L25014Q1-Q)			250		1.5P	HT-55			
	Enlarge	5 6 8 11 12	LS-PO	POT014QL15	PO	P5	150	10.5	5P	PO-26
			LS-N-PO	(PNT014QL15)						PO-26
1 5 6 12	LS-HT	TNMR014Q515						5P	HT-55	
		TNMR014Q115	HT	P3	150	10.5	1.5P	HT-55		
	(L15014Q5-R)						5P	HT-55		
	(L15014Q1-R)						1.5P	HT-55		
For left hand threads	5 6 8 11 12	LS-SP(LH)	SPQ014QL15-L	SP	P2	150	10.5	2.5P	SP-39	
		LS-N-SP(LH)	(SNQ014QL15-L)						SP-39	
	1 5 6 12	LS-HT(LH)	TNMQ014Q515-L						5P	HT-66
		TNMQ014Q115-L	HT	P2	150	10.5	1.5P	HT-66		
		(L15014Q5-QL)					5P	HT-66		

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	For left hand threads	LS-HT(LH)	LS-HT(LH)	(L15014Q1-QL)	HT	P2	150	10.5	1.5P	HT-66	
For soft structural steels	8										
Thread forming taps for steels	6 8	N-RZ	NRZM9014QP	NRZM9014QB	G9	G9	88	10.5	2.5P	SP-55	
										SP-55	
	RO	NRZM0014QP	NRZM0014QB	G9	G9	88	10.5	4P	RO-8		
									RO-8		
	RO	NRZ0014QP	NRZ0014QB	G10	G10	88	10.5	4P	RO-8		
									RO-8		
	RO	NRZ0014QP	NRZ0014QB	G10	G10	88	10.5	2P	RO-8		
									RO-8		
RO	NRZ0014QP	NRZ0014QB	G10	G10	88	10.5	2P	RO-8			
								RO-8			
For high carbon steels	5 6	HC-SP	SCMQ014Q	(SCQ014Q)	SP	P2	88	10.5	2.5P	SP-57	
										SP-57	
For hard-to-machine materials	1 5 6	HC-PO	PCMS014Q	(PCS014Q)	PO	P4	88	10.5	5P	PO-41	
										PO-41	
For titanium alloys	4 5 6 9	ZET-B	ZETBMR014Q	(ZETBR014Q)	SP	P3	88	10.5	3P	SP-68	
										SP-68	
		ZET-P	ZETPMT014Q	(ZETPT014Q)	SL	P5	88	10.5	5P	SL-4	
										SL-4	
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR014Q	(ZENBR014Q)	SP	P3	88	10.5	3P	SP-69	
										SP-69	
		ZEN-P	ZENPMT014Q	(ZENPT014Q)	PO	P5	88	10.5	4.5P	PO-47	
										PO-47	
Carbide taps for hard materials	2	UH-CT	UHCS014Q5		HT	P4	88	12.5	5P	CT-10	
For stainless steels	6 7 8	SU-SP	SUMQ014Q	(SUQ014Q)	SP	P2	88	10.5	2.5P	SP-44	
										SP-44	
		SU-PO	PUMS014Q	(PUS014Q)	PO	P4	88	10.5	5P	PO-34	
										PO-34	
		SU-HT	TUMS014Q4	(TUS014Q4)	HT	P4	88	10.5	4P	HT-72	
										HT-72	
	SU-SP	SUMR014Q	(SUR014Q)	SP	P3	88	10.5	2.5P	SP-44		
									SP-44		
	SU-PO	PUMT014Q	(PUT014Q)	PO	P5	88	10.5	5P	PO-34		
									PO-34		
	For deep hole use	6 7 8	SU-S-SP	SSMQ014Q-SU	(SSQ014Q-SU)	SP	P2	150	10.5	2.5P	SP-50
											SP-50
For hard-to-machine materials	5 6 7	SU2-SP	SU2MR014Q	(SU2R014Q)	SP	P3	88	10.5	3P	SP-49	
										SP-49	
For cast irons	1	FC-O	TFCM014Q5	(TFCM014Q1)	HT	P4	70-40	88	10.5	HT-79	
										HT-79	

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small thread and drawing machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For cast irons	①	FC-O	(TFC014Q5)	HT	7-4	88	10.5	5P	HT-79		
			(TFC014Q1)					1.5P	HT-79		
	Carbide	① ⑫ ⑬	N-CT FC	TCNR014Q3		P3			3P	CT-5	
				TCNR014Q1		P3			1.5P	CT-5	
			TCNS014Q3		HT	P4	88	10.5	3P	CT-5	
			TCNS014Q1		P4				1.5P	CT-5	
For aluminum alloys	⑪ ⑫ ⑬	AL-SP	ASHMR014Q					2.5P	SP-62		
			ASHMR014Q1		SP	P3	88	10.5	1.5P	SP-62	
			(ASHR014Q)						2.5P	SP-62	
			(ASHR014Q1)						1.5P	SP-62	
	⑪ ⑫	LA-O	TLAM014Q5						5P	HT-82	
			TLAM014Q1						1.5P	HT-82	
			(TLA014Q5)		HT	7-6	88	10.5	5P	HT-82	
			(TLA014Q1)						1.5P	HT-82	
		Carbide	⑪ ⑫ ⑬	N-CT LA	TCNR014Q3A		P3			3P	CT-2
					TCNR014Q1A		P3			1.5P	CT-2
			TCNS014Q3A		HT	P4	88	10.5	3P	CT-2	
			TCNS014Q1A		P4				1.5P	CT-2	
Thread forming taps for non-ferrous materials	⑪ ⑫	N-RS	NRSM9014QP		G9			4P	RO-18		
			NRSM9014QB		G9			2P	RO-18		
			(NRS9014QP)		G9				4P	RO-18	
			(NRS9014QB)		G9				2P	RO-18	
			NRSM0014QP		RO	G10	88	10.5	4P	RO-18	
			NRSM0014QB		G10				2P	RO-18	
			(NRS0014QP)		G10				4P	RO-18	
			(NRS0014QB)		G10				2P	RO-18	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSMQ014Q		SP	P2		2.5P	SP-53		
			(SSQ014Q)		SP	P2		2.5P	SP-53		
		S-PO	PSMS014Q		PO	P4	88	10.5	5P	PO-40	
			(PSS014Q)		PO	P4			5P	PO-40	
Low spiral	① ⑤ ⑥ ⑪ ⑫	LS-LO-SP	LSHM014QL15		SP	P2	150	10.5	2.5P		
			(LSHQ014QL15)						SP-65		
For helical coil wire screw thread inserts	⑪ ⑫	STI-SP	STIMC014Q		SP		100	14	2.5P		
			(STIC014Q)		SP		95	13	2.5P		
		STI-HT	TICM014Q5		HT	1b	100	14	5P		
			TICM014Q1		HT		100	14	1.5P		
			(TIC014Q5)		HT		95	13	5P		
			(TIC014Q1)		HT		95	13	1.5P		
With coolant hole	⑤ ⑥ ⑧ ⑪ ⑫	MC-SP	MSHQ014QL15		SP	P2	150	10.5	2.5P		
			MPHS014QL15		PO	P4	150		5P		
	① ⑤ ⑥ ⑪ ⑫	MC-PO	ML15014Q5-Q		HT	P2	150		5P		
			ML20014Q5-Q		HT	P2	200	10.5	5P		
			ML15014Q1-Q		HT	P2	150		1.5P		
			ML20014Q1-Q		HT	P2	200		1.5P		
Nut taps	⑥ ⑧ ⑪ ⑫	NT	NH2014Q		HT	II b	190	11	2.5P		

Taps M14×1.5	
Standard	⑤ ⑥ ⑧ ⑪ ⑫
	SP
	SPQ0140
	SPQ01401
	N-SP
	(SNQ0140)
(SNQ01401)	
PO	
POR0140	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	⑤ ⑥ ⑧ ⑪ ⑫	N-PO	(PNR0140)		PO	P3	88	10.5	5P	
			(TNMR01409)						9P	
			TNMR01405						5P	
			TNMR01401		HT	P3	88	10.5	1.5P	
			(TNR01409)						9P	
			(TNR01405)						5P	
			(TNR01401)						1.5P	
		Oversize	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR0140		SP	P3		2.5P
					SPS0140		SP	P4		2.5P
				N-SP	(SNR0140)		SP	P3		2.5P
					(SNS0140)		SP	P4		2.5P
				PO	POS0140		PO	P4	88	10.5
	POT0140				PO	P5		5P		
① ⑤ ⑥ ⑪ ⑫	HT		TNMS01405					5P		
			TNMS01401		HT	P4	88	10.5	1.5P	
			(TNS01405)					5P		
			(TNS01401)					1.5P		
			(PNT0140)		PO	P5		5P		
								5P		
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPQ0140-L		SP	P2		2.5P		
			(SNQ0140-L)		SP	P2		2.5P		
		PO(LH)	POR0140-L		PO	P3	88	10.5	5P	
			(PNR0140-L)		PO	P3		5P		
		① ⑤ ⑥ ⑪ ⑫	HT(LH)	(TNMR01409-L)					9P	
			(TNMR01405-L)					5P		
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPQ0140L12		SP	P2	120	2.5P		
			SPQ0140L15		SP	P2	150	2.5P		
			SPQ0140L20		SP	P2	200	2.5P		
		LS-N-SP	(SNQ0140L12)		SP	P2	120	2.5P		
			(SNQ0140L15)		SP	P2	150	2.5P		
			(SNQ0140L20)		SP	P2	200	2.5P		
		LS-PO	POR0140L15		PO	P3	150	5P		
			POR0140L20		PO	P3	200	5P		
		LS-N-PO	(PNR0140L15)		PO	P3	150	5P		
			(PNR0140L20)		PO	P3	200	5P		
		① ⑤ ⑥ ⑪ ⑫	LS-HT	TNMQ0140512				120	5P	
			TNMQ0140515					150	5P	
	TNMQ0140520					200	5P			
	TNMQ0140112					120	1.5P			
	TNMQ0140115					150	1.5P			
	TNMQ0140120					200	1.5P			
	(L1201405-Q)		HT	P2	120	10.5	5P			
	(L1501405-Q)					150	5P			
	(L2001405-Q)					200	5P			
	(L1201401-Q)					120	1.5P			
	(L1501401-Q)					150	1.5P			
	(L2001401-Q)					200	1.5P			
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP(LH)	SPQ0140L15-L		SP	P2	150	10.5	2.5P	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	For left hand threads	5 6 8 11 12	LS-N-SP(LH)	(SNQ0140L15-L)	SP	P2	150	10.5	2.5P	SP-39		
			1 5 6 12	LS-HT(LH)	TNMQ0140S15L				5P	HT-66		
				TNMQ0140I15L		HT	P2	150	10.5	1.5P	HT-66	
				(L150140S-QL)						5P	HT-66	
			(L150140I-QL)					1.5P	HT-66			
For soft structural steels		8	E-SP	ESHMQ0140 (ESHQ0140)	SP	P2	88	10.5	2.5P	SP-55 SP-55		
Thread forming taps for steels		6 8	N-RZ	NRZM90140P NRZM90140B (NRZ90140P) (NRZ90140B)					4P 2P 4P 2P	RO-8 RO-8 RO-8 RO-8		
For high carbon steels		5 6	HC-SP	SCMQ0140 (SCQ0140)	SP	P2	88	10.5	2.5P	SP-57 SP-57		
		1 5 6	HC-PO	PCMR0140 (PCR0140)	PO	P3	88	10.5	5P	PO-42 PO-42		
For hard-to-machine materials		1 4 5	EH-PO	EPHMS0140 (EPHS0140)	PO				4.5P	PO-45 PO-45		
			EH-HT	ETHMS0140S ETHMS0140I (ETHS0140S) (ETHS0140I)	HT	P4	88	10.5	5P 2.5P 5P 2.5P	HT-94 HT-94 HT-94 HT-94		
For titanium alloys		4 5 6 9	ZET-B	ZETBMR0140 (ZETBR0140)	SP	P3			3P	SP-68 SP-68		
			ZET-P	ZETPMS0140 (ZETPS0140)	SL	P4	88	10.5	5P	SL-4 SL-4		
For nickel base alloys		6 7 8 10	ZEN-B	ZENBMR0140 (ZENBR0140)	SP	P3			3P	SP-69 SP-69		
			ZEN-P	ZENPMS0140 (ZENPS0140)	PO	P4	88	10.5	4.5P	PO-47 PO-47		
Carbide taps for hard materials		2	UH-CT	UHCS0140S	HT	P4	88	12.5	5P	CT-10		
For stainless steels	Standard	6 7 8	SU-SP	SUMQ0140 (SUQ0140)	SP	P2			2.5P	SP-44 SP-44		
			SU-PO	PUMR0140 (PUR0140)	PO	P3			5P	PO-34 PO-34		
			SU-HT	TUMR0140A TUMR0140I (TUR0140A) (TUR0140I)	HT	P3	88	10.5	4P 1.5P 4P 1.5P	HT-72 HT-72 HT-72 HT-72		
			Overdose	6 7 8	SU-SP	SUMS0140 (SUS0140)	SP	P4	88	10.5	2.5P	SP-44 SP-44
			For hard-to-machine materials	5 6 7	SU2-SP	SU2MR0140 (SU2R0140)	SP	P3	88	10.5	3P	SP-49 SP-49
		For cast irons		1	FC-O	TFCM0140S TFCM0140I (TFC0140S) (TFC0140I)	HT	P4	88	10.5	5P 1.5P 5P 1.5P	HT-79 HT-79 HT-79 HT-79
			Carbide	1 12 13	N-CT FC	TCNR01403 TCNR0140I TCNS01403 TCNS0140I					3P 1.5P 3P 1.5P	CT-5 CT-5 CT-5 CT-5
		For aluminum alloys		11 12 13	AL-SP	ASHMR0140 ASHMR0140I	SP	P3	88	10.5	2.5P	SP-62 SP-62

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For aluminum alloys		11 12 13	AL-SP	(ASHR0140) (ASHR0140I)	SP	P3	88	10.5	2.5P 1.5P	SP-62 SP-62	
		11 12	LA-O	TLAM0140S TLAM0140I (TLA0140S) (TLA0140I)					5P 1.5P 5P 1.5P	HT-82 HT-82 HT-82 HT-82	
	Carbide	11 12 13	N-CT LA	TCNR01403A TCNR01401A TCNS01403A TCNS01401A					3P 1.5P 3P 1.5P	CT-2 CT-2 CT-2 CT-2	
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM90140P NRSM90140B (NRS90140P) (NRS90140B)					4P 2P 4P 2P	RO-18 RO-18 RO-18 RO-18	
For ultra fast tapping (with internal coolant hole)		For steels	5 6 8	HFIHS	HFIHS0140	SP	P4	88	12	2.5P	SP-73
		For non-ferrous metals	1 5 6	HFISP	HFISP0140	SP	P4	88	12	2.5P	SP-73
			11 12	HFAHS	HFAHS0140	SP	P4	88	12	2.5P	SP-74
				HFASP	HFASP0140	SP	P4	88	12	2.5P	SP-74
For dry tapping (with internal coolant hole)		For steels	11 12	HDISP	HDISP0140	SP	P4	88	12	2.5P	SP-75
		For non-ferrous metals	11 12	HDASP	HDASP0140	SP	P4	88	12	2.5P	SP-75
For ultra fast tapping (with internal coolant hole)		For both steels and non ferrous materials	1 5 6 11 12	HDISL	HDISL0140	SL	P4	88	12	5P	SL-6
Thread forming taps for high carbon steels		5 6 7	HP-RZ	HRZM90140P HRZM90140B (HRZ90140P) (HRZ90140B)					4P 2P 4P 2P	RO-32 RO-32 RO-32 RO-33	
For deep hole use		5 6 8	S-SP	SSMQ0140 (SSQ0140)	SP	P2			2.5P	SP-53 SP-53	
			S-PO	PSMR0140 (PSR0140)	PO	P3	88	10.5	5P	PO-40 PO-40	
Low spiral		1 5 6	LS-LO-SP	LSHQ0140L15 (LSHQ0140L15)	SP	P2	150	10.5	2.5P	SP-65 SP-65	
For helical coil wire screw thread inserts		11 12	STI-SP	STIMC0140 (STIC0140)	SP				2.5P	SP-63 SP-63	
			STI-HT	TICM0140S TICM0140I (TIC0140S) (TIC0140I)	HT	1b	95	12.5	5P 1.5P 5P 1.5P	HT-86 HT-86 HT-86 HT-86	
With coolant hole		1 5 6	MC-PO	MPHR0140L15	PO	P3	150		5P	PO-44	
		11 12	MC-HT	ML150140S-Q ML200140S-Q ML150140I-Q ML200140I-Q	HT	P2	150	10.5	5P 5P 1.5P 1.5P	HT-91 HT-91 HT-91 HT-91	
Nut taps		6 8 11 12	NT	NH20140	HT	II	170	11	27P	etc-1	
Taps M14x1.25											
Standard		5 6 8	SP	SPQ014N	SP	P2			2.5P	SP-9	
		11 12	N-SP	(SNQ014N)	SP	P2			2.5P	SP-9	
			PO	POR014N	PO	P3	88	10.5	5P	PO-7	
			N-PO	(PNR014N)	PO	P3			5P	PO-7	
		1 5 6 12	HT	(TNMS014N9)					9P	HT-19	
				TNMS014N5	HT	P4	88	10.5	5P	HT-19	
				TNMS014N1					1.5P	HT-19	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	1 5 6 12	HT	(TNS014N9)					9P	HT-19	
			(TNS014N5)	HT	P4	88	10.5	5P	HT-19	
			(TNS014N1)					1.5P	HT-19	
For high carbon steels	5 6	HC-SP	SCMQ014N (SCQ014N)	SP	P2	88	10.5	2.5P	SP-57 SP-57	
For stainless steels	6 7 8	SU-HT	TUMR014N4					4P	HT-72	
			TUMR014N1					1.5P	HT-72	
			(TUR014N4)	HT	P3	88	10.5	4P	HT-72	
			(TUR014N1)					1.5P	HT-72	
For cast irons	Carbide	1 12 13	N-CT FC					3P	CT-5	
			TCNR014N3		P3			1.5P	CT-5	
			TCNR014N1	HT	P3	88	10.5	3P	CT-5	
			TCNS014N3		P4			3P	CT-5	
			TCNS014N1		P4			1.5P	CT-5	
Taps M14×1										
Standard	5 6 8 11 12	SP	SPQ014M	SP	P2			2.5P	SP-9	
			N-SP	(SNQ014M)	SP	P2			2.5P	SP-9
			PO	POR014M	PO	P3	88	10.5	5P	PO-7
			N-PO	(PNR014M)	PO	P3			5P	PO-7
			1 5 6 12	HT	(TNMR014M9)					9P
			TNMR014M5					5P	HT-19	
			TNMR014M1	HT	P3	88	10.5	1.5P	HT-19	
			(TNR014M9)					9P	HT-19	
			(TNR014M5)					5P	HT-19	
			(TNR014M1)					1.5P	HT-19	
	Oversize	1 5 6 12	HT	TNMS014M5				5P	HT-19	
			TNMS014M1	HT	P4	88	10.5	1.5P	HT-19	
			(TNS014M5)					5P	HT-19	
			(TNS014M1)					1.5P	HT-19	
For left hand threads	1 5 6 12	HT(LH)	(TNMR014M9-L)					9P	HT-45	
			TNMR014M5-L					5P	HT-45	
			TNMR014M1-L	HT	P3	88	10.5	1.5P	HT-45	
			(TNR014M9-L)					9P	HT-45	
			(TNR014M5-L)					5P	HT-45	
			(TNR014M1-L)					1.5P	HT-45	
Long shank	Standard	1 5 6 12	LS-HT	TNMQ014M515				5P	HT-55	
				TNMQ014M115	HT	P2	150	10.5	1.5P	HT-55
				(L15014M5-Q)				5P	HT-55	
				(L15014M1-Q)				1.5P	HT-55	
Thread forming taps for steels	6 8	N-RZ	NRZM8014MP NRZM8014MB (NRZ8014MP) (NRZ8014MB)					4P 2P 4P 2P	RO-8 RO-8 RO-8 RO-8	
For high carbon steels	5 6	HC-SP	SCMQ014M (SCQ014M)	SP	P2	88	10.5	2.5P	SP-57 SP-57	
For stainless steels	6 7 8	SU-SP	SUMQ014M	SP	P2			2.5P	SP-44	
			(SUQ014M)	SP	P2			2.5P	SP-44	
			SU-HT	TUMR014M4	HT	P3			4P	HT-72
				TUMR014M1	HT	P3	88	10.5	1.5P	HT-72
				(TUR014M4)	HT	P3			4P	HT-72
				(TUR014M1)	HT	P3			1.5P	HT-72
For cast irons	Carbide	1 12 13	N-CT FC	TCNR014M3	HT	P3	70	10.5	3P	CT-5

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
For cast irons	Carbide	1 12 13	N-CT FC					1.5P	CT-5			
			TCNR014M1	HT	P4	70	10.5	3P	CT-5			
			TCNS014M1		P4			1.5P	CT-5			
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM8014MP NRSM8014MB (NRS8014MP) (NRS8014MB)				4P 2P 4P 2P	RO-18 RO-18 RO-18 RO-18			
For deep hole use		5 6 8	S-SP	SSMQ014M (SSQ014M)	SP	P2	88	10.5	2.5P	SP-53 SP-53		
Taps M14×0.75												
Standard			PO	POR014J	PO	P3	88	10.5	5P	PO-7		
			11 12	N-PO	(PNR014J)			75		PO-7		
			1 5 6 12	HT	(TNMR014J9)				88	9P	HT-19	
					TNMR014J5				88	5P	HT-19	
					TNMR014J1	HT	P3	88	10.5	1.5P	HT-19	
					(TNR014J9)				75	9P	HT-19	
					(TNR014J5)				75	5P	HT-19	
			(TNR014J1)			75	1.5P	HT-19				
Taps M14×0.5												
Standard			1 5 6 12	HT	(TNMQ014G9)			88	9P	HT-19		
					TNMQ014G5				88	5P	HT-19	
					TNMQ014G1	HT	P2	88	10.5	1.5P	HT-19	
					(TNQ014G9)				58	9P	HT-19	
					(TNQ014G5)				58	5P	HT-19	
					(TNQ014G1)				58	1.5P	HT-19	
Taps M15×2												
Standard			5 6 8 11 12	SP	SPQ015Q	SP	P2	95	12.5	2.5P	SP-9	
				N-SP	(SNQ015Q)	SP	P2	90	10.5	2.5P	SP-9	
				PO	POS015Q	PO	P4	95	12.5	5P	PO-7	
				N-PO	(PNS015Q)	PO	P4	90	10.5	5P	PO-7	
			1 5 6 12	HT	(TNMR015Q9)				95	12.5	9P	HT-19
					TNMR015Q5				95	12.5	5P	HT-19
					TNMR015Q1	HT	P3	95	12.5	1.5P	HT-19	
					(TNR015Q9)				90	10.5	9P	HT-19
			(TNR015Q5)			90	10.5	5P	HT-19			
			(TNR015Q1)			90	10.5	1.5P	HT-19			
Taps M15×1.5												
Standard			5 6 8 11 12	SP	SPQ015O	SP	P2	95	12.5	2.5P	SP-9	
				N-SP	(SNQ015O)	SP	P2	90	10.5	2.5P	SP-9	
				PO	POR015O	PO	P3	95	12.5	5P	PO-7	
				N-PO	(PNR015O)	PO	P3	90	10.5	5P	PO-7	
			1 5 6 12	HT	(TNMR015O9)				95	12.5	9P	HT-19
					TNMR015O5				95	12.5	5P	HT-19
			TNMR015O1	HT	P3	95	12.5	1.5P	HT-20			
			(TNR015O9)			90	10.5	9P	HT-19			
			(TNR015O5)			90	10.5	5P	HT-20			
			(TNR015O1)			90	10.5	1.5P	HT-20			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps M15x1.25											
Standard	1 5 6 12	HT	(TNMS015N9)			95	12.5	9P	HT-20		
			(TNMS015N5)			95	12.5	5P	HT-20		
		HT P4	(TNMS015N1)			95	12.5	1.5P	HT-20		
			(TNS015N9)			90	10.5	9P	HT-20		
			(TNS015N5)			90	10.5	5P	HT-20		
			(TNS015N1)			90	10.5	1.5P	HT-20		
Taps M15x1											
Standard	5 6 8 11 12	SP	(SPQ015M)	SP	P2	95	12.5	2.5P	SP-9		
			(SNQ015M)	SP	P2	90	10.5	2.5P	SP-9		
		PO	(POR015M)	PO	P3	95	12.5	5P	PO-7		
			(PNR015M)	PO	P3	90	10.5	5P	PO-7		
	1 5 6 12	HT	(TNMR015M9)			95	12.5	9P	HT-20		
			(TNMR015M5)			95	12.5	5P	HT-20		
		HT P3	(TNMR015M1)			95	12.5	1.5P	HT-20		
			(TNR015M9)			90	10.5	9P	HT-20		
			(TNR015M5)			90	10.5	5P	HT-20		
			(TNR015M1)			90	10.5	1.5P	HT-20		
Taps M15x0.75											
Standard	1 5 6 12	HT	(TNMR015J9)			95	12.5	9P	HT-20		
			(TNMR015J5)			95	12.5	5P	HT-20		
		HT P3	(TNMR015J1)			95	12.5	1.5P	HT-20		
			(TNR015J9)			75	10.5	9P	HT-20		
			(TNR015J5)			75	10.5	5P	HT-20		
(TNR015J1)			75	10.5	1.5P	HT-20					
Taps M15x0.5											
Standard	1 5 6 12	HT	(TNMQ015G9)			95	12.5	9P	HT-20		
			(TNMQ015G5)			95	12.5	5P	HT-20		
		HT P2	(TNMQ015G1)			95	12.5	1.5P	HT-20		
			(TNQ015G9)			58	10.5	9P	HT-20		
			(TNQ015G5)			58	10.5	5P	HT-20		
(TNQ015G1)			58	10.5	1.5P	HT-20					
Taps M16x2											
Standard	5 6 8 11 12	SP	(SPQ016Q)	SP	P2			2.5P	SP-9		
			(SPQ016Q1)	SP	P2			1.5P	SP-9		
		N-SP	(SNQ016Q)	SP	P2	95	12.5	2.5P	SP-9		
			(SNQ016Q1)	SP	P2			1.5P	SP-9		
		PO	(POS016Q)	PO	P4			5P	PO-7		
			(PNS016Q)	PO	P4			5P	PO-7		
		1 5 6 12	HT	(TNMR016Q9)				9P	HT-20		
				(TNMR016Q5)				5P	HT-20		
	HT P3		(TNMR016Q1)			1.5P	HT-20				
			(TNR016Q9)			95	12.5	9P	HT-20		
	HT P4		(TNR016Q5)			5P	HT-20				
			(TNR016Q1)			1.5P	HT-20				
	Oversize		5 6 8 11 12	SP	(SPR016Q)	SP	P3	95	12.5	2.5P	SP-9
				SP	(SPS016Q)	SP	P4			5P	SP-9

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	Oversize	5 6 8 11 12	SP	(SPT016Q)	SP	P5			2.5P	SP-9
			N-SP	(SNR016Q)	SP	P3			2.5P	SP-9
		95	12.5	2.5P	SP-9	(SNS016Q)	SP	P4		
						(SNT016Q)	SP	P5		
		5P	PO-7	PO	(POT016Q)	PO	P5			
					(PNT016Q)	PO	P5			
		1 5 6 12	HT	(TNMS016Q9)				9P	HT-20	
				(TNMS016Q5)				5P	HT-20	
			HT P4	(TNMS016Q1)			1.5P	HT-20		
				(TNS016Q9)			95	12.5	9P	HT-20
			9P	HT-20	(TNS016Q5)				5P	
					(TNS016Q1)				1.5P	
For left hand threads	5 6 8 11 12	SP(LH)	(SPO016Q-L)	SP	P2			2.5P	SP-27	
			(SNQ016Q-L)	SP	P2	95	12.5	2.5P	SP-27	
		PO(LH)	(POS016Q-L)	PO	P4			5P	PO-19	
			(PNS016Q-L)	PO	P4			5P	PO-19	
	1 5 6 12	HT(LH)	(TNMR016Q9-L)				9P	HT-45		
			(TNMR016Q5-L)				5P	HT-45		
		HT P3	(TNMR016Q1-L)			1.5P	HT-45			
			(TNR016Q9-L)			95	12.5	9P	HT-45	
		5P	HT-45	(TNR016Q5-L)				5P		
				(TNR016Q1-L)				1.5P		
Oxidizing	5 6 8 11 12	SP-OX	(SPQ016QX)	SP	P2			2.5P	SP-24	
			(SNQ016QX)	SP	P2	95	12.5	2.5P	SP-24	
		PO-OX	(POS016QX)	PO	P4			5P	PO-17	
			(PNS016QX)	PO	P4			5P	PO-17	
TiN coated	5 6 8 11 12	SP-V	(VSPQ016Q)	SP	P2	95	12.5	2.5P	SP-29	
			(VSNQ016Q)	SP	P2			2.5P	SP-29	
Long shank	5 6 8 11 12	LS-SP	(SPQ016QL15)	SP	P2	150		2.5P	SP-35	
			(SPQ016QL20)	SP	P2	200		2.5P	SP-35	
			(SPQ016QL25)	SP	P2	250		2.5P	SP-35	
			LS-N-SP	(SNQ016QL15)	SP	P2	150		2.5P	SP-35
				(SNQ016QL20)	SP	P2	200		2.5P	SP-35
			12.5	2.5P	SP-35	(SNQ016QL25)	SP	P2	250	
						(POS016QL15)	PO	P4	150	
			5P	PO-27	PO	(POS016QL20)	PO	P4	200	
		(POS016QL25)				PO	P4	250		
		1 5 6 12	LS-N-PO	(PNS016QL15)	PO	P4	150		5P	PO-27
				(PNS016QL20)	PO	P4	200		5P	PO-27
			5P	PO-27	PO	(PNS016QL25)	PO	P4	250	
						(TNMQ016Q515)			150	
			5P	HT-55	TNMQ016Q520)				200	
						(TNMQ016Q525)			250	
			1.5P	HT-56	TNMQ016Q115)				150	
(TNMQ016Q120)							200			
1.5P	HT-56	HT P2	(TNMQ016Q125)			250				
			(L15016Q5-Q)			150				
5P	HT-55	HT P3	(L20016Q5-Q)			200				
			(L25016Q5-Q)			250				
5P	HT-56	HT P4	(L15016Q1-Q)			150				
			(L20016Q1-Q)			200				
1.5P	HT-56	HT P4	(L25016Q1-Q)			250				
			(L25016Q1-Q)			250				

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth Taps
- For 3mm thread and other machines Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page						
Long shank	Oversize	⑤⑥⑧⑩⑪⑫	LS-PO	POT016QL15	PO	P5	150	12.5	5P	PO-27						
			LS-N-PO	(PNT016QL15)						PO-27						
		①⑤⑥⑩⑫	LS-HT	TNMR016Q515						5P	HT-56					
				TNMR016Q115		HT	P3	150	12.5	1.5P	HT-56					
				(L15016Q5-R)						5P	HT-56					
				(L15016Q1-R)						1.5P	HT-56					
	For left hand threads	⑤⑥⑧⑩⑪⑫	LS-SP(LH)	SPQ016QL15-L	SP	P2	150	12.5	2.5P		SP-39					
			LS-N-SP(LH)	(SNQ016QL15-L)						SP-39						
		①⑤⑥⑩⑫	LS-HT(LH)	TNMQ016Q515L						5P	HT-66					
				TNMQ016Q520L						200	5P	HT-66				
				TNMQ016Q115L						1.5P	HT-66					
				TNMQ016Q120L		HT	P2	200	12.5	1.5P	HT-66					
For soft structural steels	⑧	E-SP	ESHM016Q	SP	P2	95	12.5	2.5P		SP-55						
			(ESHQ016Q)						SP-55							
		Thread forming taps for steels	⑥⑧	N-RZ	NRZM9016QP	G9					4P	RO-8				
					NRZM9016QB						G9	2P	RO-8			
				(NRZ9016QP)	G9	4P	RO-8									
				(NRZ9016QB)	G9	2P	RO-8									
				NRZM0016QP	RO	G10	95	12.5	4P	RO-8						
				NRZM0016QB	G10	2P	RO-8									
				(NRZ0016QP)	G10	4P	RO-8									
				(NRZ0016QB)	G10	2P	RO-8									
For high carbon steels	⑤⑥	HC-SP	SCMQ016Q	SP	P2	95	12.5	2.5P		SP-57						
			(SCQ016Q)						SP-57							
	①⑤⑥	HC-PO	PCMS016Q	PO	P4	95	12.5	5P		PO-42						
			(PCS016Q)						PO-42							
	Oxidizing	⑤⑥	HC-SP-OX	SCMQ016QX	SP	P2	95	12.5	2.5P		SP-59					
				(SCQ016QX)						SP-59						
For hard-to-machine materials	①④⑤	EH-PO	EPHMT016Q	PO					4.5P	PO-45						
			(EPHT016Q)						PO-45							
		EH-HT	ETHMT016Q5	HT	P5	95	12.5			5P	HT-94					
			(ETHMT016Q1)							HT	2.5P	HT-94				
				(ETHHT016Q5)	HT	5P	HT-94									
				(ETHHT016Q1)	HT	2.5P	HT-94									
	Powder HSS	④⑤	PM-SP	-	SP	P4	95	12.5	3P		SP-70					
			LS-PM-SP	-						150	SP-71					
	For titanium alloys	④⑤⑥⑨	ZET-B	ZETBMR016Q	SP	P3				3P	SP-68					
				(ZETBR016Q)						SP	P3	95	12.5	3P	SP-68	
ZET-P			ZETPMT016Q	SL	P5					5P	SL-4					
			(ZETPT016Q)							SL	P5	5P	SL-4			
For nickel base alloys			⑥⑦⑧⑩	ZEN-B	ZENBMR016Q	SP	P3				3P	SP-69				
					(ZENBR016Q)						SP	P3	95	12.5	3P	SP-69
	ZEN-P	ZENPMT016Q		PO	P5					4.5P	PO-47					
		(ZENPT016Q)								PO	P5	4.5P	PO-47			
Carbide taps for hard materials	②	UH-CT	UHC016Q5	HT	P4	95	14	5P		CT-11						
			For stainless steels						⑥⑦⑧	SU-SP	SUMQ016Q	SP	P2		2.5P	SP-44
										(SUQ016Q)	SP					P2
		SU-PO	PUMS016Q	PO	P4		5P	PO-34								
For stainless steels	⑥⑦⑧	⑥⑦⑧	SU-PO	(PUS016Q)	PO	P4			5P	PO-34						
			SU-HT	TUMS016Q4	HT	P4			4P	HT-72						
				TUMS016Q1	HT	P4	95	12.5	1.5P	HT-73						
				(TUS016Q4)	HT	P4			4P	HT-72						
				(TUS016Q1)	HT	P4			1.5P	HT-73						
			Oversize	⑥⑦⑧	SU-SP	SUMR016Q	SP	P3			2.5P		SP-44			
	(SUR016Q)	SP				P3						2.5P	SP-44			
	SUMS016Q	SP				P4						2.5P	SP-44			
	SU-PO	(SUS016Q)			SP	P4	95	12.5	2.5P	SP-44						
		PUMT016Q			PO	P5			5P	PO-34						
		(PUT016Q)			PO	P5	5P	PO-34								
	For deep hole use	⑥⑦⑧	SU-S-SP	SSMQ016Q-SU	SP	P2	95		2.5P		SP-50					
(SSQ016Q-SU)				SP						P2	95	12.5	2.5P	SP-50		
LS-SU-S-SP				-						SP	P2	150	2.5P	SP-51		
For hard-to-machine materials			⑤⑥⑦	SU2-SP	SU2MR016Q	SP	P3	95	12.5	3P		SP-49				
					(SU2R016Q)						SP-49					
					LS-SU-S-PO						-	PO	P4	150	5P	PO-38
For cast irons	①	FC-O	TFCM016Q5						5P	HT-79						
			TFCM016Q1						HT	P4	95	12.5	1.5P	HT-79		
			(TFC016Q5)										5P	HT-79		
			(TFC016Q1)										1.5P	HT-79		
			Carbide						①⑩⑫	N-CT FC	TCNS016Q3	HT	P4	95	12.5	3P
TCNS016Q1	1.5P	CT-5														
For aluminum alloys	⑩⑫⑬	AL-SP	ASHMR016Q	SP	P3	95	12.5	2.5P		SP-62						
			ASHMR016Q1						1.5P	SP-62						
			(ASHR016Q)						2.5P	SP-62						
	⑪⑫	LA-O	TLAM016Q5	HT	P4	95	12.5	5P		HT-82						
			TLAM016Q1						HT	P4	95	12.5	1.5P	HT-82		
			(TLA016Q5)										5P	HT-82		
Carbide	⑩⑫⑬	N-CT LA	TCNS016Q3A	HT	P4	95	12.5	3P		CT-2						
			TCNS016Q1A						1.5P	CT-2						
Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRSM9016QP	G9					4P	RO-18						
			NRSM9016QB						G9	2P	RO-18					
			(NRS9016QP)						G9	4P	RO-18					
			(NRS9016QB)						G9	2P	RO-18					
			NRSM0016QP						RO	G10	95	12.5	4P	RO-18		
			NRSM0016QB						G10	2P	RO-18					
			(NRS0016QP)						G10	4P	RO-18					
			(NRS0016QB)						G10	2P	RO-18					
For high speed tapping	⑤⑥⑧⑩⑪⑫	F-SP	-	SP	P4	95	12.5	2.5P		SP-72						
		LS-F-SP	-						150	SP-72						
For deep hole use	⑤⑥⑧	S-SP	SSMQ016Q	SP	P2			2.5P		SR-53						
			(SSQ016Q)						SP	P2	95	12.5	2.5P	SR-53		
		S-PO	PSMS016Q	PO	P4				5P		PO-40					
			(PSS016Q)							PO	P4	5P	PO-40			
Low spiral	①⑤⑥⑩⑫	LS-LO-SP	LSHMQ016QL15						150	SP-65						
			LSHMQ016QL20						SP	P2	200	12.5	2.5P	SP-66		
			(LSHQ016QL15)						150	2.5P	SP-66					

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Low spiral	1 5 6 11 12	LS-LO-SP	(LSHQ016QL20)	SP	P2	200	12.5	2.5P	SP-66		
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC016Q	SP		15	2.5P		SP-63		
			(STIC016Q)	SP		14	2.5P		SP-63		
		STI-HT	TICM016Q5	HT	1b	105	15	5P		HT-86	
			TICM016Q1	HT			15	1.5P		HT-86	
			(TIC016Q5)	HT			14	5P		HT-86	
		(TIC016Q1)	HT			14	1.5P		HT-86		
With coolant hole	5 6 8 11 12	MC-SP	MSHQ016QL15	SP	P2	150	12.5	2.5P	SP-67		
		MC-PO	MPHS016QL15	PO	P4	150		5P	PO-44		
	1 5 6 11 12	MC-HT	ML15016Q5-Q	HT	P2	150		5P	HT-91		
			ML20016Q5-Q	HT	P2	200	12.5	5P	HT-91		
			ML15016Q1-Q	HT	P2	150		1.5P	HT-91		
			ML20016Q1-Q	HT	P2	200		1.5P	HT-91		
Nut taps	6 8 11 12	NT	NH2016Q	HT	II b	200	13	27P	etc-1		
Taps M16x1.5											
Standard	5 6 8 11 12	SP	SPQ016O	SP	P2			2.5P	SP-9		
			SPQ016O1	SP	P2			1.5P	SP-9		
		N-SP	(SNQ016O)	SP	P2	95	12.5	2.5P	SP-9		
			(SNQ016O1)	SP	P2			1.5P	SP-9		
		PO	POR016O	PO	P3			5P	PO-7		
	1 5 6 12	HT	(TNMR016O9)						9P	HT-20	
			TNMR016O5						5P	HT-20	
			TNMR016O1						1.5P	HT-21	
			(TNR016O9)	HT	P3	95	12.5		9P	HT-20	
			(TNR016O5)						5P	HT-21	
			(TNR016O1)						1.5P	HT-21	
		Oversize	5 6 8 11 12	SP	SPR016O	SP	P3			2.5P	SP-9
					SPS016O	SP	P4			2.5P	SP-9
				N-SP	(SNR016O)	SP	P3			2.5P	SP-9
					(SNS016O)	SP	P4	95	12.5	2.5P	SP-9
PO	POS016O			PO	P4			5P	PO-7		
1 5 6 12			POT016O	PO	P5			5P	PO-7		
			(PNS016O)	PO	P4			5P	PO-7		
			(PNT016O)	PO	P5			5P	PO-7		
	HT		(TNMS016O9)						9P	HT-21	
			TNMS016O5						5P	HT-21	
			TNMS016O1						1.5P	HT-21	
			(TNS016O9)	HT	P4	95	12.5		9P	HT-21	
			(TNS016O5)						5P	HT-21	
			(TNS016O1)						1.5P	HT-21	
	For left hand threads		5 6 8 11 12	SP(LH)	SPQ016O-L	SP	P2			2.5P	SP-27
		(SNQ016O-L)		SP	P2	95	12.5	2.5P	SP-27		
PO(LH)		POR016O-L		PO	P3			5P	PO-19		
		(PNR016O-L)		PO	P3			5P	PO-19		
1 5 6 12		HT(LH)	(TNMR016O9-L)						9P	HT-45	
			TNMR016O5-L						5P	HT-45	
			TNMR016O1-L						1.5P	HT-45	
			(TNR016O9-L)	HT	P3	95	12.5		9P	HT-45	
			(TNR016O5-L)						5P	HT-45	
			(TNR016O1-L)						1.5P	HT-45	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	5 6 8 11 12	LS-SP	SPQ016OL15	SP	P2	150		2.5P	SP-35	
			SPQ016OL20	SP	P2	200		2.5P	SP-35	
		LS-N-SP	(SNQ016OL15)	SP	P2	150		2.5P	SP-35	
			(SNQ016OL20)	SP	P2	200		2.5P	SP-35	
		LS-PO	POR016OL15	PO	P3	150		5P	PO-27	
	1 5 6 12		POR016OL20	PO	P3	200		5P	PO-27	
		LS-N-PO	(PNR016OL15)	PO	P3	150		5P	PO-27	
			(PNR016OL20)	PO	P3	200		5P	PO-27	
		LS-HT	TNMQ016O515					150	5P	HT-56
			TNMQ016O520					200	5P	HT-56
			TNMQ016O115					150	1.5P	HT-56
			TNMQ016O120					200	1.5P	HT-56
			(L15016O5-Q)	HT	P2	150	12.5	5P	HT-56	
			(L20016O5-Q)					200	5P	HT-56
			(L15016O1-Q)					150	1.5P	HT-56
	(L20016O1-Q)					200	1.5P	HT-56		
For left hand threads	5 6 8 11 12	LS-SP(LH)	SPQ016OL15-L	SP	P2	150	12.5	2.5P	SP-39	
			(SNQ016OL15-L)	SP	P2	150	12.5	2.5P	SP-39	
	1 5 6 12	LS-HT(LH)	TNMQ016O515L					5P	HT-66	
			TNMQ016O115L					1.5P	HT-66	
			(L15016O5-QL)	HT	P2	150	12.5	5P	HT-66	
			(L15016O1-QL)					1.5P	HT-66	
For soft structural steels	8	E-SP	ESHMQ016O	SP	P2	95	12.5	2.5P	SP-55	
			(ESHQ016O)					5P	SP-55	
Thread forming taps for steels	6 8	N-RZ	NRZM9016OP					4P	RO-8	
			NRZM9016OB	RO	G9	95	12.5	2P	RO-8	
			(NRZ9016OP)					4P	RO-8	
Standard	6 8	N-RZ	(NRZ9016OB)	RO	G9	95	12.5	2P	RO-8	
For high carbon steels	5 6	HC-SP	SCMQ016O	SP	P2	95	12.5	2.5P	SP-57	
			(SCQ016O)					5P	SP-57	
	1 5 6	HC-PO	PCMR016O	PO	P3	95	12.5	5P	PO-42	
		(PCR016O)					5P	PO-42		
For hard-to-machine materials	1 4 5	EH-PO	EPHMS016O	PO				4.5P	PO-45	
			(EPHS016O)	PO				4.5P	PO-45	
		EH-HT	ETHMS016O5	HT	P4	95	12.5	5P	HT-94	
		ETHMS016O1	HT				2.5P	HT-94		
		(ETHS016O5)	HT				5P	HT-94		
		(ETHS016O1)	HT				2.5P	HT-94		
Powder HSS	4 5	PM-SP	-	SP	P3	95	12.5	3P	SP-70	
For titanium alloys	4 5 6 9	ZET-B	ZETBMR016O	SP	P3			3P	SP-68	
			(ZETBR016O)	SP	P3	95	12.5	3P	SP-68	
		ZET-P	ZETPMS016O	SL	P4			5P	SL-4	
			(ZETPS016O)	SL	P4			5P	SL-4	
For nickel base alloys	6 7 8 10	ZEN-B	ZENBMR016O	SP	P3			3P	SP-69	
			(ZENBR016O)	SP	P3	95	12.5	3P	SP-69	
		ZEN-P	ZENPMS016O	PO	P4			4.5P	PO-47	
		(ZENPS016O)	PO	P4			4.5P	PO-47		
	Carbide taps for hard materials	2	UH-CT	UHCS016O5	HT	P4	95	14	5P	CT-11
For stainless steels	6 7 8	SU-SP	SUMQ016O	SP	P2			2.5P	SP-44	
			(SUQ016O)	SP	P2			2.5P	SP-44	
		SU-PO	PUMR016O	PO	P3	95	12.5	5P	PO-35	
			(PUR016O)	PO	P3			5P	PO-35	

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamp machines Taps (S&M)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M8-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small threads and drawing machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For stainless steels	6 7 8	SU-HT	TUMR01604					4P	HT-73	
			TUMR01601	HT	P3	95	12.5	1.5P	HT-73	
			(TUR01604)						4P	HT-73
			(TUR01601)						1.5P	HT-73
			(TUR01601)						1.5P	HT-73
	Enlarge	6 7 8	SU-SP	SUMS0160	SP	P4	95	12.5	2.5P	SP-44
	For hard-to-machine materials	5 6 7	SU2-SP	SU2MR0160	SP	P3	95	12.5	3P	SP-49
	(SU2R0160)							3P	SP-49	
	For cast irons	1	FC-O	TFCM01605					5P	HT-79
				TFCM01601	HT	P3	95	12.5	1.5P	HT-79
(TFC01605)									5P	HT-79
(TFC01601)									1.5P	HT-79
(TFC01601)									1.5P	HT-79
Carbide		1 12 13	N-CT FC	TCNR01603		P3			3P	CT-5
TCNR01601		HT	P3	95	12.5	1.5P	CT-5			
TCNS01603			P4			3P	CT-5			
TCNS01601			P4			1.5P	CT-5			
For aluminum alloys		11 12 13	AL-SP	ASHMR0160					2.5P	SP-62
	ASHMR01601							1.5P	SP-62	
	(ASHR0160)			SP	P3	95	12.5	2.5P	SP-62	
	(ASHR01601)							1.5P	SP-62	
	(ASHR01601)							1.5P	SP-62	
	Carbide	11 12	LA-O	TLAM01605				5P	HT-82	
	TLAM01601	HT	P3	95	12.5	1.5P	HT-82			
	(TLA01605)					5P	HT-82			
	(TLA01601)					1.5P	HT-82			
	Carbide	11 12 13	N-CT LA	TCNR01603A		P3			3P	CT-2
TCNR01601A	HT	P3	95	12.5	1.5P	CT-2				
TCNS01603A		P4			3P	CT-2				
TCNS01601A		P4			1.5P	CT-2				
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM9016OP					4P	RO-18	
			NRSM9016OB	RO	G9	95	12.5	2P	RO-18	
			(NRS9016OP)					4P	RO-18	
			(NRS9016OB)					2P	RO-18	
			(NRS9016OB)					2P	RO-18	
For ultra fast tapping (with internal coolant hole)	For steels	5 6 8	HFIHS	HFIHSS0160	SP	P4	95	16	2.5P	SP-73
		1 5 6	HFISP	HFISPS0160	SP	P4	95	16	2.5P	SP-73
	For non-ferrous metals	11 12	HFAHS	HFAHSS0160	SP	P4	95	16	2.5P	SP-74
			HFASP	HFASPS0160						SP-74
For dry tapping (with internal coolant hole)	For steels	1 5 6	HDISP	HDISPS0160	SP	P4	95	16	2.5P	SP-75
	For non-ferrous metals	11 12	HDASP	HDASPS0160	SP	P4	95	16	2.5P	SP-75
For ultra fast tapping (with internal coolant hole)	For both steels and non-ferrous metals	1 5 6 11 12	HDISL	HDISLS0160	SL	P4	95	16	5P	SL-6
Thread forming taps for high carbon steels	5 6 7 11 12	HP-RZ	HRZM9016OP					4P	RO-33	
			HRZM9016OB					2P	RO-33	
			(HRZ9016OP)	RO	G9	95	12.5	4P	RO-33	
			(HRZ9016OB)					2P	RO-33	
			(HRZ9016OB)					2P	RO-33	
For deep hole use	5 6 8	S-SP	SSMQ0160	SP	P2			2.5P	SP-53	
			(SSQ0160)	SP	P2			2.5P	SP-53	
			PSMR0160	PO	P3	95	12.5	5P	PO-40	
			(PSR0160)	PO	P3			5P	PO-40	
Low spiral	1 5 6 11 12	LS-LO-SP	LSHMQ016OL15				150		SP-66	
			LSHMQ016OL20				200		SP-66	
			(LSHQ016OL15)	SP	P2	150	12.5	2.5P	SP-66	
			(LSHQ016OL20)				200		SP-66	
			(LSHQ016OL20)				200		SP-66	
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC0160	SP	1b	100	14	2.5P	SP-63	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
For helical coil wire screw thread inserts	11 12	STI-SP	(STIC0160)	SP				2.5P	SP-63			
			STI-HT	HT				5P	HT-86			
			(TICM01605)	HT	1b	100	14	1.5P	HT-86			
			(TIC01605)	HT				5P	HT-86			
			(TIC01601)	HT				1.5P	HT-86			
			(TIC01601)	HT				1.5P	HT-86			
With coolant hole	1 5 6 11 12	MC-PO	MPHR016OL15	PO	P3	150		5P	PO-44			
			ML15016O5-Q	HT	P2	150		5P	HT-91			
			ML20016O5-Q	HT	P2	200	12.5	5P	HT-91			
			ML15016O1-Q	HT	P2	150		1.5P	HT-91			
			ML20016O1-Q	HT	P2	200		1.5P	HT-91			
			ML20016O1-Q	HT	P2	200		1.5P	HT-91			
Nut taps	6 8 11 12	NT	NH2016O	HT	II	180	13	27P	etc-1			
Taps M16×1.25												
Standard	1 5 6 12	HT	(TNMS016N9)					9P	HT-21			
			TNMS016N5					5P	HT-21			
			TNMS016N1	HT	P4	95	12.5	1.5P	HT-21			
			(TNS016N9)					9P	HT-21			
			(TNS016N5)					5P	HT-21			
			(TNS016N1)					1.5P	HT-21			
Taps M16×1												
Standard	5 6 8 11 12	SP	SPQ016M	SP	P2			2.5P	SP-9			
			N-SP	SP	P2			2.5P	SP-10			
			PO	PO	P3	95	12.5	5P	PO-7			
			N-PO	PO	P3			5P	PO-7			
			N-PO	PO	P3			5P	PO-7			
	1 5 6 12	HT	(TNMR016M9)					9P	HT-21			
			TNMR016M5					5P	HT-21			
			TNMR016M1	HT	P3	95	12.5	1.5P	HT-21			
			(TNR016M9)					9P	HT-21			
			(TNR016M5)					5P	HT-21			
Enlarge	1 5 6 12	HT	TNMS016M5					5P	HT-21			
			TNMS016M1	HT	P4	95	12.5	1.5P	HT-21			
			(TNS016M5)					5P	HT-21			
			(TNS016M1)					1.5P	HT-21			
			(TNS016M1)					1.5P	HT-21			
For left hand threads	1 5 6 12	HT(LH)	(TNMR016M9-L)					9P	HT-45			
			TNMR016M5-L					5P	HT-45			
			TNMR016M1-L	HT	P3	95	12.5	1.5P	HT-45			
			(TNR016M9-L)					9P	HT-45			
			(TNR016M5-L)					5P	HT-45			
			(TNR016M1-L)					1.5P	HT-45			
			Long shank	1 5 6 12	LS-HT	TNMQ016M515					5P	HT-56
						TNMQ016M115					1.5P	HT-56
						(L15016M5-Q)	HT	P2	150	12.5	5P	HT-56
						(L15016M1-Q)					1.5P	HT-56
For high carbon steels	5 6	HC-SP	SCMQ016M	SP	P2	95	12.5	2.5P	SP-57			
			(SCQ016M)					2.5P	SP-57			
For stainless steels	6 7 8	SU-PO	PUMR016M	PO				5P	PO-35			
			(PUR016M)	PO				5P	PO-35			
			TUMR016M4	HT	P3	95	12.5	4P	HT-73			
			TUMR016M1	HT				1.5P	HT-73			
			(TUR016M4)	HT				4P	HT-73			

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For stainless steels		6 7 8	SU-HT (TUR016M1)	HT	P3	95	12.5	1.5P	HT-73
For cast irons	Carbide	1 12 13	N-CTFC TCNS016M3	HT	P4	75	12.5	3P	CT-5
			TCNS016M1					1.5P	CT-5
Thread forming taps for non-ferrous materials		11 12	N-RS NRSM8016MP					4P	RO-18
			N-RS NRSM8016MB	RO	G8	95	12.5	2P	RO-18
			(NRS8016MP)					4P	RO-18
			(NRS8016MB)					2P	RO-18
For deep hole use		5 6 8	S-SP SSMQ016M (SSQ016M)	SP	P2	95	12.5	2.5P	SP-53 SP-53
Taps M16×0.5									
Standard		1 5 6 12	HT (TNMQ016G9)			95		9P	HT-21
			TNMQ016G5			95		5P	HT-21
			TNMQ016G1	HT	P2	95	12.5	1.5P	HT-21
			(TNQ016G9)			60		9P	HT-21
			(TNQ016G5)			60		5P	HT-21
			(TNQ016G1)			60		1.5P	HT-21
Taps M17×1.5									
Standard		5 6 8 11 12	SP SPQ0170	SP	P2	100	14	2.5P	SP-10
			N-SP (SNQ0170)			95	13		SP-10
		1 5 6 12	HT (TNMS017O9)			100	14	9P	HT-21
			TNMS017O5			100	14	5P	HT-21
			TNMS017O1			100	14	1.5P	HT-21
			(TNS017O9)	HT	P4	95	13	9P	HT-21
			(TNS017O5)			95	13	5P	HT-21
			(TNS017O1)			95	13	1.5P	HT-21
		1 5 6 12	SP SPQ017M	SP	P2	100	14	2.5P	SP-10
			N-SP (SNQ017M)			95	13		SP-10
			HT (TNMR017M9)			100	14	9P	HT-21
			TNMR017M5			100	14	5P	HT-21
	TNMR017M1				100	14	1.5P	HT-21	
	(TNR017M9)		HT	P3	95	13	9P	HT-21	
	(TNR017M5)			95	13	5P	HT-21		
	(TNR017M1)			95	13	1.5P	HT-22		
Taps M17×1									
Standard		5 6 8 11 12	SP SPQ017M	SP	P2	100	14	2.5P	SP-10
			N-SP (SNQ017M)			95	13		SP-10
		1 5 6 12	HT (TNMR017M9)			100	14	9P	HT-21
			TNMR017M5			100	14	5P	HT-21
			TNMR017M1			100	14	1.5P	HT-21
			(TNR017M9)	HT	P3	95	13	9P	HT-21
			(TNR017M5)			95	13	5P	HT-21
			(TNR017M1)			95	13	1.5P	HT-22
		5 6 8 11 12	SP SPR018R	SP	P3			2.5P	SP-10
			N-SP (SNR018R)	SP	P3			2.5P	SP-10
			PO POS018R	PO	P4			5P	PO-7
			N-PO (PNS018R)	PO	P4			5P	PO-7
	1 5 6 12		HT (TNMS018R9)					9P	HT-22
			TNMS018R5					5P	HT-22
		TNMS018R1					1.5P	HT-22	
		(TNS018R9)	HT	P4	100	14	9P	HT-22	
		(TNS018R5)					5P	HT-22	
		(TNS018R1)					1.5P	HT-22	
	5 6 8 11 12	SP SPS018R	SP	P4			2.5P	SP-10	
Enlarge		N-SP (SNS018R)	SP	P4	100	14	2.5P	SP-10	
		PO POT018R	PO	P5			5P	PO-7	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	Enlarge	5 6 8 11 12	N-PO (PNT018R)	PO	P5	100	14	5P	PO-7	
			HT (TNMT018R9)					9P	HT-22	
			TNMT018R5					5P	HT-22	
			TNMT018R1					1.5P	HT-22	
			(TNT018R9)	HT	P5	100	14	9P	HT-22	
			(TNT018R5)					5P	HT-22	
			(TNT018R1)				1.5P	HT-22		
For left hand threads		5 6 8 11 12	SP(LH) SPR018R-L	SP	P3			2.5P	SP-27	
			N-SP(LH) (SNR018R-L)	SP	P3			2.5P	SP-27	
			PO(LH) POS018R-L	PO	P4			5P	PO-19	
			N-PO(LH) (PNS018R-L)	PO	P4			5P	PO-19	
		1 5 6 12	HT(LH) (TNMS018R9-L)					9P	HT-45	
			TNMS018R5-L					5P	HT-46	
			TNMS018R1-L					1.5P	HT-46	
			(TNS018R9-L)	HT	P4	100	14	9P	HT-45	
			(TNS018R5-L)					5P	HT-46	
			(TNS018R1-L)					1.5P	HT-46	
Long shank		5 6 8 11 12	LS-SP SPR018RL15	SP	P3	150		2.5P	SP-35	
			SPR018RL20	SP	P3	200		2.5P	SP-35	
			SPR018RL25	SP	P3	250		2.5P	SP-35	
			LS-N-SP (SNR018RL15)	SP	P3	150		2.5P	SP-35	
			(SNR018RL20)	SP	P3	200		2.5P	SP-35	
			(SNR018RL25)	SP	P3	250		2.5P	SP-35	
			LS-PO POS018RL15	PO	P4	150		5P	PO-27	
			POS018RL20	PO	P4	200		5P	PO-27	
			LS-N-PO (PNS018RL15)	PO	P4	150		5P	PO-27	
			(PNS018RL20)	PO	P4	200		5P	PO-27	
			1 5 6 12	LS-HT TNMR018R515			150		5P	HT-56
				TNMR018R520			200		5P	HT-56
				TNMR018R525			250		5P	HT-56
				TNMR018R115			150		1.5P	HT-56
				TNMR018R120			200		1.5P	HT-56
				TNMR018R125			250		1.5P	HT-56
			1 5 6 12	(L15018R5-R)	HT	P3	150	14	5P	HT-56
				(L20018R5-R)			200		5P	HT-56
				(L25018R5-R)			250		5P	HT-56
				(L15018R1-R)			150		1.5P	HT-56
				(L20018R1-R)			200		1.5P	HT-56
				(L25018R1-R)			250		1.5P	HT-56
	Enlarge	5 6 8 11 12	LS-PO POT018RL15	PO	P5	150	14	5P	PO-27	
			LS-N-PO (PNT018RL15)	PO	P5	150	14	5P	PO-27	
			1 5 6 12	LS-HT TNMS018R515					5P	HT-56
				TNMS018R115					1.5P	HT-56
				(L15018R5-S)	HT	P4	150	14	5P	HT-56
				(L15018R1-S)					1.5P	HT-56
For left hand threads	1 5 6 12	LS-HT(LH) TNMR018R515L						5P	HT-66	
		TNMR018R115L					1.5P	HT-66		
		(L15018R5-RL)	HT	P3	150	14	5P	HT-66		
		(L15018R1-RL)						1.5P	HT-66	
			8	E-SP ESHMR018R	SP	P3	100	14	2.5P	SP-55
				(ESHRO18R)					SP-55	
For high carbon steels		5 6	HC-SP SCMR018R	SP	P3	100	14	2.5P	SP-57	

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small threads used on some machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For high carbon steels	⑤ ⑥	HC-SP	(SCR018R)	SP	P3	100	14	2.5P	SP-57	
	① ⑤ ⑥	HC-PO	PCMS018R (PCS018R)	PO	P4	100	14	5P	PO-42 PO-42	
For hard-to-machine materials	① ④ ⑤	EH-PO	EPHMT018R (EPHT018R)	PO				4.5P	PO-45 PO-45	
		EH-HT	ETHMT018R5	HT	P5	100	14	5P	HT-94	
			ETHMT018R1	HT					2.5P	HT-94
			(ETH018R5)	HT					5P	HT-94
			(ETH018R1)	HT					2.5P	HT-94
For titanium alloys	④ ⑤ ⑥ ⑨	ZET-B	ZETBMS018R (ZETBS018R)	SP	P4			3P	SP-68 SP-68	
		ZET-P	ZETPMT018R (ZETPT018R)	SL	P5			5P	SL-4 SL-4	
			ZENBMS018R (ZENBS018R)	SP	P4				3P	SP-69 SP-69
		ZEN-P	ZENPMT018R (ZENPT018R)	PO	P5			4.5P	PO-47 PO-47	
For nickel base alloys	⑥ ⑦ ⑧ ⑩	ZEN-B	ZENBMS018R (ZENBS018R)	SP	P4			3P	SP-69 SP-69	
		ZEN-P	ZENPMT018R (ZENPT018R)	PO	P5			4.5P	PO-47 PO-47	
			SUMR018R (SUR018R)	SP	P3				2.5P	SP-44 SP-44
			PUMS018R (PUS018R)	PO	P4				5P	PO-35 PO-35
			TUMS018R4 (TUS018R4)	HT	P4				4P	HT-73 HT-73
Carbide taps for hard materials	②	UH-CT	UHC018R5	HT	P4	100	15	5P	CT-11	
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMR018R (SUR018R)	SP	P3			2.5P	SP-44 SP-44	
		SU-PO	PUMS018R (PUS018R)	PO	P4			5P	PO-35 PO-35	
		SU-HT	TUMS018R4 (TUS018R4)	HT	P4				4P	HT-73 HT-73
			TUMS018R1 (TUS018R1)	HT	P4				1.5P	HT-73 HT-73
			SUMS018R (SUS018R)	SP	P4				2.5P	SP-44 SP-44
			PUMT018R (PUT018R)	PO	P5				5P	PO-35 PO-35
			PUMU018R (PUU018R)	PO	P6				5P	PO-35 PO-35
			SSMR018R-SU (SSR018R-SU)	SP	P3				2.5P	SP-50 SP-50
			SU2-SP	SU2MS018R (SU2S018R)	SP	P4			3P	SP-49 SP-49
		For cast irons	①	FC-O	TFCM018R5 (TFC018R5)					5P
	TFCM018R1 (TFC018R1)			HT	⑧-⑤	100	14	1.5P	HT-79 HT-79	
	N-CT FC			TCNS018R3 (TCNS018R1)	HT	P4	100	14	3P	CT-5 CT-5
For aluminum alloys	⑪ ⑫	LA-O	TLAM018R5 (TLA018R5)					5P	HT-82 HT-82	
			TLAM018R1 (TLA018R1)	HT	⑧-⑤	100	14	1.5P	HT-82 HT-82	
			N-CT LA	TCNS018R3A (TCNS018R1A)	HT	P4	100	14	3P	CT-3 CT-3
			S-SP	SSMR018R (SSR018R)	SP	P3			2.5P	SP-53 SP-53
For deep hole use	⑤ ⑥ ⑧	S-PO	PSMS018R (PSS018R)	PO	P4			5P	PO-40 PO-40	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Low spiral	① ⑤ ⑥ ⑪ ⑫	LS-LO-SP	LSHR018RL20 (LSHR018RL20)	SP	P3	200	14	2.5P	SP-66 SP-66	
		STI-SP	STIMC018R (STIC018R)	SP				2.5P	SP-63 SP-63	
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICM018R5 (TIC018R5)	HT	1b	115	17	5P	HT-86 HT-86	
			TICM018R1 (TIC018R1)	HT				1.5P	HT-86 HT-86	
			MC-SP	MSHR018RL15	SP	P3	150	14	2.5P	SP-67
			MC-PO	MPSH018RL15	PO	P4	150		5P	PO-44
With coolant hole	① ⑤ ⑥ ⑪ ⑫	MC-HT	ML15018R5-R (ML20018R5-R)	HT	P3	200	14	5P	HT-91 HT-91	
			ML15018R1-R (ML20018R1-R)	HT	P3	200		1.5P	HT-91 HT-91	
			NT	NH2018R	HT	II b	220	14	24P	etc-1

Taps M18x2										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR018Q	SP	P3			2.5P	SP-10	
		N-SP	(SNR018Q)	SP	P3			2.5P	SP-10	
		PO	POS018Q	PO	P4	100	14	5P	PO-7	
		N-PO	(PNS018Q)	PO	P4			5P	PO-7	
		① ⑤ ⑥ ⑫	HT	(TNMS018Q9)					9P	HT-22
			(TNMS018Q5)						5P	HT-22
			(TNMS018Q1)	HT	P4	100	14	1.5P	HT-22	
			(TNS018Q9)						9P	HT-22
			(TNS018Q5)						5P	HT-22
			(TNS018Q1)						1.5P	HT-22
Long shank	① ⑤ ⑥ ⑫	LS-HT	TNMR018Q520 (L20018Q5-R)					5P	HT-57 HT-57	
			TNMR018Q120 (L20018Q1-R)	HT	P3	200	14	5P	HT-57 HT-57	
			SCMR018Q (SCR018Q)	SP	P3	100	14	2.5P	SP-57 SP-57	
For high carbon steels	⑤ ⑥	S-SP	SSMR018Q (SSR018Q)	SP	P3	100	14	2.5P	SP-53 SP-53	

Taps M18x1.5										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ018O	SP	P2			2.5P	SP-10	
		N-SP	(SNQ018O)	SP	P2			2.5P	SP-10	
		PO	POS018O	PO	P4	100	14	5P	PO-7	
		N-PO	(PNS018O)	PO	P4			5P	PO-7	
		① ⑤ ⑥ ⑫	HT	(TNMR018O9)					9P	HT-22
			(TNMR018O5)						5P	HT-22
			(TNMR018O1)	HT	P3	100	14	1.5P	HT-22	
			(TNR018O9)						9P	HT-22
			(TNR018O5)						5P	HT-22
			(TNR018O1)						1.5P	HT-22
Oversize	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR018O	SP	P3			2.5P	SP-10	
			SPS018O	SP	P4			2.5P	SP-10	
		N-SP	(SNR018O)	SP	P3	100	14	2.5P	SP-10	
			(SNS018O)	SP	P4			2.5P	SP-10	
	PO	POT018O	PO	P5			5P	PO-7		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	Oversize	5 6 8 11 12	N-PO	(PNT0180)	PO	P5	100	14	5P	PO-7		
			HT	TNMS0180S						5P	HT-22	
				TNMS01801	HT	P4	100	14		1.5P	HT-22	
				(TNS0180S)						5P	HT-22	
			(TNS01801)					1.5P	HT-22			
For left hand threads	5 6 8 11 12	SP(LH)	SPQ0180-L	SP	P2				2.5P	SP-27		
		N-SP(LH)	(SNQ0180-L)	SP	P2				2.5P	SP-27		
		PO(LH)	POS0180-L	PO	P4			100	14	5P	PO-19	
		N-PO(LH)	(PNS0180-L)	PO	P4					5P	PO-20	
	1 5 6 12	HT(LH)	(TNMR01809-L)							9P	HT-46	
			TNMR01805-L							5P	HT-46	
			TNMR01801-L							1.5P	HT-46	
			(TNR01809-L)	HT	P3	100	14			9P	HT-46	
			(TNR01805-L)							5P	HT-46	
			(TNR01801-L)							1.5P	HT-46	
		Long shank	5 6 8 11 12	LS-SP	SPQ0180L15	SP	P2		150		2.5P	SP-35
					SPQ0180L20	SP	P2		200		2.5P	SP-35
LS-N-SP	(SNQ0180L15)			SP	P2		150		2.5P	SP-35		
	(SNQ0180L20)			SP	P2		200		2.5P	SP-35		
1 5 6 12	LS-PO		POS0180L15	PO	P4			150	14	5P	PO-27	
			POS0180L20	PO	P4			200		5P	PO-27	
	LS-N-PO		(PNS0180L15)	PO	P4			150		5P	PO-27	
			(PNS0180L20)	PO	P4			200		5P	PO-27	
	LS-HT		TNMQ0180S15					150		5P	HT-57	
			TNMQ0180S20					200		5P	HT-57	
			TNMQ0180115					150		1.5P	HT-57	
			TNMQ0180120					200		1.5P	HT-57	
For left hand threads	1 5 6 12	LS-HT(LH)	TNMQ0180S15L						5P	HT-66		
			TNMQ0180115L	HT	P2	150	14		1.5P	HT-67		
			(L150180S-QL)						5P	HT-67		
			(L1501801-QL)						1.5P	HT-67		
	8	E-SP	ESHMQ0180	SP	P2		100	14	2.5P	SP-55		
			(ESHQ0180)							SP-56		
		5 6	HC-SP	SCMQ0180	SP	P2		100	14	2.5P	SP-57	
				(SCQ0180)							SP-57	
	1 5 6		HC-PO	PCMS0180	PO	P4		100	14	5P	PO-42	
				(PCS0180)							PO-42	
	1 4 5	EH-PO	EPHMS0180	PO					4.5P	PO-45		
			(EPHS0180)	PO					4.5P	PO-45		
EH-HT		ETHMS0180S	HT					5P	HT-94			
		ETHMS01801	HT	P4	100	14		2.5P	HT-94			
		(ETHS0180S)	HT					5P	HT-94			
		(ETHS01801)	HT					2.5P	HT-94			
4 5 6 9	ZET-B	ZETBMR0180	SP	P3				3P	SP-68			
		(ZETBR0180)	SP	P3				3P	SP-68			
	ZET-P	ZETPMT0180	SL	P5			100	14	5P	SL-4		
		(ZETPT0180)	SL	P5				5P	SL-4			
6 7 8 10	ZEN-B	ZENBMR0180	SP	P3		100	14	3P	SP-69			
For nickel base alloys	6 7 8 10	ZEN-B	ZENBR0180	SP	P3		100	14	3P	SP-69		
	2	UH-CT	UHCS0180S	HT	P4		100	15	5P	CT-11		
			(SUQ0180)	SP	P2				2.5P	SP-44		
	6 7 8	SU-SP	SUMQ0180	SP	P2				2.5P	SP-44		
			(SUS0180)	SP	P2				2.5P	SP-44		
		SU-PO	PUMS0180	PO	P4				5P	PO-35		
			(PUS0180)	PO	P4			100	14	5P	PO-35	
		SU-HT	TUMS01804	HT	P4				4P	HT-73		
			TUMS01801	HT	P4				1.5P	HT-73		
			(TUS01804)	HT	P4				4P	HT-73		
			(TUS01801)	HT	P4				1.5P	HT-73		
6 7 8	SU-SP	SUMS0180	SP	P4		100	14	2.5P	SP-44			
		(SUS0180)							SP-44			
5 6 7	SU2-SP	SU2MR0180	SP	P3		100	14	3P	SP-49			
		(SU2R0180)							SP-49			
1	FC-O	TFCM0180S							5P	HT-79		
		TFCM01801	HT	P4	70-40	100	14	1.5P	HT-79			
		(TFC0180S)							5P	HT-79		
		(TFC01801)							1.5P	HT-79		
	1 12 13	N-CT FC	TCNS01803	HT	P4		95	14	3P	CT-5		
			TCNS01801						1.5P	CT-5		
11 12	LA-O	TLAM0180S							5P	HT-82		
		TLAM01801	HT	P4	75-45	100	14	1.5P	HT-82			
		(TLA0180S)							5P	HT-82		
		(TLA01801)							1.5P	HT-82		
	11 12 13	N-CT LA	TCNS01803A	HT	P4		95	14	3P	CT-3		
			TCNS01801A						1.5P	CT-3		
11 12	N-RS	NRSM90180P							4P	RO-18		
		NRSM90180B	RO	G9	100	14		2P	RO-19			
		(NRS90180P)							4P	RO-19		
		(NRS90180B)							2P	RO-19		
5 6 8	HFIHS	HFIHS0180	SP	P4		100	16	2.5P	SP-73			
	1 5 6	HFISP	HFISP0180	SP	P4		100	16	2.5P	SP-73		
11 12	HFAHS	HFAHS0180	SP	P4		100	16	2.5P	SP-74			
	HFAFP	HFAFP0180							SP-74			
1 5 6	HDISP	HDISP0180	SP	P4		100	16	2.5P	SP-75			
11 12	HDASP	HDAASP0180	SP	P4		100	16	2.5P	SP-75			
1 5 6 11 12	HDISL	HDISL0180	SL	P4		100	16	5P	SL-6			
5 6 7 11 12	HP-RZ	HRZM90180P							4P	RO-33		
		HRZM90180B	RO	G9	100	14		2P	RO-33			
		(HRZ90180P)							4P	RO-33		
		(HRZ90180B)							2P	RO-33		
5 6 8	S-SP	SSMQ0180	SP	P2				2.5P	SP-53			
		(SSQ0180)	SP	P2					2.5P	SP-53		
S-PO	PSMS0180	PO	P4			100	14	5P	PO-40			
	(PSS0180)	PO	P4					5P	PO-40			
1 5 6 11 12	LS-LO-SP	LSHMQ0180L20	SP	P2		200	14	2.5P	SP-66			
		(LSHQ0180L20)							SP-66			
11 12	STI-SP	STIMC0180	SP					2.5P	SP-63			
		(STIC0180)	SP						2.5P	SP-63		
STI-HT	TICM0180S	HT	1b	105	15		5P	HT-86				
	TICM01801	HT						1.5P	HT-86			
		(TIC0180S)	HT					5P	HT-86			

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used in stamping machines Taps
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M8-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small thread and drawing machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	(TIC01801)	HT	1b	105	15	1.5P	HT-86	
With coolant hole	① ⑤ ⑥ ⑫ ⑪ ⑫	MC-PO	MPHS0180L15	PO	P4	150		5P	PO-44	
		MC-HT	ML150180S-Q	HT	P2	150		5P	HT-92	
			ML200180S-Q	HT	P2	200	14	5P	HT-92	
			ML150180I-Q	HT	P2	150		1.5P	HT-92	
		ML200180I-Q	HT	P2	200		1.5P	HT-92		
Nut taps	⑥ ⑧ ⑪ ⑫	NT	NH20180	HT	II	190	14	27P	etc-1	
Taps M18×1.25										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ018N	SP	P2	100	14	2.5P	SP-10	
		N-SP	(SNQ018N)			95		2.5P	SP-10	
Taps M18×1										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ018M	SP	P2	100		2.5P	SP-10	
		N-SP	(SNQ018M)	SP	P2	95	14	2.5P	SP-10	
		PO	POR018M	PO	P3	100		5P	PO-7	
		N-PO	(PNR018M)	PO	P3	95		5P	PO-7	
		① ⑤ ⑥ ⑫	HT	(TNMR018M9)			100		9P	HT-22
				TNMR018M5			100		5P	HT-22
				TNMR018M1	HT	P3	100	14	1.5P	HT-22
				(TNR018M9)			95		9P	HT-22
				(TNR018M5)			95		5P	HT-22
				(TNR018M1)			95		1.5P	HT-22
For high carbon steels	⑤ ⑥	HC-SP	SCMQ018M (SCQ018M)	SP	P2	100	14	2.5P	SP-57 SP-57	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSMQ018M (SSQ018M)	SP	P2	100	14	2.5P	SP-53 SP-53	
Taps M18×0.5										
Standard	① ⑤ ⑥ ⑫	HT	(TNMQ018G9)			100		9P	HT-22	
			TNMQ018G5			100		5P	HT-22	
			TNMQ018G1	HT	P2	100	14	1.5P	HT-22	
			(TNQ018G9)			65		9P	HT-22	
			(TNQ018G5)			65		5P	HT-22	
		(TNQ018G1)			65		1.5P	HT-22		
Taps M19×1.5										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR0190	SP	P3	105	15	2.5P	SP-10	
		N-SP	(SNR0190)			95	14		SP-10	
		① ⑤ ⑥ ⑫	HT	TNMR019O5			15	5P	HT-23	
				TNMR019O1			15	1.5P	HT-23	
				(TNR019O9)	HT	P3	105	14	9P	HT-22
				(TNR019O5)			14	5P	HT-23	
				(TNR019O1)			14	1.5P	HT-23	
							14	1.5P	HT-23	
Taps M19×1										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ019M	SP	P2	105	15	2.5P	SP-10	
		N-SP	(SNQ019M)			95	14		SP-10	
		① ⑤ ⑥ ⑫	HT	TNMR019M5			105	15	5P	HT-23
				TNMR019M1	HT	P3	105	15	1.5P	HT-23
				(TNR019M9)			95	14	9P	HT-23
				(TNR019M5)			95	14	5P	HT-23
							95	14	5P	HT-23

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	① ⑤ ⑥ ⑫	HT	(TNR019M1)	HT	P3	95	14	1.5P	HT-23	
Taps M20×2.5										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR020R	SP	P3			2.5P	SP-10	
		N-SP	(SNR020R)	SP	P3	105	15	2.5P	SP-10	
		PO	POS020R	PO	P4			5P	PO-7	
		N-PO	(PNS020R)	PO	P4			5P	PO-8	
		① ⑤ ⑥ ⑫	HT	TNMS020R5					5P	HT-23
				TNMS020R1					1.5P	HT-23
				(TNS020R9)	HT	P4	105	15	9P	HT-23
				(TNS020R5)					5P	HT-23
				(TNS020R1)					1.5P	HT-23
									1.5P	HT-23
Oversize	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPS020R	SP	P4			2.5P	SP-10	
		N-SP	(SNS020R)	SP	P4	105	15	2.5P	SP-10	
		PO	POT020R	PO	P5			5P	PO-8	
		N-PO	(PNT020R)	PO	P5			5P	PO-8	
		① ⑤ ⑥ ⑫	HT	TNMT020R5					5P	HT-23
				TNMT020R1	HT	P5	105	15	1.5P	HT-23
				(TNT020R5)				5P	HT-23	
				(TNT020R1)				1.5P	HT-23	
									1.5P	HT-23
									1.5P	HT-23
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPR020R-L	SP	P3			2.5P	SP-27	
		N-SP(LH)	(SNR020R-L)	SP	P3	105	15	2.5P	SP-27	
		PO(LH)	POS020R-L	PO	P4			5P	PO-20	
		N-PO(LH)	(PNS020R-L)	PO	P4			5P	PO-20	
		① ⑤ ⑥ ⑫	HT(LH)	TNMS020R5-L					5P	HT-46
				TNMS020R1-L					1.5P	HT-46
				(TNS020R9-L)	HT	P4	105	15	9P	HT-46
				(TNS020R5-L)					5P	HT-46
		(TNS020R1-L)					1.5P	HT-46		
Oxidizing	⑤ ⑥ ⑧	SP-OX	SPR020RX	SP	P3			2.5P	SP-24	
		N-SP-OX	(SNR020RX)	SP	P3	105	15	2.5P	SP-24	
		PO-OX	POS020RX	PO	P4			5P	PO-17	
		N-PO-OX	(PNS020RX)	PO	P4			5P	PO-17	
TiN coated	⑤ ⑥ ⑧ ⑪ ⑫	SP-V	VSPR020R	SP	P3	105	15	2.5P	SP-29	
		N-SP-V	(VSNR020R)					2.5P	SP-29	
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPR020RL15	SP	P3	150		2.5P	SP-35	
			SPR020RL20	SP	P3	200		2.5P	SP-35	
			SPR020RL25	SP	P3	250		2.5P	SP-35	
		LS-N-SP	(SNR020RL15)	SP	P3	150		2.5P	SP-35	
			(SNR020RL20)	SP	P3	200		2.5P	SP-35	
			(SNR020RL25)	SP	P3	250		2.5P	SP-35	
		LS-PO	POS020RL15	PO	P4	150		5P	PO-27	
			POS020RL20	PO	P4	200		5P	PO-27	
			POS020RL25	PO	P4	250		5P	PO-27	
		LS-N-PO	(PNS020RL15)	PO	P4	150		5P	PO-27	
			(PNS020RL20)	PO	P4	200		5P	PO-27	
			(PNS020RL25)	PO	P4	250		5P	PO-27	
		① ⑤ ⑥ ⑫	LS-HT	TNMR020R515			150		5P	HT-57
				TNMR020R520			200		5P	HT-57
				TNMR020R525	HT	P3	250	15	5P	HT-57
				TNMR020R115			150		1.5P	HT-57
		TNMR020R120			200		1.5P	HT-57		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page				
Long shank	1 5 6 12	LS-HT	TNMR020R125			250	1.5P	HT-57					
			(L15020R5-R)			150	5P	HT-57					
			(L20020R5-R)			200	5P	HT-57					
			(L25020R5-R)	HT	P3	250	15	5P	HT-57				
			(L15020R1-R)			150	1.5P	HT-57					
			(L20020R1-R)			200	1.5P	HT-57					
	1 5 6 12	LS-HT	TNMS020R515				5P	HT-57					
			TNMS020R115			1.5P	HT-57						
			(L15020R5-S)	HT	P4	150	15	5P	HT-57				
			(L15020R1-S)			1.5P	HT-57						
			LS-HT(LH)			150	5P	HT-67					
			TNMR020R520L			200	5P	HT-67					
For left hand threads	1 5 6 12	LS-HT(LH)	TNMR020R115L			150	1.5P	HT-67					
			TNMR020R20L			200	5P	HT-67					
			TNMR020R115L			150	1.5P	HT-67					
			TNMR020R120L			200	1.5P	HT-67					
			(L15020R5-RL)	HT	P3	150	15	5P	HT-67				
			(L20020R5-RL)			200	5P	HT-67					
	1 5 6 12	LS-HT(LH)	(L15020R1-RL)			150	1.5P	HT-67					
			(L20020R1-RL)			200	1.5P	HT-67					
			8	E-SP	ESHMR020R					SP-56			
					(ESHRO20R)	SP	P3	105	15	2.5P	SP-56		
					5 6	HC-SP	SCMR020R					SP-57	
							(SCRO20R)	SP	P3	105	15	2.5P	SP-57
1 5 6 6	HC-PO	PCMS020R									PO-42		
		(PCS020R)					PO	P4	105	15	5P	PO-42	
		1 4 5	EH-PO	EPHMT020R							PO-45		
				(EPHT020R)			PO			4.5P	PO-45		
				EH-HT	ETHMT020R5						HT-94		
					(ETHMT020R1)	HT	P5	105	15	5P	HT-94		
(ETHT020R5)									HT-94				
(ETHT020R1)	HT							2.5P	HT-94				
Powder HSS	4 5	PM-SP	-				105	15	3P	SP-70			
			LS-PM-SP				150		SP-71				
For titanium alloys	4 5 6 9	ZET-B	ZETBMS020R					SP-68					
			(ZETBS020R)	SP	P4			3P	SP-68				
			ZETPMT020R						SL-4				
			(ZETPT020R)	SL	P5	105	15	5P	SL-4				
			6 7 8 10	ZEN-B	ZENBMS020R						SP-69		
					(ZENBS020R)	SP	P4			3P	SP-69		
ZENPMT020R								PO-47					
(ZENPT020R)	PO	P5			105	15	4.5P	PO-47					
Carbide taps for hard materials	2	UH-CT			UHCS020R5			105	17	5P	CT-11		
					For stainless steels	6 7 8	SU-SP	SUMR020R					SP-45
			(SUR020R)	SP				P3			2.5P	SP-45	
			SU-PO	PUMS020R									PO-35
				(PUS020R)				PO	P4			5P	PO-35
				SU-HT				TUMS020R4					
(TUS020R4)	HT	P4						105	15	4P	HT-73		
TUMS020R1								HT-73					
(TUS020R1)	HT	P4					1.5P	HT-73					

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
For stainless steels	Oversize	6 7 8	SU-SP						SP-45					
			(SU020R)	SP	P4			2.5P	SP-45					
			SU-PO							PO-35				
			(PUT020R)	PO	P5	105	15	5P	PO-35					
			PUMU020R							PO-35				
			(PUU020R)	PO	P6			5P	PO-35					
	For deep hole use	6 7 8	SU-S-SP						SP-50					
			(SSR020R-SU)	SP	P3	105	15	2.5P	SP-50					
			LS-SU-S-SP							SP-51				
			(LSU020R-S)	SP	P3	150		2.5P	SP-51					
			LS-SU-S-PO							PO-38				
			(LSU020R-S)	PO	P4	150		5P	PO-38					
For cast irons	1	FC-O	TFCM020R5					5P	HT-79					
			(TFCM020R1)					1.5P	HT-79					
			(TFCO20R5)	HT	P4	105	15	5P	HT-79					
			(TFCO20R1)						1.5P	HT-79				
			Carbide	1 12 13	N-CT FC	TCNS020R3					3P	CT-6		
						(TCNS020R1)	HT	P4	105	15	1.5P	CT-6		
	For aluminum alloys	11 12				LA-O	TLAM020R5					5P	HT-82	
							(TLAM020R1)					1.5P	HT-82	
							(TLA020R5)	HT	P4	105	15	5P	HT-82	
							(TLA020R1)						1.5P	HT-82
			Carbide	11 12 13	N-CT LA		TCNS020R3A					3P	CT-3	
							(TCNS020R1A)	HT	P4	105	15	1.5P	CT-3	
Thread forming taps for non-ferrous materials	11 12	N-RS				NRSM1020RP					4P	RO-19		
						(NRSM1020RB)					2P	RO-19		
						(NRS1020RP)	RO	G11	105	15	4P	RO-19		
						(NRS1020RB)					2P	RO-19		
			High speed tapping	5 6 8 11 12 13	F-SP	-					SP-72			
						For deep hole use	5 6 8	S-SP	SSMR020R					SP-53
(SSR020R)	SP	P3									2.5P	SP-53		
S-PO												PO-40		
(PSS020R)	PO	P4							105	15	5P	PO-40		
Low spiral	1 5 6 11 12	LS-LO-SP							LSHMR020R20					SP-66
			(LSHRO20R20)	SP	P3				200	15	2.5P	SP-66		
			For helical coil wire screw thread inserts	11 12	STI-SP	STIMC020R					SP-63			
						(STIC020R)	SP				2.5P	SP-63		
						STI-HT	TICM020R5						HT-86	
							(TICM020R1)	HT	P4	120	19	5P	HT-86	
(TIC020R5)										HT-86				
(TIC020R1)	HT								1.5P	HT-86				
With coolant hole	5 6 8 11 12	MC-SP	MSHR020R15						SP-67					
			(MSR020R15)	SP	P3		150	15	2.5P	SP-67				
			1 5 6 11 12	MC-PO	MPS020R15					PO-44				
					(MPS020R15)	PO	P4	150		5P	PO-44			
					MC-HT	ML15020R5-R						HT-92		
						(ML15020R1-R)	HT	P3	150		5P	HT-92		
(ML15020R1-R)	HT	P3				150		1.5P	HT-92					
(ML20020R1-R)	HT	P3				200		1.5P	HT-92					
Nut taps	6 8 11 12	NT	NH2020R						etc-1					
			Taps M20x2	Standard		5 6 8 11 12	SP	SPR020Q				SP-10		
					(SPR020Q)			SP	P3	105	15	2.5P	SP-10	
					N-SP			(SNR020Q)						SP-10

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw thread used in stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For 3mm thread and diameter machine Taps (mm)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	⑤⑥⑧⑪⑫	PO	POS020Q						PO-8	
		N-PO	(PNS020Q)	PO	P4	105	15	5P	PO-8	
	①⑤⑥⑫	HT	TNMS020Q5						5P	HT-23
			TNMS020Q1						1.5P	HT-23
			(TNS020Q9)	HT	P4	105	15	9P		HT-23
			(TNS020Q5)						5P	HT-23
			(TNS020Q1)						1.5P	HT-23
For high carbon steels	⑤⑥	HC-SP	SCMR020Q (SCR020Q)	SP	P3	105	15	2.5P	SP-57 SP-57	
For deep hole use	⑤⑥⑧	S-SP	SSMR020Q (SSR020Q)	SP	P3	105	15	2.5P	SP-53 SP-53	
Taps M20×1.5										
Standard	⑤⑥⑧⑪⑫	SP	SPR0200	SP	P3			2.5P	SP-10	
		N-SP	(SNR0200)	SP	P3	105	15	2.5P	SP-10	
		PO	POS0200	PO	P4			5P	PO-8	
		N-PO	(PNS0200)	PO	P4			5P	PO-8	
	①⑤⑥⑫	HT	TNMR02005						5P	HT-23
			TNMR02001						1.5P	HT-23
			(TNR02009)	HT	P3	105	15	9P		HT-23
			(TNR02005)						5P	HT-23
			(TNR02001)						1.5P	HT-23
	Oversize	⑤⑥⑧⑪⑫	SP	SPS0200	SP	P4			2.5P	SP-10
			SPT0200	SP	P5			2.5P	SP-10	
		N-SP	(SNS0200)	SP	P4	105	15	2.5P	SP-10	
			(SNT0200)	SP	P5			2.5P	SP-10	
			POT0200	PO	P5			5P	PO-8	
			(PNT0200)	PO	P5			5P	PO-8	
①⑤⑥⑫	HT	TNMS02005						5P	HT-23	
		TNMS02001						1.5P	HT-23	
		(TNS02005)	HT	P4	105	15	5P		HT-23	
		(TNS02001)						1.5P	HT-23	
For left hand threads	⑤⑥⑧⑪⑫	SP(LH)	SPR0200-L	SP	P3	105	15	2.5P	SP-27	
	N-SP(LH)	(SNR0200-L)	SP	P3	105	15	2.5P	SP-27		
	⑤⑥⑧⑪⑫	PO(LH)	POS0200-L	PO	P4	105	15	5P	PO-20	
	N-PO(LH)	(PNS0200-L)	PO	P4	105	15	5P	PO-20		
	①⑤⑥⑫	HT(LH)	TNMR02005-L					5P	HT-46	
		TNMR02001-L						1.5P	HT-46	
		(TNR02009-L)	HT	P3	105	15	9P		HT-46	
		(TNR02005-L)						5P	HT-46	
		(TNR02001-L)						1.5P	HT-46	
Long shank	⑤⑥⑧⑪⑫	LS-SP	SPR020OL15	SP	P3	150		2.5P	SP-35	
			SPR020OL20	SP	P3	200		2.5P	SP-35	
		LS-N-SP	(SNR020OL15)	SP	P3	150		2.5P	SP-35	
			(SNR020OL20)	SP	P3	200		2.5P	SP-35	
		LS-PO	POS020OL15	PO	P4	150		5P	PO-27	
		POS020OL20	PO	P4	200		5P	PO-27		
		LS-N-PO	(PNS020OL15)	PO	P4	150		5P	PO-27	
			(PNS020OL20)	PO	P4	200		5P	PO-27	
	①⑤⑥⑫	LS-HT	TNMR020O515				150		5P	HT-57
			TNMR020O520	HT	P3	200	15	5P		HT-57
			TNMR020O115				150		1.5P	HT-57

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	①⑤⑥⑫	LS-HT	TNMR020O120					200	1.5P	HT-57		
			(L15020O5-R)					150	5P	HT-57		
			(L20020O5-R)	HT	P3	200	15	5P		HT-57		
			(L15020O1-R)					150	1.5P	HT-57		
				(L20020O1-R)				200	1.5P	HT-57		
	Oversize	①⑤⑥⑫	LS-HT	TNMS020O515					5P	HT-57		
				TNMS020O115					1.5P	HT-57		
				(L15020O5-S)	HT	P4	150	15	5P		HT-57	
				(L15020O1-S)				1.5P	HT-57			
	For left hand threads	①⑤⑥⑫	LS-HT(LH)	TNMR020O515L					150	5P	HT-67	
TNMR020O520L								200	5P	HT-67		
TNMR020O115L								150	1.5P	HT-67		
TNMR020O120L								200	1.5P	HT-67		
(L15020O5-RL)				HT	P3	150	15	5P		HT-67		
						(L20020O5-RL)				200	5P	HT-67
						(L15020O1-RL)				150	1.5P	HT-67
						(L20020O1-RL)				200	1.5P	HT-67
For soft structural steels				⑧	E-SP	ESHMR0200						SP-56
						(ESH0200)	SP	P3	105	15	2.5P	SP-56
Thread forming taps for steels	⑥⑧	N-RZ	NRZM9020OP					4P	RO-9			
			NRZM9020OB					2P	RO-9			
			(NRZ9020OP)	RO	G9	105	15	4P		RO-9		
			(NRZ9020OB)					2P		RO-9		
For high carbon steels	⑤⑥	HC-SP	SCMR0200						SP-57			
			(SCR0200)	SP	P3	105	15	2.5P	SP-57			
	①⑤⑥	HC-PO	PCMS0200						PO-42			
(PCS0200)			PO	P4	105	15	5P		PO-42			
For hard-to-machine materials	①④⑤	EH-PO	EPHMS0200					4.5P	PO-46			
			(EPHS0200)	PO				4.5P	PO-46			
		EH-HT	ETHMS02005					5P	HT-94			
			(ETHS02005)	HT	P4	105	15	2.5P		HT-94		
					(ETHS02005)				5P	HT-94		
					(ETHS02001)				2.5P	HT-94		
For titanium alloys	④⑤⑥⑨	ZET-B	ZETBMS0200					3P	SP-68			
			(ZETBS0200)	SP	P4	105	15	3P	SP-68			
			ZETPMT0200					5P	SL-4			
			(ZETPT0200)	SL	P5			5P	SL-4			
For nickel base alloys	⑥⑦⑧⑩	ZEN-B	ZENBMS0200					3P	SP-69			
			(ZENBS0200)	SP	P4	105	15	3P	SP-69			
		ZEN-P	ZENPMT0200					4.5P	PO-47			
			(ZENPT0200)	PO	P5			4.5P	PO-47			
Carbide taps for hard materials	②	UH-CT	UHCS020O5					5P	CT-11			
For stainless steels	⑥⑦⑧	SU-SP	SUMR0200					2.5P	SP-45			
			(SURO200)	SP	P3			2.5P	SP-45			
			SU-PO					5P	PO-35			
			(PUS0200)	PO	P4			5P	PO-35			
						(TUMS02004)	HT	P4	105	15	4P	HT-73
					TUMS02001				1.5P	HT-73		
					(TUS02004)	HT	P4		4P	HT-73		
					(TUS02001)	HT	P4		1.5P	HT-73		
		Oversize	⑥⑦⑧	SU-SP	SUMS0200					2.5P	SP-45	
					(SUS0200)	SP	P4	105	15	2.5P	SP-45	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
For stainless steels	For hard-to-machine materials	5 6 7 SU2-SP	SU2MS0200 (SU2S0200)	SP	P4	105	15	3P	SP-49	
For cast irons		1	FC-O	TFCM02005				5P	HT-79	
			TFCM02001	HT	75-40	105	15	1.5P	HT-79	
			(TFC02005)					5P	HT-79	
			(TFC02001)					1.5P	HT-79	
Carbide		1 12 13	N-CT FC	TCNS02003	HT	P4	95	15	3P	CT-6
			TCNS02001					1.5P	CT-6	
For aluminum alloys		11 12	LA-O	TLAM02005				5P	HT-83	
			TLAM02001	HT	80-45	105	15	1.5P	HT-83	
			(TLA02005)					5P	HT-83	
			(TLA02001)					1.5P	HT-83	
Carbide		11 12 13	N-CT LA	TCNS02003A	HT	P4	95	15	3P	CT-3
			TCNS02001A					1.5P	CT-3	
Thread forming taps for non-ferrous materials		11 12	N-RS	NRSM90200P				4P	RO-19	
			NRSM90200B				2P	RO-19		
			(NRS90200P)	RO	G9	105	15	4P	RO-19	
			(NRS90200B)				2P	RO-19		
For ultra fast tapping (with internal coolant hole)	For steels	5 6 8 HFIHS	HFIHS0200	SP	P5	105	16	2.5P	SP-73	
	For non-ferrous metals	1 5 6 HFISP	HFISPT0200	SP	P5	105	16	2.5P	SP-73	
		11 12 HFAHS	HFAHS0200	SP	P5	105	16	2.5P	SP-74	
			HFASP	HFASPT0200	SP	P5	105	16	2.5P	SP-74
For dry tapping (with internal coolant hole)	For steels	1 5 6 HDISP	HDISPT0200	SP	P5	105	16	2.5P	SP-75	
	For non-ferrous metals	11 12 HDASP	HDAAPT0200	SP	P5	105	16	2.5P	SP-75	
For ultra fast tapping (with internal coolant hole)	For both steels and non-ferrous materials	1 5 6 11 12 HDISL	HDISLT0200	SL	P5	105	16	5P	SL-6	
Thread forming taps for high carbon steels		5 6 7 HP-RZ	HRZM90200P					4P	RO-33	
			HRZM90200B					2P	RO-33	
			(HRZ90200P)	RO	G9	105	15	4P	RO-33	
			(HRZ90200B)					2P	RO-33	
For deep hole use		5 6 8	S-SP	SSMR0200	SP	P3		2.5P	SP-53	
			(SSR0200)	SP	P3	105	15	2.5P	SP-53	
			S-PO	PSMS0200	PO	P4		5P	PO-40	
			(PSS0200)	PO	P4		5P	PO-40		
Low spiral		1 5 6 LS-LO-SP	LSHR0200L20	SP	P3	200	15	2.5P	SP-66	
			(LSHR0200L20)					SP-66		
For helical coil wire screw thread inserts		11 12	STI-SP	STIMC0200	SP			2.5P	SP-63	
			(STIC0200)	SP				2.5P	SP-63	
			STI-HT	TICM02005	HT	1b	115	17	5P	HT-87
			TICM02001	HT				1.5P	HT-87	
			(TIC02005)	HT				5P	HT-87	
			(TIC02001)	HT				1.5P	HT-87	
With coolant hole		1 5 6 MC-PO	MPHS0200L15	PO	P4	150		5P	PO-44	
			ML1502005-R	HT	P3	150		5P	HT-92	
			ML2002005-R	HT	P3	200	15	5P	HT-92	
			ML1502001-R	HT	P3	150		1.5P	HT-92	
			ML2002001-R	HT	P3	200		1.5P	HT-92	
Nut taps		6 8 11 12	NT	NH20200	HT	II	200	16	30P	etc-1
Taps M20x1.25										
Standard		5 6 8 SP	SPQ020N	SP	P2	105		5P	SP-10	
			(SNQ020N)	SP	P2	95	15	2.5P	SP-10	

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page			
Taps M20x1												
Standard		5 6 8 SP	SPQ020M	SP	P2	105		2.5P	SP-10			
			(SNQ020M)	SP	P2	95	15	2.5P	SP-10			
			POR020M	PO	P3	105		5P	PO-8			
			(PNR020M)	PO	P3	95		5P	PO-8			
			1 5 6 12	HT	TNMR020M5				105		5P	HT-23
				TNMR020M1					105		1.5P	HT-23
				(TNR020M9)	HT	P3	95	15	9P		HT-23	
				(TNR020M5)					95		5P	HT-23
						(TNR020M1)			95		1.5P	HT-23
			For high carbon steels		5 6	HC-SP	SCMQ020M	SP	P2	105		SP-57
						(SCQ020M)	SP	P2	95	15	2.5P	SP-57
			For deep hole use		5 6 8	S-SP	SSMQ020M	SP	P2	105		SP-54
(SSQ020M)	SP	P2				95	15	2.5P	SP-54			
Taps M22x2.5												
Standard		5 6 8 SP	SPR022R	SP	P3			2.5P	SP-10			
			(SNR022R)	SP	P3	115	17	2.5P	SP-11			
			POS022R	PO	P4			5P	PO-8			
			(PNS022R)	PO	P4			5P	PO-8			
			1 5 6 12	HT	TNMS022R5					5P	HT-23	
				TNMS022R1						1.5P	HT-23	
				(TNS022R9)	HT	P4	115	17	9P		HT-23	
				(TNS022R5)					5P		HT-23	
						(TNS022R1)				1.5P	HT-23	
			Oversize		5 6 8 SP	SPS022R	SP	P4			2.5P	SP-11
						(SNS022R)	SP	P4	115	17	2.5P	SP-11
						POT022R	PO	P5			5P	PO-8
(PNT022R)	PO	P5						5P	PO-8			
For left hand threads		5 6 8 SP(LH)	SPR022R-L	SP	P3			2.5P	SP-27			
			(SNR022R-L)	SP	P3	115	17	2.5P	SP-27			
			POS022R-L	PO	P4			5P	PO-20			
			(PNS022R-L)	PO	P4			5P	PO-20			
			1 5 6 12	HT(LH)	TNMS022R5-L					5P	HT-46	
				TNMS022R1-L						1.5P	HT-46	
				(TNS022R9-L)	HT	P4	115	17	9P		HT-46	
				(TNS022R5-L)					5P		HT-46	
			(TNS022R1-L)				1.5P	HT-46				
Long shank		5 6 8 LS-SP	SPR022RL15	SP	P3	150		2.5P	SP-35			
			SPR022RL20	SP	P3	200		2.5P	SP-35			
			(SNR022RL15)	SP	P3	150		2.5P	SP-35			
			(SNR022RL20)	SP	P3	200		2.5P	SP-35			
			17	LS-PO	POS022RL15	PO	P4	150		5P	PO-27	
				POS022RL20	PO	P4	200		5P	PO-27		
				(PNS022RL15)	PO	P4	150		5P	PO-27		
				(PNS022RL20)	PO	P4	200		5P	PO-27		
			1 5 6 12	LS-HT	TNMR022R515				150		5P	HT-57
				TNMR022R520					200		5P	HT-58
				TNMR022R525	HT	P3	250	17	5P		HT-58	
				TNMR022R115					150		1.5P	HT-58
			TNMR022R120			200		1.5P	HT-58			

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used in stamping machines Taps
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M8-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and diameter machine Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	① ⑤ ⑥ ⑫	LS-HT	TNMR022R12S			250		1.5P	HT-58			
			(L15022R5-R)			150		5P	HT-57			
			(L20022R5-R)			200		5P	HT-58			
			(L25022R5-R)	HT	P3	250	17	5P	HT-58			
			(L15022R1-R)			150		1.5P	HT-58			
			(L20022R1-R)			200		1.5P	HT-58			
			(L25022R1-R)			250		1.5P	HT-58			
			Enlarge	① ⑤ ⑥ ⑫	LS-HT	TNMS022R51S				5P	HT-58	
						TNMS022R11S	HT	P4	150	17	1.5P	HT-58
						(L15022R5-S)				5P	HT-58	
			(L15022R1-S)				1.5P	HT-58				
For left hand threads	① ⑤ ⑥ ⑫	LS-HT(LH)	TNMR022R515L			150		5P	HT-67			
			TNMR022R520L			200		5P	HT-67			
			TNMR022R115L			150		1.5P	HT-67			
			TNMR022R120L	HT	P3	200	17	1.5P	HT-67			
			(L15022R5-RL)			150		5P	HT-67			
			(L20022R5-RL)			200		5P	HT-67			
			(L15022R1-RL)			150		1.5P	HT-67			
			(L20022R1-RL)			200		1.5P	HT-67			
			For soft structural steels	⑧	E-SP	ESHMR022R	SP	P3	115	17	2.5P	SP-56
						(ESHRO22R)						
For high carbon steels	⑤ ⑥	HC-SP	SCMR022R	SP	P3	115	17	2.5P	SP-57			
			(SCR022R)							SP-57		
	① ⑤ ⑥	HC-PO	PCMS022R	PO	P4	115	17	5P	PO-42			
			(PCS022R)							PO-42		
For hard-to-machine materials	① ④ ⑤	EH-PO	EPHMT022R	PO	P5	115	17	4.5P	PO-46			
			(EPHT022R)							PO-46		
		EH-HT	ETHMT022R5						5P	HT-94		
			ETHMT022R1	HT	P5	115	17	2.5P	HT-94			
			(ETHT022R5)						5P	HT-94		
			(ETHT022R1)						2.5P	HT-94		
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMR022R	SP	P3			2.5P	SP-45			
			(SUR022R)	SP	P3			2.5P	SP-45			
		SU-PO	PUMS022R	PO	P4			5P	PO-35			
			(PUS022R)	PO	P4		115	17	5P	PO-35		
		SU-HT	TUMS022R4	HT	P4			4P	HT-73			
			TUMS022R1	HT	P4			1.5P	HT-73			
				(TUS022R4)	HT	P4		4P	HT-73			
				(TUS022R1)	HT	P4		1.5P	HT-73			
		Enlarge	⑥ ⑦ ⑧	SU-SP	SUMS022R	SP	P4			2.5P	SP-45	
					(SUS022R)	SP	P4			2.5P	SP-45	
SUMT022R	SP				P5			2.5P	SP-45			
(SUT022R)	SP				P5			2.5P	SP-45			
SU-PO	PUMT022R				PO	P5		115	17	5P	PO-35	
	(PUT022R)				PO	P5			5P	PO-35		
	PUMU022R				PO	P6			5P	PO-35		
	(PUU022R)				PO	P6			5P	PO-35		
For hard-to-machine materials	⑤ ⑥ ⑦				SU2-SP	SU2MS022R	SP	P4	115	17	3P	SP-49
						(SU2S022R)						
For cast irons	①	FC-O	TFCM022R5					5P	HT-79			
			TFCM022R1	HT	⑧-⑤	115	17	1.5P	HT-79			
			(TFC022R5)						5P	HT-79		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For cast irons	①	FC-O	(TFC022R1)	HT	⑧-⑤	115	17	1.5P	HT-79	
			Carbide	① ⑫ ⑬	N-CT FC	TCNS022R3	HT	P4	115	17
			TCNS022R1					1.5P	CT-6	
For aluminum alloys	⑪ ⑫	LA-O	TLAM022R5					5P	HT-83	
			TLAM022R1	HT	⑧-⑤	115	17	1.5P	HT-83	
			(TLA022R5)					5P	HT-83	
			(TLA022R1)					1.5P	HT-83	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSMR022R	SP	P3			2.5P	SP-54	
			(SSR022R)	SP	P3		115	17	2.5P	SP-54
		S-PO	PSMS022R	PO	P4			5P	PO-40	
			(PSS022R)	PO	P4			5P	PO-40	
Low spiral	① ⑤ ⑥ ⑪ ⑫	LS-LO-SP	LSHMR022RL20	SP	P3	200	17	2.5P	SP-66	
			(LSHR022RL20)							SP-66
For helical coil wire screw thread inserts	⑪ ⑫	STI-SP	STIMC022R	SP			19	2.5P	SP-63	
			(STIC022R)	SP			20	2.5P	SP-63	
		STI-HT	TICM022R5	HT	1b	125	19	5P	HT-87	
			TICM022R1	HT			19	1.5P	HT-87	
			(TIC022R5)	HT			20	5P	HT-87	
			(TIC022R1)	HT			20	1.5P	HT-87	
With coolant hole	⑤ ⑥ ⑧ ⑪ ⑫	MC-SP	MSHR022RL15	SP	P3	150	17	2.5P	SP-67	
			(MSP022RL15)							
	① ⑤ ⑥ ⑪ ⑫	MC-PO	MPHS022RL15	PO	P4	150		5P	PO-44	
			ML15022R5-R	HT	P3	150		5P	HT-92	
		ML20022R5-R	HT	P3	200	17	5P	HT-92		
		ML15022R1-R	HT	P3	150		1.5P	HT-92		
		ML20022R1-R	HT	P3	200		1.5P	HT-92		
Nut taps	⑥ ⑧ ⑪ ⑫	NT	NH2022R	HT	II b	250	18	27P	etc-1	
Taps M22×2										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR022Q	SP	P3			2.5P	SP-11	
			(SNR022Q)	SP	P3		115	17	2.5P	SP-11
			POS022Q	PO	P4			5P	PO-8	
			(PNS022Q)	PO	P4			5P	PO-8	
		① ⑤ ⑥ ⑫	HT	TNMS022Q5					5P	HT-24
				TNMS022Q1					1.5P	HT-24
				(TNS022Q9)	HT	P4	115	17	9P	HT-24
		(TNS022Q5)					5P	HT-24		
		(TNS022Q1)					1.5P	HT-24		
For high carbon steels	⑤ ⑥	HC-SP	SCMR022Q	SP	P3	115	17	2.5P	SP-58	
			(SCR022Q)						SP-58	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSMR022Q	SP	P3	115	17	2.5P	SP-54	
			(SSR022Q)						SP-54	
Taps M22×1.5										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR022O	SP	P3			2.5P	SP-11	
			(SNR022O)	SP	P3		115	17	2.5P	SP-11
			POS022O	PO	P4			5P	PO-8	
			(PNS022O)	PO	P4			5P	PO-8	
		① ⑤ ⑥ ⑫	HT	TNMR022O5					5P	HT-24
				TNMR022O1					1.5P	HT-24
		(TNR022O9)	HT	P3	115	17	9P	HT-24		
		(TNR022O5)					5P	HT-24		
		(TNR022O1)					1.5P	HT-24		

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	Oversize		SP	SPS0220	SP	P4			2.5P	SP-11	
			SPT0220	SP	P5			2.5P	SP-11		
			N-SP	(SNS0220)	SP	P4	115	17	2.5P	SP-11	
			(SNT0220)	SP	P5			2.5P	SP-11		
			PO	POT0220	PO	P5			5P	PO-8	
N-PO	(PNT0220)	PO	P5			5P	PO-8				
For left hand threads			SP(LH)	SPR0220-L	SP	P3			2.5P	SP-27	
N-SP(LH)	(SNR0220-L)		SP	P3			2.5P	SP-27			
PO(LH)	POS0220-L		PO	P4	115	17	5P	PO-20			
N-PO(LH)	(PNS0220-L)		PO	P4			5P	PO-20			
Long shank				LS-SP	SPR0220L15	SP	P3	150		2.5P	SP-35
		SPR0220L20		SP	P3	200		2.5P	SP-35		
		LS-N-SP		(SNR0220L15)	SP	P3	150		2.5P	SP-35	
		(SNR0220L20)		SP	P3	200		2.5P	SP-35		
		LS-PO		POS0220L15	PO	P4	150	17	5P	PO-27	
		POS0220L20		PO	P4	200		5P	PO-28		
		LS-N-PO		(PNS0220L15)	PO	P4	150		5P	PO-27	
		(PNS0220L20)		PO	P4	200		5P	PO-28		
				LS-HT	TNMR0220S15			150		5P	HT-58
				TNMR0220S20			200		5P	HT-58	
				TNMR0220115			150		1.5P	HT-58	
				TNMR0220120			200		1.5P	HT-58	
				(L150220S-R)	HT	P3	150	17	5P	HT-58	
				(L200220S-R)			200		5P	HT-58	
				(L1502201-R)			150		1.5P	HT-58	
		(L2002201-R)			200		1.5P	HT-58			
For soft structural steels			E-SP	ESHMR0220						SP-56	
			(ESHRO220)	SP	P3	115	17	2.5P	SP-56		
For high carbon steels			HC-SP	SCMR0220						SP-58	
			(SCRO220)	SP	P3	115	17	2.5P	SP-58		
For hard-to-machine materials			EH-PO	EPHMS0220	PO			4.5P	PO-46		
			(EPHS0220)	PO			4.5P	PO-46			
			EH-HT	ETHMS0220S	HT	P4	115	17	5P	HT-95	
			ETHMS02201	HT			2.5P	HT-95			
			(ETHS0220S)	HT			5P	HT-95			
		(ETHS02201)	HT			2.5P	HT-95				
For stainless steels			SU-SP	SUMR0220	SP	P3			2.5P	SP-45	
			(SUR0220)	SP	P3			2.5P	SP-45		
			SU-PO	PUMS0220	PO	P4			5P	PO-35	
			(PUS0220)	PO	P4	115	17	5P	PO-35		
			SU-HT	TUMS02204	HT	P4			4P	HT-73	
			TUMS02201	HT	P4			1.5P	HT-73		
			(TUS02204)	HT	P4			4P	HT-73		
			(TUS02201)	HT	P4			1.5P	HT-73		
	Oversize			SU-SP	SUMS0220	SP	P4	115	17	2.5P	SP-45
				(SUS0220)	SP	P4	115	17	2.5P	SP-45	
	For hard-to-machine materials			SU2-SP	SU2MS0220	SP	P4	115	17	3P	SP-49
				(SU2S0220)	SP	P4	115	17	3P	SP-49	
For cast irons			FC-O	TFCM0220S						5P	HT-79
			TFCM02201					1.5P	HT-79		
			(TFCO220S)	HT	P5-40	115	17	5P	HT-79		
			(TFCO2201)					1.5P	HT-79		
								1.5P	HT-79		

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For cast irons	Carbide		N-CTFC	TCNS02203						3P	CT-6
			TCNS02201					1.5P	CT-6		
For aluminum alloys			LA-O	TLAM02205						5P	HT-83
			TLAM02201					1.5P	HT-83		
			(TLA0220S)	HT	P4-45	115	17	5P	HT-83		
			(TLA02201)					1.5P	HT-83		
For deep hole use			S-SP	SSMR0220	SP	P3			2.5P	SP-54	
			(SSR0220)	SP	P3			2.5P	SP-54		
			S-PO	PSMS0220	PO	P4	115	17	5P	PO-40	
			(PSS0220)	PO	P4			5P	PO-40		
Low spiral			LS-LO-SP	LSHMR0220L20							SP-66
			(LSHR0220L20)	SP	P3	200	17	2.5P	SP-66		
For helical coil wire screw thread inserts			STI-HT	TICM0220S						5P	HT-87
			TICM02201					1.5P	HT-87		
			(TIC0220S)	HT	1b	120	19	5P	HT-87		
			(TIC02201)					1.5P	HT-87		
With coolant hole			MC-HT	ML150220S-R			150		5P	HT-92	
			ML200220S-R				200		5P	HT-92	
			ML1502201-R	HT	P3	150	17	1.5P	HT-92		
			ML2002201-R			200		1.5P	HT-92		
Taps M22x1											
Standard			SP	SPQ022M	SP	P2	115		2.5P	SP-11	
			N-SP	(SNQ022M)	SP	P2	95		2.5P	SP-11	
			PO	POR022M	PO	P3	115	17	5P	PO-8	
			N-PO	(PNR022M)	PO	P3	95		5P	PO-8	
				HT	TNMR022M5			115		5P	HT-24
				TNMR022M1				115		1.5P	HT-24
			(TNR022M9)	HT	P3	95	17	9P	HT-24		
			(TNR022M5)			95		5P	HT-24		
			(TNR022M1)			95		1.5P	HT-24		
Taps M23x1.5											
Standard			SP	SPR0230						SP-11	
			N-SP	(SNR0230)	SP	P3	120	19	2.5P	SP-11	
Taps M24x3											
Standard			SP	SPR024S	SP	P3			2.5P	SP-11	
			N-SP	(SNR024S)	SP	P3			2.5P	SP-11	
			PO	POS024S	PO	P4	120	19	5P	PO-8	
			N-PO	(PNS024S)	PO	P4			5P	PO-8	
				HT	TNMS0245S					5P	HT-24
				TNMS02451					1.5P	HT-24	
				(TNS02459)	HT	P4	120	19	9P	HT-24	
				(TNS0245S)					5P	HT-24	
		(TNS02451)					1.5P	HT-24			
Oversize			SP	SPS024S	SP	P4			2.5P	SP-11	
			N-SP	(SNS024S)	SP	P4			2.5P	SP-11	
			PO	POT024S	PO	P5	120	19	5P	PO-8	
			N-PO	(PNT024S)	PO	P5			5P	PO-8	
				SP(LH)	SPR024S-L	SP	P3	120	19	2.5P	SP-27
For left hand threads			N-SP(LH)	(SNR024S-L)	SP	P3	120	19	2.5P	SP-27	

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page						
For left hand threads	5 6 8 11 12	PO(LH)	POS0245-L	PO	P4	120	19	5P	PO-20						
		N-PO(LH)	(PNS0245-L)						PO-20						
	1 5 6 12	HT(LH)	TNMS02455-L						5P	HT-46					
			TNMS02451-L						1.5P	HT-46					
			(TNS02459-L)						HT	P4	120	19	9P	HT-46	
			(TNS02455-L)										5P	HT-46	
		(TNS02451-L)					1.5P	HT-46							
Long shank	5 6 8 11 12	LS-SP	SPR0245L15						2.5P	SP-35					
			SPR0245L20						SP	P3	200	2.5P	SP-36		
			SPR0245L25						SP	P3	250	2.5P	SP-36		
		LS-N-SP	(SNR0245L15)						SP	P3	150	2.5P	SP-36		
			(SNR0245L20)						SP	P3	200	2.5P	SP-36		
			(SNR0245L25)						SP	P3	250	2.5P	SP-36		
		LS-PO	POS0245L15						PO	P4	150	5P	PO-28		
			POS0245L20						PO	P4	200	5P	PO-28		
			POS0245L25						PO	P4	250	5P	PO-28		
		LS-N-PO	(PNS0245L15)						PO	P4	150	5P	PO-28		
			(PNS0245L20)						PO	P4	200	5P	PO-28		
			(PNS0245L25)						PO	P4	250	5P	PO-28		
		1 5 6 11 12	LS-HT						TNMR0245515				150	5P	HT-58
									TNMR0245520				200	5P	HT-58
									TNMR0245525				250	5P	HT-58
									TNMR0245115				150	1.5P	HT-58
			TNMR0245120				200	1.5P	HT-58						
			TNMR0245125				250	1.5P	HT-58						
			(L1502455-R)	HT	P3	150	5P	HT-58							
			(L2002455-R)			200	5P	HT-58							
			(L2502455-R)			250	5P	HT-58							
			(L1502451-R)			150	1.5P	HT-58							
			(L2002451-R)			200	1.5P	HT-58							
			(L2502451-R)			250	1.5P	HT-58							
	Oversize		1 5 6 11 12	LS-HT	TNMS0245515					5P	HT-58				
					TNMS0245115	HT	P4	150	1.5P	HT-58					
					(L1502455-S)					5P	HT-58				
					(L1502451-S)					1.5P	HT-58				
	For left hand threads	1 5 6 11 12	LS-HT(LH)	TNMR0245515L			150	5P	HT-67						
				TNMR0245520L			200	5P	HT-67						
				TNMR0245115L			150	1.5P	HT-67						
				TNMR0245120L	HT	P3	200	1.5P	HT-67						
			(L1502455-RL)			150	5P	HT-67							
			(L2002455-RL)			200	5P	HT-67							
	(L1502451-RL)			150	1.5P	HT-67									
	(L2002451-RL)			200	1.5P	HT-67									
For soft structural steels	8	E-SP	ESHMR0245	SP	P3	120	19	2.5P	SP-56						
			(ESHRO245)						SP-56						
For high carbon steels	5 6	HC-SP	SCMR0245	SP	P3	120	19	2.5P	SP-58						
			(SCR0245)						SP-58						
	1 5 6	HC-PO	PCMS0245	PO	P4	120	19	5P	PO-42						
			(PCS0245)						PO-42						
For hard-to-machine materials	1 4 5	EH-PO	EPHMT0245	PO					4.5P	PO-46					
			(EPHT0245)						PO	P5	120	19	4.5P	PO-46	
		EH-HT	ETHMT02455						HT				5P	HT-95	
For hard-to-machine materials	1 4 5	EH-HT	ETHMT02451						2.5P	HT-95					
			(ETHHT02455)						HT	P5	120	19	5P	HT-95	
			(ETHHT02451)										2.5P	HT-95	
	Powder HSS	4 5	PM-SP	-	SP	P4	120	19	3P	SP-70					
	For stainless steels	6 7 8	SU-SP	SUMR0245						2.5P	SP-45				
			(SUR0245)	SP						P3		2.5P	SP-45		
SU-PO			PUMS0245	PO						P4		5P	PO-35		
			(PUS0245)	PO						P4	120	19	5P	PO-35	
SU-HT			TUMS02454	HT						P4		4P	HT-73		
			(TUS02454)	HT						P4		4P	HT-73		
Oversize		6 7 8	SU-SP	SUMS0245						2.5P	SP-45				
				(SUS0245)						SP	P4		2.5P	SP-45	
				SUMT0245						SP	P5		2.5P	SP-45	
				(SUT0245)						SP	P5	120	19	2.5P	SP-45
			SU-PO	PUMT0245						PO	P5		5P	PO-35	
				(PUT0245)						PO	P5		5P	PO-35	
For deep hole use	6 7 8	LS-SU-S-SP	-	SP	P3	150	19	2.5P	SP-51						
For hard-to-machine materials	5 6 7	SU2-SP	SU2MS0245	SP	P4	120	19	3P	SP-49						
		(SU2S0245)						3P	SP-49						
For cast irons	1	FC-O	TFCM02455						5P	HT-79					
			TFCM02451						HT	P3	120	19	1.5P	HT-80	
			(TFC02455)										5P	HT-79	
			(TFC02451)										1.5P	HT-80	
Carbide	1 12 13	N-CT FC	TCNS02453	HT	P4	120	19		3P	CT-6					
			TCNS02451						1.5P	CT-6					
For aluminum alloys	11 12	LA-O	TLAM02455						5P	HT-83					
			TLAM02451						HT	P3	120	19	1.5P	HT-83	
			(TLA02455)										5P	HT-83	
		(TLA02451)					1.5P	HT-83							
For deep hole use	5 6 8	S-SP	SSMR0245	SP	P3				2.5P	SP-54					
			(SSR0245)						SP	P3	120	19	2.5P	SP-54	
		S-PO	PSMS0245						PO	P4		5P	PO-40		
		(PSS0245)	PO	P4		5P	PO-40								
Low spiral	1 5 6 11 12	LS-LO-SP	LSHR0245L20			200	19		2.5P	SP-66					
			(LSHR0245L20)						SP	P3	200	19	2.5P	SP-66	
For helical coil wire screw thread inserts	11 12	STI-SP	STIMC0245						135	23	2.5P	SP-63			
			(STIC0245)						SP		130	21	2.5P	SP-63	
		STI-HT	TICM02455						HT		135	23	5P	HT-87	
			TICM02451						HT	1b	135	23	1.5P	HT-87	
			(TIC02455)						HT		130	21	5P	HT-87	
			(TIC02451)						HT		130	21	1.5P	HT-87	
With coolant hole	5 6 8 10 12	MC-SP	MSHR0245L15			150	19		2.5P	SP-67					
			(MSHR0245L15)						SP	P3	150	19	2.5P	SP-67	
	1 5 6 11 12	MC-PO	MPHS0245L15						PO	P4	150	5P	PO-44		
		MC-HT	ML1502455-R						HT	P3	150	5P	HT-92		
		ML2002455-R	HT	P3	200	19	5P	HT-92							
		ML1502451-R	HT	P3	150	1.5P	HT-92								
		ML2002451-R	HT	P3	200	1.5P	HT-92								
Nut taps	6 8 11 12	NT	NH20245	HT	II b	260	19	2.5P	etc-1						

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Taps M24x2										
Standard	5 6 8 11 12	SP	SPR024Q	SP	P3			2.5P	SP-11	
		N-SP	(SNR024Q)	SP	P3	120	19	2.5P	SP-11	
		PO	POS024Q	PO	P4			5P	PO-8	
		N-PO	(PNS024Q)	PO	P4			5P	PO-8	
	1 5 6 12	HT	TNMS024Q5						5P	HT-24
			TNMS024Q1						1.5P	HT-24
			(TNS024Q9)	HT	P4	120	19	9P	HT-24	
			(TNS024Q5)						5P	HT-24
	1 5 6 12		(TNS024Q1)						1.5P	HT-24
		LS-SP	SPR024QL20	SP	P3	200	19	2.5P	SP-36	
		LS-N-SP	(SNR024QL20)						2.5P	SP-36
		LS-HT	TNMR024Q520						5P	HT-58
1 5 6 12		TNMR024Q120						1.5P	HT-58	
		(L20024Q5-R)	HT	P3	200	19	5P	HT-58		
		(L20024Q1-R)						1.5P	HT-58	
	For high carbon steels	5 6	HC-SP	SCMR024Q	SP	P3	120	19	2.5P	SP-58
		(SCR024Q)						SP-58		
For deep hole use	5 6 8	S-SP	SSMR024Q	SP	P3	120	19	2.5P	SP-54	
		(SSR024Q)						SP-54		
Taps M24x1.5										
Standard	5 6 8 11 12	SP	SPR024O	SP	P3			2.5P	SP-11	
		N-SP	(SNR024O)	SP	P3	120	19	2.5P	SP-11	
		PO	POS024O	PO	P4			5P	PO-8	
		N-PO	(PNS024O)	PO	P4			5P	PO-8	
	1 5 6 12	HT	TNMR024O5						5P	HT-24
			TNMR024O1						1.5P	HT-24
			(TNR024O9)	HT	P3	120	19	9P	HT-24	
			(TNR024O5)						5P	HT-24
	1 5 6 12		(TNR024O1)						1.5P	HT-24
		SP	SPS024O	SP	P4			2.5P	SP-11	
		N-SP	(SNS024O)	SP	P4	120	19	2.5P	SP-11	
		PO	POT024O	PO	P5			5P	PO-8	
1 5 6 12		(PNT024O)	PO	P5			5P	PO-8		
	For left hand threads	5 6 8 11 12	SP(LH)	SPR024O-L	SP	P3		2.5P	SP-27	
		N-SP(LH)	(SNR024O-L)	SP	P3	120	19	2.5P	SP-27	
		PO(LH)	POS024O-L	PO	P4			5P	PO-20	
1 5 6 12		N-PO(LH)	(PNS024O-L)	PO	P4			5P	PO-20	
	Long shank	5 6 8 11 12	LS-SP	SPR024OL15	SP	P3	150		2.5P	SP-36
				SPR024OL20	SP	P3	200		2.5P	SP-36
			LS-N-SP	(SNR024OL15)	SP	P3	150		2.5P	SP-36
			(SNR024OL20)	SP	P3	200	19	2.5P	SP-36	
1 5 6 12		LS-PO	POS024OL15	PO	P4	150		5P	PO-28	
			POS024OL20	PO	P4	200		5P	PO-28	
		LS-N-PO	(PNS024OL15)	PO	P4	150		5P	PO-28	
			(PNS024OL20)	PO	P4	200		5P	PO-28	
1 5 6 12		LS-HT	TNMR024O515				150		5P	HT-59
			TNMR024O520				200		5P	HT-59
			TNMR024O115	HT	P3	150	19	1.5P	HT-59	
			TNMR024O120			200		1.5P	HT-59	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	1 5 6 12	LS-HT	(L15024O5-R)					150	5P	HT-59
			(L20024O5-R)	HT	P3	200		5P	HT-59	
			(L15024O1-R)			150		1.5P	HT-59	
For soft structural steels	8	E-SP	ESHMR024O	SP	P3	120	19	2.5P	SP-56	
			(ESHRO24O)					SP-56		
		For high carbon steels	5 6	HC-SP	SCMR024O	SP	P3	120	19	2.5P
		(SCR024O)						SP-58		
For hard-to-machine materials	1 4 5	EH-PO	EPHMS024O	PO				4.5P	PO-46	
			(EPHS024O)	PO				4.5P	PO-46	
	1 4 5	EH-HT	ETHMS024O5	HT	P4	120	19	5P	HT-95	
			ETHMS024O1	HT				2.5P	HT-95	
			(ETHS024O5)	HT				5P	HT-95	
			(ETHS024O1)	HT				2.5P	HT-95	
For stainless steels	6 7 8	SU-SP	SUMR024O	SP	P3			2.5P	SP-45	
			(SUR024O)	SP	P3			2.5P	SP-45	
		SU-PO	PUMS024O	PO	P4			5P	PO-35	
	6 7 8		(PUS024O)	PO	P4	120	19	5P	PO-35	
		SU-HT	TUMS024O4	HT	P4			4P	HT-73	
			TUMS024O1	HT	P4			1.5P	HT-73	
	6 7 8		(TUS024O4)	HT	P4			4P	HT-73	
			(TUS024O1)	HT	P4			1.5P	HT-73	
		For cast irons	1	FC-O	TFCM024O5				5P	HT-80
		TFCM024O1	HT	P3-40	120	19	1.5P	HT-80		
		(TFC024O5)					5P	HT-80		
		(TFC024O1)					1.5P	HT-80		
Carbide	1 12 13	N-CT FC	TCNS024O3	HT	P4	95	19	3P	CT-6	
			TCNS024O1					1.5P	CT-6	
For aluminum alloys	11 12	LA-O	TLAM024O5					5P	HT-83	
			TLAM024O1	HT	P4-46	120	19	1.5P	HT-83	
			(TLA024O5)					5P	HT-83	
		(TLA024O1)					1.5P	HT-83		
For deep hole use	5 6 8	S-SP	SSMR024O	SP	P3			2.5P	SP-54	
			(SSR024O)	SP	P3	120	19	2.5P	SP-54	
		S-PO	PSMS024O	PO	P4			5P	PO-40	
		(PSS024O)	PO	P4			5P	PO-40		
	1 5 6 12	LS-LO-SP	LSHMR024OL20	SP	P3	200	19	2.5P	SP-66	
			(LSHR024OL20)					SP-66		
For helical coil wire screw thread inserts	11 12	STI-HT	TICM024O5			130		5P	HT-87	
			TICM024O1			130		1.5P	HT-87	
			(TIC024O5)	HT	1b	125	20	5P	HT-87	
			(TIC024O1)			125		1.5P	HT-87	
With coolant hole	1 5 6 12	MC-HT	ML15024O5-R			150		5P	HT-92	
			ML20024O5-R	HT	P3	200	19	5P	HT-92	
		ML15024O1-R			150		1.5P	HT-92		
		ML20024O1-R			200		1.5P	HT-92		
Nut taps	6 8 11 12	NT	NH2024O	HT	II	220	19	30P	etc-5	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used in stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	l _c	Product page	
Taps M24×1										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ024M	SP	P2	120		2.5P	SP-11	
		N-SP	(SNQ024M)	SP	P2	95	19	2.5P	SP-11	
		PO	POR024M	PO	P3	120		5P	PO-8	
		N-PO	(PNR024M)	PO	P3	95		5P	PO-8	
	① ⑤ ⑥ ⑫	HT	TNMR024M5				120		5P	HT-24
			TNMR024M1				120		1.5P	HT-24
			(TNR024M9)	HT	P3	95	19	9P	HT-24	
			(TNR024M5)				95		5P	HT-24
			(TNR024M1)				95		1.5P	HT-24
			(TNR024M1)				95		1.5P	HT-24

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps**
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small thread cast iron/machining Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page	
Dies M9×1.25										
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GG29.0N	Di-2	
							2~2.5P	GJ29.0N	Di-2	
							50	16	GM29.0N	Di-2
For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG29.0N-L	Di-7	
Dies M9×1										
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG29.0M	Di-2	
							38	13	GJ29.0M	Di-2
For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG29.0M-L	Di-7	
Solid dies for auto lathe	SKS	6 8	AD-S ST	P1	20	7	2~2.5P	FEP9.0M	Di-10	
				P2			FEQ9.0M	Di-10		
	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEO9.0M	Di-12	
				P2			EEQ9.0M	Di-12		
HSS	6 7 8	HS-D	P1	20	7	2~2.5P	HEP9.0M	Di-15		
			P2			HEQ9.0M	Di-15			
Dies M9×0.75										
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG29.0J	Di-2	
							38	13	GJ29.0J	Di-2
							For left hand threads	SKS	6 8 11 12	AR-D LH
Solid dies for auto lathe	SKS	6 8	AD-S ST	P1	20	7	2~2.5P	FEP9.0J	Di-10	
				P2			FEQ9.0J	Di-10		
	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEO9.0J	Di-12	
				P2			EEQ9.0J	Di-12		
HSS	6 7 8	HS-D	P1	20	7	2~2.5P	HEP9.0J	Di-15		
			P2			HEQ9.0J	Di-15			
Dies M9×0.5										
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG29.0G	Di-2	
							38	13	GJ29.0G	Di-2
							For left hand threads	SKS	6 8 11 12	AR-D LH
Solid dies for auto lathe	SKS	11 12	AD-S BR	P1	20	7	2~2.5P	EEO9.0G	Di-12	
Dies M11×1.5										
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2011O	Di-3	
							50	16	GM2011O	Di-3
For left hand threads	SKS	6 8 11 12	AR-D LH	II	38	13	2~2.5P	GJ2011O-L	Di-8	
Dies M11×1.25										
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2011N	Di-3	
							50	16	GM2011N	Di-3
							For left hand threads	SKS	6 8 11 12	AR-D LH
Dies M11×1										
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2011M	Di-3	
							50	16	GM2011M	Di-3
							For left hand threads	SKS	6 8 11 12	AR-D LH
Solid dies for auto lathe	SKS	6 8	AD-S ST	P1	25	9	2~2.5P	FGP011M	Di-10	
				SKS	11 12	AD-S BR	P1	25	9	2~2.5P

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M11×0.75									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2011J	Di-3
							2~2.5P	EGP011J	Di-12
Solid dies for auto lathe	SKS	11 12	AD-S BR	P1	25	9	2~2.5P	EGP011J	Di-12
Dies M11×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2011G	Di-3
							2~2.5P	EGP011G	Di-12
Solid dies for auto lathe	SKS	11 12	AD-S BR	P1	25	9	2~2.5P	EGP011G	Di-12
Dies M13×1.75									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2013P	Di-3
Dies M13×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2013O	Di-3
Dies M13×1.25									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2013N	Di-3
Dies M13×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2013M	Di-3
Dies M13×0.75									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2013J	Di-3
Dies M13×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2013G	Di-3
Dies M14×2									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13		GJ2014Q	Di-3
								GM2014Q	Di-3
							2~2.5P	HJ2014Q	Di-14
							50	16	HM2014Q
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16		GJ2014Q-L	Di-8
								GM2014Q-L	Di-8
							2~2.5P	GM2014Q-L	Di-8
							38	13	HJ2014Q-L
Dies M14×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13		GJ2014O	Di-3
								GM2014O	Di-3
							2~2.5P	HJ2014O	Di-13
							50	16	HM2014O
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16		GJ2014O-L	Di-8
								GM2014O-L	Di-8
							2~2.5P	GM2014O-L	Di-8
							38	13	HJ2014O-L
Dies M14×1.25									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13		GJ2014N	Di-3
								GM2014N	Di-3
							2~2.5P	HJ2014N	Di-13
							50	16	HM2014N
For left hand threads	SKS	6 8 11 12	AR-D LH	II	38	13		GJ2014N-L	Di-8
								GM2014N-L	Di-8
							2~2.5P	GM2014N-L	Di-8
							50	16	GM2014N-L
Dies M14×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	38	13	2~2.5P	GJ2014M	Di-3
							50	16	GM2014M

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Screw threads used on tapping machines Dies (SM)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For 3/8" threads and drawing machines Dies (SM)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Adjustable dies	HSS	⑥ ⑧ ⑪ ⑫	AR-D HSS	II	38	13	2~2.5P	HJ2014M	Di-13
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2014M-L	Di-8
Dies M14×0.75									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2014J	Di-3
Dies M14×0.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2014G	Di-3
Dies M15×2									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2015Q	Di-3
					50	16		GM2015Q	Di-3
Dies M15×1.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2015O	Di-3
					50	16		GM2015O	Di-3
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2015O-L	Di-8
Dies M15×1.25									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2015N	Di-3
Dies M15×1									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13		GJ2015M	Di-3
					50	16	2~2.5P	GM2015M	Di-3
					38	13		HJ2015M	Di-13
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2015M-L	Di-8
Dies M15×0.75									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2015J	Di-3
Dies M15×0.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2015G	Di-3
Dies M16×2									
Solid dies	HSS	⑥ ⑧ ⑪ ⑫	SD-Y	6G	50	16	2~2.5P	DMG016Q	Di-1
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13		GJ2016Q	Di-3
					50	16	2~2.5P	GM2016Q	Di-3
					38	13		HJ2016Q	Di-13
					50	16		HM2016Q	Di-13
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2016Q-L	Di-8
					50	16		GM2016Q-L	Di-8
					38	13		HJ2016Q-L	Di-14
					50	16		HM2016Q-L	Di-14
Dies M16×1.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13		GJ2016O	Di-3
					50	16	2~2.5P	GM2016O	Di-3
					38	13		HJ2016O	Di-13
					50	16		HM2016O	Di-13
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2016O-L	Di-8
					50	16		GM2016O-L	Di-8

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M16×1.25									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2016N	Di-3
					50	16		GM2016N	Di-3
Dies M16×1									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2016M	Di-3
					50	16		GM2016M	Di-3
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2016M-L	Di-8
					50	16		GM2016M-L	Di-8
Dies M16×0.75									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2016J	Di-3
					50	16		GM2016J	Di-3
Dies M16×0.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2016G	Di-3
					50	16		GM2016G	Di-3
Dies M17×2									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2017Q	Di-3
Dies M17×1.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2017O	Di-3
Dies M17×1.25									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2017N	Di-3
Dies M17×1									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2017M	Di-3
Dies M17×0.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2017G	Di-3
Dies M18×2.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2018R	Di-3
					50	16		HM2018R	Di-13
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	50	16	2~2.5P	GM2018R-L	Di-8
					50	16		HM2018R-L	Di-14
Dies M18×2									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2018Q	Di-3
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	50	16	2~2.5P	GM2018Q-L	Di-8
Dies M18×1.5									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2018O	Di-3
					50	16		HM2018O	Di-13
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	50	16	2~2.5P	GM2018O-L	Di-8
Dies M18×1.25									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2018N	Di-3

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M18×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2018M	Di-3
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2018M-L	Di-8
Dies M18×0.75									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2018J	Di-3
Dies M18×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2018G	Di-3
Dies M19×2.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2019R	Di-3
Dies M19×2									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2019Q	Di-3
Dies M19×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2019O	Di-3
Dies M19×1.25									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2019N	Di-3
Dies M19×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2019M	Di-3
Dies M19×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2019G	Di-3
Dies M20×2.5									
Solid dies	HSS	6 8 11 12	SD-Y	6G	50	16	2~2.5P	DMG020R	Di-1
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020R	Di-3
	HSS	6 8 11 12	AR-D HSS					HM2020R	Di-13
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2020R-L	Di-8
	HSS	6 8 11 12	AR-D HSS LH					HM2020R-L	Di-14
Dies M20×2									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020Q	Di-4
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2020Q-L	Di-8
Dies M20×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020O	Di-4
	HSS	6 8 11 12	AR-D HSS					HM2020O	Di-13
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2020O-L	Di-8
Dies M20×1.25									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020N	Di-4
Dies M20×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020M	Di-4
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2020M-L	Di-8

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M20×0.75									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020J	Di-4
Dies M20×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2020G	Di-4
Dies M21×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2021O	Di-4
Dies M21×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2021M	Di-4
Dies M21×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2021G	Di-4
Dies M22×2.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2022R	Di-4
	HSS	6 8 11 12	AR-D HSS					HM2022R	Di-13
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2022R-L	Di-8
Dies M22×2									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2022Q	Di-4
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2022Q-L	Di-8
Dies M22×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2022O	Di-4
	HSS	6 8 11 12	AR-D HSS					HM2022O	Di-13
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2022O-L	Di-8
Dies M22×1.25									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2022N	Di-4
Dies M22×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2022M	Di-4
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2022M-L	Di-8
Dies M22×0.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2022G	Di-4
Dies M23×1.5									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2023O	Di-4
Dies M23×1									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2023M	Di-4
Dies M24×3									
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16	2~2.5P	GM2024S	Di-4
	HSS	6 8 11 12	AR-D HSS					HM2024S	Di-14
For left hand threads	SKS	6 8 11 12	AR-D LH	II	50	16	2~2.5P	GM2024S-L	Di-8
	HSS	6 8 11 12	AR-D HSS LH					HM2024S-L	Di-14

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on tapping machines Dies (SMA)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Small thread cast iron/machining Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M24×2									
Adjustable dies	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2024Q	Di-4
For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	50	16	2~2.5P	GM2024Q-L	Di-7
Dies M24×1.5									
Adjustable dies	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2024O	Di-4
	HSS	⑥⑧⑪⑫	AR-D HSS	II	50	16	2~2.5P	HM2024O	Di-13
For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	50	16	2~2.5P	GM2024O-L	Di-8
Dies M24×1.25									
Adjustable dies	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2024N	Di-4
Dies M24×1									
Adjustable dies	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2024M	Di-4
For left hand threads	SKS	⑥⑧⑪⑫	AR-D LH	II	50	16	2~2.5P	GM2024M-L	Di-8
Dies M24×0.5									
Adjustable dies	SKS	⑥⑧⑪⑫	AR-D	II	50	16	2~2.5P	GM2024G	Di-4

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps M25×3									
Standard	①⑤⑥⑫	HT	TNMS025S5					5P	HT-24
			TNMS025S1					1.5P	HT-24
			(TNS025S9)	HT	P4	125	19	9P	HT-24
			(TNS025S5)					5P	HT-24
			(TNS025S1)					1.5P	HT-24
Taps M25×2									
Standard	⑤⑥⑧⑪⑫	SP	SPR025Q	SP	P3			2.5P	SP-11
		N-SP	(SNR025Q)	SP	P3	125	19	2.5P	SP-11
		PO	POS025Q	PO	P4			5P	PO-8
		N-PO	(PNS025Q)	PO	P4			5P	PO-8
	①⑤⑥⑫	HT	TNMS025Q5					5P	HT-24
			TNMS025Q1					1.5P	HT-25
			(TNS025Q9)	HT	P4	125	19	9P	HT-24
			(TNS025Q5)					5P	HT-25
			(TNS025Q1)					1.5P	HT-25
Taps M25×1.5									
Standard	⑤⑥⑧⑪⑫	SP	SPR025O	SP	P3			2.5P	SP-11
		N-SP	(SNR025O)	SP	P3	125	19	2.5P	SP-11
		PO	POS025O	PO	P4			5P	PO-8
		N-PO	(PNS025O)	PO	P4			5P	PO-8
	①⑤⑥⑫	HT	TNMR025O5					5P	HT-25
			TNMR025O1					1.5P	HT-25
			(TNR025O9)	HT	P3	125	19	9P	HT-25
			(TNR025O5)					5P	HT-25
			(TNR025O1)					1.5P	HT-25
For high carbon steels	⑤⑥	HC-SP	SCMR025O	SP	P3	125	19	2.5P	SP-58
			(SCR025O)					2.5P	SP-58
Taps M25×1									
Standard	⑤⑥⑧⑪⑫	SP	SPQ025M	SP	P2	125	19	2.5P	SP-11
		N-SP	(SNQ025M)			95		2.5P	SP-11
	①⑤⑥⑫	HT	TNMR025M5			125		5P	HT-25
			TNMR025M1			125		1.5P	HT-25
			(TNR025M9)	HT	P3	95	19	9P	HT-25
			(TNR025M5)			95		5P	HT-25
			(TNR025M1)			95		1.5P	HT-25
Taps M26×3									
Standard	⑤⑥⑧⑪⑫	SP	SPR026S	SP	P3	130	20	2.5P	SP-11
		N-SP	(SNR026S)			125		2.5P	SP-11
	①⑤⑥⑫	HT	TNMS026S5			130		5P	HT-25
			TNMS026S1			130		1.5P	HT-25
			(TNS026S9)	HT	P4	125	20	9P	HT-25
			(TNS026S5)			125		5P	HT-25
			(TNS026S1)			125		1.5P	HT-25
Taps M26×2									
Standard	⑤⑥⑧⑪⑫	SP	SPR026Q	SP	P3	130		2.5P	SP-11

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	5 6 8 11 12	N-SP	(SNR026Q)	SP	P3	125		2.5P	SP-11		
		PO	POS026Q	PO	P4	130	20	5P	PO-8		
		N-PO	(PNS026Q)	PO	P4	125		5P	PO-8		
	1 5 6 12	HT	TNMS026Q5				130		5P	HT-25	
			TNMS026Q1				130		1.5P	HT-25	
			(TNS026Q9)	HT	P4	125	20	9P		HT-25	
			(TNS026Q5)				125		5P	HT-25	
			(TNS026Q1)				125		1.5P	HT-25	
		Taps M26×1.5									
		Standard	5 6 8 11 12	SP	SPR026O	SP	P3	130		2.5P	SP-11
N-SP	(SNR026O)			SP	P3	125	20	2.5P	SP-11		
PO	POS026O			PO	P4	130		5P	PO-8		
1 5 6 12	N-PO		(PNS026O)	PO	P4	125		5P	PO-9		
	HT		TNMR026O5				130		5P	HT-25	
			TNMR026O1				130		1.5P	HT-25	
			(TNR026O9)	HT	P3	125	20	9P		HT-25	
			(TNR026O5)				125		5P	HT-25	
			(TNR026O1)				125		1.5P	HT-25	
	Taps M26×1										
For high carbon steels	5 6	HC-SP	SCMR026O	SP	P3	130	20	2.5P	SP-58		
			(SCR026O)			125			SP-58		
Nut taps											
	6 8 11 12	NT	NH2026O	HT	II	230	21	30P	etc-1		
Taps M26×1											
Standard	5 6 8 11 12	SP	SPQ026M	SP	P2	130		2.5P	SP-11		
		N-SP	(SNQ026M)	SP	P2	95		2.5P	SP-11		
		PO	POR026M	PO	P3	130	20	5P	PO-9		
	1 5 6 12	N-PO	(PNR026M)	PO	P3	95		5P	PO-9		
		Taps M27×3									
Standard	5 6 8 11 12	SP	SPR027S	SP	P3			2.5P	SP-11		
		N-SP	(SNR027S)	SP	P3	130	20	2.5P	SP-12		
		PO	POS027S	PO	P4			5P	PO-9		
	1 5 6 12	N-PO	(PNS027S)	PO	P4			5P	PO-9		
		HT	TNMS027S5					5P	HT-25		
			TNMS027S1					1.5P	HT-25		
			(TNS027S9)	HT	P4	130	20	9P		HT-25	
			(TNS027S5)					5P	HT-25		
			(TNS027S1)					1.5P	HT-25		
		Taps M27×2									
Standard	5 6 8 11 12	SP	SPR027Q	SP	P3	130	20	2.5P	SP-12		
		N-SP	(SNR027Q)	SP	P3	130	20	2.5P	SP-12		
		HT	TNMT027Q5					5P	HT-25		
	1 5 6 12		TNMT027Q1					1.5P	HT-25		
			(TNT027Q9)	HT	P5	130	20	9P		HT-25	
			(TNT027Q5)					5P	HT-25		
			(TNT027Q1)					1.5P	HT-25		
		Long shank									
		5 6 8 11 12	LS-SP	SPR027QL20	SP	P3	200	20	2.5P	SP-36	
			LS-N-SP	SNR027QL20						SP-36	
1 5 6 12	LS-HT		TNMR027Q525					5P	HT-59		
			TNMR027Q125					1.5P	HT-59		
			(L25027Q5-R)	HT	P3	250	20	5P	HT-59		
For deep hole use											
5 6 8	S-SP	SSMR027Q	SP	P3	130	20	2.5P	SP-54			
		(SSR027Q)						SP-54			
Taps M27×1.5											
Standard	5 6 8 11 12	SP	SPR027O	SP	P3			2.5P	SP-12		
		N-SP	(SNR027O)	SP	P3	130	20	2.5P	SP-12		
		PO	POS027O	PO	P4			5P	PO-9		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	1 5 6 12	LS-HT	TNMR027S125					1.5P	HT-59		
			(L20027S5-R)				200		5P	HT-59	
			(L25027S5-R)	HT	P3	250	20	5P	HT-59		
			(L20027S1-R)				200		1.5P	HT-59	
	For left hand threads	1 5 6 12		(L25027S1-R)				250		1.5P	HT-59
			LS-HT(LH)	TNMR027S520L					5P	HT-67	
				TNMR027S120L					1.5P	HT-67	
				(L20027S5-RL)	HT	P3	200	20	5P	HT-67	
				(L20027S1-RL)					1.5P	HT-67	
			For high carbon steels								
5 6	HC-SP	SCMR027S	SP	P3	130	20	2.5P	SP-58			
		(SCR027S)						SP-58			
For hard-to-machine materials	Cobalt HSS	1 4 5	EH-HT	ETHMT027S5				5P	HT-95		
				ETHMT027S1				2.5P	HT-95		
				(ETHT027S5)	HT	P5	130	20	5P	HT-95	
				(ETHT027S1)					2.5P	HT-95	
For stainless steels											
6 7 8	SU-SP	SUMR027S	SP	P3	130	20	2.5P	SP-45			
		(SUR027S)	SP	P3	130	20	2.5P	SP-45			
	SU-PO	PUMS027S	PO	P4	20	130	5P	PO-35			
		(PUS027S)	PO	P4	20	130	5P	PO-35			
	SU-HT	TUMS027S4	HT	P4	130	20	4P	HT-74			
		TUMS027S1	HT	P4	130	20	1.5P	HT-74			
		(TUS027S4)	HT	P4	130	20	4P	HT-74			
		(TUS027S1)	HT	P4	130	20	1.5P	HT-74			
For deep hole use											
5 6 8	S-SP	SSMR027S	SP	P3	130	20	2.5P	SP-54			
		(SSR027S)	SP	P3	130	20	2.5P	SP-54			
	S-PO	PSMS027S	PO	P4	130	20	5P	PO-40			
	(PSS027S)	PO	P4	130	20	5P	PO-40				
With coolant hole											
1 5 6 11 12	MC-HT	(ML20027S5-R)						5P	HT-92		
		(ML20027S1-R)	HT	P3	200	20	1.5P	HT-92			
Nut taps											
6 8 11 12	NT	NH2027S	HT	II b	280	22	28P	etc-1			
Taps M27×2											
Standard	5 6 8 11 12	SP	SPR027Q	SP	P3	130	20	2.5P	SP-12		
		N-SP	(SNR027Q)	SP	P3	130	20	2.5P	SP-12		
		HT	TNMT027Q5					5P	HT-25		
	1 5 6 12		TNMT027Q1					1.5P	HT-25		
			(TNT027Q9)	HT	P5	130	20	9P		HT-25	
			(TNT027Q5)					5P	HT-25		
			(TNT027Q1)					1.5P	HT-25		
		Long shank									
		5 6 8 11 12	LS-SP	SPR027QL20	SP	P3	200	20	2.5P	SP-36	
			LS-N-SP	SNR027QL20						SP-36	
1 5 6 12	LS-HT		TNMR027Q525					5P	HT-59		
			TNMR027Q125					1.5P	HT-59		
			(L25027Q5-R)	HT	P3	250	20	5P	HT-59		
For deep hole use											
5 6 8	S-SP	SSMR027Q	SP	P3	130	20	2.5P	SP-54			
		(SSR027Q)						SP-54			
Taps M27×1.5											
Standard	5 6 8 11 12	SP	SPR027O	SP	P3			2.5P	SP-12		
		N-SP	(SNR027O)	SP	P3	130	20	2.5P	SP-12		
		PO	POS027O	PO	P4			5P	PO-9		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps (SMB)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and diameter metric Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	5 6 8 11 12	N-PO	(PNS0270)	PO	P4	130	20	5P	PO-9
	1 5 6 12	HT	TNMR02705					5P	HT-25
			TNMR02701					1.5P	HT-25
			(TNR02709)	HT	P3	130	20	9P	HT-25
			(TNR02705)					5P	HT-25
For left hand threads	5 6 8 11 12	PO(LH)	POS0270-L						PO-20
		N-PO(LH)	(PNS0270-L)	PO	P4	130	20	5P	PO-20
	5 6 8 11 12	LS-SP	SPR0270L20	SP	P3	200		2.5P	SP-36
			SPR0270L25	SP	P3	250		2.5P	SP-36
Long shank	5 6 8 11 12	LS-N-SP	(SNR0270L20)	SP	P3	200		2.5P	SP-36
			(SNR0270L25)	SP	P3	250		2.5P	SP-36
							20		
		LS-PO	POS0270L20	PO	P4	200		5P	PO-28
			POS0270L25	PO	P4	250		5P	PO-28
		LS-N-PO	(PNS0270L20)	PO	P4	200		5P	PO-28
			(PNS0270L25)	PO	P4	250		5P	PO-28
	1 5 6 12	LS-HT	TNMR0270520			200		5P	HT-59
			TNMR0270525			250		5P	HT-59
			TNMR0270120			200		1.5P	HT-59
			TNMR0270125	HT	P3	250	20	1.5P	HT-59
			(L2002705-R)			200		5P	HT-59
			(L2502705-R)			250		5P	HT-59
			(L2002701-R)			200		1.5P	HT-59
			(L2502701-R)			250		1.5P	HT-59
For high carbon steels	5 6	HC-SP	SCMR0270	SP	P3	130	20	2.5P	SP-58
			(SCR0270)						SP-58
For stainless steels	6 7 8	SU-SP	SUMR0270	SP	P3			2.5P	SP-45
			(SUR0270)	SP	P3			2.5P	SP-45
		SU-PO	PUMS0270	PO	P4			5P	PO-35
			(PUS0270)	PO	P4			5P	PO-35
		SU-HT	TUMS02704	HT	P4	130	20	4P	HT-74
			TUMS02701	HT	P4			1.5P	HT-74
			(TUS02704)	HT	P4			4P	HT-74
		(TUS02701)	HT	P4			1.5P	HT-74	
For deep hole use	5 6 8	S-SP	SSMR0270	SP	P3			2.5P	SP-54
			(SSR0270)	SP	P3			2.5P	SP-54
		S-PO	PSMS0270	PO	P4	130	20	5P	PO-40
			(PSS0270)	PO	P4			5P	PO-40
With coolant hole	1 5 6 11 12	MC-HT	(ML2002705-R)	HT	P3	200	20	5P	HT-92
			(ML2002701-R)					1.5P	HT-92
Taps M27×1									
Standard	5 6 8 11 12	SP	SPQ027M	SP	P2	130		2.5P	SP-12
		N-SP	(SNQ027M)	SP	P2	95	20	2.5P	SP-12
		PO	POR027M	PO	P3	130		5P	PO-9
		N-PO	(PNR027M)	PO	P3	95		5P	PO-9
	1 5 6 12	HT	TNMR027M5			130		5P	HT-26
			TNMR027M1			130		1.5P	HT-26
			(TNR027M9)	HT	P3	95	20	9P	HT-26
			(TNR027M5)			95		5P	HT-26
			(TNR027M1)			95		1.5P	HT-26

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps M28×3									
Standard	1 5 6 12	HT	TNMS02855			135	23	5P	HT-26
			TNMS02851			135	23	1.5P	HT-26
			(TNS02859)	HT	P4	130	21	9P	HT-26
			(TNS02855)			130	21	5P	HT-26
			(TNS02851)			130	21	1.5P	HT-26
Taps M28×2									
Standard	5 6 8 11 12	SP	SPR028Q	SP	P3	135	23	2.5P	SP-12
		N-SP	(SNR028Q)	SP	P3	130	21	2.5P	SP-12
		PO	POS028Q	PO	P4	135	23	5P	PO-9
		N-PO	(PNS028Q)	PO	P4	130	21	5P	PO-9
	1 5 6 12	HT	TNMS028Q5			135	23	5P	HT-26
			TNMS028Q1			135	23	1.5P	HT-26
			(TNS028Q9)	HT	P4	130	21	9P	HT-26
			(TNS028Q5)			130	21	5P	HT-26
			(TNS028Q1)			130	21	1.5P	HT-26
Taps M28×1.5									
Standard	5 6 8 11 12	SP	SPR0280	SP	P3	135	23	2.5P	SP-12
		N-SP	(SNR0280)	SP	P3	130	21	2.5P	SP-12
		PO	POS0280	PO	P4	135	23	5P	PO-9
		N-PO	(PNS0280)	PO	P4	130	21	5P	PO-9
	1 5 6 12	HT	TNMR02805			135	23	5P	HT-26
			TNMR02801			135	23	1.5P	HT-26
			(TNR02809)	HT	P3	130	21	9P	HT-26
For high carbon steels	5 6	HC-SP	SCMR0280	SP	P3	135	23	2.5P	SP-58
			(SCR0280)			130	21	2.5P	SP-58
			(TNR02805)			130	21	5P	HT-26
			(TNR02801)			130	21	1.5P	HT-26
Taps M28×1									
Standard	5 6 8 11 12	SP	SPQ028M	SP	P2	135	23		SP-12
		N-SP	(SNQ028M)	SP	P2	105	21	2.5P	SP-12
	1 5 6 12	HT	TNMR028M5			135	23	5P	HT-26
			TNMR028M1			135	23	1.5P	HT-26
			(TNR028M9)	HT	P3	105	21	9P	HT-26
			(TNR028M5)			105	21	5P	HT-26
			(TNR028M1)			105	21	1.5P	HT-26
Taps M30×3.5									
Standard	5 6 8 11 12	SP	SPS030T	SP	P4			2.5P	SP-12
		N-SP	(SNS030T)	SP	P4			2.5P	SP-12
		PO	POT030T	PO	P5	135	23	5P	PO-9
		N-PO	(PNT030T)	PO	P5			5P	PO-9
	1 5 6 12	HT	TNMS030T5					5P	HT-26
			TNMS030T1					1.5P	HT-26
			(TNS030T9)	HT	P4	135	23	9P	HT-26
			(TNS030T5)					5P	HT-26
			(TNS030T1)					1.5P	HT-26
For left hand threads	5 6 8 11 12	SP(LH)	SPS030T-L	SP	P4	135	23	2.5P	SP-27

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D_s	l_c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					

Tap selection	Main material	Symbol	Code	Flute	Class	L	D_s	l_c	Product page		
For left hand threads	5 6 8 11 12	N-SP(LH)	(SNS030T-L)	SP	P4			2.5P	SP-27		
		PO(LH)	(POT030T-L)	PO	P5	135	23	5P	PO-20		
		N-PO(LH)	(PNT030T-L)	PO	P5			5P	PO-20		
	1 5 6 12	HT(LH)	TNMS030T5-L						5P	HT-46	
			TNMS030T1-L						1.5P	HT-46	
			(TNS030T9-L)	HT	P4	135	23	9P		HT-46	
			(TNS030T5-L)						5P	HT-46	
		(TNS030T1-L)					1.5P	HT-46			
Long shank	5 6 8 11 12	LS-SP	SPS030TL20	SP	P4	200		2.5P	SP-36		
			SPS030TL25	SP	P4	250		2.5P	SP-36		
			SPS030TL30	SP	P4	300		2.5P	SP-36		
	1 5 6 12	LS-N-SP	(SNS030TL20)	SP	P4	200		2.5P	SP-36		
			(SNS030TL25)	SP	P4	250		2.5P	SP-36		
			(SNS030TL30)	SP	P4	300		2.5P	SP-36		
							23				
			LS-PO	POT030TL20	PO	P5	200		5P	PO-28	
				POT030TL25	PO	P5	250		5P	PO-28	
	1 5 6 12		POT030TL30	PO	P5	300		5P	PO-28		
			LS-N-PO	(PNT030TL20)	PO	P5	200		5P	PO-28	
				(PNT030TL25)	PO	P5	250		5P	PO-28	
				(PNT030TL30)	PO	P5	300		5P	PO-28	
			LS-HT	TNMS030T520			200		5P	HT-59	
				TNMS030T525			250		5P	HT-59	
				TNMS030T530			300		5P	HT-59	
				TNMS030T120			200		1.5P	HT-59	
				TNMS030T125			250		1.5P	HT-59	
				TNMS030T130			300		1.5P	HT-59	
				(L20030T5-S)	HT	P4		23	5P	HT-59	
				(L25030T5-S)			250		5P	HT-59	
				(L30030T5-S)			300		5P	HT-59	
				(L20030T1-S)			200		1.5P	HT-59	
				(L25030T1-S)			250		1.5P	HT-59	
				(L30030T1-S)			300		1.5P	HT-59	
		For left hand threads	1 5 6 12	LS-HT(LH)	TNMS030T520L					5P	HT-67
					TNMS030T120L	HT	P4	200	23	1.5P	HT-67
	(L20030T5-SL)							5P	HT-67		
		(L20030T1-SL)					1.5P	HT-67			
For high carbon steels	5 6	HC-SP	SCMS030T	SP	P4	135	23	2.5P	SP-58		
			(SCS030T)						SP-58		
For hard-to-machine materials	Cobalt HSS	1 4 5	EH-HT	ETHMT030T5				5P	HT-95		
				ETHMT030T1	HT	P5	135	23	2.5P	HT-95	
				(ETHT030T5)					5P	HT-95	
				(ETHT030T1)					2.5P	HT-95	
For stainless steels	6 7 8	SU-SP	SUMS030T	SP	P4			2.5P	SP-45		
			(SUS030T)	SP	P4			2.5P	SP-45		
		SU-PO	PUMT030T	PO	P5			5P	PO-35		
			(PUT030T)	PO	P5	135	23	5P	PO-35		
		SU-HT	TUMT030T4	HT	P5			4P	HT-74		
			TUMT030T1	HT	P5			1.5P	HT-74		
			(TUT030T4)	HT	P5			4P	HT-74		
	(TUT030T1)	HT	P5			1.5P	HT-74				
For deep hole use	5 6 8	S-SP	SSMS030T	SP	P4	135	23	2.5P	SP-54		
			(SSS030T)						SP-54		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D_s	l_c	Product page	
For deep hole use	5 6 8	S-PO	PSMT030T	PO	P5	135	23	5P	PO-40	
			(PST030T)						PO-40	
With coolant hole	1 5 6 11 12	MC-HT	(ML20030T5-S)	HT	P4	200	23	5P	HT-92	
			(ML20030T1-S)					1.5P	HT-92	
Nut taps	6 8 11 12	NT	NH2030T	HT	II b	300	24	26P	etc-1	
Taps M30x3										
Standard	5 6 8 11 12	SP	SPR030S	SP	P3			2.5P	SP-12	
		N-SP	(SNR030S)	SP	P3	135	23	2.5P	SP-12	
		PO	POS030S	PO	P4			5P	PO-9	
		N-PO	(PNS030S)	PO	P4			5P	PO-9	
	1 5 6 12	HT	TNMT030S5						5P	HT-26
			TNMT030S1						1.5P	HT-26
			(TNT030S9)	HT	P5	135	23	9P		HT-26
			(TNT030S5)						5P	HT-26
			(TNT030S1)						1.5P	HT-26
			Long shank	1 5 6 12	LS-HT	TNMR030S525				5P
					TNMR030S125	HT	P3	250	23	5P
				(L25030S5-R)				1.5P	HT-60	
				(L25030S1-R)				1.5P	HT-60	
For deep hole use	5 6 8	S-SP	SSMR030S	SP	P3	135	23	2.5P	SP-54	
			(SSR030S)						SP-54	
Taps M30x2										
Standard	5 6 8 11 12	SP	SPR030Q	SP	P3			2.5P	SP-12	
		N-SP	(SNR030Q)	SP	P3	135	23	2.5P	SP-12	
		PO	POS030Q	PO	P4			5P	PO-9	
		N-PO	(PNS030Q)	PO	P4			5P	PO-9	
	1 5 6 12	HT	TNMS030Q5						5P	HT-26
			TNMS030Q1						1.5P	HT-26
			(TNS030Q9)	HT	P4	135	23	9P		HT-26
			(TNS030Q5)						5P	HT-26
			(TNS030Q1)						1.5P	HT-26
			For left hand threads	5 6 8 11 12	SP(LH)	SPR030Q-L	SP	P3	135	23
				N-SP(LH)	(SNR030Q-L)				SP-27	
Long shank	1 5 6 12	LS-HT	TNMR030Q520			200		5P	HT-60	
			TNMR030Q525			250		5P	HT-60	
			TNMR030Q120			200		1.5P	HT-60	
			TNMR030Q125			250		1.5P	HT-60	
			(L20030Q5-R)	HT	P3	200	23	5P	HT-60	
			(L25030Q5-R)			250		5P	HT-60	
	(L20030Q1-R)			200		1.5P	HT-60			
				(L25030Q1-R)			250	1.5P	HT-60	
For deep hole use	5 6 8	S-SP	SSMR030Q	SP	P3	135	23	2.5P	SP-54	
			(SSR030Q)						SP-54	
Taps M30x1.5										
Standard	5 6 8 11 12	SP	SPR030O	SP	P3			2.5P	SP-12	
		N-SP	(SNR030O)	SP	P3	135	23	2.5P	SP-12	
		PO	POS030O	PO	P4			5P	PO-9	
		N-PO	(PNS030O)	PO	P4			5P	PO-9	
Standard	1 5 6 12	HT	TNMR030O5	HT	P3	135	23	5P	HT-27	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm thread and drawing machines Taps (cm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	1 5 6 12	HT	TNMR03001					1.5P	HT-27	
			(TNR03009)	HT	P3	135	23	9P	HT-26	
			(TNR03005)					5P	HT-27	
			(TNR03001)					1.5P	HT-27	
For left hand threads	5 6 8 11 12	SP(LH)	SPR0300-L	SP	P3			2.5P	SP-27	
		N-SP(LH)	(SNR0300-L)	SP	P3	135	23	2.5P	SP-27	
		PO(LH)	POS0300-L	PO	P4			5P	PO-20	
		N-PO(LH)	(PNS0300-L)	PO	P4			5P	PO-20	
Long shank	5 6 8 11 12	LS-SP	SPR0300L20	SP	P3	200		2.5P	SP-36	
			SPR0300L25	SP	P3	250		2.5P	SP-36	
		LS-N-SP	(SNR0300L20)	SP	P3	200		2.5P	SP-36	
			(SNR0300L25)	SP	P3	250		2.5P	SP-36	
		LS-PO	POS0300L20	PO	P4	200	23	5P	PO-28	
			POS0300L25	PO	P4	250		5P	PO-28	
		LS-N-PO	(PNS0300L20)	PO	P4	200		5P	PO-28	
			(PNS0300L25)	PO	P4	250		5P	PO-28	
		LS-HT	TNMR0300S20			200		5P	HT-60	
			TNMR0300S25			250		5P	HT-60	
			TNMR0300120			200		1.5P	HT-60	
			TNMR0300125	HT	P3	250	23	1.5P	HT-60	
	(L2503005-R)			200		5P	HT-60			
	(L2503005-R)			250		5P	HT-60			
	(L2003001-R)			200		1.5P	HT-60			
	(L2503001-R)			250		1.5P	HT-60			
For high carbon steels	5 6	HC-SP	SCMR0300	SP	P3	135	23	2.5P	SP-58	
			(SCR0300)						SP-58	
For stainless steels	6 7 8	SU-SP	SUMR0300	SP	P3			2.5P	SP-45	
			(SUR0300)	SP	P3			2.5P	SP-45	
		SU-PO	PUMS0300	PO	P4			5P	PO-36	
			(PUS0300)	PO	P4	135	23	5P	PO-36	
		SU-HT	TUMS03004	HT	P4			4P	HT-74	
			TUMS03001	HT	P4			1.5P	HT-74	
	(TUS03004)	HT	P4			4P	HT-74			
	(TUS03001)	HT	P4			1.5P	HT-74			
For deep hole use	5 6 8	S-SP	SSMR0300	SP	P3			2.5P	SP-54	
			(SSR0300)	SP	P3	135	23	2.5P	SP-54	
		S-PO	PSMS0300	PO	P4			5P	PO-40	
			(PSS0300)	PO	P4			5P	PO-40	
With coolant hole	1 5 6 11 12	MC-HT	(ML200300S-R)	HT	P3	200	23	5P	HT-92	
			(ML2003001-R)					1.5P	HT-92	
Nut taps	6 8 11 12	NT	NH20300	HT	II	240	24	30P	etc-1	
Taps M30×1										
Standard	5 6 8 11 12	SP	SPQ030M	SP	P2	135		2.5P	SP-12	
		N-SP	(SNQ030M)	SP	P2	105	23	2.5P	SP-12	
		PO	POR030M	PO	P3	135		5P	PO-9	
			(PNR030M)	PO	P3	105		5P	PO-9	
		1 5 6 12	HT	TNMR030M5			135		5P	HT-27
			TNMR030M1			135		1.5P	HT-27	
			(TNR030M9)	HT	P3	105	23	9P	HT-27	
			(TNR030M5)			105		5P	HT-27	
			(TNR030M1)			105		1.5P	HT-27	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Taps M32×3										
Standard	5 6 8 11 12	SP	SPR032S	SP	P3			2.5P	SP-12	
		N-SP	(SNR032S)	SP	P3	145	24	2.5P	SP-12	
		PO	POS032S	PO	P4			5P	PO-9	
		N-PO	(PNS032S)	PO	P4			5P	PO-9	
Taps M32×2										
Standard	5 6 8 11 12	SP	SPR032Q	SP	P3			2.5P	SP-12	
		N-SP	(SNR032Q)	SP	P3	135	24	2.5P	SP-12	
		PO	POS032Q	PO	P4			5P	PO-9	
			(PNS032Q)	PO	P4			5P	PO-9	
		1 5 6 12	HT	(TNS032Q9)					9P	HT-27
			TNS032Q5	HT	P4	135	24	5P	HT-27	
	TNS032Q1					1.5P	HT-27			
Taps M32×1.5										
Standard	5 6 8 11 12	SP	SPR032O	SP	P3			2.5P	SP-12	
		N-SP	(SNR032O)	SP	P3	135	24	2.5P	SP-12	
		PO	POS032O	PO	P4			5P	PO-9	
			(PNS032O)	PO	P4			5P	PO-9	
		1 5 6 12	HT	(TNS032O9)					9P	HT-27
			TNS032O5	HT	P4	135	24	5P	HT-27	
	TNS032O1					1.5P	HT-27			
Taps M32×1										
Standard	5 6 8 11 12	SP	SPQ032M	SP	P2	105	24	2.5P	SP-12	
		N-SP	(SNQ032M)	SP	P2	105	24	2.5P	SP-12	
		1 5 6 12	HT	(TNR032M9)					9P	HT-27
			TNR032M5	HT	P3	105	24	5P	HT-27	
	TNR032M1					1.5P	HT-27			
Taps M33×3.5										
Standard	5 6 8 11 12	SP	SPS033T	SP	P4			2.5P	SP-12	
		N-SP	(SNS033T)	SP	P4	145	25	2.5P	SP-12	
		PO	POT033T	PO	P5			5P	PO-9	
			(PNT033T)	PO	P5			5P	PO-9	
		1 5 6 12	HT	(TNS033T9)					9P	HT-27
			TNS033T5	HT	P4	145	25	5P	HT-27	
	TNS033T1					1.5P	HT-27			
Long shank	5 6 8 11 12	LS-SP	SPS033TL25	SP	P4	250	25	2.5P	SP-36	
			(SNS033TL25)	SP	P4	250	25	2.5P	SP-36	
		1 5 6 12	LS-HT	L25033T5-S	HT	P4	250	25	5P	HT-60
	L25033T1-S			250	25	1.5P	HT-60			
For stainless steels	6 7 8	SU-SP	SUS033T	SP	P4	145	25	2.5P	SP-45	
		SU-PO	PUT033T	PO	P5			5P	PO-36	
For deep hole use	5 6 8	S-SP	SSS033T	SP	P4	145	25	2.5P	SP-54	
		S-PO	PST033T	PO	P5			5P	PO-40	
Taps M33×3										
Standard	5 6 8 11 12	SP	SPR033S	SP	P3	145	25	2.5P	SP-12	
		N-SP	(SNR033S)	SP	P3	145	25	2.5P	SP-12	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Standard	5 6 8 11 12	PO	POS033S	PO	P4	145	25	5P	PO-9	
		N-PO	(PNS033S)						PO-9	
	1 5 6 12	HT	(TNT03359)	HT	P5	145	25	5P	9P HT-27	
		TNT0335S							5P HT-27	
TNT0335I										
1.5P HT-27										
Long shank	1 5 6 12	LS-HT	L250335S-R	HT	P3	250	25	5P	HT-60	
		L250335I-R							1.5P HT-60	
For deep hole use	5 6 8	S-SP	SSR033S	SP	P3	145	25	2.5P	SP-54	
Taps M33x2										
Standard	5 6 8 11 12	SP	SPR033Q	SP	P3	135	25	2.5P	SP-12	
		N-SP	(SNR033Q)						SP-12	
	1 5 6 12	PO	POS033Q	PO	P4	135	25	5P	PO-9	
		N-PO	(PNS033Q)						PO-9	
	HT (TNS033Q9)									
	9P HT-27									
TNS033Q5										
HT P4 135 25 5P HT-27										
TNS033Q1										
1.5P HT-27										
Long shank	1 5 6 12	LS-HT	L25033Q5-R	HT	P3	250	25	5P	HT-60	
		L25033Q1-R							1.5P HT-60	
For deep hole use	5 6 8	S-SP	SSR033Q	SP	P3	135	25	2.5P	SP-54	
Taps M33x1.5										
Standard	5 6 8 11 12	SP	SPR033O	SP	P3	135	25	2.5P	SP-12	
		N-SP	(SNR033O)						SP-12	
	1 5 6 12	PO	POS033O	PO	P4	135	25	5P	PO-9	
		N-PO	(PNS033O)						PO-9	
	HT (TNS033O9)									
	9P HT-27									
TNS033O5										
HT P4 135 25 5P HT-27										
TNS033O1										
1.5P HT-27										
Long shank	1 5 6 12	LS-HT	L25033O5-R	HT	P3	250	25	5P	HT-60	
		L25033O1-R							1.5P HT-60	
For deep hole use	5 6 8	S-SP	SSR033O	SP	P3	135	25	2.5P	SP-54	
Taps M33x1										
Standard	5 6 8 11 12	SP	SPQ033M	SP	P2	110	25	2.5P	SP-12	
		N-SP	(SNQ033M)						SP-12	
	1 5 6 12	HT	(TNR033M9)	HT	P3	110	25	5P	9P HT-27	
		TNR033M5							5P HT-27	
TNR033M1										
1.5P HT-27										
Taps M34x3										
Standard	5 6 8 11 12	SP	SPR034S	SP	P3	145	26	2.5P	SP-12	
		N-SP	(SNR034S)						SP-13	
Taps M34x2										
Standard	5 6 8 11 12	SP	SPR034Q	SP	P3	135	26	2.5P	SP-13	
		N-SP	(SNR034Q)						SP-13	
	1 5 6 12	HT	(TNS034Q9)	HT	P4	135	26	5P	9P HT-27	
		TNS034Q5							5P HT-27	
	TNS034Q1									
1.5P HT-27										

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Taps M34x1.5										
Standard	5 6 8 11 12	SP	SPR034O	SP	P3	135	26	2.5P	SP-13	
		N-SP	(SNR034O)						SP-13	
	1 5 6 12	HT	(TNS034O9)	HT	P4	135	26	5P	9P HT-27	
		TNS034O5							5P HT-27	
TNS034O1										
1.5P HT-27										
Taps M34x1										
Standard	5 6 8 11 12	SP	SPQ034M	SP	P2	110	26	2.5P	SP-13	
		N-SP	(SNQ034M)						SP-13	
	1 5 6 12	HT	(TNR034M9)	HT	P3	110	26	5P	9P HT-27	
		TNR034M5							5P HT-27	
TNR034M1										
1.5P HT-27										
Taps M35x3										
Standard	5 6 8 11 12	SP	SPR035S	SP	P3	155	26	2.5P	SP-13	
		N-SP	(SNR035S)						SP-13	
Taps M35x2										
Standard	5 6 8 11 12	SP	SPR035Q	SP	P3	135	26	2.5P	SP-13	
		N-SP	(SNR035Q)						SP-13	
	1 5 6 12	PO	POS035Q	PO	P4	135	26	5P	PO-9	
		N-PO	(PNS035Q)						PO-9	
	HT (TNT035Q9)									
	9P HT-28									
TNT035Q5										
HT P5 135 26 5P HT-28										
TNT035Q1										
HT P5 135 26 1.5P HT-28										
Taps M35x1.5										
Standard	5 6 8 11 12	SP	SPR035O	SP	P3	135	26	2.5P	SP-13	
		N-SP	(SNR035O)						SP-13	
	1 5 6 12	PO	POS035O	PO	P4	135	26	5P	PO-9	
		N-PO	(PNS035O)						PO-9	
	HT (TNS035O9)									
9P HT-28										
TNS035O5										
HT P4 135 26 5P HT-28										
TNS035O1										
1.5P HT-28										
Taps M35x1										
Standard	5 6 8 11 12	SP	SPQ035M	SP	P2	110	26	2.5P	SP-13	
		N-SP	(SNQ035M)						SP-13	
Taps M36x4										
Standard	5 6 8 11 12	SP	SPS036U	SP	P4	155	28	2.5P	SP-13	
		N-SP	(SNS036U)						SP-13	
	1 5 6 12	PO	POT036U	PO	P5	155	28	5P	PO-9	
		N-PO	(PNT036U)						PO-10	
	HT (TNT036U9)									
	9P HT-28									
TNT036U5										
HT P5 155 28 5P HT-28										
TNT036U1										
1.5P HT-28										
Long shank	5 6 8 11 12	LS-SP	SPS036UL25	SP	P4	250	28	2.5P	SP-36	
		LS-N-SP	(SNS036UL25)						SP-36	
1 5 6 12										
LS-HT L25036U5-S										
HT P4 250 28 5P HT-60										

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	① ⑤ ⑥ ⑫	LS-HT	L30036U5-S			300		5P	HT-60	
			L25036U1-S	HT	P4	250	28	1.5P	HT-60	
			L30036U1-S			300		1.5P	HT-60	
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUS036U	SP	P4	155	28	2.5P	SP-45	
		SU-PO	PUT036U	PO	P5			5P	PO-36	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSS036U	SP	P4	155	28	2.5P	SP-54	
		S-PO	PST036U	PO	P5			5P	PO-40	
Taps M36×3										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR036S	SP	P3			2.5P	SP-13	
		N-SP	(SNR036S)	SP	P3	155	28	2.5P	SP-13	
		PO	POS036S	PO	P4			5P	PO-10	
		N-PO	(PNS036S)	PO	P4			5P	PO-10	
		① ⑤ ⑥ ⑫	HT	(TNT036S9)					9P	HT-28
			TNT036S5	HT	P5	155	28	5P	HT-28	
	TNT036S1					1.5P	HT-28			
Long shank	① ⑤ ⑥ ⑫	LS-HT	L25036S5-R	HT	P3	250	28	5P	HT-60	
			L25036S1-R					1.5P	HT-60	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSR036S	SP	P3	155	28	2.5P	SP-54	
Taps M36×2										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR036Q	SP	P3			2.5P	SP-13	
		N-SP	(SNR036Q)	SP	P3	135	28	2.5P	SP-13	
		PO	POS036Q	PO	P4			5P	PO-10	
		N-PO	(PNS036Q)	PO	P4			5P	PO-10	
		① ⑤ ⑥ ⑫	HT	(TNS036Q9)					9P	HT-28
			TNS036Q5	HT	P4	135	28	5P	HT-28	
	TNS036Q1					1.5P	HT-28			
Long shank	① ⑤ ⑥ ⑫	LS-HT	L25036Q5-R	HT	P3	250	28	5P	HT-60	
			L25036Q1-R					1.5P	HT-60	
Taps M36×1.5										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR036O	SP	P3			2.5P	SP-13	
		N-SP	(SNR036O)	SP	P3	135	28	2.5P	SP-13	
		PO	POS036O	PO	P4			5P	PO-10	
		N-PO	(PNS036O)	PO	P4			5P	PO-10	
		① ⑤ ⑥ ⑫	HT	(TNS036O9)					9P	HT-28
			TNS036O5	HT	P4	135	28	5P	HT-28	
	TNS036O1					1.5P	HT-28			
Long shank	① ⑤ ⑥ ⑫	LS-HT	L25036O5-R	HT	P3	250	28	5P	HT-60	
			L25036O1-R					1.5P	HT-60	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSR036O	SP	P3	135	28	2.5P	SP-54	
Taps M36×1										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQ036M	SP	P2	110	28	2.5P	SP-13	
		N-SP	(SNQ036M)	SP	P2			2.5P	SP-13	
		① ⑤ ⑥ ⑫	HT	(TNR036M9)					9P	HT-28
			TNR036M5	HT	P3	110	28	5P	HT-28	
			TNR036M1					1.5P	HT-28	
Taps M37×1.5										
Standard	① ⑤ ⑥ ⑫	HT	(TNS037O9)	HT	P4	135	28	9P	HT-28	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	① ⑤ ⑥ ⑫	HT	TNS037O5	HT	P4	135	28	5P	HT-28	
			TNS037O1					1.5P	HT-28	
Taps M38×3										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR038S	SP	P3	165	28	2.5P	SP-13	
		N-SP	(SNR038S)	SP	P3			2.5P	SP-13	
Taps M38×2										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR038Q	SP	P3			2.5P	SP-13	
		N-SP	(SNR038Q)	SP	P3	135	28	2.5P	SP-13	
		PO	POS038Q	PO	P4			5P	PO-10	
		N-PO	(PNS038Q)	PO	P4			5P	PO-10	
		① ⑤ ⑥ ⑫	HT	(TNS038Q9)					9P	HT-28
			TNS038Q5	HT	P4	135	28	5P	HT-28	
	TNS038Q1					1.5P	HT-28			
Taps M38×1.5										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR038O	SP	P3			2.5P	SP-13	
		N-SP	(SNR038O)	SP	P3	135	28	2.5P	SP-13	
		PO	POS038O	PO	P4			5P	PO-10	
		N-PO	(PNS038O)	PO	P4			5P	PO-10	
		① ⑤ ⑥ ⑫	HT	(TNS038O9)					9P	HT-28
	TNS038O5	HT	P4	135	28	5P	HT-28			
	TNS038O1					1.5P	HT-28			
Taps M38×1										
Standard	① ⑤ ⑥ ⑫	HT	(TNR038M9)					9P	HT-28	
			TNR038M5	HT	P3	115	28	5P	HT-28	
			TNR038M1					1.5P	HT-28	
Taps M39×4										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPS039U	SP	P4			2.5P	SP-13	
		N-SP	(SNS039U)	SP	P4	165	30	2.5P	SP-13	
		PO	POT039U	PO	P5			5P	PO-10	
		N-PO	(PNT039U)	PO	P5			5P	PO-10	
		① ⑤ ⑥ ⑫	HT	(TNT039U9)					9P	HT-28
			TNT039U5	HT	P5	165	30	5P	HT-28	
	TNT039U1					1.5P	HT-28			
Long shank	① ⑤ ⑥ ⑫	LS-HT	L30039U5-S	HT	P4	300	30	5P	HT-60	
			L30039U1-S					1.5P	HT-60	
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUS039U	SP	P4	165	30	2.5P	SP-45	
		SU-PO	PUT039U	PO	P5			5P	PO-36	
For deep hole use	⑤ ⑥ ⑧	S-SP	SSS039U	SP	P4	165	30	2.5P	SP-54	
		S-PO	PST039U	PO	P5			5P	PO-40	
Taps M39×3										
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPR039S	SP	P3	165	30	2.5P	SP-13	
		N-SP	(SNR039S)	SP	P3			2.5P	SP-13	
		① ⑤ ⑥ ⑫	HT	(TNT039S9)					9P	HT-28
			TNT039S5	HT	P5	165	30	5P	HT-28	
			TNT039S1					1.5P	HT-28	
Long shank	① ⑤ ⑥ ⑫	LS-HT	L25039S5-R	HT	P3	250	30	5P	HT-60	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Long shank	1 5 6 12	LS-HT	L25039S1-R	HT	P3	250	30	1.5P	HT-60
Taps M39×2									
Standard	5 6 8 11 12	SP	SPR039Q	SP	P3			2.5P	SP-13
		N-SP	(SNR039Q)	SP	P3	135	30	2.5P	SP-13
		PO	POS039Q	PO	P4			5P	PO-10
		N-PO	(PNS039Q)	PO	P4			5P	PO-10
	HT	(TNT039Q9)						9P	HT-28
Long shank	1 5 6 12	HT	TNT039Q5	HT	P5	135	30	5P	HT-28
			TNT039Q1					1.5P	HT-28
		HT	L25039Q5-R	HT	P3	250	30	5P	HT-60
Long shank	1 5 6 12		L25039Q1-R					1.5P	HT-60
		Taps M39×1.5							
Standard	5 6 8 11 12	SP	SPR039O	SP	P3			2.5P	SP-13
		N-SP	(SNR039O)	SP	P3	135	30	2.5P	SP-13
		PO	POS039O	PO	P4			5P	PO-10
		N-PO	(PNS039O)	PO	P4			5P	PO-10
	HT	(TNS039O9)						9P	HT-29
Long shank	1 5 6 12	HT	TNS039O5	HT	P4	135	30	5P	HT-29
			TNS039O1					1.5P	HT-29
		HT	L25039O5-R	HT	P3	250	30	5P	HT-61
Long shank	1 5 6 12		L25039O1-R					1.5P	HT-61
		Taps M39×1							
Standard	1 5 6 12	HT	(TNR039M9)					9P	HT-29
		HT	TNR039M5	HT	P3	115	30	5P	HT-29
			TNR039M1					1.5P	HT-29
Taps M40×4									
Standard	1 5 6 12	HT	(TNT040U9)					9P	HT-29
		HT	TNT040U5	HT	P5	165	30	5P	HT-29
			TNT040U1					1.5P	HT-29
Taps M40×3									
Standard	5 6 8 11 12	SP	SPR040S	SP	P3			2.5P	SP-13
		N-SP	(SNR040S)	SP	P3	165	30	2.5P	SP-13
		PO	POS040S	PO	P4			5P	PO-10
		N-PO	(PNS040S)	PO	P4			5P	PO-10
	HT	(TNT040S9)						9P	HT-29
Long shank	1 5 6 12	HT	TNT040S5	HT	P5	165	30	5P	HT-29
			TNT040S1					1.5P	HT-29
		HT	L25040S5-R	HT	P3	250	30	5P	HT-61
Long shank	1 5 6 12		L30040S5-R			300		5P	HT-61
			L25040S1-R			250	30	1.5P	HT-61
			L30040S1-R			300		1.5P	HT-61
			L30040S1-R			300		1.5P	HT-61
Taps M40×2									
Standard	5 6 8 11 12	SP	SPR040Q	SP	P3			2.5P	SP-13
		N-SP	(SNR040Q)	SP	P3	135	30	2.5P	SP-14
		PO	POS040Q	PO	P4			5P	PO-10
		N-PO	(PNS040Q)	PO	P4	135	30	5P	PO-10

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	1 5 6 12	HT	(TNS040Q9)					9P	HT-29
		HT	TNS040Q5	HT	P4	135	30	5P	HT-29
			TNS040Q1					1.5P	HT-29
Long shank	1 5 6 12	LS-HT	L25040Q5-R			250		5P	HT-61
		HT	L30040Q5-R	HT	P3	300	30	5P	HT-61
		HT	L25040Q1-R	HT	P3	250		1.5P	HT-61
			L30040Q1-R			300		1.5P	HT-61
Taps M40×1.5									
Standard	5 6 8 11 12	SP	SPR040O	SP	P3			2.5P	SP-14
		N-SP	(SNR040O)	SP	P3	135	30	2.5P	SP-14
		PO	POS040O	PO	P4			5P	PO-10
		N-PO	(PNS040O)	PO	P4			5P	PO-10
	HT	(TNS040O9)						9P	HT-29
Long shank	1 5 6 12	HT	TNS040O5	HT	P4	135	30	5P	HT-29
			TNS040O1					1.5P	HT-29
		LS-HT	L25040O5-R			250		5P	HT-61
Long shank	1 5 6 12		L30040O5-R			300		5P	HT-61
		HT	L25040O1-R	HT	P3	250	30	1.5P	HT-61
			L30040O1-R			300		1.5P	HT-61
			L30040O1-R			300		1.5P	HT-61
Taps M42×4.5									
Standard	5 6 8 11 12	SP	SPS042V	SP	P4			2.5P	SP-14
		N-SP	(SNS042V)	SP	P4	175	32	2.5P	SP-14
		PO	POT042V	PO	P5			5P	PO-10
		N-PO	(PNT042V)	PO	P5			5P	PO-10
	HT	(TNT042V9)						9P	HT-29
Long shank	1 5 6 12	HT	TNT042V5	HT	P5	175	32	5P	HT-29
			TNT042V1					1.5P	HT-29
		LS-HT	L25042V5-S			250		5P	HT-61
Long shank	1 5 6 12		L30042V5-S			300		5P	HT-61
		HT	L25042V1-S	HT	P4	250	32	1.5P	HT-61
			L30042V1-S			300		1.5P	HT-61
			L30042V1-S			300		1.5P	HT-61
For stainless steels	6 7 8	SU-SP	SUS042V	SP	P4	175	32	2.5P	SP-45
		SU-PO	PUT042V	PO	P5			5P	PO-36
For deep hole use	5 6 8	S-SP	SSS042V	SP	P4	175	32	2.5P	SP-54
		S-PO	PST042V	PO	P5			5P	PO-40
Taps M42×4									
Standard	1 5 6 12	HT	(TNU042U9)					9P	HT-29
		HT	TNU042U5	HT	P6	175	32	5P	HT-29
			TNU042U1					1.5P	HT-29
Taps M42×3									
Standard	5 6 8 11 12	SP	SPR042S	SP	P3	175	32	2.5P	SP-14
		N-SP	(SNR042S)	SP	P3	175	32	2.5P	SP-14
		HT	(TNT042S9)						9P
	HT	TNT042S5	HT	P5	175	32	5P	HT-29	
Long shank	1 5 6 12		TNT042S1					1.5P	HT-29
		LS-HT	L25042S5-R			250		5P	HT-61
		HT	L30042S5-R	HT	P3	300	32	5P	HT-61
Long shank	1 5 6 12		L25042S1-R			250		1.5P	HT-61
			L25042S1-R			250		1.5P	HT-61

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Long shank	①⑤⑥⑬	LS-HT	L30042S1-R	HT	P3	300	32	1.5P	HT-61
Taps M42×2									
Standard	⑤⑥⑧⑪⑫	SP	SPR042Q	SP	P3			2.5P	SP-14
		N-SP	(SNR042Q)	SP	P3	135	32	2.5P	SP-14
		PO	POS042Q	PO	P4			5P	PO-10
		N-PO	(PNS042Q)	PO	P4			5P	PO-10
	①⑤⑥⑬	HT	(TNS042Q9)					9P	HT-29
		TNS042Q5	HT	P4	135	32	5P	HT-29	
		TNS042Q1					1.5P	HT-29	
Long shank	①⑤⑥⑬	LS-HT	L25042Q5-R			250		5P	HT-61
			L30042Q5-R			300	32	5P	HT-61
			L25042Q1-R	HT	P3	250		1.5P	HT-61
			L30042Q1-R			300		1.5P	HT-61
Taps M42×1.5									
Standard	⑤⑥⑧⑪⑫	SP	SPR042O	SP	P3			2.5P	SP-14
		N-SP	(SNR042O)	SP	P3	135	32	2.5P	SP-14
		PO	POS042O	PO	P4			5P	PO-10
		N-PO	(PNS042O)	PO	P4			5P	PO-10
	①⑤⑥⑬	HT	(TNS042O9)					9P	HT-29
		TNS042O5	HT	P4	135	32	5P	HT-29	
		TNS042O1					1.5P	HT-29	
Long shank	①⑤⑥⑬	LS-HT	L25042O5-R			250		5P	HT-61
			L30042O5-R			300	32	5P	HT-61
			L25042O1-R	HT	P3	250		1.5P	HT-61
			L30042O1-R			300		1.5P	HT-61
For stainless steels	⑥⑦⑧	SU-SP	SUR042O	SP	P3	135	32	2.5P	SP-45
Taps M44×4									
Standard	①⑤⑥⑬	HT	(TNU044U9)					9P	HT-29
			TNU044U5	HT	P6	175	35	5P	HT-29
			TNU044U1					1.5P	HT-29
Taps M44×3									
Standard	①⑤⑥⑬	HT	(TNT044S9)					9P	HT-29
			TNT044S5	HT	P5	175	35	5P	HT-29
			TNT044S1					1.5P	HT-29
Taps M44×2									
Standard	①⑤⑥⑬	HT	(TNS044Q9)					9P	HT-29
			TNS044Q5	HT	P4	135	35	5P	HT-29
			TNS044Q1					1.5P	HT-29
Taps M44×1.5									
Standard	①⑤⑥⑬	HT	(TNS044O9)					9P	HT-30
			TNS044O5	HT	P4	135	35	5P	HT-30
			TNS044O1					1.5P	HT-30
Taps M45×4.5									
Standard	⑤⑥⑧⑪⑫	SP	SPS045V	SP	P4	180	35	2.5P	SP-14
		N-SP	(SNS045V)	SP	P4			2.5P	SP-14

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤⑥⑧⑪⑫	PO	POT045V	PO	P5	180	35	5P	PO-10
		N-PO	(PNT045V)	PO	P5			5P	PO-10
	①⑤⑥⑬	HT	(TNT045V9)					9P	HT-30
			TNT045V5	HT	P5	180	35	5P	HT-30
		TNT045V1					1.5P	HT-30	
Long shank	①⑤⑥⑬	LS-HT	L30045V5-S			300	35	5P	HT-61
			L30045V1-S	HT	P4			1.5P	HT-61
For stainless steels	⑥⑦⑧	SU-SP	SUS045V	SP	P4	180	35	2.5P	SP-45
For deep hole use	⑤⑥⑧	S-SP	SSS045V	SP	P4	180	35	2.5P	SP-54
Taps M45×4									
Standard	①⑤⑥⑬	HT	(TNU045U9)					9P	HT-30
			TNU045U5	HT	P6	180	35	5P	HT-30
			TNU045U1					1.5P	HT-30
Taps M45×3									
Standard	⑤⑥⑧⑪⑫	SP	SPR045S	SP	P3	180	35	2.5P	SP-14
		N-SP	(SNR045S)	SP	P3			2.5P	SP-14
	①⑤⑥⑬	HT	(TNT045S9)					9P	HT-30
			TNT045S5	HT	P5	180	35	5P	HT-30
			TNT045S1					1.5P	HT-30
Long shank	①⑤⑥⑬	LS-HT	L30045S5-R			300	35	5P	HT-61
			L30045S1-R	HT	P3			1.5P	HT-61
Taps M45×2									
Standard	⑤⑥⑧⑪⑫	SP	SPR045Q	SP	P3			2.5P	SP-14
		N-SP	(SNR045Q)	SP	P3	140	35	2.5P	SP-14
		PO	POS045Q	PO	P4			5P	PO-10
		N-PO	(PNS045Q)	PO	P4			5P	PO-10
	①⑤⑥⑬	HT	(TNS045Q9)					9P	HT-30
		TNS045Q5	HT	P4	140	35	5P	HT-30	
		TNS045Q1					1.5P	HT-30	
Long shank	①⑤⑥⑬	LS-HT	L30045Q5-R			300	35	5P	HT-61
			L30045Q1-R	HT	P3			1.5P	HT-61
Taps M45×1.5									
Standard	⑤⑥⑧⑪⑫	SP	SPR045O	SP	P3			2.5P	SP-14
		N-SP	(SNR045O)	SP	P3	140	35	2.5P	SP-14
		PO	POS045O	PO	P4			5P	PO-10
		N-PO	(PNS045O)	PO	P4			5P	PO-10
	①⑤⑥⑬	HT	(TNS045O9)					9P	HT-30
		TNS045O5	HT	P4	140	35	5P	HT-30	
		TNS045O1					1.5P	HT-30	
Long shank	①⑤⑥⑬	LS-HT	L30045O5-R			300	35	5P	HT-61
			L30045O1-R	HT	P3			1.5P	HT-61
Taps M45×1									
Standard	①⑤⑥⑬	HT	(TNR045M9)					9P	HT-30
			TNR045M5	HT	P3	120	35	5P	HT-30
			TNR045M1					1.5P	HT-30

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Taps M46×1.5										
Standard		1 5 6 12 HT	(TNS04609)					9P	HT-30	
			TNS04605	HT	P4	140	35	5P	HT-30	
			TNS04601					1.5P	HT-30	
Taps M48×5										
Standard		5 6 8 11 12	SPS048W	SP	P4			2.5P	SP-14	
			(SNS048W)	SP	P4	185	38	2.5P	SP-14	
			POT048W	PO	P5			5P	PO-10	
			(PNT048W)	PO	P5			5P	PO-10	
			1 5 6 12 HT	(TNT048W9)					9P	HT-30
			TNT048W5	HT	P5	185	38	5P	HT-30	
			TNT048W1					1.5P	HT-30	
Long shank		1 5 6 12 LS-HT	L30048W5-S					5P	HT-61	
			L30048W1-S	HT	P4	300	38	1.5P	HT-61	
Taps M48×4										
Standard		5 6 8 11 12	SPS048U	SP	P4	185	38	2.5P	SP-14	
			(SNS048U)					SP-14		
			1 5 6 12 HT	(TNU048U9)					9P	HT-30
			TNU048U5	HT	P6	185	38	5P	HT-30	
			TNU048U1					1.5P	HT-30	
Taps M48×3										
Standard		5 6 8 11 12	SPR048S	SP	P3			2.5P	SP-14	
			(SNR048S)	SP	P3	185	38	2.5P	SP-14	
			POS048S	PO	P4			5P	PO-10	
			(PNS048S)	PO	P4			5P	PO-10	
			1 5 6 12 HT	(TNU048S9)					9P	HT-30
			TNU048S5	HT	P6	185	38	5P	HT-30	
Long shank		1 5 6 12 LS-HT	L30048S5-R					5P	HT-61	
			L30048S1-R	HT	P3	300	38	1.5P	HT-61	
Taps M48×2										
Standard		5 6 8 11 12	SPR048Q	SP	P3	140	38	2.5P	SP-14	
			(SNR048Q)					SP-14		
			1 5 6 12 HT	(TNS048Q9)					9P	HT-30
			TNS048Q5	HT	P4	140	38	5P	HT-30	
			TNS048Q1					1.5P	HT-30	
Long shank		1 5 6 12 LS-HT	L30048Q5-R					5P	HT-62	
			L30048Q1-R	HT	P3	300	38	1.5P	HT-62	
Taps M48×1.5										
Standard		5 6 8 11 12	SPR048O	SP	P3			2.5P	SP-14	
			(SNR048O)	SP	P3	140	38	2.5P	SP-14	
			POS048O	PO	P4			5P	PO-10	
			(PNS048O)	PO	P4			5P	PO-10	
			1 5 6 12 HT	(TNS048O9)					9P	HT-30
			TNS048O5	HT	P4	140	38	5P	HT-30	
			TNS048O1					1.5P	HT-30	

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page
Long shank	1 5 6 12	LS-HT	L30048O5-R					5P	HT-62
			L30048O1-R	HT	P3	300	38	1.5P	HT-62

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Small threads and irregular pitches Dies (SM)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M25×3									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	50	16	2~2.5P	GM2025S	Di-4
Dies M25×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	50	16	2~2.5P	GM2025Q	Di-4
Dies M25×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	50	16	2~2.5P	GM2025O	Di-4
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	50	16	2~2.5P	GM2025O-L	Di-8
Dies M25×1.25									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	50	16	2~2.5P	GM2025N	Di-4
Dies M25×1									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	50	16	2~2.5P	GM2025M	Di-4
Dies M26×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2026Q	Di-4
Dies M26×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2026O	Di-4
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	63	20	2~2.5P	GR2026O-L	Di-8
Dies M26×1									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2026M	Di-4
Dies M27×3									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2027S	Di-4
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	63	20	2~2.5P	GR2027S-L	Di-8
Dies M27×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2027Q	Di-4
Dies M27×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2027O	Di-4
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	63	20	2~2.5P	GR2027O-L	Di-8
Dies M27×1									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2027M	Di-4
Dies M28×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2028Q	Di-4
Dies M28×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2028O	Di-4
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	63	20	2~2.5P	GR2028O-L	Di-8
Dies M28×1									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2028M	Di-4

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M30×3.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2030T	Di-4
					75	25		GU2030T	
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	63	20	2~2.5P	GR2030T-L	Di-8
Dies M30×3									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2030S	Di-4
Dies M30×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2030Q	Di-4
					75	25		GU2030Q	
Dies M30×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2030O	Di-4
					75	25		GU2030O	
For left hand threads	SKS	⑥⑧⑩⑫	AR-D LH	II	63	20	2~2.5P	GR2030O-L	Di-8
Dies M30×1									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2030M	Di-4
Dies M32×3									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2032S	Di-4
Dies M32×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2032Q	Di-4
Dies M32×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2032O	Di-4
					75	25		GU2032O	
Dies M32×1									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2032M	Di-4
Dies M33×3.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2033T	Di-4
					75	25		GU2033T	
Dies M33×3									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2033S	Di-4
					75	25		GU2033S	
Dies M33×2									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2033Q	Di-4
					75	25		GU2033Q	
Dies M33×1.5									
Adjustable dies	SKS	⑥⑧⑩⑫	AR-D	II	63	20	2~2.5P	GR2033O	Di-4
					75	25		GU2033O	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M33×1									
Adjustable dies	SKS		AR-D	II	63	20	2~2.5P	GR2033M	Di-4
					75	25		GU2033M	
Dies M34×3									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2034S	Di-4
Dies M34×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2034Q	Di-4
Dies M34×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2034Q	Di-4
Dies M34×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2034M	Di-4
Dies M35×3									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2035S	Di-4
Dies M35×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2035Q	Di-4
Dies M35×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2035Q	Di-4
Dies M35×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2035M	Di-4
Dies M36×4									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2036U	Di-4
For left hand threads	SKS		AR-D LH	II	75	25	2~2.5P	GU2036U-L	Di-8
Dies M36×3									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2036S	Di-4
Dies M36×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2036Q	Di-4
Dies M36×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2036Q	Di-4
Dies M36×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2036M	Di-4
Dies M37×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2037M	Di-4
Dies M38×4									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2038U	Di-4

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M38×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2038Q	Di-4
Dies M38×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2038Q	Di-4
Dies M38×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2038M	Di-4
Dies M39×4									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2039U	Di-4
Dies M39×3									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2039S	Di-4
Dies M39×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2039Q	Di-4
Dies M39×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2039Q	Di-4
Dies M39×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2039M	Di-4
Dies M40×3									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2040S	Di-5
Dies M40×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2040Q	Di-5
Dies M40×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2040Q	Di-5
Dies M40×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2040M	Di-5
Dies M42×4.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2042V	Di-5
Dies M42×3									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2042S	Di-5
Dies M42×2									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2042Q	Di-5
Dies M42×1.5									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2042Q	Di-5
Dies M42×1									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GU2042M	Di-5

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Screw threads used on temporary fixtures Dies (SMA)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies M44×1.5									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU20440	Di-5
Dies M45×4.5									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU2045V	Di-5
Dies M45×3									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU2045S	Di-5
Dies M45×2									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU2045Q	Di-5
Dies M45×1.5									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU2045O	Di-5
Dies M48×5									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU2048W	Di-5
For left hand threads	SKS	⑥⑧ ⑪⑫	AR-D LH	II	75	25	2~2.5P	GU2048W-L	Di-8
Dies M48×1.5									
Adjustable dies	SKS	⑥⑧ ⑪⑫	AR-D	II	75	25	2~2.5P	GU2048O	Di-5

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Taps No.0-80UNF												
Standard	⑤⑥⑧ ⑪⑫	PO	POPUN0B		P1	36	3	5P	PO-11			
		N-PO	(PNPUN0B)						PO-11			
	①⑤⑥⑧⑫	HT	(TNMPUN0B9)						9P	HT-31		
			TNMPUN0B5						5P	HT-31		
			TNMPUN0B1		P1	36	3		1.5P	HT-31		
			(TNPUN0B9)						9P	HT-31		
			(TNPUN0B5)						5P	HT-31		
			(TNPUN0B1)						1.5P	HT-31		
			Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRSM5UN0BP					4P	RO-19
						NRSM5UN0BB	RO	G5	36	3	2P	RO-19
	(NRS5UN0BP)							4P	RO-19			
	(NRS5UN0BB)							2P	RO-19			
Taps No.1-64UNC												
Standard	⑤⑥⑧ ⑪⑫	SP	SPPUN1D	SP		42		2.5P	SP-15			
		N-SP	(SNPUN1D)	SP		36		2.5P	SP-15			
		PO	POPUN1D	PO	P1	42	3	5P	PO-11			
		N-PO	(PNPUN1D)	PO		36		5P	PO-11			
	①⑤⑥⑧⑫	HT	(TNMPUN1D9)				42		9P	HT-31		
			TNMPUN1D5				42		5P	HT-31		
			TNMPUN1D1		P1	42	3	1.5P	HT-31			
			(TNPUN1D9)				36		9P	HT-31		
			(TNPUN1D5)				36		5P	HT-31		
			(TNPUN1D1)				36		1.5P	HT-31		
Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRSM5UN1CP	RO	G5	42	3	4P	RO-19			
			NRSM5UN1CB					2P	RO-19			
Taps No.1-72UNF												
Standard	⑤⑥⑧ ⑪⑫	PO	POPUN1C		P1	42	3	5P	PO-11			
		N-PO	(PNPUN1C)			36		5P	PO-11			
	①⑤⑥⑧⑫	HT	(TNMPUN1C9)				42		9P	HT-31		
			TNMPUN1C5				42		5P	HT-31		
			TNMPUN1C1		P1	42	3	1.5P	HT-31			
			(TNPUN1C9)				36		9P	HT-31		
			(TNPUN1C5)				36		5P	HT-31		
			(TNPUN1C1)				36		1.5P	HT-31		
			Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRSM5UN1CP	RO	G5	42	3	4P	RO-19
						NRSM5UN1CB					2P	RO-19
Taps No.2-56UNC												
Standard	⑤⑥⑧ ⑪⑫	SP	SPPUN2E	SP				2.5P	SP-15			
		N-SP	(SNMPUN2E)	SP				2.5P	SP-15			
			(SNPUN2E)	SP	P1	42	3	2.5P	SP-15			
		PO	POPUN2E	PO				5P	PO-11			
	①⑤⑥⑧⑫	HT	N-PO	(PNPUN2E)	PO				5P	PO-11		
			(TNMPUN2E9)						9P	HT-31		
			TNMPUN2E5						5P	HT-31		
			TNMPUN2E1		P1	42	3	1.5P	HT-31			
			(TNPUN2E9)				36		9P	HT-31		
			(TNPUN2E5)				36		5P	HT-31		
(TNPUN2E1)				36		1.5P	HT-31					
For stainless steels	⑥⑦⑧	SU-SP	SUMPUN2E	SP	P1	42	3	2.5P	SP-46			

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unifit threads Taps
- For Whitworth threads Taps
- For Small thread cast iron/machining Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
For stainless steels	6 7 8	SU-SP	(SUPUN2E)	SP				2.5P	SP-46		
		SU-PO	PUMPUN2E	PO	P1	42	3	5P	PO-36		
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM4UN2EP	G4				4P	RO-19		
			NRSM4UN2EB	G4				2P	RO-19		
			(NRS4UN2EP)	G4				4P	RO-19		
			(NRS4UN2EB)	G4				2P	RO-19		
			NRSM5UN2EP	RO	G5	42	3	4P	RO-19		
			NRSM5UN2EB	G5				2P	RO-19		
			(NRS5UN2EP)	G5				4P	RO-19		
			(NRS5UN2EB)	G5				2P	RO-19		
			NRSM7UN2EP	G7				4P	RO-19		
			NRSM7UN2EB	G7				2P	RO-19		
		Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM4UN2EP	G4					RO-28
					(OLRZ4UN2EP)	G4					RO-28
	OLRZM5UN2EP			RO	G5	42	3	4P	RO-28		
	(OLRZ5UN2EP)			G5					RO-28		
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM4UN2EB	G4					RO-33		
			(HRZ4UN2EB)	G4					RO-33		
			HRZM5UN2EB	RO	G5	42	3	2P	RO-33		
			(HRZ5UN2EB)	G5					RO-33		
Taps No.2-64UNF											
Standard	5 6 8 11 12	SP	SPPUN2D	SP				2.5P	SP-15		
		N-SP	(SNMPUN2D)	SP				2.5P	SP-15		
			(SNPNUN2D)	SP	P1	42	3	2.5P	SP-15		
		PO	POPUN2D	PO				5P	PO-11		
		N-PO	(PNPNUN2D)	PO				5P	PO-11		
		1 5 6 12	HT	(TNMPUN2D9)					9P	HT-31	
			TNMPUN2D5						5P	HT-31	
			TNMPUN2D1	HT	P1	42	3	1.5P	HT-31		
			(TNPUN2D9)						9P	HT-31	
			(TNPUN2D5)						5P	HT-31	
	(TNPUN2D1)						1.5P	HT-31			
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM4UN2DP	RO	G4	42	3	4P	RO-28		
			(OLRZ4UN2DP)						RO-28		
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM4UN2DB	RO	G4	42	3	2P	RO-33		
			(HRZ4UN2DB)						RO-33		
Taps No.3-48UNC											
Standard	5 6 8 11 12	SP	SPPUN3F	SP		46		2.5P	SP-15		
		N-SP	(SNMPUN3F)	SP		46		2.5P	SP-15		
			(SNPNUN3F)	SP	P1	44	3	2.5P	SP-15		
		PO	POPUN3F	PO		46		5P	PO-11		
		N-PO	(PNPNUN3F)	PO		44		5P	PO-11		
		1 5 6 12	HT	(TNMPUN3F9)			46		9P	HT-31	
			TNMPUN3F5				46		5P	HT-31	
			TNMPUN3F1	HT	P1	44	3	1.5P	HT-31		
			(TNPUN3F9)			44		9P	HT-31		
			(TNPUN3F5)			44		5P	HT-31		
	(TNPUN3F1)			44		1.5P	HT-31				
For stainless steels	6 7 8	SU-SP	SUMPUN3F	SP	P1	46	3	2.5P	SP-46		
Taps No.4-40UNC											
Standard	5 6 8 11 12	SP	SPPUN4H	SP	P1	46	4	2.5P	SP-15		
		N-SP	(SNMPUN4H)	SP	P1	46	4	2.5P	SP-15		
			(SNPNUN4H)	SP	P1	44	3	2.5P	SP-15		
		PO	POQUN4H	PO	P2	46	4	5P	PO-11		
		N-PO	(PNMQUN4H)	PO	P2	46	4	5P	PO-11		
			(PNQUN4H)	PO	P2	44	3	5P	PO-11		
		1 5 6 12	HT	(TNMQUN4H9)			46	4	9P	HT-32	
			TNMQUN4H5			46	4	5P	HT-32		
			TNMQUN4H1	HT	P2	44	3	1.5P	HT-32		
			(TNQUN4H9)			44	3	9P	HT-32		
	(TNQUN4H5)			44	3	5P	HT-32				
	(TNQUN4H1)			44	3	1.5P	HT-32				
Oversize	1 5 6 12	HT	TNMRUN4H5			46	4	5P	HT-32		
			TNMRUN4H1	HT	P3	46	4	1.5P	HT-32		
For stainless steels	6 7 8	SU-SP	SUMPUN4H	SP	P1	46	4	2.5P	SP-46		
			(SUPUN4H)	SP	P1	44	3	2.5P	SP-46		
		SU-PO	PUMQUN4H	PO	P2	46	4	5P	PO-36		
	(PUQUN4H)	PO	P2	44	3	5P	PO-36				
For cast irons	Carbide	1 12 13	N-CT FC	HT	P3	44	3	3P	CT-6		
			(TCNRUN4H1)			44	3	1.5P	CT-6		
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM5UN4HP			46	4	4P	RO-19		
			NRSM5UN4HB	RO	G5	46	4	2P	RO-19		
			(NRS5UN4HP)			44	3	4P	RO-19		
			(NRS5UN4HB)			44	3	2P	RO-19		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For stainless steels	6 7 8	SU-SP	(SUPUN3F)	SP	P1	44	3	2.5P	SP-46	
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM4UN3FP	G4				4P	RO-19	
			NRSM4UN3FB	RO	G4	46	3	2P	RO-19	
			NRSM5UN3FP	G5				4P	RO-19	
	NRSM5UN3FB	G5				2P	RO-19			
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM4UN3FP	RO	G4	46	3	4P	RO-28	
			(OLRZ4UN3FP)			44			RO-29	
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM4UN3FB	RO	G4	46	3	2P	RO-33	
			(HRZ4UN3FB)			44			RO-33	
Taps No.3-56UNF										
Standard	5 6 8 11 12	SP	SPPUN3E	SP		46		2.5P	SP-15	
		N-SP	(SNMPUN3E)	SP		46		2.5P	SP-15	
			(SNPNUN3E)	SP	P1	44	3	2.5P	SP-15	
		PO	POPUN3E	PO		46		5P	PO-11	
		N-PO	(PNPNUN3E)	PO		44		5P	PO-11	
		1 5 6 12	HT	(TNMPUN3E9)			46		9P	HT-31
			TNMPUN3E5			46		5P	HT-31	
			TNMPUN3E1	HT	P1	46	3	1.5P	HT-31	
			(TNPUN3E9)			44		9P	HT-31	
			(TNPUN3E5)			44		5P	HT-31	
	(TNPUN3E1)			44		1.5P	HT-32			
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZM4UN3EP	RO	G4	46	3	4P	RO-29	
			(OLRZ4UN3EP)			44			RO-29	
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM4UN3EB	RO	G4	46	3	2P	RO-33	
			(HRZ4UN3EB)			44			RO-33	
Taps No.4-40UNC										
Standard	5 6 8 11 12	SP	SPPUN4H	SP	P1	46	4	2.5P	SP-15	
		N-SP	(SNMPUN4H)	SP	P1	46	4	2.5P	SP-15	
			(SNPNUN4H)	SP	P1	44	3	2.5P	SP-15	
		PO	POQUN4H	PO	P2	46	4	5P	PO-11	
		N-PO	(PNMQUN4H)	PO	P2	46	4	5P	PO-11	
			(PNQUN4H)	PO	P2	44	3	5P	PO-11	
		1 5 6 12	HT	(TNMQUN4H9)			46	4	9P	HT-32
			TNMQUN4H5			46	4	5P	HT-32	
			TNMQUN4H1	HT	P2	46	4	1.5P	HT-32	
			(TNQUN4H9)			44	3	9P	HT-32	
	(TNQUN4H5)			44	3	5P	HT-32			
	(TNQUN4H1)			44	3	1.5P	HT-32			
Oversize	1 5 6 12	HT	TNMRUN4H5			46	4	5P	HT-32	
			TNMRUN4H1	HT	P3	46	4	1.5P	HT-32	
For stainless steels	6 7 8	SU-SP	SUMPUN4H	SP	P1	46	4	2.5P	SP-46	
			(SUPUN4H)	SP	P1	44	3	2.5P	SP-46	
		SU-PO	PUMQUN4H	PO	P2	46	4	5P	PO-36	
	(PUQUN4H)	PO	P2	44	3	5P	PO-36			
For cast irons	Carbide	1 12 13	N-CT FC	HT	P3	44	3	3P	CT-6	
			(TCNRUN4H1)			44	3	1.5P	CT-6	
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM5UN4HP			46	4	4P	RO-19	
			NRSM5UN4HB	RO	G5	46	4	2P	RO-19	
			(NRS5UN4HP)			44	3	4P	RO-19	
			(NRS5UN4HB)			44	3	2P	RO-19	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for non-ferrous materials	⑪ ⑫	N-RS	NRSM6UN4HP		G6	46	4	4P	RO-19
			NRSM6UN4HB		G6	46	4	2P	RO-19
			(NR56UN4HP)	RO	G6	44	3	4P	RO-19
			(NR56UN4HB)		G6	44	3	2P	RO-19
			NRSM7UN4HP		G7	46	4	4P	RO-20
			NRSM7UN4HB		G7	46	4	2P	RO-20
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL-RZ	OLRZM5UN4HP		G5	46	4		RO-29
			(OLRZ5UN4HP)	RO	G5	44	3	4P	RO-29
			OLRZM6UN4HP		G6	46	4		RO-29
			(OLRZ6UN4HP)		G6	44	3		RO-29
High performance thread forming taps, TiCN coated	⑤ ⑥ ⑦ ⑪ ⑫	HP-RZ	HRZM5UN4HB		G5	46	4		RO-33
			(HRZ5UN4HB)	RO	G5	44	3	2P	RO-33
			HRZM6UN4HB		G6	46	4		RO-33
			(HRZ6UN4HB)		G6	44	3		RO-33
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMUN4H5					5P	HT-87
			TICMUN4H1	HT	1b	52	5	1.5P	HT-87
			(TICUN4H5)					5P	HT-87
			(TICUN4H1)					1.5P	HT-87

Taps No.4-48UNF

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPPUN4F	SP		46	4	2.5P	SP-15	
		N-SP	(SNMPUN4F)	SP		46	4	2.5P	SP-15	
			(SNPUN4F)	SP	P1	44	3	2.5P	SP-15	
		PO	POPUN4F	PO		46	4	5P	PO-11	
			(PNPUN4F)	PO		44	3	5P	PO-11	
Oversize	① ⑤ ⑥ ⑧ ⑫	HT	(TNMPUN4F9)			46	4	9P	HT-32	
			TNMPUN4F5			46	4	5P	HT-32	
			TNMPUN4F1	HT	P1	44	3	9P	HT-32	
			(TNPUN4F5)			44	3	5P	HT-32	
			(TNPUN4F1)			44	3	1.5P	HT-32	
			TNMRUN4F5	HT	P3	46	4	5P	HT-32	
			TNMRUN4F1			46	4	1.5P	HT-32	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMPUN4F	SP		46	4	2.5P	SP-46
			(SUPUN4F)	SP	P1	44	3	2.5P	SP-46
		SU-PO	PUMPUN4F	PO		46	4	5P	PO-36
		(PUPUN4F)	PO		44	3	5P	PO-36	
For cast irons	① ⑫ ⑬	N-CT FC	TCNRUN4F3	HT	P3	44	3	3P	CT-6
			TCNRUN4F1			44	3	1.5P	CT-6

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for non-ferrous materials	⑪ ⑫	N-RS	NRSM5UN4FP		G5			4P	RO-20
			NRSM5UN4FB	RO	G5	46	4	2P	RO-20
			NRSM6UN4FP		G6			4P	RO-20
			NRSM6UN4FB		G6			2P	RO-20
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL-RZ	OLRZM5UN4FP	RO	G5	46	4	4P	RO-29
			(OLRZ5UN4FP)		G5	44	3	4P	RO-29
High performance thread forming taps, TiCN coated	⑤ ⑥ ⑦ ⑪ ⑫	HP-RZ	HRZM5UN4FB	RO	G5	46	4	2P	RO-33
			(HRZ5UN4FB)		G5	44	3	2P	RO-33
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMUN4F5	HT	1b	52	5	5P	HT-87
			TICMUN4F1			52	5	1.5P	HT-87

Taps No.5-40UNC

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPPUN5H	SP	P1	52	5	2.5P	SP-15

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤ ⑥ ⑧ ⑪ ⑫	N-SP	(SNMPUN5H)	SP	P1	52	5	2.5P	SP-15
			(SNPUN5H)	SP	P1	46	4	2.5P	SP-15
		PO	POQUN5H	PO	P2	52	5	5P	PO-11
			(PNQUN5H)	PO	P2	46	4	5P	PO-11
		HT	TNMQUN5H5	HT	P2	52	5	5P	HT-32
								1.5P	HT-32
Oversize	① ⑤ ⑥ ⑧ ⑫	HT	TNMRUN5H5	HT	P3	52	5	5P	HT-32
			(TNMRUN5H1)			52	5	1.5P	HT-32

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMPUN5H	SP	P1	52	5	2.5P	SP-46
			(SUPUN5H)	SP	P1	46	4	2.5P	SP-46
		SU-PO	PUMQUN5H	PO	P2	52	5	5P	PO-36
		(PUQUN5H)	PO	P2	46	4	5P	PO-36	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For cast irons	① ⑫ ⑬	N-CT FC	TCNRUN5H3	HT	P3	46	4	3P	CT-6
			TCNRUN5H1			46	4	1.5P	CT-6

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL-RZ	OLRZM5UN5HP	RO	G5	52	5	4P	RO-29
			(OLRZ5UN5HP)			46	4	4P	RO-29
High performance thread forming taps, TiCN coated	⑤ ⑥ ⑦ ⑪ ⑫	HP-RZ	HRZM5UN5HP			52	5	4P	RO-33
			HRZM5UN5HB	RO	G5	52	5	2P	RO-33
			(HRZ5UN5HP)			46	4	4P	RO-33
			(HRZ5UN5HB)			46	4	2P	RO-33

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMUN5H5					5P	HT-87
			TICMUN5H1	HT	1b	52	5	1.5P	HT-87
			(TICUN5H5)					5P	HT-87
			(TICUN5H1)					1.5P	HT-87

Taps No.5-44UNF

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPPUN5G	SP		52	5	2.5P	SP-15	
		N-SP	(SNMPUN5G)	SP		52	5	2.5P	SP-15	
			(SNPUN5G)	SP	P1	46	4	2.5P	SP-15	
		PO	POPUN5G	PO		52	5	5P	PO-11	
			(PNPUN5G)	PO		46	4	5P	PO-11	
Oversize	① ⑤ ⑥ ⑧ ⑫	HT	(TNMPUN5G9)			52	5	9P	HT-32	
			TNMPUN5G5			52	5	5P	HT-32	
			TNMPUN5G1	HT	P1	46	4	9P	HT-32	
			(TNPUN5G5)			46	4	5P	HT-32	
			(TNPUN5G1)			46	4	1.5P	HT-32	
			TNMRUN5G5	HT	P3	52	5	5P	HT-32	
			TNMRUN5G1			52	5	1.5P	HT-32	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMPUN5G	SP		52	5	2.5P	SP-46
			(SUPUN5G)	SP	P1	46	4	2.5P	SP-46
		SU-PO	PUMPUN5G	PO		52	5	5P	PO-36
		(PUPUN5G)	PO		46	4	5P	PO-36	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL-RZ	OLRZM5UN5GP	RO	G5	52	5	4P	RO-29
			(OLRZ5UN5GP)		G5	46	4	4P	RO-29
High performance thread forming taps, TiCN coated	⑤ ⑥ ⑦ ⑪ ⑫	HP-RZ	HRZM5UN5GP			52	5	4P	RO-33
			HRZM5UN5GB	RO	G5	52	5	2P	RO-33
			(HRZ5UN5GP)			46	4	4P	RO-33
			(HRZ5UN5GB)			46	4	2P	RO-33

Taps No.6-32UNC

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQUN6J	SP	P2	52	5	2.5P	SP-15

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For 3mm thread and 4mm thread Taps (M3, M4)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page							
Standard	5 6 8 11 12	N-SP	(SNMQUN6J)	SP	P2	52	5	2.5P	SP-15							
			(SNQUN6J)	SP		48	4	2.5P	SP-15							
		PO	(POQUN6J)	PO	52	5	5P	PO-11								
			(PNQUN6J)	PO	48	4	5P	PO-11								
		HT	(TNMQUN6J9)	HT	52	5	9P	HT-32								
			(TNMQUN6J5)	HT	52	5	5P	HT-32								
	1 5 6 12	HT	(TNMQUN6J1)	HT	52	5	1.5P	HT-32								
			(TNQUN6J9)	HT	48	4	9P	HT-32								
		(TNQUN6J5)	HT	48	4	5P	HT-32									
			(TNQUN6J1)	HT	48	4	1.5P	HT-32								
		Oversize	HT	(TNMRUN6J5)	HT	P3	52	5	5P	HT-32						
				(TNMRUN6J1)	HT	P3	52	5	1.5P	HT-32						
For stainless steels	6 7 8	SU-SP	(SUMQUN6J)	SP	P2	52	5	2.5P	SP-46							
			(SUQUN6J)	SP		48	4	2.5P	SP-46							
		SU-PO	(PUMQUN6J)	PO	52	5	5P	PO-36								
			(PUQUN6J)	PO	48	4	5P	PO-36								
		Oversize	HT	(TNMRUN6J5)	HT	P3	52	5	5P	HT-32						
				(TNMRUN6J1)	HT	P3	52	5	1.5P	HT-32						
For cast irons	Carbide	1 12 13	N-CT FC	(TCNRUN6J3)	HT	P3	48	4	3P	CT-6						
				(TCNRUN6J1)	HT		48	4	1.5P	CT-6						
			Thread forming taps for non-ferrous materials	11 12	N-RS	(NRS5UN6JP)	G5	RO	52	5	4P	RO-20				
						(NRS5UN6JB)	G5		52	5	2P	RO-20				
						(NRS5UN6JP)	G5		48	4	4P	RO-20				
						(NRS5UN6JB)	G5		48	4	2P	RO-20				
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	(OLRZM5UN6JP)	G5	RO	52	5	4P	RO-29							
			(OLRZ5UN6JP)	G5		48	4	4P	RO-29							
			(OLRZM6UN6JP)	G6		52	5	4P	RO-29							
			(OLRZ6UN6JP)	G6		48	4	4P	RO-29							
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	(HRZM5UN6JP)	G5	RO	52	5	4P	RO-33							
			(HRZM5UN6JB)	G5		52	5	2P	RO-34							
			(HRZ5UN6JP)	G5		48	4	4P	RO-33							
			(HRZ5UN6JB)	G5		48	4	2P	RO-34							
			(HRZM6UN6JP)	G6		52	5	4P	RO-34							
			(HRZ6UN6JP)	G6		48	4	4P	RO-34							
For helical coil wire screw thread inserts	11 12	STI-HT	(TICMUN6J5)	HT	1b	60	5.5	5P	HT-87							
			(TICMUN6J1)	HT				1.5P	HT-87							
			(TICUN6J5)	HT				5P	HT-87							
			(TICUN6J1)	HT				1.5P	HT-87							
			Taps No.6-40UNF	Standard				5 6 8 11 12	SP	(SPPUN6H)	SP	P1	52	5	2.5P	SP-15
										(SNMPUN6H)	SP		52	5	2.5P	SP-15
N-SP	(SNPUN6H)	SP			48	4	2.5P		SP-15							
	(POQUN6H)	PO			52	5	5P		PO-11							
N-PO	(PNQUN6H)	PO			48	4	5P		PO-11							
	HT	(TNMQUN6H9)			HT	P2	52		5	9P	HT-32					

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Standard	1 5 6 12	HT	(TNMQUN6H5)	HT	P2	52	5	5P	HT-32			
			(TNMQUN6H1)	HT		52	5	1.5P	HT-32			
		(TNQUN6H9)	HT	48	4	9P	HT-32					
			(TNQUN6H5)	HT	48	4	5P	HT-32				
		(TNQUN6H1)	HT	48	4	1.5P	HT-33					
			Oversize	HT	(TNMRUN6H5)	HT	P3	52	5	5P	HT-33	
	(TNMRUN6H1)	HT	52	5	1.5P	HT-33						
		For stainless steels	6 7 8	SU-SP	(SUMPUN6H)	SP	P1	52	5	2.5P	SP-46	
	(SUPUN6H)				SP	48		4	2.5P	SP-46		
	SU-PO			(PUMQUN6H)	PO	52	5	5P	PO-36			
				(PUQUN6H)	PO	48	4	5P	PO-36			
	Thread forming taps for non-ferrous materials			11 12	N-RS	(NRS5UN6HP)	RO	G5	52	5	4P	RO-20
(NRS5UN6HB)						RO	52		5	2P	RO-20	
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	(OLRZM5UN6HP)	RO	G5	52	5	4P	RO-29			
			(OLRZ5UN6HP)	RO		48	4	4P	RO-29			
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	(HRZM5UN6HP)	RO	G5	52	5	4P	RO-34			
			(HRZM5UN6HB)	RO		52	5	2P	RO-34			
			(HRZ5UN6HP)	RO		48	4	4P	RO-34			
			(HRZ5UN6HB)	RO		48	4	2P	RO-34			
For helical coil wire screw thread inserts	11 12	STI-HT	(TICMUN6H5)	HT	1b	60	5.5	5P	HT-87			
			(TICMUN6H1)	HT				1.5P	HT-87			
			(TICUN6H5)	HT				5P	HT-87			
			(TICUN6H1)	HT				1.5P	HT-87			
Taps No.8-32UNC												
Standard	5 6 8 11 12	SP	(SPQUN8J)	SP	P2	60	5.5	2.5P	SP-15			
			(SNMQUN8J)	SP		60	5.5	2.5P	SP-15			
		N-SP	(SNQUN8J)	SP	52	5	2.5P	SP-15				
			(POQUN8J)	PO	60	5.5	5P	PO-11				
		N-PO	(PNQUN8J)	PO	52	5	5P	PO-11				
			HT	(TNMQUN8J9)	HT	60	5.5	9P	HT-33			
	(TNMQUN8J5)	HT	60	5.5	5P	HT-33						
		(TNQUN8J9)	HT	52	5	9P	HT-33					
	(TNQUN8J5)	HT	52	5	5P	HT-33						
		(TNQUN8J1)	HT	52	5	1.5P	HT-33					
	Oversize	HT	(TNMRUN8J5)	HT	P3	60	5.5	5P	HT-33			
	(TNMRUN8J1)	HT	60	5.5	1.5P	HT-33						
For stainless steels	6 7 8	SU-SP	(SUMQUN8J)	SP	P2	60	5.5	2.5P	SP-46			
			(SUQUN8J)	SP		52	5	2.5P	SP-46			
		SU-PO	(PUMQUN8J)	PO	60	5.5	5P	PO-36				
			(PUQUN8J)	PO	52	5	5P	PO-36				
		For cast irons	Carbide	1 12 13	N-CT FC	(TCNRUN8J3)	HT	P3	52	5	3P	CT-6
						(TCNRUN8J1)	HT		52	5	1.5P	CT-6
Thread forming taps for non-ferrous materials	11 12	N-RS	(NRS6UN8JP)	G6	RO	60	5.5	4P	RO-20			
			(NRS6UN8JB)	G6		60	5.5	2P	RO-20			
			(NRS6UN8JP)	G6		52	5	4P	RO-20			
			(NRS6UN8JB)	G6		52	5	2P	RO-20			
			(NRS7UN8JP)	G7		60	5.5	4P	RO-20			
			(NRS7UN8JB)	G7		60	5.5	2P	RO-20			
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	(OLRZM6UN8JP)	G6	RO	60	5.5	4P	RO-29			
			(OLRZ6UN8JP)	G6		52	5	4P	RO-29			

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Thread forming taps for dry tapping	⑤⑥⑦ ⑪⑫	OL-RZ	OLRZM7UN8JP	RO	G7	60	5.5	4P	RO-29
			(OLRZ7UN8JP)		G7	52	5		RO-29
High performance thread forming taps, TiCN coated	⑤⑥⑦ ⑪⑫	HP-RZ	HRZM6UN8JP	RO	G6	60	5.5	4P	RO-34
			HRZM6UN8JB		G6	60	5.5	2P	RO-34
			(HRZ6UN8JP)	RO	G6	52	5	4P	RO-34
			(HRZ6UN8JB)		G6	52	5	2P	RO-34
			HRZM7UN8JP	RO	G7	60	5.5	4P	RO-34
			HRZM7UN8JB		G7	60	5.5	2P	RO-34
			(HRZ7UN8JP)	RO	G7	52	5	4P	RO-34
			(HRZ7UN8JB)		G7	52	5	2P	RO-34
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMUN8J5	HT	1b	62	6	5P	HT-87
			TICMUN8J1			62	6	1.5P	HT-88
			(TICUN8J5)	HT	1b	60	5.5	5P	HT-88
			(TICUN8J1)			60	5.5	1.5P	HT-88

Taps No.8-36UNF										
Standard	⑤⑥⑧ ⑪⑫	SP	SPQUN8I	SP		60	5.5	2.5P	SP-15	
		N-SP	(SNMQUN8I)	SP		60	5.5	2.5P	SP-15	
			(SNQUN8I)	SP	P2	52	5	2.5P	SP-15	
		PO	POQUN8I	PO		60	5.5	5P	PO-11	
		N-PO	(PNQUN8I)	PO		52	5	5P	PO-11	
Standard	①⑤⑥⑧⑫	HT	(TNMQUN8I9)			60	5.5	9P	HT-33	
			TNMQUN8I5			60	5.5	5P	HT-33	
			TNMQUN8I1	HT	P2	60	5.5	1.5P	HT-33	
			(TNQUN8I9)			52	5	9P	HT-33	
			(TNQUN8I5)			52	5	5P	HT-33	
			(TNQUN8I1)			52	5	1.5P	HT-33	
			HT	TNMRUN8I5	HT	P3	60	5.5	5P	HT-33
For stainless steels	⑥⑦⑧	SU-SP	SUMQUN8I	SP		60	5.5	2.5P	SP-46	
			(SUQUN8I)	SP		52	5	2.5P	SP-46	
		SU-PO	PUMQUN8I	PO	P2	60	5.5	5P	PO-36	
Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRS5UN8IP	G5				4P	RO-20	
			NRS5UN8IB	RO	G5	60	5.5	2P	RO-20	
			NRS6UN8IB	G6					2P	RO-20
			(NRS5UN8IP)	RO	G6	60	5.5	4P	RO-29	
High performance thread forming taps, TiCN coated	⑤⑥⑦ ⑪⑫	HP-RZ	HRZM6UN8IP	RO	G6	60	5.5	4P	RO-34	
			HRZM6UN8IB		G6	60	5.5	2P	RO-34	
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMUN8I5	HT	1b	62	6	5P	HT-88	
			TICMUN8I1			62	6	1.5P	HT-88	
			(TICUN8I5)	HT	1b	60	5.5	5P	HT-88	
			(TICUN8I1)			60	5.5	1.5P	HT-88	

Taps No.10-24UNC									
Standard	⑤⑥⑧ ⑪⑫	SP	SPQUNAM	SP				2.5P	SP-15
		N-SP	(SNMQUNAM)	SP				2.5P	SP-15
			(SNQUNAM)	SP	P2	60	5.5	2.5P	SP-15
		PO	POQUNAM	PO				5P	PO-11
		N-PO	(PNQUNAM)	PO				5P	PO-11
For helical coil wire screw thread inserts	⑪⑫	HT	(TNMQUNAM9)	HT	P2	60	5.5	9P	HT-33

Taps No.10-32UNF									
Standard	⑤⑥⑧ ⑪⑫	SP	SPQUNAJ	SP				2.5P	SP-16
		N-SP	(SNMQUNAJ)	SP				2.5P	SP-16
			(SNQUNAJ)	SP	P2	60	5.5	2.5P	SP-16
		PO	POQUNAJ	PO				5P	PO-11
		N-PO	(PNQUNAJ)	PO				5P	PO-11
Standard	①⑤⑥⑧⑫	HT	(TNMQUNAJ9)					9P	HT-33
			TNMQUNAJ5					5P	HT-33
			TNMQUNAJ1	HT	P2	60	5.5	1.5P	HT-33
			(TNQUNAJ9)			60	5.5	9P	HT-33
			(TNQUNAJ5)					5P	HT-33
			(TNQUNAJ1)					1.5P	HT-33
			HT	TNMRUNAJ5	HT	P3	60	5.5	5P
For stainless steels	⑥⑦⑧	SU-SP	SUMQUNAJ	SP				2.5P	SP-46
			(SUQUNAJ)	SP	P2	60	5.5	2.5P	SP-46
		SU-PO	PUMQUNAJ	PO	P2	60	5.5	5P	PO-36
For cast irons	①②③	N-CT FC	TCNUNAJ3	HT	P3	60	5.5	3P	CT-6
			TCNUNAJ1	HT	P3	60	5.5	1.5P	CT-6

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	①⑤⑥⑧⑫	HT	TNMQUNAM5					5P	HT-33	
			TNMQUNAM1					1.5P	HT-33	
			(TNQUNAM9)	HT	P2	60	5.5	9P	HT-33	
			(TNQUNAM5)					5P	HT-33	
			(TNQUNAM1)					1.5P	HT-33	
Oversize	①⑤⑥⑧⑫	HT	TNMRUNAM5	HT	P3	60	5.5	5P	HT-33	
			TNMRUNAM1					1.5P	HT-33	
For stainless steels	⑥⑦⑧	SU-SP	SUMQUNAM	SP				2.5P	SP-46	
			(SUQUNAM)	SP				2.5P	SP-46	
		SU-PO	PUMQUNAM	PO	P2	60	5.5	5P	PO-36	
For cast irons	Carbide	①②③	N-CT FC	TCNUNAM3	HT	P3	60	5.5	3P	CT-6
				TCNUNAM1					1.5P	CT-6
Thread forming taps for non-ferrous materials	⑪⑫	N-RS	NRSM6UNAMP	G6				4P	RO-20	
			NRSM6UNAMB	RO	G6	60	5.5	2P	RO-20	
			NRSM7UNAMP	G7				4P	RO-20	
			NRSM7UNAMB	G7				2P	RO-20	
Thread forming taps for dry tapping	⑤⑥⑦ ⑪⑫	OL-RZ	OLRZM6UNAMP	RO	G6				RO-29	
			(OLRZ6UNAMP)		G6	60	5.5	4P	RO-29	
			OLRZM7UNAMP	RO	G7	60	5.5	4P	RO-29	
			(OLRZ7UNAMP)		G7				RO-29	
		High performance thread forming taps, TiCN coated	⑤⑥⑦ ⑪⑫	HP-RZ	HRZM6UNAMP	RO	G6			4P
	HRZM6UNAMB			G6				2P	RO-34	
	(HRZ6UNAMP)			RO	G6			4P	RO-34	
	(HRZ6UNAMB)				G6	60	5.5	2P	RO-34	
	HRZM7UNAMP			RO	G7	60	5.5	4P	RO-34	
	HRZM7UNAMB				G7			2P	RO-34	
	(HRZ7UNAMP)			RO	G7			4P	RO-34	
	(HRZ7UNAMB)	G7				2P	RO-34			
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMUNAM5	HT	1b	62	6	5P	HT-88	
			TICMUNAM1			62	6	1.5P	HT-88	
			(TICUNAM5)	HT	1b	60	5.5	5P	HT-88	
			(TICUNAM1)			60	5.5	1.5P	HT-88	

Taps No.10-32UNF										
Standard	⑤⑥⑧ ⑪⑫	SP	SPQUNAJ	SP				2.5P	SP-16	
		N-SP	(SNMQUNAJ)	SP				2.5P	SP-16	
			(SNQUNAJ)	SP	P2	60	5.5	2.5P	SP-16	
		PO	POQUNAJ	PO				5P	PO-11	
		N-PO	(PNQUNAJ)	PO				5P	PO-11	
Standard	①⑤⑥⑧⑫	HT	(TNMQUNAJ9)					9P	HT-33	
			TNMQUNAJ5					5P	HT-33	
			TNMQUNAJ1	HT	P2	60	5.5	1.5P	HT-33	
			(TNQUNAJ9)			60	5.5	9P	HT-33	
			(TNQUNAJ5)					5P	HT-33	
			(TNQUNAJ1)					1.5P	HT-33	
			HT	TNMRUNAJ5	HT	P3	60	5.5	5P	HT-33
For stainless steels	⑥⑦⑧	SU-SP	SUMQUNAJ	SP				2.5P	SP-46	
			(SUQUNAJ)	SP	P2	60	5.5	2.5P	SP-46	
		SU-PO	PUMQUNAJ	PO	P2	60	5.5	5P	PO-36	
For cast irons	Carbide	①②③	N-CT FC	TCNUNAJ3	HT	P3	60	5.5	3P	CT-6
				TCNUNAJ1	HT	P3	60	5.5	1.5P	CT-6

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
Thread forming taps for non-ferrous materials	11 12	N-RS	NRSM6UNAJP	RO	G6	60	5.5	4P	RO-20					
			NRSM6UNAJB		G6				2P	RO-20				
			NRSM7UNAJP		G7				4P	RO-20				
			NRSM7UNAJB		G7				2P	RO-20				
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZ6UNAJP	RO	G6	60	5.5	4P	RO-29					
			(OLRZ6UNAJP)		G6				RO-29					
			OLRZ7UNAJP		G7				RO-29					
			(OLRZ7UNAJP)		G7				RO-29					
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM6UNAJP	RO	G6	60	5.5	4P	RO-34					
			HRZM6UNAJB		G6				2P	RO-34				
			(HRZ6UNAJP)		G6				4P	RO-34				
			(HRZ6UNAJB)		G6				2P	RO-34				
			HRZM7UNAJP		G7				4P	RO-34				
			HRZM7UNAJB		G7				2P	RO-34				
			(HRZ7UNAJP)		G7				4P	RO-34				
			(HRZ7UNAJB)		G7				2P	RO-34				
For helical coil wire screw thread inserts	11 12	STI-HT	TICMUNAJ5	HT	1b	62	6	5P	HT-88					
			TICMUNAJ1						1.5P	HT-88				
			(TICUNAJ5)						5P	HT-88				
			(TICUNAJ1)						1.5P	HT-88				
Taps No.12-24UNC														
Standard	5 6 8 11 12	SP	SPQUNCM	SP	P2	60	5.5	2.5P	SP-16					
		N-SP	SNMQUNCM						SP	2.5P	SP-16			
			(SNQUNCM)						SP	P2	60	5.5	2.5P	SP-16
		PO	POQUNCM						PO	5P	PO-11			
		N-PO	PNQUNCM	PO	60	5.5	5P	PO-11						
	1 5 6 12	HT	TNMQUNCM9	HT	P2	60	5.5	1.5P	HT-33					
			TNMQUNCM5						5P	HT-33				
			TNMQUNCM1						62	6	1.5P	HT-33		
			(TNQUNCM9)						60	5.5	9P	HT-33		
			(TNQUNCM5)						60	5.5	5P	HT-33		
			(TNQUNCM1)						60	5.5	1.5P	HT-33		
		HT	TNMRUNCM5						HT	P3	62	6	5P	HT-33
HT		TNMRUNCM5	HT						P3	62	6	5P	HT-33	
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZ6UNCMP	RO	G6	60	5.5	4P	RO-29					
			(OLRZ6UNCMP)						60	5.5	RO-29			
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM6UNCMP	RO	G6	60	5.5	4P	RO-34					
			HRZM6UNCMB						62	6	2P	RO-34		
			(HRZ6UNCMP)						60	5.5	4P	RO-34		
		(HRZ6UNCMB)	60	5.5	2P	RO-34								
For helical coil wire screw thread inserts	11 12	STI-HT	TICMUNCM5	HT	1b	70	6.1	5P	HT-88					
			TICMUNCM1						6.2	1.5P	HT-88			
			(TICUNCM5)						6.1	5P	HT-88			
			(TICUNCM1)						6.1	1.5P	HT-88			
Taps No.12-28UNF														
Standard	5 6 8 11 12	SP	SPQUNCK	SP	P2	60	5.5	2.5P	SP-16					
		N-SP	SNMQUNCK						SP	2.5P	SP-16			
			(SNQUNCK)						SP	P2	60	5.5	2.5P	SP-16
		PO	POQUNCK						PO	5P	PO-11			
		N-PO	PNQUNCK	PO	60	5.5	5P	PO-11						
	1 5 6 12	HT	TNMQUNCN9	HT	P2	62	6	9P	HT-34					
			TNMQUNCN5						5P	HT-62				
			TNMQUNCN1						150	5P	HT-62			
		(LNQUNCN9)	150						1.5P	HT-62				

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
Standard	1 5 6 12	HT	TNMQUNCN5	HT	P2	60	5.5	1.5P	HT-34					
			TNMQUNCN1						62	6	1.5P	HT-34		
			(TNQUNCN9)						60	5.5	9P	HT-34		
			(TNQUNCN5)						60	5.5	5P	HT-34		
			(TNQUNCN1)						60	5.5	1.5P	HT-34		
Standard	1 5 6 12	HT	TNMRUNCN5	HT	P3	62	6	5P	HT-34					
	1 5 6 12	HT	TNMRUNCN1	HT	P3	62	6	1.5P	HT-34					
Thread forming taps for dry tapping	5 6 7 11 12	OL-RZ	OLRZ6UNCNCP	RO	G6	60	5.5	4P	RO-29					
			(OLRZ6UNCNCP)						60	5.5	RO-29			
High performance thread forming taps, TiCN coated	5 6 7 11 12	HP-RZ	HRZM6UNCNCP	RO	G6	60	5.5	4P	RO-35					
			HRZM6UNCNB						62	6	2P	RO-35		
			(HRZ6UNCNCP)						60	5.5	4P	RO-35		
			(HRZ6UNCNB)						60	5.5	2P	RO-35		
Taps No.12-32UNEF														
Standard	1 5 6 12	HT	TNMQUNCJ9	HT	P2	60	5.5	5P	HT-34					
			TNMQUNCJ5						62	6	5P	HT-34		
			TNMQUNCJ1						62	6	1.5P	HT-34		
			(TNQUNCJ9)						60	5.5	9P	HT-34		
			(TNQUNCJ5)						60	5.5	5P	HT-34		
			(TNQUNCJ1)						60	5.5	1.5P	HT-34		
Taps 1/4-20UNC														
Standard	5 6 8 11 12	SP	SPQU04N	SP	P2	62	6	2.5P	SP-16					
		N-SP	SNMQU04N						SP	2.5P	SP-16			
			(SNQU04N)						SP	P2	62	6	2.5P	SP-16
		PO	POQU04N						PO	5P	PO-11			
		N-PO	PNQU04N	PO	60	5.5	5P	PO-11						
	1 5 6 12	HT	TNMQU04N5	HT	P2	60	5.5	1.5P	HT-34					
			TNMQU04N1						5P	HT-34				
			(TNQU04N9)						62	6	9P	HT-34		
			(TNQU04N5)						60	5.5	5P	HT-34		
			(TNQU04N1)						60	5.5	1.5P	HT-34		
		(TNQU04N1)	60						5.5	1.5P	HT-34			
For left hand threads	5 6 8 11 12	SP(LH)	SPQU04N-L	SP	P2	62	6	2.5P	SP-28					
		N-SP(LH)	(SNQU04N-L)						SP	2.5P	SP-28			
		PO(LH)	POQU04N-L						PO	5P	PO-20			
		N-PO(LH)	(PNQU04N-L)						PO	5P	PO-20			
Long shank	5 6 8 11 12	LS-SP	SPQU04NL10	LS	P2	100	150	2.5P	SP-36					
			SPQU04NL15						SP	2.5P	SP-36			
			(SNQU04NL10)						SP	100	2.5P	SP-36		
			(SNQU04NL15)						SP	150	2.5P	SP-36		
			POQU04NL10						PO	100	5P	PO-28		
			POQU04NL15						PO	150	5P	PO-28		
	1 5 6 12	LS-SP	TNMQU04N515	LS	P2	150	200	5P	HT-62					
			TNMQU04N520						5P	HT-62				
			TNMQU04N115						150	1.5P	HT-62			
			TNMQU04N120						HT	P2	200	6	1.5P	HT-62
			(L15U04N5-Q)						150	5P	HT-62			
			(L20U04N5-Q)						200	5P	HT-62			
	(L15U04N1-Q)	150	1.5P	HT-62										

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	① ⑤ ⑥ ⑫	LS-HT	(L20U04N1-Q)	HT	P2	200	6	1.5P	HT-62			
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMQU04N	SP				2.5P	SP-46			
			(SUQU04N)	SP				2.5P	SP-46			
		SU-PO	PUMQU04N	PO					5P	PO-36		
			(PUQU04N)	PO	P2	62	6		5P	PO-36		
		SU-HT	TUMQU04N4	HT					4P	HT-74		
			TUMQU04N1	HT					1.5P	HT-74		
			(TUQU04N4)	HT					4P	HT-74		
	(TUQU04N1)	HT					1.5P	HT-74				
For cast irons	Carbide	①	N-CT FC	TCNRU04N3	HT	P3	62	6	3P	CT-6		
				TCNRU04N1					1.5P	CT-6		
Thread forming taps for non-ferrous materials	⑪ ⑫	N-RS	NRS6U04NP	G6				4P	RO-20			
				NRS6U04NB	G6				2P	RO-20		
				(NRS6U04NP)	G6					4P	RO-20	
				(NRS6U04NB)	RO	G6	62	6		2P	RO-20	
				NRS7U04NP	G7					4P	RO-20	
				NRS7U04NB	G7					2P	RO-21	
				(NRS7U04NP)	G7					4P	RO-20	
	(NRS7U04NB)	G7					2P	RO-21				
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL-RZ	OLRZM7U04NP	RO	G7	62	6	4P	RO-29			
				(OLRZ7U04NP)						RO-29		
High performance thread forming taps, TiCN coated	⑤ ⑥ ⑦ ⑪ ⑫	HP-RZ	HRZM7U04NP					4P	RO-35			
				HRZM7U04NB	RO	G7	62	6	2P	RO-35		
				(HRZ7U04NP)					4P	RO-35		
				(HRZ7U04NB)					2P	RO-35		
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMU04N5				6.2	5P	HT-88			
				TICMU04N1	HT	1b	70	6.2	1.5P	HT-88		
				(TICU04N5)				6.1	5P	HT-88		
				(TICU04N1)				6.1	1.5P	HT-88		
For tripod threads	⑪ ⑫	HT	TRIMU04N9					9P	etc-3			
				TRIMU04N5					3P	etc-3		
				TRIMU04N1	HT		62	6	1.5P	etc-3		
				(TRIU04N9)					9P	etc-3		
				(TRIU04N5)					3P	etc-3		
				(TRIU04N1)					1.5P	etc-3		
	⑤ ⑥ ⑧ ⑪ ⑫	N-SP	SNRIU04N	SP		62	6	2.5P	etc-4			
		SP	SPRIU04N					2.5P	etc-4			
Taps 1/4-28UNF												
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQU04K	SP				2.5P	SP-16			
				N-SP	(SNMQU04K)	SP			2.5P	SP-16		
				(SNQU04K)	SP	P2	62	6	2.5P	SP-16		
				PO	POQU04K	PO				5P	PO-12	
				N-PO	(PNQU04K)	PO				5P	PO-12	
				① ⑤ ⑥ ⑦ ⑫	HT	TNMQU04K5					5P	HT-34
					TNMQU04K1					1.5P	HT-34	
					(TNQU04K9)	HT	P2	62	6	9P	HT-34	
					(TNQU04K5)					5P	HT-34	
					(TNQU04K1)					1.5P	HT-34	
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPQU04K-L	SP				2.5P	SP-28			
				N-SP(LH)	(SNQU04K-L)	SP	P2	62	6	2.5P	SP-28	
				PO(LH)	POQU04K-L	PO				5P	PO-20	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	N-PO(LH)	(PNQU04K-L)	PO	P2	62	6	5P	PO-20			
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPQU04KL10	SP				100	2.5P	SP-36		
				SPQU04KL15	SP				150	2.5P	SP-36	
				LS-N-SP	(SNQU04KL10)	SP				100	2.5P	SP-36
				(SNQU04KL15)	SP	P2	150	6	2.5P	SP-37		
				LS-PO	POQU04KL10	PO				100	5P	PO-28
				POQU04KL15	PO					150	5P	PO-28
				LS-N-PO	(PNQU04KL10)	PO				100	5P	PO-28
				(PNQU04KL15)	PO					150	5P	PO-28
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMQU04K	SP				2.5P	SP-46			
				(SUQU04K)	SP				2.5P	SP-46		
				SU-PO	PUMQU04K	PO				5P	PO-36	
				(PUQU04K)	PO	P2	62	6	5P	PO-36		
				SU-HT	TUMQU04K4	HT				4P	HT-74	
				TUMQU04K1	HT					1.5P	HT-74	
				(TUQU04K4)	HT				4P	HT-74		
				(TUQU04K1)	HT				1.5P	HT-74		
For cast irons	Carbide	① ② ⑩ ⑬	N-CT FC	TCNRU04K3	HT	P3	62	6	3P	CT-6		
				TCNRU04K1					1.5P	CT-6		
Thread forming taps for non-ferrous materials	⑪ ⑫	N-RS	NRS6U04KP					4P	RO-21			
				NRS6U04KB	RO	G6	62	6	2P	RO-21		
				(NRS6U04KP)					4P	RO-21		
				(NRS6U04KB)					2P	RO-21		
Thread forming taps for dry tapping	⑤ ⑥ ⑦ ⑪ ⑫	OL-RZ	OLRZM7U04KP	RO	G7	62	6	4P	RO-29			
				(OLRZ7U04KP)						RO-29		
High performance thread forming taps, TiCN coated	⑤ ⑥ ⑦ ⑪ ⑫	HP-RZ	HRZM7U04KP					4P	RO-35			
				HRZM7U04KB	RO	G7	62	6	2P	RO-35		
				(HRZ7U04KP)					4P	RO-35		
				(HRZ7U04KB)					2P	RO-35		
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMU04K5				6.2	5P	HT-88			
				TICMU04K1	HT	1b	70	6.2	1.5P	HT-88		
				(TICU04K5)				6.1	5P	HT-88		
				(TICU04K1)				6.1	1.5P	HT-88		
Taps 1/4-32UNEF												
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQU04J	SP				2.5P	SP-16			
				N-SP	(SNMQU04J)	SP			2.5P	SP-16		
				(SNQU04J)	SP	P2	62	6	2.5P	SP-16		
				PO	POQU04J	PO				5P	PO-12	
				N-PO	(PNQU04J)	PO				5P	PO-12	
				① ⑤ ⑥ ⑦ ⑫	HT	TNMQU04J5					5P	HT-34
					TNMQU04J1					1.5P	HT-34	
					(TNQU04J9)	HT	P2	62	6	9P	HT-34	
					(TNQU04J5)					5P	HT-34	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	①⑤⑥⑫	HT	(TNQU04J1)	HT	P2	62	6	1.5P	HT-34	
Taps 5/16-18UNC										
Standard	⑤⑥⑧⑪⑫	SP	SPQU050	SP	P2	62	2.5P	SP-16		
		N-SP	(SNQU050)	SP	P2	61	2.5P	SP-16		
		PO	PORU050	PO	P3	70	6.2	5P	PO-12	
		N-PO	(PNRU050)	PO	P3	61	5P	PO-12		
	①⑤⑥⑫	HT	TNMRU0509				6.2	9P	HT-34	
			TNMRU0505				6.2	5P	HT-34	
			TNMRU0501				6.2	1.5P	HT-34	
			(TNRU0509)	HT	P3	70	6.1	9P	HT-34	
			(TNRU0505)				6.1	5P	HT-34	
			(TNRU0501)				6.1	1.5P	HT-34	
	For left hand threads	⑤⑥⑧⑪⑫	SP(LH)	SPQU050-L	SP	P2	6.2	2.5P	SP-28	
			N-SP(LH)	(SNQU050-L)	SP	P2	70	6.1	2.5P	SP-28
			PO(LH)	PORU050-L	PO	P3	70	6.2	5P	PO-20
			N-PO(LH)	(PNRU050-L)	PO	P3	61	5P	PO-20	
Long shank	⑤⑥⑧⑪⑫	LS-SP	SPQU050L10	SP	P2	100	6.2	2.5P	SP-37	
			SPQU050L15	SP	P2	150	6.2	2.5P	SP-37	
		LS-N-SP	(SNQU050L10)	SP	P2	100	6.1	2.5P	SP-37	
			(SNQU050L15)	SP	P2	150	6.1	2.5P	SP-37	
		LS-PO	PORU050L10	PO	P3	100	6.2	5P	PO-28	
			PORU050L15	PO	P3	150	6.2	5P	PO-28	
	①⑤⑥⑫	LS-N-PO	(PNRU050L10)	PO	P3	100	6.1	5P	PO-28	
			(PNRU050L15)	PO	P3	150	6.1	5P	PO-28	
		LS-HT	TNMQU050515				150	6.2	5P	HT-62
			TNMQU050520				200	6.2	5P	HT-62
			TNMQU050115				150	6.2	1.5P	HT-62
			TNMQU050120	HT	P2	200	6.2	1.5P	HT-62	
			(L15U0505-Q)				150	6.1	5P	HT-62
			(L20U0505-Q)				200	6.1	5P	HT-62
For stainless steels	⑥⑦⑧	SU-SP	SUMQU050	SP	P2	6.2	2.5P	SP-46		
			(SUQU050)	SP	P2	6.1	2.5P	SP-46		
	SU-PO	PUMRU050	PO	P3	6.2	5P	PO-36			
		(PURU050)	PO	P3	70	6.1	5P	PO-36		
	SU-HT	TUMRU0504	HT	P3	6.2	4P	HT-74			
			TUMRU0501	HT	P3	6.2	1.5P	HT-74		
			(TURU0504)	HT	P3	6.1	4P	HT-74		
			(TURU0501)	HT	P3	6.1	1.5P	HT-74		
			N-CT FC	TCNRU0503	HT	P3	70	6.1	3P	CT-6
				TCNRU0501	HT	P3	70	6.1	1.5P	CT-6
For cast irons	Carbide	①⑫⑬	N-CT FC	TCNRU05M3	HT	P3	70	6.1	3P	CT-6
				TCNRU05M1	HT	P3	70	6.1	1.5P	CT-6
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMU05M5				75	7	5P	HT-88
			TICMU05M1				75	7	1.5P	HT-88
			(TICU05M5)	HT	1b	75	7	5P	HT-88	
			(TICU05M1)				75	7	1.5P	HT-88
Taps 5/16-24UNF										
Standard	⑤⑥⑧⑪⑫	SP	SPQU05M	SP		6.2	2.5P	SP-16		
		N-SP	(SNQU05M)	SP	P2	70	6.1	2.5P	SP-16	
		PO	POQU05M	PO		6.2	5P	PO-12		
		N-PO	(PNQU05M)	PO		6.1	5P	PO-12		
①⑤⑥⑫	HT	TNMQU05J9				6.2	9P	HT-35		
		TNMQU05J5				6.2	5P	HT-35		
		TNMQU05J1	HT	P2	70	6.2	1.5P	HT-35		
		(TNQU05J9)				6.1	9P	HT-35		
		(TNQU05J5)				6.1	5P	HT-35		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	⑤⑥⑧⑪⑫	N-PO	(PNQU05M)	PO	P2	70	6.1	5P	PO-12	
①⑤⑥⑫	HT	TNMQU05M9				6.2	9P	HT-34		
		TNMQU05M5				6.2	5P	HT-34		
		TNMQU05M1	HT	P2	70	6.2	1.5P	HT-34		
		(TNQU05M9)				6.1	9P	HT-34		
		(TNQU05M5)				6.1	5P	HT-34		
For left hand threads	⑤⑥⑧⑪⑫	SP(LH)	SPQU05M-L	SP		6.2	2.5P	SP-28		
		N-SP(LH)	(SNQU05M-L)	SP	P2	70	6.1	2.5P	SP-28	
		PO(LH)	POQU05M-L	PO		6.2	5P	PO-20		
		N-PO(LH)	(PNQU05M-L)	PO		6.1	5P	PO-20		
Long shank	⑤⑥⑧⑪⑫	LS-SP	SPQU05ML10	SP		100	6.2	2.5P	SP-37	
			SPQU05ML15	SP		150	6.2	2.5P	SP-37	
		LS-N-SP	(SNQU05ML10)	SP	P2	100	6.1	2.5P	SP-37	
			(SNQU05ML15)	SP	P2	150	6.1	2.5P	SP-37	
		LS-PO	POQU05ML10	PO		100	6.2	5P	PO-29	
			POQU05ML15	PO		150	6.2	5P	PO-29	
	①⑤⑥⑫	LS-N-PO	(PNQU05ML10)	PO		100	6.1	5P	PO-29	
			(PNQU05ML15)	PO		150	6.1	5P	PO-29	
		LS-HT	TNMQU05M515				150	6.2	5P	HT-62
			TNMQU05M520				200	6.2	5P	HT-62
			TNMQU05M115				150	6.2	1.5P	HT-62
			TNMQU05M120	HT	P2	200	6.2	1.5P	HT-62	
			(L15U05M5-Q)				150	6.1	5P	HT-62
			(L20U05M5-Q)				200	6.1	5P	HT-62
For stainless steels	⑥⑦⑧	SU-SP	SUMQU05M	SP		6.2	2.5P	SP-46		
			(SUQU05M)	SP		6.1	2.5P	SP-46		
	SU-PO	PUMQU05M	PO		6.2	5P	PO-36			
		(PUQU05M)	PO	P2	70	6.1	5P	PO-36		
	SU-HT	TUMQU05M4	HT		6.2	4P	HT-74			
			TUMQU05M1	HT		6.2	1.5P	HT-74		
			(TUQU05M4)	HT		6.1	4P	HT-74		
			(TUQU05M1)	HT		6.1	1.5P	HT-74		
			N-CT FC	TCNRU05M3	HT	P3	70	6.1	3P	CT-6
				TCNRU05M1	HT	P3	70	6.1	1.5P	CT-6
For cast irons	Carbide	①⑫⑬	N-CT FC	TCNRU05M3	HT	P3	70	6.1	3P	CT-6
				TCNRU05M1	HT	P3	70	6.1	1.5P	CT-6
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMU05M5				75	7	5P	HT-88
			TICMU05M1				75	7	1.5P	HT-88
			(TICU05M5)	HT	1b	75	7	5P	HT-88	
			(TICU05M1)				75	7	1.5P	HT-88
Taps 5/16-32UNEF										
Standard	⑤⑥⑧⑪⑫	SP	SPQU05J	SP		6.2	2.5P	SP-16		
		N-SP	(SNQU05J)	SP	P2	70	6.1	2.5P	SP-16	
		PO	POQU05J	PO		6.2	5P	PO-12		
		N-PO	(PNQU05J)	PO		6.1	5P	PO-12		
		HT	TNMQU05J9				6.2	9P	HT-35	
①⑤⑥⑫		TNMQU05J5				6.2	5P	HT-35		
		TNMQU05J1	HT	P2	70	6.2	1.5P	HT-35		
		(TNQU05J9)				6.1	9P	HT-35		
		(TNQU05J5)				6.1	5P	HT-35		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For 3mm threads used in some machines Taps (mm)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	① ⑤ ⑥ ⑧ ⑫	HT	(TNQU05J1)	HT	P2	70	6.1	1.5P	HT-35		
Taps 3/8-16UNC											
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQU06P	SP	P2			2.5P	SP-16		
		N-SP	(SNQU06P)	SP	P2	75	7	2.5P	SP-16		
		PO	PORU06P	PO	P3			5P	PO-12		
		N-PO	(PNRU06P)	PO	P3			5P	PO-12		
	① ⑤ ⑥ ⑧ ⑫	HT	TNMRU06P9						9P	HT-35	
			TNMRU06P5						5P	HT-35	
			TNMRU06P1	HT	P3	75	7	1.5P	HT-35		
			(TNRU06P9)					9P	HT-35		
			(TNRU06P5)					5P	HT-35		
			(TNRU06P1)					1.5P	HT-35		
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPQU06P-L	SP	P2			2.5P	SP-28		
		N-SP(LH)	(SNQU06P-L)	SP	P2	75	7	2.5P	SP-28		
		PO(LH)	PORU06P-L	PO	P3			5P	PO-20		
		N-PO(LH)	(PNRU06P-L)	PO	P3			5P	PO-20		
								1.5P	HT-35		
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPQU06PL10	SP	P2	100		2.5P	SP-37		
			SPQU06PL15	SP	P2	150		2.5P	SP-37		
			SPQU06PL20	SP	P2	200		2.5P	SP-37		
		LS-N-SP	(SNQU06PL10)	SP	P2	100		2.5P	SP-37		
			(SNQU06PL15)	SP	P2	150		2.5P	SP-37		
	① ⑤ ⑥ ⑧ ⑫		(SNQU06PL20)	SP	P2	200		2.5P	SP-37		
		LS-PO	PORU06PL10	PO	P3	100		5P	PO-29		
			PORU06PL15	PO	P3	150		5P	PO-29		
		LS-N-PO	(PNRU06PL10)	PO	P3	100		5P	PO-29		
			(PNRU06PL15)	PO	P3	150		5P	PO-29		
		LS-HT	TNMQU06P515				150		5P	HT-62	
			TNMQU06P520				200		5P	HT-62	
			TNMQU06P115				150		1.5P	HT-63	
			TNMQU06P120	HT	P2	200	7	1.5P	HT-63		
			(L15U06P5-Q)			150		5P	HT-62		
	(L20U06P5-Q)			200		5P	HT-63				
	(L15U06P1-Q)			150		1.5P	HT-63				
	(L20U06P1-Q)			200		1.5P	HT-63				
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMQU06P	SP	P2			2.5P	SP-46		
			(SUQU06P)	SP	P2			2.5P	SP-46		
		SU-PO	PUMRU06P	PO	P3			5P	PO-36		
			(PURU06P)	PO	P3	75	7	5P	PO-36		
		SU-HT	TUMRU06P4	HT	P3			4P	HT-74		
			TUMRU06P1	HT	P3			1.5P	HT-74		
			(TURU06P4)	HT	P3			4P	HT-74		
			(TURU06P1)	HT	P3			1.5P	HT-74		
For cast irons	Carbide	① ⑫ ⑬	N-CT FC	TCNRU06P3	HT	P3	75	7	3P	CT-6	
				TCNRU06P1	HT	P3			1.5P	CT-6	
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMU06P5				82	8.5	5P	HT-88	
			TICMU06P1	HT	1b			82	8.5	1.5P	HT-88
			(TICU06P5)					85	9	5P	HT-88
			(TICU06P1)					85	9	1.5P	HT-88
Taps 3/8-24UNF											
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQU06M	SP	P2	75	7	2.5P	SP-16		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	⑤ ⑥ ⑧ ⑪ ⑫	N-SP	(SNQU06M)	SP				2.5P	SP-16		
		PO	POQU06M	PO	P2	75	7	5P	PO-12		
		N-PO	(PNQU06M)	PO				5P	PO-12		
	① ⑤ ⑥ ⑧ ⑫	HT	TNMRU06M9						9P	HT-35	
			TNMRU06M5						5P	HT-35	
			TNMRU06M1	HT	P3	75	7	1.5P	HT-35		
			(TNRU06M9)					9P	HT-35		
			(TNRU06M5)					5P	HT-35		
			(TNRU06M1)					1.5P	HT-35		
For left hand threads	⑤ ⑥ ⑧ ⑪ ⑫	SP(LH)	SPQU06M-L	SP				2.5P	SP-28		
		N-SP(LH)	(SNQU06M-L)	SP	P2	75	7	2.5P	SP-28		
		PO(LH)	POQU06M-L	PO				5P	PO-20		
		N-PO(LH)	(PNQU06M-L)	PO				5P	PO-20		
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPQU06ML10	SP			100	2.5P	SP-37		
			SPQU06ML15	SP			150	2.5P	SP-37		
			SPQU06ML20	SP			200	2.5P	SP-37		
		LS-N-SP	(SNQU06ML10)	SP			100	2.5P	SP-37		
			(SNQU06ML15)	SP			150	2.5P	SP-37		
	① ⑤ ⑥ ⑧ ⑫		(SNQU06ML20)	SP			200	2.5P	SP-37		
		LS-PO	POQU06ML10	PO	P2	100	7	5P	PO-29		
			POQU06ML15	PO			150	5P	PO-29		
		LS-N-PO	(PNQU06ML10)	PO			100	5P	PO-29		
			(PNQU06ML15)	PO			150	5P	PO-29		
		LS-HT	TNMQU06M515				150		5P	HT-63	
			TNMQU06M520				200		5P	HT-63	
			TNMQU06M115				150		1.5P	HT-63	
			TNMQU06M120	HT	P2	200	7	1.5P	HT-63		
			(L15U06M5-Q)			150		5P	HT-63		
	(L20U06M5-Q)			200		5P	HT-63				
	(L15U06M1-Q)			150		1.5P	HT-63				
	(L20U06M1-Q)			200		1.5P	HT-63				
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMQU06M	SP				2.5P	SP-46		
			(SUQU06M)	SP				2.5P	SP-46		
		SU-PO	PUMQU06M	PO				5P	PO-36		
			(PUQU06M)	PO	P2	75	7	5P	PO-36		
		SU-HT	TUMQU06M4	HT				4P	HT-74		
			TUMQU06M1	HT				1.5P	HT-74		
			(TUQU06M4)	HT				4P	HT-74		
			(TUQU06M1)	HT				1.5P	HT-74		
For cast irons	Carbide	①	N-CT FC	TCNRU06M3	HT	P3	75	7	3P	CT-6	
				TCNRU06M1				1.5P	CT-6		
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMU06M5				82	8.5	5P	HT-88	
			TICMU06M1	HT	1b			82	8.5	1.5P	HT-88
			(TICU06M5)					80	8	5P	HT-88
			(TICU06M1)					80	8	1.5P	HT-88
Taps 3/8-32UNEF											
Standard	⑤ ⑥ ⑧ ⑪ ⑫	PO	POQU06J	PO	P2	75	7	5P	PO-12		
		N-PO	(PNQU06J)	PO				5P	PO-12		
	① ⑤ ⑥ ⑧ ⑫	HT	TNMQU06J9						9P	HT-35	
			TNMQU06J5						5P	HT-35	
			TNMQU06J1	HT	P2	75	7	1.5P	HT-35		
	(TNQU06J9)					9P	HT-35				
	(TNQU06J5)					5P	HT-35				

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Standard	①⑤⑥⑧⑫	HT	(TNQU06J1)	HT	P2	75	7	1.5P	HT-35		
Taps 7/16-14UNC											
Standard	⑤⑥⑧⑫	SP	SPRU07Q	SP		82	8.5	2.5P	SP-16		
		N-SP	(SNRU07Q)	SP	P3	80	8	2.5P	SP-16		
		PO	PORU07Q	PO		82	8.5	5P	PO-12		
		N-PO	(PNRU07Q)	PO		80	8	5P	PO-12		
	①⑤⑥⑧⑫	HT	TNMRU07Q9				82	8.5	9P	HT-35	
			TNMRU07Q5				82	8.5	5P	HT-35	
		HT	TNMRU07Q1				82	8.5	1.5P	HT-35	
			(TNRU07Q9)				80	8	9P	HT-35	
		HT	(TNRU07Q5)				80	8	5P	HT-35	
			(TNRU07Q1)				80	8	1.5P	HT-35	
		For left hand threads	⑤⑥⑧⑫	SP(LH)	SPRU07Q-L	SP		82	8.5	2.5P	SP-28
				PO(LH)	PORU07Q-L	PO	P3	82	8.5	5P	PO-20
				N-PO(LH)	(PNRU07Q-L)	PO		80	8	5P	PO-20
		Long shank	⑤⑥⑧⑫	LS-SP	SPRU07QL15	SP			8.5	2.5P	SP-37
LS-N-SP	(SNRU07QL15)			SP			8	2.5P	SP-37		
LS-PO	PORU07QL15			PO	P3	150	8.5	5P	PO-29		
LS-N-PO	(PNRU07QL15)			PO			8	5P	PO-29		
①⑤⑥⑧⑫	LS-HT		TNMRU07Q515				8.5	5P	HT-63		
			TNMRU07Q115				8.5	1.5P	HT-63		
	HT		(L15U07Q5-R)				8	5P	HT-63		
			(L15U07Q1-R)				8	1.5P	HT-63		
For stainless steels	⑥⑦⑧	SU-SP	SUMRU07Q	SP		82	8.5	2.5P	SP-46		
		(SURU07Q)	SP			80	8	2.5P	SP-46		
		SU-PO	PUMRU07Q	PO			82	8.5	5P	PO-37	
		(PURU07Q)	PO	P3		80	8	5P	PO-37		
		SU-HT	TUMRU07Q4	HT			82	8.5	4P	HT-77	
		TUMRU07Q1	HT			82	8.5	1.5P	HT-77		
For cast irons	Carbide	①⑫⑬	N-CTFC	TCNRU07Q3	HT	P3	80	8	3P	CT-6	
			TCNRU07Q1					1.5P	CT-7		
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMU07Q5			88		5P	HT-88		
			TICMU07Q1			88		1.5P	HT-89		
			(TICU07Q5)			90	10.5	5P	HT-89		
			(TICU07Q1)			90	1.5P	HT-89			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	⑤⑥⑧⑫	LS-SP	SPQU07NL15	SP	P2		8.5	2.5P	SP-37			
		LS-N-SP	(SNQU07NL15)	SP	P2		8	2.5P	SP-37			
		LS-PO	PORU07NL15	PO	P3	150	8.5	5P	PO-29			
		LS-N-PO	(PNRU07NL15)	PO	P3		8	5P	PO-29			
	①⑤⑥⑧⑫	LS-HT	TNMQU07N515				150	8.5	5P	HT-63		
			TNMQU07N520				200	8.5	5P	HT-63		
		HT	TNMQU07N115				150	8.5	1.5P	HT-63		
			TNMQU07N120				200	8.5	1.5P	HT-63		
		HT	(L15U07N5-Q)				150	8	5P	HT-63		
			(L20U07N5-Q)				200	8	5P	HT-63		
For stainless steels	⑥⑦⑧	SU-SP	SUMQU07N	SP	P2	82	8.5	2.5P	SP-46			
			(SUQU07N)	SP	P2	80	8	2.5P	SP-46			
		SU-PO	PUMRU07N	PO	P3	82	8.5	5P	PO-37			
			(PURU07N)	PO	P3	80	8	5P	PO-37			
		SU-HT	TUMRU07N4	HT	P3	82	8.5	4P	HT-75			
			TUMRU07N1	HT	P3	82	8.5	1.5P	HT-75			
		HT	(TURU07N4)	HT	P3	80	8	4P	HT-75			
			(TURU07N1)	HT	P3	80	8	1.5P	HT-75			
		For cast irons	Carbide	①	N-CTFC	TCNRU07N3	HT	P3	80	8	3P	CT-7
					TCNRU07N1					1.5P	CT-7	
For helical coil wire screw thread inserts	⑪⑫	STI-HT	TICMU07N5			88	10.5	5P	HT-89			
			TICMU07N1			88	10.5	1.5P	HT-89			
			(TICU07N5)			85	9	5P	HT-89			
			(TICU07N1)			85	9	1.5P	HT-89			

Taps 7/16-28UNEF										
Standard	⑤⑥⑧⑫	PO	POQU07K	PO	P2	82	8.5	5P	PO-12	
		N-PO	(PNQU07K)	PO		80	8	5P	PO-12	
	①⑤⑥⑧⑫	HT	TNMQU07K9				82	8.5	9P	HT-35
			TNMQU07K5				82	8.5	5P	HT-35
		HT	TNMQU07K1				82	8.5	1.5P	HT-35
			(TNQU07K9)				80	8	9P	HT-35
HT	(TNQU07K5)				80	8	5P	HT-35		
	(TNQU07K1)				80	8	1.5P	HT-35		

Taps 1/2-13UNC										
Standard	⑤⑥⑧⑫	SP	SPRU08R	SP		88	10.5	2.5P	SP-16	
		N-SP	(SNRU08R)	SP	P3	85	9	2.5P	SP-16	
		PO	PORU08R	PO		88	10.5	5P	PO-12	
		N-PO	(PNRU08R)	PO		85	9	5P	PO-12	
	①⑤⑥⑧⑫	HT	TNMRU08R9				88	10.5	9P	HT-36
			TNMRU08R5				88	10.5	5P	HT-36
		HT	TNMRU08R1				88	10.5	1.5P	HT-36
			(TNRU08R9)				85	9	9P	HT-36
		HT	(TNRU08R5)				85	9	5P	HT-36
			(TNRU08R1)				85	9	1.5P	HT-36
For left hand threads	⑤⑥⑧⑫	SP(LH)	SPRU08R-L	SP		88	10.5	2.5P	SP-28	
		N-SP(LH)	(SNRU08R-L)	SP	P3	85	9	2.5P	SP-28	
		PO(LH)	PORU08R-L	PO		88	10.5	5P	PO-20	
		N-PO(LH)	(PNRU08R-L)	PO		85	9	5P	PO-20	

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	⑤ ⑥ ⑧ ⑪ ⑫	LS-SP	SPRU08RL15	SP		150	10.5	2.5P	SP-37		
			SPRU08RL20	SP		200	10.5	2.5P	SP-37		
		LS-N-SP	(SNRU08RL15)	SP		150	9	2.5P	SP-37		
			(SNRU08RL20)	SP		200	9	2.5P	SP-37		
		LS-PO	PORU08RL15	PO	P3	150	10.5	5P	PO-29		
			PORU08RL20	PO		200	10.5	5P	PO-29		
		LS-N-PO	(PNRU08RL15)	PO		150	9	5P	PO-29		
			(PNRU08RL20)	PO		200	9	5P	PO-29		
		① ⑤ ⑥ ⑫	LS-HT	TNMRU08R515			150	10.5	5P	HT-63	
			TNMRU08R520			200	10.5	5P	HT-63		
			TNMRU08R115			150	10.5	1.5P	HT-63		
			TNMRU08R120			200	10.5	1.5P	HT-63		
			(L15U08R5-R)	HT	P3	150	9	5P	HT-63		
			(L20U08R5-R)			200	9	5P	HT-63		
			(L15U08R1-R)			150	9	1.5P	HT-63		
	(L20U08R1-R)			200	9	1.5P	HT-63				
For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMRU08R	SP		88	10.5	2.5P	SP-46		
			(SURU08R)	SP		85	9	2.5P	SP-47		
		SU-PO	PUMRU08R	PO		88	10.5	5P	PO-37		
			(PURU08R)	PO	P3	85	9	5P	PO-37		
		SU-HT	TUMRU08R4	HT		88	10.5	4P	HT-75		
			TUMRU08R1	HT		88	10.5	1.5P	HT-75		
For cast irons	Carbide	① ⑫ ⑬	N-CT FC	TCNRU08R3					3P	CT-7	
				TCNRU08R1	HT	P3	85	9	1.5P	CT-7	
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMU08R5				12.5	5P	HT-89		
				TICMU08R1	HT	1b	95	12	5P	HT-89	
				(TICU08R5)			12	5P	HT-89		
				(TICU08R1)			12	1.5P	HT-89		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
Long shank	① ⑤ ⑥ ⑫	LS-HT	TNMQU08N515			150	10.5	5P	HT-63			
			TNMQU08N520			200	10.5	5P	HT-63			
			TNMQU08N115			150	10.5	1.5P	HT-63			
			TNMQU08N120			200	10.5	1.5P	HT-63			
			(L15U08N5-Q)	HT	P2	150	9	5P	HT-63			
			(L20U08N5-Q)			200	9	5P	HT-63			
			(L15U08N1-Q)			150	9	1.5P	HT-63			
			(L20U08N1-Q)			200	9	1.5P	HT-63			
		For stainless steels	⑥ ⑦ ⑧	SU-SP	SUMQU08N	SP	P2	88	10.5	2.5P	SP-47	
					(SUQU08N)	SP	P2	85	9	2.5P	SP-47	
SU-PO	PUMRU08N			PO	P3	88	10.5	5P	PO-37			
	(PURU08N)			PO	P3	85	9	5P	PO-37			
SU-HT	TUMRU08N4			HT	P3	88	10.5	4P	HT-75			
	TUMRU08N1			HT	P3	88	10.5	1.5P	HT-75			
	(TURU08N4)			HT	P3	85	9	4P	HT-75			
	(TURU08N1)			HT	P3	85	9	1.5P	HT-75			
For cast irons	Carbide			①	N-CT FC	TCNRU08N3					3P	CT-7
						TCNRU08N1	HT	P3	85	9	1.5P	CT-7
For helical coil wire screw thread inserts	⑪ ⑫	STI-HT	TICMU08N5				95	12.5	5P	HT-89		
				TICMU08N1	HT	1b	95	12.5	1.5P	HT-89		
				(TICU08N5)			90	10.5	5P	HT-89		
				(TICU08N1)			90	10.5	1.5P	HT-89		

Taps 1/2-28UNEF

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤ ⑥ ⑧ ⑪ ⑫	PO	POQU08K			88	10.5		PO-12
			(PNQU08K)	PO	P2	85	9	5P	PO-12
① ⑤ ⑥ ⑫	HT		TNMQU08K9			88	10.5	9P	HT-36
			TNMQU08K5			88	10.5	5P	HT-36
			TNMQU08K1	HT	P2	88	10.5	1.5P	HT-36
			(TNQU08K9)			85	9	9P	HT-36
			(TNQU08K5)			85	9	5P	HT-36
			(TNQU08K1)			85	9	1.5P	HT-36

Taps 9/16-12UNC

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPRU09S	SP		95	12.5	2.5P	SP-16
			(SNRU09S)	SP	P3	90	10.5	2.5P	SP-16
			PORU09S	PO		95	12.5	5P	PO-12
			(PNRU09S)	PO		90	10.5	5P	PO-12
		① ⑤ ⑥ ⑫	HT	TNMRU09S9			95	12.5	9P
	TNMRU09S5			95	12.5	5P	HT-36		
	TNMRU09S1	HT	P3	95	12.5	1.5P	HT-36		
	(TNRU09S9)			90	10.5	9P	HT-36		
	(TNRU09S5)			90	10.5	5P	HT-36		
	(TNRU09S1)			90	10.5	1.5P	HT-36		

Taps 9/16-18UNF

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤ ⑥ ⑧ ⑪ ⑫	SP	SPQU09O	SP	P2	95	12.5	2.5P	SP-16
			(SNQU09O)	SP	P2	90	10.5	2.5P	SP-16
			PORU09O	PO	P3	95	12.5	5P	PO-12
			(PNRU09O)	PO	P3	90	10.5	5P	PO-12
		① ⑤ ⑥ ⑫	HT	TNMRU09O9			95	12.5	9P
	TNMRU09O5	HT	P3	95	12.5	5P	HT-36		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unrifed threads Taps
For Whitworth threads Taps
For 3mm threads and other metric Taps (mm)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page					
Standard	1 5 6 12	HT	TNMRU0901	HT	P3	95	12.5	1.5P	HT-36					
			(TNRU0909)			90	10.5	9P	HT-36					
			(TNRU0905)			90	10.5	5P	HT-36					
			(TNRU0901)			90	10.5	1.5P	HT-36					
Long shank	1 5 6 12	LS-HT	TNMQU090515	HT	P2	12.5	5P	HT-63						
			TNMQU090115			12.5	1.5P	HT-64						
			(L15U0905-Q)			10.5	5P	HT-64						
For stainless steels	6 7 8	SU-PO	PUMRU090	PO	P3	95	12.5	5P	PO-37					
			(PURU090)			90	10.5	5P	PO-37					
Taps 9/16-24UNEF														
Standard	5 6 8 11 12	SP	SPQU09M	SP	P2	95	12.5	2.5P	SP-16					
			(SNQU09M)			90	10.5	2.5P	SP-16					
Taps 5/8-11UNC														
Standard	5 6 8 11 12	SP	SPRU10U	SP	P3	12.5	2.5P	SP-17						
			(SNRU10U)			12	2.5P	SP-17						
			PORU10U			12.5	5P	PO-12						
			(PNRU10U)			12	5P	PO-12						
	1 5 6 12	HT	TNMSU10U9	HT	P4	12.5	9P	HT-36						
			TNMSU10U5			12.5	5P	HT-36						
			TNMSU10U1			12.5	1.5P	HT-36						
			(TNSU10U9)			12	9P	HT-36						
			(TNSU10U5)			12	5P	HT-36						
			(TNSU10U1)			12	1.5P	HT-36						
			Long shank			5 6 8 11 12	LS-SP	SPRU10UL15	SP	P3	150	12.5	2.5P	SP-37
								SPRU10UL20			200	12.5	2.5P	SP-37
								(SNRU10UL15)			150	12	2.5P	SP-37
								(SNRU10UL20)			200	12	2.5P	SP-37
1 5 6 12	HT	TNMRU10U515		HT	P3	150	12.5	5P	HT-64					
		TNMRU10U520				200	12.5	5P	HT-64					
		TNMRU10U115				150	12.5	1.5P	HT-64					
		TNMRU10U120				200	12.5	1.5P	HT-64					
		(L15U10U5-R)				150	12	5P	HT-64					
		(L20U10U5-R)				200	12	5P	HT-64					
For stainless steels	6 7 8	SU-SP		SUMRU10U	SU	P3	12.5	2.5P	SP-47					
				(SURU10U)			12	2.5P	SP-47					
				PUMRU10U			12.5	5P	PO-37					
				(PURU10U)			12	5P	PO-37					
For cast irons	1	N-CTFC	TCNSU10U3	HT	P4	95	12	3P	CT-7					
			TCNSU10U1			95	12	1.5P	CT-7					
	1 5 6 12	LS-HT	TNMRU10U515	HT	P3	150	12.5	5P	HT-64					
			TNMRU10U520			200	12.5	5P	HT-64					
			TNMRU10U115			150	12.5	1.5P	HT-64					
			TNMRU10U120			200	12.5	1.5P	HT-64					
			(L15U10U5-R)			150	12	5P	HT-64					
			(L20U10U5-R)			200	12	5P	HT-64					
			(L15U10U1-R)			150	12	1.5P	HT-64					
			(L20U10U1-R)			200	12	1.5P	HT-64					
			For stainless steels			6 7 8	SU-SP	SUMRU10U	SU	P3	12.5	2.5P	SP-47	
								(SURU10U)			12	2.5P	SP-47	
						1 5 6 12	HT	TUMRU10U4	HT	P3	12.5	4P	HT-75	
								TUMRU10U1			12.5	1.5P	HT-75	
(TURU10U4)	12	4P		HT-75										
(TURU10U1)	12	1.5P		HT-75										

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page										
For helical coil wire screw thread inserts	11 12	STI-HT	TICMU10U5	HT	1b	15	5P	HT-89											
			TICMU10U1			15	1.5P	HT-89											
			(TICU10U5)			14	5P	HT-89											
			(TICU10U1)			14	1.5P	HT-89											
Taps 5/8-18UNF																			
Standard	5 6 8 11 12	SP	SPQU100	SP	P2	12.5	2.5P	SP-17											
			(SNQU100)			12	2.5P	SP-17											
			PORU100			12.5	5P	PO-12											
			(PNRU100)			12	5P	PO-12											
	1 5 6 12	HT	TNMRU1009	HT	P3	12.5	9P	HT-36											
			TNMRU1005			12.5	5P	HT-36											
			TNMRU1001			12.5	1.5P	HT-36											
			(TNRU1009)			12	9P	HT-36											
			(TNRU1005)			12	5P	HT-36											
			(TNRU1001)			12	1.5P	HT-36											
			Long shank			5 6 8 11 12	LS-SP	SPQU100L15	SP	P2	150	12.5	2.5P	SP-37					
								(SNQU100L15)			150	12	2.5P	SP-37					
								PORU100L15			150	12.5	5P	PO-29					
								(PNRU100L15)			150	12	5P	PO-29					
1 5 6 12	LS-HT	TNMQU100515		HT	P2	12.5	5P	HT-64											
		TNMQU100115				12.5	1.5P	HT-64											
		(L15U1005-Q)				12	5P	HT-64											
		(L15U1001-Q)				12	1.5P	HT-64											
		For stainless steels				6 7 8	SU-SP	SUMQU100	SU	P2	12.5	2.5P	SP-47						
								(SUQU100)			12	2.5P	SP-47						
						1 5 6 12	HT	TUMRU1004	HT	P3	12.5	4P	HT-75						
								TUMRU1001			12.5	1.5P	HT-75						
								(TURU1004)			12	4P	HT-75						
								(TURU1001)			12	1.5P	HT-75						
For cast irons	1 12 13		N-CTFC	TCNSU1003	HT			P4			95	12	3P	CT-7					
				TCNSU1001							95	12	1.5P	CT-7					
	11 12		STI-HT	TICMU1005	HT			1b			100	5P	HT-89						
				TICMU1001							100	1.5P	HT-89						
				(TICU1005)							105	5P	HT-89						
				(TICU1001)							105	1.5P	HT-89						
				Taps 5/8-24UNEF															
				Standard							5 6 8 11 12	SP	SPQU10M	SP	P2	95	12.5	2.5P	SP-17
		(SNQU10M)				12	2.5P		SP-17										
		PORU10M				12.5	5P		PO-12										
		(PNRU10M)				12	5P		PO-12										
		1 5 6 12				HT	TNMRU10M9		HT	P3	12.5	9P	HT-37						
							TNMRU10M5				12.5	5P	HT-37						
							TNMRU10M1				12.5	1.5P	HT-37						
(TNRU10M9)	12		9P		HT-37														
(TNRU10M5)	12		5P		HT-37														
(TNRU10M1)	12		1.5P		HT-37														
Taps 3/4-10UNC																			
Standard	5 6 8 11 12		SP		SPRU12V		SP	P3			15	2.5P	SP-17						
					(SNRU12V)						14	2.5P	SP-17						

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	5 6 8 11 12	PO	POSU12V			15			PO-12	
		N-PO	(PNSU12V)	PO	P4	105	14	5P	PO-12	
	1 5 6 12	HT	TNMSU12V5				15	5P	HT-37	
			TNMSU12V1				15	1.5P	HT-37	
			(TNSU12V9)	HT	P4	105	14	9P	HT-37	
			(TNSU12V5)				14	5P	HT-37	
		(TNSU12V1)				14	1.5P	HT-37		
		LS-SP	SPRU12VL15	SP	P3	150	15	2.5P	SP-37	
			SPRU12VL20	SP	P3	200	15	2.5P	SP-37	
			LS-N-SP	(SNRU12VL15)	SP	P3	150	14	2.5P	SP-37
(SNRU12VL20)	SP		P3	200	14	2.5P	SP-37			
LS-PO	POSU12VL15	PO	P4	150	15	5P	PO-29			
	POSU12VL20	PO	P4	200	15	5P	PO-29			
	LS-N-PO	(PNSU12VL15)	PO	P4	150	14	5P	PO-29		
	(PNSU12VL20)	PO	P4	200	14	5P	PO-29			
1 5 6 12	LS-HT	TNMRU12V515				150	15	5P	HT-64	
		TNMRU12V520				200	15	5P	HT-64	
	TNMRU12V115					150	15	1.5P	HT-64	
		TNMRU12V120				200	15	1.5P	HT-64	
	HT P3	(L15U12V5-R)				150	14	5P	HT-64	
		(L20U12V5-R)				200	14	5P	HT-64	
	(L15U12V1-R)					150	14	1.5P	HT-64	
		(L20U12V1-R)				200	14	1.5P	HT-64	
	For stainless steels	6 7 8	SU-SP	SUMRU12V	SP	P3	15	2.5P	SP-47	
			(SURU12V)	SP	P3	14	2.5P	SP-47		
SU-HT		TUMSU12V4	HT	P4	105	15	4P	HT-75		
		TUMSU12V1	HT	P4	105	15	1.5P	HT-75		
		(TUSU12V4)	HT	P4	14	4P	HT-75			
		(TUSU12V1)	HT	P4	14	1.5P	HT-75			
For cast irons	Carbide	1	N-CT FC	TCNSU12V3	HT	P4	105	14	3P	CT-7
			TCNSU12V1				1.5P	CT-7		
Taps 3/4-16UNF										
Standard	5 6 8 11 12	SP	SPRU12P	SP		15	2.5P	SP-17		
		N-SP	(SNRU12P)	SP	P3	105	14	2.5P	SP-17	
	PO	PORU12P	PO			15	5P	PO-12		
		(PNRU12P)	PO			14	5P	PO-12		
	1 5 6 12	HT	TNMRU12P5				15	5P	HT-37	
			TNMRU12P1				15	1.5P	HT-37	
		(TNRU12P9)	HT	P3	105	14	9P	HT-37		
		(TNRU12P5)				14	5P	HT-37		
		(TNRU12P1)				14	1.5P	HT-37		
		LS-SP	SPRU12PL15	SP			150	15	2.5P	SP-37
LS-N-SP			(SNRU12PL15)	SP		150	14	2.5P	SP-37	
LS-PO			PORU12PL15	PO	P3	150	15	5P	PO-29	
	PORU12PL20		PO	P3	200	15	5P	PO-29		
LS-N-PO	(PNRU12PL15)	PO			150	14	5P	PO-29		
	(PNRU12PL20)	PO			200	14	5P	PO-29		
1 5 6 12	LS-HT	TNMRU12P515				15	5P	HT-64		
		TNMRU12P115				15	1.5P	HT-64		
	(L15U12P5-R)					14	5P	HT-64		
		(L15U12P1-R)				14	1.5P	HT-64		

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For stainless steels	6 7 8	SU-SP	SUMRU12P	SP		15	2.5P	SP-47		
		(SURU12P)	SP		14	2.5P	SP-47			
	SU-HT	TUMRU12P4	HT	P3	105	15	4P	HT-75		
		TUMRU12P1	HT	P3	105	15	1.5P	HT-75		
		(TURU12P4)	HT			14	4P	HT-75		
		(TURU12P1)	HT			14	1.5P	HT-75		
For cast irons	Carbide	1	N-CT FC	TCNSU12P3	HT	P4	95	14	3P	CT-7
			TCNSU12P1				1.5P	CT-7		
For helical coil wire screw thread inserts	11 12	STI-HT	TICMU12P5					5P	HT-89	
			TICMU12P1					1.5P	HT-89	
		(TICU12P5)	HT	1b	115	17	5P	HT-89		
			(TICU12P1)				1.5P	HT-89		

Taps 3/4-20UNEF

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	5 6 8 11 12	SP	SPQU12N	SP	P2	105	15	2.5P	SP-17	
		N-SP	(SNQU12N)	SP	P2	95	14	2.5P	SP-17	
	PO	PORU12N	PO	P3	105	15	5P	PO-12		
		(PNRU12N)	PO	P3	95	14	5P	PO-12		
	1 5 6 12	HT	TNMRU12N5				105	15	5P	HT-37
			TNMRU12N1				105	15	1.5P	HT-37
		(TNRU12N9)	HT	P3	95	14	9P	HT-37		
			(TNRU12N5)				95	14	5P	HT-37
		(TNRU12N1)				95	14	1.5P	HT-37	

Taps 7/8-9UNC

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Standard	5 6 8 11 12	SP	SPRU14W	SP	P3			2.5P	SP-17	
		N-SP	(SNRU14W)	SP	P3	115	17	2.5P	SP-17	
	PO	POSU14W	PO	P4				5P	PO-13	
		(PNSU14W)	PO	P4				5P	PO-13	
	1 5 6 12	HT	TNMSU14W5						5P	HT-37
			TNMSU14W1						1.5P	HT-37
(TNSU14W9)	HT	P4	115	17	9P	HT-37				
	(TNSU14W5)					5P	HT-37			
	(TNSU14W1)					1.5P	HT-37			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	5 6 8 11 12	LS-SP	SPRU14WL15	SP	P3	150		2.5P	SP-37	
			SPRU14WL20	SP	P3	200		2.5P	SP-38	
	LS-N-SP	(SNRU14WL15)	SP	P3	150		2.5P	SP-38		
		(SNRU14WL20)	SP	P3	200		2.5P	SP-38		
	LS-PO	POSU14WL20	PO	P4	200		5P	PO-29		
		LS-N-PO	(PNSU14WL20)	PO	P4	200		5P	PO-30	
	1 5 6 12	LS-HT	TNMRU14W520						5P	HT-64
			TNMRU14W120						1.5P	HT-64
		(L20U14W5-R)					200	17	5P	HT-64
			(L20U14W1-R)						1.5P	HT-64

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
For stainless steels	6 7 8	SU-SP	SUMRU14W	SP	P3	115	17	2.5P	SP-47
		(SURU14W)						2.5P	SP-47

Taps 7/8-14UNF

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	5 6 8 11 12	SP	SPRU14Q	SP				2.5P	SP-17
		N-SP	(SNRU14Q)	SP	P3	115	17	2.5P	SP-17
	PO	PORU14Q	PO					5P	PO-13
		(PNRU14Q)	PO					5P	PO-13

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unifit threads Taps
For Whitworth threads Taps
For 3mm thread and other metric Taps (mm)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Standard	1 5 6 12	HT	TNMSU14Q5					5P	HT-37	
			TNMSU14Q1					1.5P	HT-37	
			(TNSU14Q9)	HT	P4	115	17	9P	HT-37	
			(TNSU14Q5)						5P	HT-37
			(TNSU14Q1)						1.5P	HT-37
Long shank	5 6 8 11 12	LS-PO	PORU14QL20	PO	P3	200	17	5P	PO-30	
			(PNRU14QL20)							PO-30
For stainless steels	6 7 8	SU-SP	SUMRU14Q	SP	P3	115	17	2.5P	SP-47	
			(SURU14Q)							SP-47
Taps 7/8-20UNEF										
Standard	5 6 8 11 12	SP	SPQU14N	SP	P2	115	17	2.5P	SP-17	
			(SNQU14N)			95			SP-17	
	1 5 6 12	HT	TNMRU14N5				115		5P	HT-37
			TNMRU14N1				115		1.5P	HT-37
			(TNRU14N9)	HT	P3	95	17	9P	HT-37	
			(TNRU14N5)				95		5P	HT-37
			(TNRU14N1)				95		1.5P	HT-37
	Taps 1-8UNC									
Standard	5 6 8 11 12	SP	SPRU16X	SP	P3	19	2.5P	SP-17		
			(SNRU16X)	SP	P3	125	19	2.5P	SP-17	
	1 5 6 12	HT	POSU16X	PO	P4	19	5P	PO-13		
			(PNSU16X)	PO	P4	20	5P	PO-13		
			TNMSU16X5				19	5P	HT-37	
			TNMSU16X1				19	1.5P	HT-37	
			(TNSU16X9)	HT	P4	125	20	9P	HT-37	
			(TNSU16X5)				20	5P	HT-37	
			(TNSU16X1)				20	1.5P	HT-37	
	Long shank	5 6 8 11 12	LS-SP	SPRU16XL15	SP	P3	150	19	2.5P	SP-38
SPRU16XL20				SP	P3	200	19	2.5P	SP-38	
1 5 6 12		LS-N-SP	(SNRU16XL15)	SP	P3	150	20	2.5P	SP-38	
			(SNRU16XL20)	SP	P3	200	20	2.5P	SP-38	
			POSU16XL20	PO	P4	200	19	5P	PO-30	
			(PNSU16XL20)	PO	P4	200	20	5P	PO-30	
1 5 6 12		LS-HT	TNMRU16X515				150	19	5P	HT-64
			TNMRU16X520				200	19	5P	HT-64
			TNMRU16X115				150	19	1.5P	HT-64
			TNMRU16X120				200	19	1.5P	HT-64
			(L15U16X5-R)	HT	P3	150	20	5P	HT-64	
			(L20U16X5-R)			200	20	5P	HT-64	
	(L15U16X1-R)				150	20	1.5P	HT-64		
	(L20U16X1-R)				200	20	1.5P	HT-64		
For stainless steels	6 7 8	SU-SP	SUMRU16X	SP	P3	125	19	2.5P	SP-47	
			(SURU16X)				20		SP-47	
Taps 1-12UNF										
Standard	5 6 8 11 12	SP	SPRU16S	SP	P3	19	2.5P	SP-17		
			(SNRU16S)	SP	P3	125	20	2.5P	SP-17	
	1 5 6 12	HT	POSU16S	PO	P4	19	5P	PO-13		
			(PNSU16S)	PO	P4	20	5P	PO-13		
			TNMSU16S5	HT	P4	125	19	5P	HT-37	

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Standard	1 5 6 12	HT	TNMSU16S1					19	1.5P	HT-38
			(TNSU16S9)	HT	P4	125	20	9P	HT-37	
			(TNSU16S5)					20	5P	HT-38
			(TNSU16S1)					20	1.5P	HT-38
Long shank	5 6 8 11 12	LS-PO	POSU16SL20	PO	P4	200	19	5P	PO-30	
			(PNSU16SL20)							PO-30
For stainless steels	6 7 8	SU-SP	SUMRU16S	SP	P3	125	19	2.5P	SP-47	
			(SURU16S)							SP-47
Taps 1-14UNS										
Standard	5 6 8 11 12	SP	SPRU16Q	SP	P3	19	2.5P	SP-17		
			(SNRU16Q)	SP	P3	125	20	2.5P	SP-17	
	1 5 6 12	HT	POSU16Q	PO	P4	19	5P	PO-13		
			(PNSU16Q)	PO	P4	20	5P	PO-13		
			TNMSU16Q5				19	5P	HT-38	
			TNMSU16Q1				19	1.5P	HT-38	
			(TNSU16Q9)	HT	P4	125	20	9P	HT-38	
			(TNSU16Q5)				20	5P	HT-38	
		(TNSU16Q1)				20	1.5P	HT-38		
Taps 1-20UNEF										
Standard	5 6 8 11 12	SP	SPQU16N	SP	P2	125	19	2.5P	SP-17	
			(SNQU16N)	SP	P2	95	20	2.5P	SP-17	
	1 5 6 12	HT	TNMRU16N5				125	19	5P	HT-38
			TNMRU16N1				125	19	1.5P	HT-38
			(TNRU16N9)	HT	P3	95	20	9P	HT-38	
			(TNRU16N5)				95	20	5P	HT-38
		(TNRU16N1)				95	20	1.5P	HT-38	
Taps 1 1/8-7UNC										
Standard	5 6 8 11 12	SP	SPSU18Y	SP		23	2.5P	SP-17		
			(SNSU18Y)	SP	P4	135	22	2.5P	SP-17	
	1 5 6 12	HT	POSU18Y	PO		23	5P	PO-13		
			(PNSU18Y)	PO		22	5P	PO-13		
			TNMTU18Y5				23	5P	HT-38	
			TNMTU18Y1				23	1.5P	HT-38	
			(TNTU18Y9)	HT	P5	135	22	9P	HT-38	
			(TNTU18Y5)				22	5P	HT-38	
		(TNTU18Y1)				22	1.5P	HT-38		
Taps 1 1/8-12UNF										
Standard	5 6 8 11 12	SP	SPRU18S	SP	P3	135	23	2.5P	SP-17	
			(SNRU18S)				22		SP-17	
Taps 1 1/8-14UNEF										
Standard	5 6 8 11 12	SP	SPRU18Q	SP	P3	135	23	2.5P	SP-17	
			(SNRU18Q)				22		SP-17	
Taps 1 1/4-7UNC										
Standard	5 6 8 11 12	SP	SPSU20Y	SP				2.5P	SP-17	
			(SNSU20Y)	SP	P4	145	24	2.5P	SP-17	
			POSU20Y	PO					5P	PO-13

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For 3mm thread cast iron/machining Taps (M1)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤⑥⑧⑩⑬	N-PO	(PNSU20Y)	PO	P4	145	24	SP	PO-13
	①⑤⑥⑫	HT	(TNTU20Y9)					9P	HT-38
			TNTU20Y5	HT	P5	145	24	5P	HT-38
			TNTU20Y1					1.5P	HT-38
Taps 1 1/4-8UN									
Standard	⑤⑥⑧⑩⑬	SP	SPRU20X	SP	P3	145	24	2.5P	SP-17
	⑤⑥⑧⑩⑬	N-SP	(SNRU20X)						SP-17
	①⑤⑥⑫	HT	(TNTU20X9)					9P	HT-38
			TNTU20X5	HT	P5	145	24	5P	HT-38
			TNTU20X1					1.5P	HT-38
Taps 1 1/4-12UNF									
Standard	⑤⑥⑧⑩⑬	SP	SPRU20S	SP	P3	135	24	2.5P	SP-17
	⑤⑥⑧⑩⑬	N-SP	(SNRU20S)						SP-17
	①⑤⑥⑫	HT	(TNSU20S9)					9P	HT-38
			TNSU20S5	HT	P4	135	24	5P	HT-38
			TNSU20S1					1.5P	HT-38
Taps 1 3/8-6UNC									
Standard	⑤⑥⑧⑩⑬	SP	SPSU22Z	SP	P4			2.5P	SP-17
	⑤⑥⑧⑩⑬	N-SP	(SNSU22Z)	SP	P4			2.5P	SP-17
	①⑤⑥⑫	HT	(TNTU22Z9)					9P	HT-38
			POTU22Z	PO	P5	155	26	5P	PO-13
			(PNTU22Z)	PO	P5			5P	PO-13
			TNTU22Z5	HT	P5	155	26	5P	HT-38
			TNTU22Z1					1.5P	HT-38
Taps 1 3/8-8UN									
Standard	⑤⑥⑧⑩⑬	SP	SPRU22X	SP	P3	155	26	2.5P	SP-17
	⑤⑥⑧⑩⑬	N-SP	(SNRU22X)						SP-17
	①⑤⑥⑫	HT	(TNTU22X9)					9P	HT-38
			TNTU22X5	HT	P5	155	26	5P	HT-38
			TNTU22X1					1.5P	HT-38
Taps 1 3/8-12UNF									
Standard	⑤⑥⑧⑩⑬	SP	SPRU22S	SP	P3	135	26	2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNRU22S)						SP-18
	①⑤⑥⑫	HT	(TNSU22S9)					9P	HT-38
			TNSU22S5	HT	P4	135	26	5P	HT-38
			TNSU22S1					1.5P	HT-38
Taps 1 1/2-6UNC									
Standard	⑤⑥⑧⑩⑬	SP	SPSU24Z	SP	P4			2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNSU24Z)	SP	P4			2.5P	SP-18
	①⑤⑥⑫	HT	(TNTU24Z9)					9P	HT-38
			POTU24Z	PO	P5	160	30	5P	PO-13
			(PNTU24Z)	PO	P5			5P	PO-13
			TNTU24Z5	HT	P5	160	30	5P	HT-38
			TNTU24Z1					1.5P	HT-38

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps 1 1/2-12UNF									
Standard	⑤⑥⑧⑩⑬	SP	SPRU24S	SP	P3	135	30	2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNRU24S)						SP-18
	①⑤⑥⑫	HT	(TNSU24S9)					9P	HT-38
			TNSU24S5	HT	P4	135	30	5P	HT-38
			TNSU24S1					1.5P	HT-38
Taps 1 3/4-5UNC									
Standard	⑤⑥⑧⑩⑬	SP	SPSU280	SP	P4	175	35	2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNSU280)						SP-18
	①⑤⑥⑫	HT	(TNUU2809)					9P	HT-39
			TNUU2805	HT	P6	175	35	5P	HT-39
			TNUU2801					1.5P	HT-39
Taps 1 3/4-12UNC									
Standard	⑤⑥⑧⑩⑬	SP	SPRU28S	SP	P3	135	35	2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNRU28S)						SP-18
	①⑤⑥⑫	HT	(TNSU28S9)					9P	HT-39
			TNSU28S5	HT	P4	135	35	5P	HT-39
			TNSU28S1					1.5P	HT-39
Taps 2-4.5UNC									
Standard	⑤⑥⑧⑩⑬	SP	SPTU329	SP	P5	195	40	2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNTU329)						SP-18
Taps 2-12UN									
Standard	⑤⑥⑧⑩⑬	SP	SPRU32S	SP	P3	145	40	2.5P	SP-18
	⑤⑥⑧⑩⑬	N-SP	(SNRU32S)						SP-18

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies NO.0-80UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN0B GE2UN0B	Di-5
Dies NO.1-64UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16	5	2~2.5P	GD2UN1D	Di-5
Dies NO.1-72UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN1C GE2UN1C	Di-5
Dies NO.2-56UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN2E GE2UN2E	Di-5
Dies NO.2-64UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN2D GE2UN2D	Di-5
Dies NO.3-48UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN3F GE2UN3F	Di-5
Dies NO.3-56UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN3E GE2UN3E	Di-5
Dies NO.4-40UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN4H GE2UN4H	Di-5
Dies NO.4-48UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	16 20	5 7	2~2.5P	GD2UN4F GE2UN4F	Di-5
Dies NO.5-40UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UN5H	Di-5
Dies NO.5-44UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UN5G	Di-5
Dies NO.6-32UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UN6J	Di-5
Dies NO.6-40UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UN6H	Di-5
Dies NO.8-32UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UN8J	Di-5

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies NO.8-36UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UN8I	Di-5
Dies NO.10-24UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UNAM	Di-5
Dies NO.10-32UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UNAJ	Di-5
Dies NO.12-24UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UNCM	Di-5
Dies NO.12-28UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UNCK	Di-5
Dies NO.12-32UNEF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	20	7	2~2.5P	GE2UNCI	Di-5
Dies 1/4-20UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG2U04N	Di-5
					38	13		GJ2U04N	Di-5
For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG2U04N-L	Di-8
					38	13		GG2U04N-L	Di-8
Dies 1/4-28UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG2U04K	Di-5
					38	13		GJ2U04K	Di-5
For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG2U04K-L	Di-8
					38	13		GG2U04K-L	Di-8
Dies 1/4-32UNEF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG2U04J	Di-5
					38	13		GG2U04J	Di-5
Dies 5/16-18UNC									
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG2U05O	Di-5
					38	13		GJ2U05O	Di-5
For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG2U05O-L	Di-8
					38	13		GJ2U05O-L	Di-8
Dies 5/16-24UNF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG2U05M	Di-5
					38	13		GJ2U05M	Di-5
For left hand threads	SKS	6 8 11 12	AR-D LH	II	25	9	2~2.5P	GG2U05M-L	Di-8
					38	13		GJ2U05M-L	Di-8
Dies 5/16-32UNEF									
Adjustable dies	SKS	6 8 11 12	AR-D	II	25	9	2~2.5P	GG2U05J	Di-5

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on tapping machines Dies (SMA)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 3/8-16UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	25	9		GG2U06P	Di-5
					38	13	2~2.5P	GJ2U06P	Di-5
					50	16		GM2U06P	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	25	9	2~2.5P	GG2U06P-L	Di-8
					38	13		GJ2U06P-L	Di-8
Dies 3/8-24UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	25	9		GG2U06M	Di-5
					38	13	2~2.5P	GJ2U06M	Di-5
					50	16		GM2U06M	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	25	9	2~2.5P	GG2U06M-L	Di-8
					38	13		GJ2U06M-L	Di-8
Dies 3/8-32UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	25	9	2~2.5P	GG2U06J	Di-5
					38	13		GJ2U06J	Di-5
Dies 7/16-14UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U07Q	Di-5
					50	16		GM2U07Q	Di-5
Dies 7/16-20UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U07N	Di-5
					50	16		GM2U07N	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2U07N-L	Di-8
Dies 7/16-24UN									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U07M	Di-5
Dies 7/16-28UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U07K	Di-5
Dies 1/2-13UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U08R	Di-5
					50	16		GM2U08R	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2U08R-L	Di-8
Dies 1/2-20UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U08N	Di-5
					50	16		GM2U08N	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2U08N-L	Di-8
Dies 1/2-28UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U08K	Di-5
Dies 9/16-12UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U09S	Di-5
					50	16		GM2U09S	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2U09S-L	Di-8

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 9/16-18UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U09O	Di-5
					50	16		GM2U09O	Di-5
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	38	13	2~2.5P	GJ2U09O-L	Di-8
Dies 9/16U24UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U09M	Di-5
					50	16		GM2U09M	Di-5
Dies 5/8-11UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U10U	Di-6
					50	16		GM2U10U	Di-6
Dies 5/8-18UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U10O	Di-6
					50	16		GM2U10O	Di-6
For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II	50	16	2~2.5P	GM2U10O-L	Di-8
Dies 5/8-24UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	38	13	2~2.5P	GJ2U10M	Di-6
					50	16		GM2U10M	Di-6
Dies 3/4-10UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U12V	Di-6
					For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II
Dies 3/4-16UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U12P	Di-6
					For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II
Dies 3/4-20UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U12N	Di-6
Dies 7/8-9UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U14W	Di-6
					For left hand threads	SKS	⑥ ⑧ ⑪ ⑫	AR-D LH	II
Dies 7/8-14UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U14Q	Di-6
Dies 7/8-20UNEF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U14N	Di-6
Dies 1-8UNC									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U16X	Di-6
Dies 1-12UNF									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U16S	Di-6
Dies 1-14UNS									
Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D	II	50	16	2~2.5P	GM2U16Q	Di-6

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Main material	Symbol	Class	Thickness	Front face	Code	Product page
Dies 1-20UNEF							
Adjustable dies	SKS	6 8 11 12	AR-D	II	50	16 2~2.5P	GM2U16N Di-6
Dies 1 1/8-7UN							
Adjustable dies	SKS	6 8 11 12	AR-D	II	63	20 2~2.5P	GR2U18V Di-6
Dies 1 1/8U12UNF							
Adjustable dies	SKS	6 8 11 12	AR-D	II	63	20 2~2.5P	GR2U18S Di-6
Dies 1 1/4-7UNC							
Adjustable dies	SKS	6 8 11 12	AR-D	II	63	20 2~2.5P	GR2U20V Di-6
Dies 1 1/4-12UNF							
Adjustable dies	SKS	6 8 11 12	AR-D	II	63	20 2~2.5P	GR2U20S Di-6
Dies 1 3/8-6UNC							
Adjustable dies	SKS	6 8 11 12	AR-D	II	75	25 2~2.5P	GU2U22Z Di-6
Dies 1 3/8-12UNF							
Adjustable dies	SKS	6 8 11 12	AR-D	II	75	25 2~2.5P	GU2U22S Di-6
Dies 1 1/2-6UNC							
Adjustable dies	SKS	6 8 11 12	AR-D	II	75	25 2~2.5P	GU2U24Z Di-6
Dies 1 3/4-5UNC							
Adjustable dies	SKS	6 8 11 12	AR-D	II	75	25 2~2.5P	GU2U280 Di-6
Dies 2U4.5UNC							
Adjustable dies	SKS	6 8 11 12	AR-D	II	75	25 2~2.5P	GU2U329 Di-6

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Taps 1/8W40										
Standard	SKS	5 6 8 11 12	SP	SPPW02H	SP	P1	52	5	2.5P	SP-18
			N-SP	(SNMPW02H)	SP	P1	52	5	2.5P	SP-18
				(SNPW02H)	SP	P1	46	4	2.5P	SP-18
			PO	POQW02H	PO	P2	52	5	5P	PO-13
			N-PO	PNQW02H	PO	P2	46	4	5P	PO-13
Taps 5/32W32										
Standard	SKS	5 6 8 11 12	SP	SPQW2HJ	SP				2.5P	SP-18
			N-SP	(SNMQW2HJ)	SP				2.5P	SP-18
				(SNQW2HJ)	SP	P2	52	5	2.5P	SP-18
			PO	POQW2HJ	PO				5P	PO-13
			N-PO	PNQW2HJ	PO			5P	PO-13	
Taps 3/16W24										
Standard	SKS	5 6 8 11 12	SP	SPQW03M	SP				2.5P	SP-18
			N-SP	(SNMQW03M)	SP				2.5P	SP-18
				(SNQW03M)	SP	P2	60	5.5	2.5P	SP-18
			PO	POQW03M	PO				5P	PO-13
			N-PO	(PNQW03M)	PO			5P	PO-13	
For stainless steels	SKS	6 7 8	SU-SP	SUMQW03M	SP				2.5P	SP-47
				(SUQW03M)	SP				2.5P	SP-47
			SU-PO	PUMQW03M	PO	P2	60	5.5	5P	PO-37
			(PUQW03M)	PO			5P	PO-37		
Taps 7/32W24										
Standard	SKS	5 6 8 11 12	SP	SPQW3HM	SP		62	6	2.5P	SP-18
			N-SP	(SNMQW3HM)	SP		62	6	2.5P	SP-18
				(SNQW3HM)	SP	P2	60	5.5	2.5P	SP-18
			PO	POQW3HM	PO		62	6	5P	PO-13
			N-PO	(PNQW3HM)	PO		60	5.5	5P	PO-13
Taps 1/4W20										
Standard	SKS	5 6 8 11 12	SP	SPQW04N	SP	P2			2.5P	SP-18
			N-SP	(SNMQW04N)	SP	P2			2.5P	SP-18
				(SNQW04N)	SP	P2	62	6	2.5P	SP-18
			PO	PORW04N	PO	P3			5P	PO-13
			N-PO	(PNRW04N)	PO	P3		5P	PO-13	
For left hand threads	SKS	5 6 8 11 12	SP(LH)	SPQW04N-L	SP	P2			2.5P	SP-28
			N-SP(LH)	(SNQW04N-L)	SP	P2			2.5P	SP-28
			PO(LH)	PORW04N-L	PO	P3	62	6	5P	PO-21
			N-PO(LH)	(PNRW04N-L)	PO	P3			5P	PO-21
Long shank	SKS	5 6 8 11 12	LS-SP	SPQW04NL10	SP	P2	100		2.5P	SP-38
				SPQW04NL15	SP	P2	150		2.5P	SP-38
			LS-N-SP	(SNQW04NL10)	SP	P2	100		2.5P	SP-38
				(SNQW04NL15)	SP	P2	150	6	2.5P	SP-38
			LS-PO	PORW04NL10	PO	P3	100		5P	PO-30
				PORW04NL15	PO	P3	150		5P	PO-30
For high carbon steels	SKS	5 6	HC-SP	SCMQW04N	SP	P2	62	6	2.5P	SP-58
				(SCQW04N)	SP	P2	62	6	2.5P	SP-58

- M2 Taps
- M3 Taps
- M4 Taps
- M5 Taps
- M6 Taps
- M8 Taps
- M10 Taps
- M12 Taps
- M1-M7 Taps
- M9-M24 Taps
- M25-M48 Taps
- For Unified threads Taps
- For Whitworth threads Taps
- For Screw threads used on stamping machines Taps (SM)
- For Pipe threads Taps
- For American pipe threads Taps
- For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
For stainless steels	6 7 8	SU-SP	SUMQW04N	SP	P2			2.5P	SP-47	
			(SUQW04N)	SP	P2			2.5P	SP-47	
		SU-PO	PUMRW04N	PO	P3			5P	PO-37	
			(PURW04N)	PO	P3			5P	PO-37	
		SU-HT	TUMRW04N4	HT	P3	62	6	4P	HT-75	
			TUMRW04N1	HT	P3			1.5P	HT-75	
			(TURW04N9)	HT	P3			9P	HT-75	
			(TURW04N4)	HT	P3			4P	HT-75	
		(TURW04N1)	HT	P3			1.5P	HT-75		
Taps 5/16W18										
Standard	5 6 8 11 12	SP	SPQW05O	SP	P2		6.2	2.5P	SP-18	
		N-SP	(SNQW05O)	SP	P2	70		6.1	2.5P	SP-18
		PO	PORW05O	PO	P3			6.2	5P	PO-13
		N-PO	(PNRW05O)	PO	P3			6.1	5P	PO-13
For left hand threads	5 6 8 11 12	SP(LH)	SPQW05O-L	SP	P2		6.2	2.5P	SP-28	
		N-SP(LH)	(SNQW05O-L)	SP	P2	70		6.1	2.5P	SP-28
		PO(LH)	PORW05O-L	PO	P3			6.2	5P	PO-21
		N-PO(LH)	(PNRW05O-L)	PO	P3			6.1	5P	PO-21
Long shank	5 6 8 11 12	LS-SP	SPQW05OL10	SP	P2	100	6.2	2.5P	SP-38	
			SPQW05OL15	SP	P2	150	6.2	2.5P	SP-38	
		LS-N-SP	(SNQW05OL10)	SP	P2	100	6.1	2.5P	SP-38	
			(SNQW05OL15)	SP	P2	150	6.1	2.5P	SP-38	
		LS-PO	PORW05OL10	PO	P3	100	6.2	5P	PO-30	
			PORW05OL15	PO	P3	150	6.2	5P	PO-30	
		LS-N-PO	(PNRW05OL10)	PO	P3	100	6.1	5P	PO-30	
			(PNRW05OL15)	PO	P3	150	6.1	5P	PO-30	
For high carbon steels	5 6	HC-SP	SCMQW05O	SP	P2	70	6.2	2.5P	SP-58	
			(SCQW05O)	SP	P2			6.1	2.5P	SP-58
For stainless steels	6 7 8	SU-SP	SUMQW05O	SP	P2		6.2	2.5P	SP-47	
			(SUQW05O)	SP	P2			6.1	2.5P	SP-47
		SU-PO	PUMRW05O	PO	P3			6.2	5P	PO-37
			(PURW05O)	PO	P3			6.1	5P	PO-37
		SU-HT	TUMRW05O4	HT	P3	70	6.2	4P	HT-75	
			TUMRW05O1	HT	P3			6.2	1.5P	HT-75
			(TURW05O9)	HT	P3			6.1	9P	HT-75
			(TURW05O4)	HT	P3			6.1	4P	HT-75
			(TURW05O1)	HT	P3			6.1	1.5P	HT-75
				(TURW05O1)	HT	P3			6.1	1.5P
Taps 3/8W16										
Standard	5 6 8 11 12	SP	SPQW06P	SP	P2			2.5P	SP-18	
		N-SP	(SNQW06P)	SP	P2	75	7	2.5P	SP-18	
		PO	PORW06P	PO	P3			5P	PO-13	
		N-PO	(PNRW06P)	PO	P3			5P	PO-13	
For left hand threads	5 6 8 11 12	SP(LH)	SPQW06P-L	SP	P2			2.5P	SP-28	
		N-SP(LH)	(SNQW06P-L)	SP	P2	75	7	2.5P	SP-28	
		PO(LH)	PORW06P-L	PO	P3			5P	PO-21	
		N-PO(LH)	(PNRW06P-L)	PO	P3			5P	PO-21	
Long shank	5 6 8 11 12	LS-SP	SPQW06PL10			100			SP-38	
			SPQW06PL15			150			SP-38	
			SPQW06PL20	SP	P2	200	7	2.5P	SP-38	
			SPQW06PL10			100			SP-38	
		LS-N-SP	(SNQW06PL10)			100			SP-38	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Long shank	5 6 8 11 12	LS-N-SP	(SNQW06PL15)	SP	P2	150		2.5P	SP-38		
			(SNQW06PL20)	SP	P2	200		2.5P	SP-38		
		LS-PO	PORW06PL10	PO	P3	100	7	5P	PO-30		
			PORW06PL15	PO	P3	150		5P	PO-30		
		LS-N-PO	(PNRW06PL10)	PO	P3	100		5P	PO-30		
			(PNRW06PL15)	PO	P3	150		5P	PO-30		
		For high carbon steels	5 6	HC-SP	SCMQW06P	SP	P2	75	7	2.5P	SP-58
					(SCQW06P)	SP	P2			2.5P	SP-58
For stainless steels	6 7 8	SU-SP	SUMQW06P	SP	P2			2.5P	SP-47		
			(SUQW06P)	SP	P2			2.5P	SP-47		
		SU-PO	PUMRW06P	PO	P3			5P	PO-37		
			(PURW06P)	PO	P3			5P	PO-37		
		SU-HT	TUMRW06P4	HT	P3	75	7	4P	HT-76		
			TUMRW06P1	HT	P3			1.5P	HT-76		
			(TURW06P9)	HT	P3			9P	HT-76		
			(TURW06P4)	HT	P3			4P	HT-76		
		(TURW06P1)	HT	P3			1.5P	HT-76			
Taps 7/16W14											
Standard	5 6 8 11 12	SP	SPRW07Q	SP		82	8.5	2.5P	SP-18		
		N-SP	(SNRW07Q)	SP		80	8	2.5P	SP-18		
		PO	PORW07Q	PO	P3	82	8.5	5P	PO-13		
		N-PO	(PNRW07Q)	PO		80	8	5P	PO-13		
For left hand threads	5 6 8 11 12	SP(LH)	SPRW07Q-L	SP	P3	82	8.5	2.5P	SP-28		
Long shank	5 6 8 11 12	LS-SP	SPRW07QL15	SP			8.5	2.5P	SP-38		
		LS-N-SP	(SNRW07QL15)	SP	P3	150	8	2.5P	SP-38		
		LS-PO	PORW07QL15	PO				8.5	5P	PO-30	
For stainless steels	6 7 8	SU-SP	SUMRW07Q	SP		82	8.5	2.5P	SP-47		
			(SURW07Q)	SP		80	8	2.5P	SP-47		
		SU-PO	PUMRW07Q	PO		82	8.5	5P	PO-37		
			(PURW07Q)	PO		80	8	5P	PO-37		
		SU-HT	TUMRW07Q4	HT	P3	82	8.5	4P	HT-76		
			TUMRW07Q1	HT		82	8.5	1.5P	HT-76		
			(TURW07Q9)	HT		80	8	9P	HT-76		
			(TURW07Q4)	HT		80	8	4P	HT-76		
			(TURW07Q1)	HT		80	8	1.5P	HT-76		
				(TURW07Q1)	HT		80	8	1.5P	HT-76	
Taps 1/2W12											
Standard	5 6 8 11 12	SP	SPRW08S	SP		88	10.5	2.5P	SP-18		
		N-SP	(SNRW08S)	SP		85	9	2.5P	SP-18		
		PO	PORW08S	PO	P3	88	10.5	5P	PO-13		
		N-PO	(PNRW08S)	PO		85	9	5P	PO-13		
For left hand threads	5 6 8 11 12	SP(LH)	SPRW08S-L	SP		88	10.5	2.5P	SP-28		
		N-SP(LH)	(SNRW08S-L)	SP		85	9	2.5P	SP-28		
		PO(LH)	PORW08S-L	PO	P3	88	10.5	5P	PO-21		
		N-PO(LH)	(PNRW08S-L)	PO		85	9	5P	PO-21		
Long shank	5 6 8 11 12	LS-SP	SPRW08SL15	SP		150	10.5	2.5P	SP-38		
			SPRW08SL20	SP		200	10.5	2.5P	SP-38		
		LS-N-SP	(SNRW08SL15)	SP		150	9	2.5P	SP-38		
			(SNRW08SL20)	SP	P3	200	9	2.5P	SP-38		
		LS-PO	PORW08SL15	PO		150	10.5	5P	PO-30		
	PORW08SL20	PO		200	10.5	5P	PO-30				

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page				
Long shank	5 6 8 11 12	LS-N-PO	(PNRW08SL15)	PO	P3	150	9	5P	PO-30				
			(PNRW08SL20)			200			PO-30				
For high carbon steels	5 6	HC-SP	SCMRW08S	SP	P3	88	10.5	2.5P	SP-58				
			(SCRW08S)			85	9		SP-58				
For stainless steels	6 7 8	SU-SP	SUMRW08S	SP	P3	88	10.5	2.5P	SP-47				
			(SURW08S)			85	9		2.5P	SP-47			
			SU-PO			PUMRW08S	PO	P3	88	10.5	5P	PO-37	
						(PURW08S)			85	9		5P	PO-37
						SU-HT	TUMRW08S4	HT	P3	88	10.5	4P	HT-76
							TUMRW08S1			88	10.5		1.5P
							(TURW08S9)	HT	P3	85	9	9P	HT-76
							(TURW08S4)	HT	P3	85	9	4P	HT-76
							(TURW08S1)	HT	P3	85	9	1.5P	HT-76

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page				
Taps 3/4W10													
Standard	5 6 8 11 12	SP	SPRW12V	SP	P3	150	15	2.5P	SP-19				
			(SNRW12V)			140			2.5P	SP-19			
			POSW12V			PO	P4	105	15	5P	PO-14		
			(PNSW12V)					140			5P	PO-14	
For left hand threads	5 6 8 11 12	SP(LH)	SPRW12V-L	SP	P3	150	15	2.5P	SP-28				
			(SNRW12V-L)			140			2.5P	SP-28			
			POSW12V-L			PO	P4	105	15	5P	PO-21		
			(PNSW12V-L)					140			5P	PO-21	
Long shank	5 6 8 11 12	LS-SP	SPRW12VL15	SP	P3	150	15	2.5P	SP-38				
			SPRW12VL20			200			15	2.5P	SP-38		
			(SNRW12VL15)			SP	P3	150	14	2.5P	SP-38		
			(SNRW12VL20)					200			14	2.5P	SP-38
			POSW12VL15			PO	P4	150	15	5P	PO-30		
			POSW12VL20					200			15	5P	PO-30
			LS-N-PO			PO	P4	150	14	5P	PO-30		
			(PNSW12VL15)					200			14	5P	PO-30
	(PNSW12VL20)	200	14	5P	PO-30								
For high carbon steels	5 6	HC-SP	SCMRW12V	SP	P3	105	15	2.5P	SP-58				
		(SCRW12V)	140			2.5P			SP-58				
For stainless steels	6 7 8	SU-SP	SUMRW12V	SP	P3	150	15	2.5P	SP-47				
			(SURW12V)			140			2.5P	SP-47			
			SU-PO			PUMSW12V	PO	P4	150	15	5P	PO-37	
						(PUSW12V)			140			5P	PO-37
						SU-HT	TUMSW12V4	HT	P4	105	15	4P	HT-76
							TUMSW12V1			140			1.5P
							(TUSW12V9)	HT	P4	140	9P	HT-76	
							(TUSW12V4)	HT	P4	140	4P	HT-76	
		(TUSW12V1)	HT	P4	140	1.5P	HT-76						

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page		
Taps 7/8W9											
Standard	5 6 8 11 12	SP	SPRW14W	SP	P3	150	15	2.5P	SP-19		
			(SNRW14W)			115			17	2.5P	SP-19
			POSW14W			PO	P4	150	5P	PO-14	
			(PNSW14W)					150		5P	PO-14
Long shank	5 6 8 11 12	LS-SP	SPRW14WL15	SP	P3	150	15	2.5P	SP-38		
			SPRW14WL20			200			15	2.5P	SP-38
			(SNRW14WL15)			SP	P3	150	15	2.5P	SP-38
			(SNRW14WL20)					200			17
			POSW14WL15			PO	P4	150	5P	PO-30	
			POSW14WL20					200		5P	PO-30
			LS-N-PO			PO	P4	200	5P	PO-30	
			(PNSW14WL20)					200		5P	PO-30
For high carbon steels	5 6	HC-SP	SCMRW14W	SP	P3	115	17	2.5P	SP-58		
		(SCRW14W)	115			17			2.5P	SP-58	
For stainless steels	6 7 8	SU-SP	SUMRW14W	SP	P3	115	17	2.5P	SP-47		
		(SURW14W)	115			17			2.5P	SP-47	

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page	
Taps 1W8										
Standard	5 6 8 11 12	SP	SPRW16X	SP	P3	190	19	2.5P	SP-19	
			(SNRW16X)			125			20	2.5P
			POSW16X			PO	P4	190	5P	PO-14
			(PNSW16X)					200		5P

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamp machines Taps (SM)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
Long shank	⑤⑥⑧ ⑪⑫	LS-SP	SPRW16XL15	SP	P3	150	19	2.5P	SP-38	
			SPRW16XL20	SP	P3	200	19	2.5P	SP-38	
		LS-N-SP	(SNRW16XL15)	SP	P3	150	20	2.5P	SP-38	
			(SNRW16XL20)	SP	P3	200	20	2.5P	SP-38	
		LS-PO	POSW16XL15	PO	P4	150	19	5P	PO-30	
			POSW16XL20	PO	P4	200	19	5P	PO-30	
		LS-N-PO	(PNSW16XL15)	PO	P4	150	20	5P	PO-30	
			(PNSW16XL20)	PO	P4	200	20	5P	PO-30	
For high carbon steels	⑤⑥	HC-SP	SCMRW16X	SP	P3	125	19	2.5P	SP-58	
			(SCRW16X)				20		SP-58	
For stainless steels	⑥⑦⑧	SU-SP	SUMRW16X	SP	P3	125	19	2.5P	SP-48	
			(SURW16X)				20		SP-48	
Taps 1 1/8W7										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW18Y	SP			23	2.5P	SP-19	
		N-SP	(SNSW18Y)	SP	P4	135	22	2.5P	SP-19	
		PO	POSW18Y	PO			23	5P	PO-14	
		N-PO	(PNSW18Y)	PO			22	5P	PO-14	
Taps 1 1/4W7										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW20Y	SP				2.5P	SP-19	
		N-SP	(SNSW20Y)	SP	P4	145	24	2.5P	SP-19	
		PO	POSW20Y	PO				5P	PO-14	
		N-PO	(PNSW20Y)	PO				5P	PO-14	
Taps 1 3/8W6										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW22Z	SP	P4			2.5P	SP-19	
		N-SP	(SNSW22Z)	SP	P4			2.5P	SP-19	
		PO	POTW22Z	PO	P5	155	26	5P	PO-14	
		N-PO	(PNTW22Z)	PO	P5			5P	PO-14	
Taps 1 1/2W6										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW24Z	SP	P4			2.5P	SP-19	
		N-SP	(SNSW24Z)	SP	P4		160	30	2.5P	SP-19
		PO	POTW24Z	PO	P5			5P	PO-14	
		N-PO	(PNTW24Z)	PO	P5			5P	PO-14	
Taps 1 5/8W5										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW260	SP	P4	170	32	2.5P	SP-19	
		N-SP	(SNSW260)						SP-19	
Taps 1 3/4W5										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW280	SP	P4	175	35	2.5P	SP-19	
		N-SP	(SNSW280)						SP-19	
Taps 1 7/8W4.5										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW309	SP	P4	185	38	2.5P	SP-19	
		N-SP	(SNSW309)						SP-19	
Taps 2W4.5										
Standard	⑤⑥⑧ ⑪⑫	SP	SPSW329	SP	P4	195	40	2.5P	SP-19	
		N-SP	(SNSW329)						SP-19	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard	⑤⑥⑧ ⑪⑫	PO	POTW329	PO	P5	195	40		PO-14
		N-PO	(PNTW329)						PO-14

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For 3mm threads used on some machines Taps (mm)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 1/8W40									
Adjustable dies	SKS		AR-D	II	20	7	2~2.5P	GEPW02H	Di-6
					25	9		GGPW02H	Di-6
For left hand threads	SKS		AR-D LH	II	25	9	2~2.5P	GGPW02H-L	Di-9
Dies 5/32W32									
Adjustable dies	SKS		AR-D	II	20	7	2~2.5P	GEPW2HU	Di-6
					25	9		GGPW2HU	Di-6
Dies 3/16W24									
Adjustable dies	SKS		AR-D	II	20	7	2~2.5P	GEPW03M	Di-6
					25	9		GGPW03M	Di-6
For left hand threads	SKS		AR-D LH	P	20	7	2~2.5P	GEPW03M-L	Di-9
					25	9		GGPW03M-L	Di-9
Dies 7/32W24									
Adjustable dies	SKS		AR-D	II	20	7	2~2.5P	GEPW3HM	Di-6
Dies 1/4W20									
Adjustable dies	SKS		AR-D		20	7		GEPW04N	Di-6
	SKS		AR-D	II	25	9	2~2.5P	GGPW04N	Di-6
	SKS		AR-D	II	38	13		GJPW04N	Di-6
	HSS		AR-D HSS		38	13		HJPW04N	Di-14
For left hand threads					20	7		GEPW04N-L	Di-8
	SKS		AR-D LH	P	25	9	2~2.5P	GGPW04N-L	Di-8
					38	13		GJPW04N-L	Di-8
Dies 5/16W18									
Adjustable dies	SKS		AR-D		25	9		GGPW05O	Di-6
	SKS		AR-D	II	50	16	2~2.5P	GMPW05O	Di-6
	HSS		AR-D HSS		38	13		HJPW05O	Di-14
For left hand threads	SKS		AR-D LH	P	25	9	2~2.5P	GGPW05O-L	Di-9
					38	13		GJPW05O-L	Di-9
Dies 3/8W16									
Adjustable dies	SKS		AR-D		25	9		GGPW06P	Di-6
	SKS		AR-D		38	13		GJPW06P	Di-6
	SKS		AR-D	II	50	16	2~2.5P	GMPW06P	Di-6
	HSS		AR-D HSS		38	13		HJPW06P	Di-14
	HSS		AR-D HSS		50	16		HMPW06P	Di-14
For left hand threads					25	9		GGPW06P-L	Di-9
	SKS		AR-D LH	P	38	13	2~2.5P	GJPW06P-L	Di-9
					50	16		GMPW06P-L	Di-9
Dies 7/16W14									
Adjustable dies	SKS		AR-D	II	38	13	2~2.5P	GJPW07Q	Di-6
					50	16		GMPW07Q	Di-6
For left hand threads	SKS		AR-D LH	P	38	13	2~2.5P	GJPW07Q-L	Di-9
					50	16		GMPW07Q-L	Di-9

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 1/2W12									
Adjustable dies	SKS		AR-D		38	13		GJPW08S	Di-6
	SKS		AR-D	II	50	16	2~2.5P	GMPW08S	Di-6
	HSS		AR-D HSS		38	13		HJPW08S	Di-14
	HSS		AR-D HSS		50	16		HMPW08S	Di-14
For left hand threads	SKS		AR-D LH	P	38	13	2~2.5P	GJPW08S-L	Di-9
					50	16		GMPW08S-L	Di-9
Dies 9/16W12									
Adjustable dies	SKS		AR-D	II	38	13	2~2.5P	GJPW09S	Di-6
					50	16		GMPW09S	Di-6
Dies 5/8W11									
Adjustable dies	SKS		AR-D		38	13		GJPW10U	Di-6
	SKS		AR-D	II	50	16	2~2.5P	GMPW10U	Di-6
	HSS		AR-D HSS		38	13		HJPW10U	Di-14
	HSS		AR-D HSS		50	16		HMPW10U	Di-14
For left hand threads	SKS		AR-D LH	P	50	16	2~2.5P	GMPW10U-L	Di-9
Dies 3/4W10									
Adjustable dies	SKS		AR-D	II	50	16	2~2.5P	GMPW12V	Di-6
	HSS		AR-D HSS		50	16		HMPW12V	Di-14
For left hand threads	SKS		AR-D LH	P	50	16	2~2.5P	GMPW12V-L	Di-9
Dies 7/8W9									
Adjustable dies	SKS		AR-D	II	50	16	2~2.5P	GMPW14W	Di-6
	HSS		AR-D HSS		50	16		HMPW14W	Di-14
For left hand threads	SKS		AR-D LH	P	50	16	2~2.5P	GMPW14W-L	Di-9
Dies 1W8									
Adjustable dies	SKS		AR-D	II	50	16	2~2.5P	GMPW16X	Di-6
	HSS		AR-D HSS		50	16		HMPW16X	Di-14
For left hand threads	SKS		AR-D LH	II	50	16	2~2.5P	GMPW16X-L	Di-9
Dies 1 1/8W7									
Adjustable dies	SKS		AR-D	II	63	20	2~2.5P	GRPW18Y	Di-6
					75	25		GUPW18Y	Di-6
Dies 1 1/4W7									
Adjustable dies	SKS		AR-D	II	63	20	2~2.5P	GRPW20Y	Di-6
					75	25		GUPW20Y	Di-6
For left hand threads	SKS		AR-D LH	P	63	20	2~2.5P	GRPW20Y-L	Di-9
Dies 1 3/8W6									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GUPW22Z	Di-6
Dies 1 1/2W6									
Adjustable dies	SKS		AR-D	II	75	25	2~2.5P	GUPW24Z	Di-6

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads used on tapping machines Dies (SMA)
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

- 1** Cast iron, Ductile cast iron, Sintered material
- 2** High hardness material
- 3** Heat treated steel (45-55HRC)
- 4** Heat treated steel (25-45HRC)
- 5** High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6** Medium carbon steel, Cast steel
- 7** Stainless steel
- 8** Low carbon steel
- 9** Titanium alloy
- 10** Nickel base alloy
- 11** Rolled aluminum, Copper, Copper alloy
- 12** Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13** Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps 1/16SM80									
Standard	1 5 6 12 HT		TNMP504B5	HT	P1	36	3	5P	HT-39
			TNMP504B1					1.5P	HT-39
Taps 5/64SM64									
Standard	1 5 6 12 HT		TNMP505D5	HT	P1	42	3	5P	HT-39
			TNMP505D1					1.5P	HT-39
Taps 3/32SM56									
Standard	5 6 8 11 12	SP	SPP506E	SP		46		2.5P	SP-19
		N-SP	(SNMP506E)	SP		46		2.5P	SP-19
			(SNP506E)	SP	P1	42	3	2.5P	SP-19
		PO	POP506E	PO		46		5P	PO-14
		N-PO	(PNP506E)	PO		42		5P	PO-14
	1 5 6 12 HT		TNMP506E5	HT	P1	46	3	5P	HT-39
			TNMP506E1					1.5P	HT-39
Taps 3/32SM100									
Standard	1 5 6 12 HT		TNMP506A5	HT	P1	46	3	5P	HT-39
			TNMP506A1					1.5P	HT-39
Taps 1/8SM40									
Standard	5 6 8 11 12	SP	SPP508H	SP	P1	52	5	2.5P	SP-19
		N-SP	(SNMP508H)	SP	P1	52	5	2.5P	SP-19
			(SNP508H)	SP	P1	46	4	2.5P	SP-19
		PO	POQ508H	PO	P2	52	5	5P	PO-14
		N-PO	(PNQ508H)	PO	P2	46	4	5P	PO-14
	1 5 6 12 HT		TNMQ508H5	HT	P2	52	5	5P	HT-39
			TNMQ508H1					1.5P	HT-39
Taps 1/8SM44									
Standard	5 6 8 11 12	SP	SPP508G	SP	P1	52	5	2.5P	SP-19
		N-SP	(SNMP508G)	SP	P1	52	5	2.5P	SP-19
			(SNP508G)	SP	P1	46	4	2.5P	SP-19
		PO	POQ508G	PO	P2	52	5	5P	PO-14
		N-PO	(PNQ508G)	PO	P2	46	4	5P	PO-14
	1 5 6 12 HT		TNMQ508G5	HT	P2	52	5	5P	HT-39
			TNMQ508G1					1.5P	HT-39
Taps 9/64SM40									
Standard	5 6 8 11 12	SP	SPP509H	SP	P1	52	5	2.5P	SP-19
		N-SP	(SNMP509H)	SP	P1	52	5	2.5P	SP-19
			(SNP509H)	SP	P1	48	4	2.5P	SP-19
		PO	POQ509H	PO	P2	52	5	5P	PO-14
		N-PO	(PNQ509H)	PO	P2	48	4	5P	PO-14
	1 5 6 12 HT		TNMQ509H5	HT	P2	52	5	5P	HT-39
			TNMQ509H1					1.5P	HT-39
Taps 11/64SM40									
Standard	5 6 8 11 12	SP	SPP511H	SP	P1	60	5.5	2.5P	SP-19
		N-SP	(SNMP511H)	SP	P1	60	5.5	2.5P	SP-19

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard									
	5 6 8 11 12	N-SP	(SNPS11H)	SP	P1	55	5	2.5P	SP-19
		PO	POQS11H	PO	P2	60	5.5	5P	PO-14
		N-PO	(PNQS11H)	PO	P2	55	5	5P	PO-14
	1 5 6 12 HT		TNMQ511H5	HT	P2	60	5.5	5P	HT-39
			TNMQ511H1					1.5P	HT-39
Taps 3/16SM24									
Standard	1 5 6 12 HT		TNMQ512M5	HT	P2	60	5.5	5P	HT-39
			TNMQ512M1					1.5P	HT-39
Taps 3/16SM28									
Standard	5 6 8 11 12	SP	SPQS12K	SP				2.5P	SP-20
		N-SP	(SNMQ512K)	SP				2.5P	SP-20
			(SNQ512K)	SP	P2	60	5.5	2.5P	SP-20
		PO	POQS12K	PO				5P	PO-14
		N-PO	(PNQ512K)	PO				5P	PO-14
	1 5 6 12 HT		TNMQ512K5	HT	P2	60	5.5	5P	HT-39
			TNMQ512K1					1.5P	HT-39
Taps 3/16SM32									
Standard	5 6 8 11 12	SP	SPQS12J	SP				2.5P	SP-20
		N-SP	(SNMQ512J)	SP				2.5P	SP-20
			(SNQ512J)	SP	P2	60	5.5	2.5P	SP-20
		PO	POQS12J	PO				5P	PO-14
		N-PO	(PNQ512J)	PO				5P	PO-14
	1 5 6 12 HT		TNMQ512J5	HT	P2	60	5.5	5P	HT-39
			TNMQ512J1					1.5P	HT-39
Taps 3/16SM40									
Standard	1 5 6 12 HT		TNMQ512H5	HT	P2	60	5.5	5P	HT-39
			TNMQ512H1					1.5P	HT-39
Taps 7/32SM32									
Standard	5 6 8 11 12	SP	SPQS14J	SP		62	6	2.5P	SP-20
		N-SP	(SNMQ514J)	SP		62	6	2.5P	SP-20
			(SNQ514J)	SP	P2	60	5.5	2.5P	SP-20
		PO	POQS14J	PO		62	6	5P	PO-14
		N-PO	(PNQ514J)	PO		60	5.5	5P	PO-14
Taps 15/64SM28									
Standard	5 6 8 11 12	SP	SPQS15K	SP				2.5P	SP-20
		N-SP	(SNMQ515K)	SP				2.5P	SP-20
			(SNQ515K)	SP	P2	62	6	2.5P	SP-20
		PO	POQS15K	PO				5P	PO-14
		N-PO	(PNQ515K)	PO				5P	PO-14
	1 5 6 12 HT		TNMQ515K5	HT	P2	62	6	5P	HT-39
			TNMQ515K1					1.5P	HT-39
Taps 1/4SM24									
Standard	5 6 8 11 12	SP	SPQS16M						SP-20
		N-SP	(SNMQ516M)	SP	P2	62	6	2.5P	SP-20
			(SNQ516M)						SP-20

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

	Spiral	Straight	Spiral point	Left hand spiral	Roll
Symbol of flute design	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Standard		PO	POQS16M	PO	P2	62	6	5P	PO-14
		N-PO	(PNQS16M)						PO-14
Taps 1/4SM40									
Standard		SP	SPPS16H	SP	P1	62		2.5P	SP-20
		N-SP	(SNMPS16H)						SP-20
			(SNPS16H)	SP	P1	55	6	2.5P	SP-20
		PO	POQS16H	PO	P2	62		5P	PO-14
		N-PO	(PNQS16H)	PO	P2	55		5P	PO-14

Dies selection	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 1/16SM80								
Adjustable dies	SKS	AR-D	II	16	5	2~2.5P	GD2S04B	Di-6
							GE2S04B	Di-6
Dies 5/64SM64								
Adjustable dies	SKS	AR-D	II	16	5	2~2.5P	GD2S05D	Di-6
							GE2S05D	Di-6
Dies 3/32SM56								
Adjustable dies	SKS	AR-D	II	16	5	2~2.5P	GD2S06E	Di-6
							GE2S06E	Di-6
Dies 3/32SM100								
Adjustable dies	SKS	AR-D	II	16	5	2~2.5P	GD2S06A	Di-6
Dies 1/8SM40								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S08H	Di-6
Dies 1/8SM44								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S08G	Di-6
							GG2S08G	Di-6
Dies 1/8SM48								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S08F	Di-6
Dies 9/64SM40								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S09H	Di-6
							GG2S09H	Di-6
Dies 11/64SM40								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S11H	Di-6
							GG2S11H	Di-6
Dies 3/16SM24								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S12M	Di-6
Dies 3/16SM28								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S12K	Di-6

Dies selection	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies 3/16SM32								
Adjustable dies	SKS	AR-D	II	25	9	2~2.5P	GG2S12K	Di-6
							GE2S12J	Di-6
Dies 7/32SM32								
Adjustable dies	SKS	AR-D	II	25	9	2~2.5P	GG2S12J	Di-6
							GG2S12J	Di-6
Dies 15/64SM28								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S14J	Di-6
							GE2S15K	Di-7
Dies 1/4SM24								
Adjustable dies	SKS	AR-D	II	20	7	2~2.5P	GE2S16M	Di-7
							GG2S15K	Di-7
Dies 1/4SM40								
Adjustable dies	SKS	AR-D	II	25	9	2~2.5P	GE2S16H	Di-7
							GG2S16H	Di-7

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Over threads used of bearing machines Dies.com
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps 1/16-28										
Rc	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC01K	HT	II	59	8	2.5P Pipe-1
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T01K-8	HT	II	55	8	2.5P Pipe-1
			5 6 8 10 12	SP-PT	SH2T01K-8	SP	II	55	8	2.5P Pipe-5
		For PT threads short (lg) type	1 5 6 11 12	S-PT	TSPT01K-8	HT	II	55	8	2.5P Pipe-3
			5 6 8 10 12	PT-X	THX2T01K-8			75	8	Pipe-2
			5 6 8 10 12	SP-PT-X	SHX2T01K-8	SP	II	75	8	2.5P Pipe-6
Long shank		For PT threads	1 5 6 10 12	LS-PT	L10T01K-8	HT	II	100	8	2.5P Pipe-4
			6 7 8	INT-PT	TINT01K-8	SL	II	55	8	3P Pipe-8
Interrupted		For PT threads	6 7 8	INT-S-PT	TIST01K-8	SL	II	55	8	3P Pipe-8
		For PT threads short (lg) type	6 7 8							
For cast irons		For PT threads	1 4 5 12	FC-PT	FCPT01K-8	HT	II	55	8	2.5P Pipe-13
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT01K-8	HT	II	55	8	2.5P Pipe-13
Rp	Standard (ISO standard)		1 5 6 10 12	Rp	TH2RP01K	HT	II	59	8	3.5P Pipe-15
PS	Standard		1 5 6 10 12	PS	TH2P01K-8	HT	II	55	8	3.5P Pipe-15
G	Standard (ISO standard)		1 5 6 10 12	G	TH2G01K	HT	II	59	8	3.5P Pipe-19
PF	Standard		1 5 6 10 12	PF	TH2F01K-8	HT	II	55	8	3.5P Pipe-19

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps 1/8-28												
Rc	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC02K	HT	II	59	8	2.5P Pipe-1		
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T02K	HT	II	55	8	2.5P Pipe-1		
			5 6 8 10 12	SP-PT	SH2T02K	SP	II	55	8	2.5P Pipe-5		
		For PT threads	1 5 6 10 12	S-PT	TSPT02K	HT	II	55	8	2.5P Pipe-3		
			5 6 8 10 12	SP-S-PT	SSPT02K	SP	II	55	8	2.5P Pipe-6		
			1 5 6 10 12	PT-X	THX2T02K	HT	II	75	8	2.5P Pipe-2		
			5 6 8 10 12	SP-PT-X	SHX2T02K	SP	II	75	8	2.5P Pipe-6		
For left hand threads		For PT threads	1 5 6 10 12	PT(LH)	TH2T02K-L	HT	II	55	8	2.5P Pipe-2		
		For PT threads short (lg) type	1 5 6 10 12	S-PT(LH)	TSPT02K-L	HT	II	55	8	2.5P Pipe-3		
Long shank		For PT threads	1 5 6 11 12	LS-PT	L10T02K			100		Pipe-4		
			11 12		L15T02K	HT	II	150	8	2.5P Pipe-4		
			5 6 8 11 12		L20T02K			200		Pipe-4		
			5 6 8 11 12	LS-SP-PT	SH2T02KL10			100		Pipe-7		
			5 6 8 11 12		SH2T02KL12	SP	II	120	8	2.5P Pipe-7		
			5 6 8 11 12		SH2T02KL15			150		Pipe-7		
For PT threads short (lg) type			1 5 6 11 12	LS-S-PT	TSPT02KL10			100		Pipe-4		
			11 12		TSPT02KL15	HT	II	150	8	2.5P Pipe-4		
			5 6 8 11 12		TSPT02KL20			200		Pipe-4		
			5 6 8 11 12	LS-SP-S-PT	SSPT02KL10			100		Pipe-7		
			5 6 8 11 12		SSPT02KL12	SP	II	120	8	2.5P Pipe-7		
			5 6 8 11 12		SSPT02KL15			150		Pipe-7		
		Interrupted		For PT threads	6 7 8	INT-PT	TINT02K	SL	II	55	8	3P Pipe-8
				For PT threads short (lg) type	6 7 8	INT-S-PT	TIST02K	SL	II	55	8	3P Pipe-8
Long shank for PT threads			6 7 8	LS-INT-PT	TINT02KL10			100		Pipe-9		
			6 7 8		TINT02KL12	SL	II	120	8	3P Pipe-9		
			6 7 8		TINT02KL15			150		Pipe-9		
Long shank for PT threads short (lg) type			6 7 8	LS-INT-S-PT	TIST02KL10			100		Pipe-9		
			6 7 8		TIST02KL12	SL	II	120	8	3P Pipe-9		
			6 7 8		TIST02KL15			150		Pipe-9		
For low carbon steels		For PT threads	6 8	LC-PT	LCPT02K	HT	II	55	8	2.5P Pipe-10		
		For PT threads short (lg) type	6 8	LC-S-PT	LCSPT02K	HT	II	55	8	2.5P Pipe-10		
For stainless steels		For PT threads	6 7 8	SU-PT	TU2T02K	HT	II	55	8	2.5P Pipe-11		
			6 7 8	SU-SP-PT	-	SP	II	55	8	2.5P Pipe-12		

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps 1/4-19										
PT	For stainless steels	For PT threads	6 7 8	SU-S-PT	TUST02K	HT	II	55	8	2.5P Pipe-11
		For PT threads short (lg) type	6 7 8	SU-SP-S-PT	-	SP	II	55	8	2.5P Pipe-12
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT02K	HT	II	55	8	2.5P Pipe-13
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT02K	HT	II	55	8	2.5P Pipe-13
Carbide		For PT threads	1 12 13	CT-PT	TCPT02K	HT	II	55	8	2.5P Pipe-14
		For PT threads short (lg) type	1 12 13	CT-S-PT	TCST02K	HT	II	55	8	2.5P Pipe-14
Rp	Standard (ISO standard)		1 5 6 10 12	Rp	TH2RP02K	HT	II	59	8	3.5P Pipe-15
PS	Standard		1 5 6 11 12	PS	TH2P02K	HT	II	55	8	3.5P Pipe-15
			5 6 8 10 12	SP-PS	SH2P02K	SP	II	55	8	2.5P Pipe-17
	For left hand threads		1 5 6 10 12	PS(LH)	TH2P02K-L	HT	II	55	8	3.5P Pipe-16
Long shank			1 5 6 11 12	LS-PS	L10P02K			100		Pipe-17
			11 12		L15P02K	HT	II	150	8	3.5P Pipe-17
			5 6 8 11 12		L20P02K			200		Pipe-17
			5 6 8 11 12	LS-SP-PS	SH2P02KL10			100		Pipe-18
			11 12		SH2P02KL15	SP	II	150	8	2.5P Pipe-18
Carbide			1 12 13	CT-PS	TCPS02K	HT	II	55	8	3.5P Pipe-18
G	Standard (ISO standard)		1 5 6 10 12	G	TH2G02K	HT	II	59	8	3.5P Pipe-19
PF	Standard		5 6 8 11 12	PF	TH2F02K	HT	II	55	8	3.5P Pipe-19
			5 6 8 10 12	SP-PF	SH2F02K	SP	II	55	8	2.5P Pipe-21
	For left hand threads		1 5 6 10 12	PF(LH)	TH2F02K-L	HT	II	55	8	3.5P Pipe-20
Long shank			5 6 8 11 12	LS-PF	L10F02K			100		Pipe-21
			11 12		L15F02K	HT	II	150	8	3.5P Pipe-21
			5 6 8 11 12		L20F02K			200		Pipe-21
			5 6 8 11 12	LS-SP-PF	SH2F02KL10			100		Pipe-22
			11 12		SH2F02KL12	SP	II	120	8	2.5P Pipe-22
			11 12		SH2F02KL15			150		Pipe-22
For stainless steels			6 7 8	SU-PF	TU2F02K	HT	II	55	8	3.5P Pipe-23
For cast irons			1 4 5 12	FC-PF	FCPF02K	HT	II	55	8	3.5P Pipe-23
Carbide			1 12 13	CT-PF	TCPF02K	HT	II	55	8	3.5P Pipe-23

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps 1/4-19										
Rc	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC04-	HT	II	67	11	2.5P Pipe-1
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T04-	HT	II	62	11	2.5P Pipe-1
			5 6 8 10 12	SP-PT	SH2T04-	SP	II	62	11	2.5P Pipe-5
		For PT threads	1 5 6 10 12	S-PT	TSPT04-	HT	II	62	11	2.5P Pipe-3
			5 6 8 10 12	SP-S-PT	SSPT04-	SP	II	62	11	2.5P Pipe-6
			1 5 6 10 12	PT-X	THX2T04-	HT	II	85	11	2.5P Pipe-2
			5 6 8 10 12	SP-PT-X	SHX2T04-	SP	II	85	11	2.5P Pipe-6
For left hand threads			1 5 6 10 12	PT(LH)	TH2T04---L	HT	II	62	11	2.5P Pipe-2
			1 5 6 10 12	S-PT(LH)	TSPT04---L	HT	II	62	11	2.5P Pipe-3
Long shank		For PT threads	1 5 6 11 12	LS-PT	L10T04-			100		Pipe-4
			11 12		L15T04-	HT	II	150	11	2.5P Pipe-4
			5 6 8 11 12		L20T04-			200		Pipe-4
			5 6 8 11 12	LS-SP-PT	SH2T04-L10			100		Pipe-7
			11 12		SH2T04-L12	SP	II	120	11	2.5P Pipe-7
			11 12		SH2T04-L15			150		Pipe-7
For PT threads short (lg) type			1 5 6 11 12	LS-S-PT	TSPT04-L10			100		Pipe-5
			11 12		TSPT04-L15	HT	II	150	11	2.5P Pipe-5
			5 6 8 11 12		TSPT04-L20			200		Pipe-5
			5 6 8 11 12	LS-SP-S-PT	SSPT04-L10	SP	II	100	11	2.5P Pipe-7

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
										Note 1		
PT	Long shank	For PT threads short (lg) type	5 6 8 11 12	LS-SP-S-PT	SSPT04-L12	SP	II	120	11	2.5P	Pipe-7	
			SSPT04-L15								Pipe-7	
	Interrupted	For PT threads	6 7 8	INT-PT	TINT04-	SL	II	62	11	3P	Pipe-8	
			6 7 8	INT-S-PT	TIST04-	SL	II	62	11	3P	Pipe-8	
		For PT threads short (lg) type	6 7 8	LS-INT-PT	TINT04-L10				100			Pipe-9
			6 7 8	TINT04-L12	SL	II	120	11	3P			Pipe-9
		6 7 8	TINT04-L15					150			Pipe-9	
	Long shank for PT threads	For PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST04-L10				100			Pipe-9
			6 7 8	TIST04-L12	SL	II	120	11	3P			Pipe-9
			6 7 8	TIST04-L15					150			Pipe-9
	For low carbon steels	For PT threads	6 8	LC-PT	LCPT04-	HT	II	62	11	2.5P		Pipe-10
			6 8	LC-S-PT	LCSP04-	HT	II	62	11	2.5P		Pipe-10
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T04-	HT	II	62	11	2.5P		Pipe-11
			6 7 8	SU-SP-PT	-	SP	II	62	11	2.5P		Pipe-12
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST04-	HT	II	62	11	2.5P		Pipe-11
			6 7 8	SU-SP-S-PT	-	SP	II	62	11	2.5P		Pipe-12
	For cast irons	For PT threads short (lg) type	1 4 5 12	FC-PT	FCPT04-	HT	II	62	11	2.5P		Pipe-13
			1 4 5 12	FC-S-PT	FCSP04-	HT	II	62	11	2.5P		Pipe-13
	Carbide	For PT threads short (lg) type	1 12 13	CT-PT	TCPT04-	HT	II	62	11	2.5P		Pipe-14
1 12 13			CT-S-PT	TCST04-	HT	II	62	11	2.5P		Pipe-14	
Rp	Standard (ISO standard)	1 5 6 10 12	Rp	TH2RP04-	HT	II	67	11	3.5P		Pipe-15	
PS	Standard	For PT threads short (lg) type	1 5 6 11 12	PS	TH2P04-	HT	II	62	11	3.5P		Pipe-15
			5 6 8 11 12	SH2P04-	SP	II	62	11	2.5P		Pipe-17	
	For left hand threads	For PT threads short (lg) type	1 5 6 10 12	PS(LH)	TH2P04-L	HT	II	62	11	3.5P		Pipe-16
			1 5 6 11 12	LS-PS	L10P04-				100			Pipe-17
	Long shank	For PT threads short (lg) type	1 5 6 11 12	L15P04-	HT	II	150	11	3.5P		Pipe-17	
			5 6 8 11 12	L20P04-				200			Pipe-17	
			5 6 8 11 12	LS-SP-PS	SH2P04-L10	SP	II	11	2.5P		Pipe-18	
		5 6 8 11 12	SH2P04-L15				150			Pipe-18		
	Carbide	For PT threads short (lg) type	1 12 13	CT-PS	TCPS04-	HT	II	62	11	3.5P		Pipe-18
			1 12 13	G	TH2G04-	HT	II	67	11	3.5P		Pipe-19
G	Standard (ISO standard)	1 5 6 10 12	G	TH2G04-	HT	II	67	11	3.5P		Pipe-19	
PF	Standard	For PT threads short (lg) type	1 5 6 11 12	PF	TH2F04-	HT	II	62	11	3.5P		Pipe-19
			5 6 8 10 12	SH2F04-	SP	II	62	11	2.5P		Pipe-21	
	For left hand threads	For PT threads short (lg) type	1 5 6 10 12	PF(LH)	TH2F04-L	HT	II	62	11	3.5P		Pipe-20
			1 5 6 11 12	LS-PF	L10F04-				100			Pipe-21
	Long shank	For PT threads short (lg) type	1 5 6 11 12	L15F04-	HT	II	150	11	3.5P		Pipe-21	
			5 6 8 11 12	L20F04-				200			Pipe-21	
			5 6 8 11 12	LS-SP-PF	SH2F04-L10				100			Pipe-22
		5 6 8 11 12	SH2F04-L12	SP	II	120	11	2.5P		Pipe-22		
		5 6 8 11 12	SH2F04-L15				150			Pipe-22		
	For stainless steels	For PT threads short (lg) type	6 7 8	SU-PF	TU2F04-	HT	II	62	11	3.5P		Pipe-22
1 4 5 12			FC-PF	FCPF04-	HT	II	62	11	3.5P		Pipe-23	
Carbide	For PT threads short (lg) type	1 12 13	CT-PF	TCPF04-	HT	II	62	11	3.5P		Pipe-23	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
										Note 1		
PT	Standard	For PT threads short (lg) type	1 5 6 10 12	PT-X	THX2T06-	HT	II	95	14	2.5P	Pipe-2	
			5 6 8 10 12	SP-PT-X	SHX2T06-	SP	II	95	14	2.5P	Pipe-6	
	For left hand threads	For PT threads short (lg) type	1 5 6 10 12	PT(LH)	TH2T06-L	HT	II	65	14	2.5P	Pipe-2	
			1 5 6 10 12	S-PT(LH)	TSPT06-L	HT	II	65	14	2.5P	Pipe-3	
	Long shank	For PT threads	1 5 6 11 12	LS-PT	L10T06-				100			Pipe-4
			1 5 6 11 12	L12T06-	HT	II	120	14	2.5P		Pipe-4	
			1 5 6 11 12	L15T06-				150			Pipe-4	
		For PT threads short (lg) type	5 6 8 11 12	LS-SP-PT	SH2T06-L12	SP	II	120	14	2.5P		Pipe-7
			5 6 8 11 12	SH2T06-L15				150			Pipe-7	
			1 5 6 11 12	LS-S-PT	TSPT06-L10				100			Pipe-5
		1 5 6 11 12	TSPT06-L12	HT	II	120	14	2.5P		Pipe-5		
		1 5 6 11 12	TSPT06-L15				150			Pipe-5		
		5 6 8 11 12	LS-SP-S-PT	SSPT06-L12	SP	II	120	14	2.5P		Pipe-7	
		5 6 8 11 12	SSPT06-L15				150			Pipe-7		
	Interrupted	For PT threads short (lg) type	6 7 8	INT-PT	TINT06-	SL	II	65	14	3P		Pipe-8
			6 7 8	INT-S-PT	TIST06-	SL	II	65	14	3P		Pipe-8
		Long shank for PT threads	For PT threads short (lg) type	6 7 8	LS-INT-PT	TINT06-L10				100		Pipe-9
				6 7 8	TINT06-L12	SL	II	120	14	3P		Pipe-9
			6 7 8	TINT06-L15				150			Pipe-9	
Long shank for PT threads short (lg) type		For PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST06-L10				100			Pipe-9
	6 7 8		TIST06-L12	SL	II	120	14	3P		Pipe-9		
	6 7 8		TIST06-L15				150			Pipe-9		
For low carbon steels	For PT threads short (lg) type	6 8	LC-PT	LCPT06-	HT	II	65	14	2.5P		Pipe-10	
		6 8	LC-S-PT	LCSP06-	HT	II	65	14	2.5P		Pipe-10	
For stainless steels	For PT threads	6 7 8	SU-PT	TU2T06-	HT	II	65	14	2.5P		Pipe-11	
		6 7 8	SU-SP-PT	-	SP	II	65	14	2.5P		Pipe-12	
	For PT threads short (lg) type	6 7 8	SU-S-PT	TUST06-	HT	II	65	14	2.5P		Pipe-11	
		6 7 8	SU-SP-S-PT	-	SP	II	65	14	2.5P		Pipe-12	
For cast irons	For PT threads short (lg) type	1 4 5 12	FC-PT	FCPT06-	HT	II	65	14	2.5P		Pipe-13	
		1 4 5 12	FC-S-PT	FCSP06-	HT	II	65	14	2.5P		Pipe-13	
Carbide	For PT threads short (lg) type	1 12 13	CT-PT	TCPT06-	HT	II	65	14	2.5P		Pipe-14	
		1 12 13	CT-S-PT	TCST06-	HT	II	65	14	2.5P		Pipe-14	
Rp	Standard (ISO standard)	1 5 6 10 12	Rp	TH2RP06-	HT	II	75	14	3.5P		Pipe-15	
PS	Standard	For PT threads short (lg) type	1 5 6 11 12	PS	TH2P06-	HT	II	65	14	3.5P		Pipe-15
			5 6 8 10 12	SH2P06-	SP	II	65	14	2.5P		Pipe-17	
	For left hand threads	For PT threads short (lg) type	1 5 6 10 12	PS(LH)	TH2P06-L	HT	II	65	14	3.5P		Pipe-16
			1 5 6 11 12	LS-PS	L10P06-				100			Pipe-17
	Long shank	For PT threads short (lg) type	1 5 6 11 12	L15P06-	HT	II	150	14	3.5P		Pipe-17	
			5 6 8 11 12	L20P06-				200			Pipe-17	
			5 6 8 11 12	LS-SP-PS	SH2P06-L15	SP	II	150	14	2.5P		Pipe-18
	Carbide	For PT threads short (lg) type	1 12 13	CT-PS	TCPS06-	HT	II	65	14	3.5P		Pipe-18
			1 12 13	G	TH2G06-	HT	II	75	14	3.5P		Pipe-19
	G	Standard (ISO standard)	1 5 6 10 12	G	TH2G06-	HT	II	75	14	3.5P		Pipe-19
PF	Standard	For PT threads short (lg) type	1 5 6 11 12	PF	TH2F06-	HT	II	65	14	3.5P		Pipe-19
			5 6 8 10 12	SH2F06-	SP	II	65	14	2.5P		Pipe-21	
	For left hand threads	For PT threads short (lg) type	1 5 6 10 12	PF(LH)	TH2F06-L	HT	II	65	14	3.5P		Pipe-20
			1 5 6 11 12	LS-PF	L10F06-				100			Pipe-21
	Long shank	For PT threads short (lg) type	1 5 6 11 12	L15F06-	HT	II	150	14	3.5P		Pipe-21	
			5 6 8 11 12	L20F06-				200			Pipe-21	
			5 6 8 11 12	LS-SP-PF	SH2F06-L15	SP	II	150	14	2.5P		Pipe-22
	Carbide	For PT threads short (lg) type	1 12 13	CT-PS	TCPS06-	HT	II	65	14	3.5P		Pipe-18
			1 12 13	G	TH2G06-	HT	II	75	14	3.5P		Pipe-19
	G	Standard (ISO standard)	1 5 6 10 12	G	TH2G06-	HT	II	75	14	3.5P		Pipe-19
PF	Standard	For PT threads short (lg) type	1 5 6 11 12	PF	TH2F06-	HT	II	65	14	3.5P		Pipe-19
			5 6 8 10 12	SH2F06-	SP	II	65	14	2.5P		Pipe-21	
	For left hand threads	For PT threads short (lg) type	1 5 6 10 12	PF(LH)	TH2F06-L	HT	II	65	14	3.5P		Pipe-20
			1 5 6 11 12	LS-PF	L10F06-				100			Pipe-21
	Long shank	For PT threads short (lg) type	1 5 6 11 12	L15F06-	HT	II	150	14	3.5P		Pipe-21	
			5 6 8 11 12	L20F06-				200			Pipe-21	

Taps 3/8-19

RC	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC06-	HT	II	75	14	2.5P	Pipe-1
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T06-	HT	II	65	14	2.5P	Pipe-1
			5 6 8 10 12	SP-PT	SH2T06-	SP	II	65	14	2.5P	Pipe-5
		For PT threads short (lg) type	1 5 6 10 12	S-PT	TSPT06-	HT	II	65	14	2.5P	Pipe-3
			5 6 8 10 12	SP-S-PT	SSPT06-	SP	II	65	14	2.5P	Pipe-6

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
 2 High hardness material
 3 Heat treated steel (45-55HRC)
 4 Heat treated steel (25-45HRC)
 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
 6 Medium carbon steel, Cast steel
 7 Stainless steel
8 Low carbon steel
 9 Titanium alloy
 10 Nickel base alloy
 11 Rolled aluminum, Copper, Copper alloy
 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
 13 Thermosetting plastic

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
PF Long shank	5 6 8 11 12	LS-SP-PF	SH2F06-L12	SP	II	120	14	2.5P	Pipe-22	
			SH2F06-L15			150			Pipe-22	
	For stainless steels	6 7 8	SU-PF	TU2F06-	HT	II	65	14	3.5P	Pipe-22
	For cast irons	1 4 5 12	FC-PF	FCPF06-	HT	II	65	14	3.5P	Pipe-23
	Carbide	1 12 13	CT-PF	TCPF06-	HT	II	65	14	3.5P	Pipe-23
Taps 1/2-14										
Rc Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC08Q	HT	II	87	18	2.5P	Pipe-1
PT Standard	For PT threads	1 5 6 10 12	PT	TH2T08Q	HT	II	80	18	2.5P	Pipe-1
		5 6 8 10 12	SP-PT	SH2T08Q	SP	II	80	18	2.5P	Pipe-5
	For PT threads short (lg) type	1 5 6 10 12	S-PT	TSPT08Q	HT	II	80	18	2.5P	Pipe-3
		5 6 8 10 12	SP-S-PT	SSPT08Q	SP	II	80	18	2.5P	Pipe-6
		1 5 6 10 12	PT-X	THX2T08Q	HT	II	105	18	2.5P	Pipe-2
		5 6 8 10 12	SP-PT-X	SHX2T08Q	SP	II	105	18	2.5P	Pipe-6
For left hand threads	For PT threads	1 5 6 10 12	PT(LH)	TH2T08Q-L	HT	II	80	18	2.5P	Pipe-2
	For PT threads short (lg) type	1 5 6 10 12	S-PT(LH)	TSPT08Q-L	HT	II	80	18	2.5P	Pipe-3
Long shank	For PT threads	1 5 6 12	LS-PT	L15T08Q	HT	II	150	18	2.5P	Pipe-4
		11 12		L20T08Q			200			Pipe-4
		5 6 8 10 12	LS-SP-PT	SH2T08QL15	SP	II	150	18	2.5P	Pipe-7
	For PT threads short (lg) type	1 5 6 12	LS-S-PT	TSPT08QL15	HT	II	150	18	2.5P	Pipe-5
		11 12		TSPT08QL20			200			Pipe-5
	5 6 8 10 12	LS-SP-S-PT	SSPT08QL15	SP	II	150	18	2.5P	Pipe-7	
Interrupted	For PT threads	6 7 8	INT-PT	TINT08Q	SL	II	80	18	3P	Pipe-8
	For PT threads short (lg) type	6 7 8	INT-S-PT	TIST08Q	SL	II	80	18	3P	Pipe-8
For low carbon steels	For PT threads	6 8	LC-PT	LCPT08Q	HT	II	80	18	2.5P	Pipe-10
	For PT threads short (lg) type	6 8	LC-S-PT	LCSP08Q	HT	II	80	18	2.5P	Pipe-10
For stainless steels	For PT threads	6 7 8	SU-PT	TU2T08Q	HT	II	80	18	2.5P	Pipe-11
	For PT threads short (lg) type	6 7 8	SU-SP-PT	-	SP	II	80	18	2.5P	Pipe-12
		6 7 8	SU-S-PT	TUST08Q	HT	II	80	18	2.5P	Pipe-11
	6 7 8	SU-SP-S-PT	-	SP	II	80	18	2.5P	Pipe-12	
For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT08Q	HT	II	80	18	2.5P	Pipe-13
	For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT08Q	HT	II	80	18	2.5P	Pipe-13
Carbide	For PT threads	1 12 13	CT-PT	TCPT08Q	HT	II	80	18	2.5P	Pipe-14
	For PT threads short (lg) type	1 12 13	CT-S-PT	TCST08Q	HT	II	80	18	2.5P	Pipe-14
Rp Standard (ISO standard)	1 5 6 10 12	Rp	TH2RP08Q	HT	II	87	18	3.5P	Pipe-15	
PS Standard	1 5 6 11 12	PS	TH2P08Q	HT	II	80	18	3.5P	Pipe-15	
			TH2P08Q1			1.5P			Pipe-15	
		5 6 8 10 12	SP-PS	SH2P08Q	SP	II	80	18	2.5P	Pipe-17
	For left hand threads	1 5 6 10 12	PS(LH)	TH2P08Q-L	HT	II	80	18	3.5P	Pipe-16
	Long shank	1 5 6 11 12	LS-PS	L15P08Q	HT	II	150	18	3.5P	Pipe-17
		L20P08Q		200			Pipe-17			
		5 6 8 10 12	LS-SP-PS	SH2P08QL15	SP	II	150	18	2.5P	Pipe-18
Carbide	1 12 13	CT-PS	TCPS08Q	HT	II	80	18	3.5P	Pipe-18	
G Standard (ISO standard)	1 5 6 10 12	G	TH2G08Q	HT	II	87	18	3.5P	Pipe-19	
PF Standard	1 5 6 11 12	PF	TH2F08Q	HT	II	80	18	3.5P	Pipe-19	
			TH2F08Q1			1.5P			Pipe-19	
		5 6 8 10 12	SP-PF	SH2F08Q	SP	II	80	18	2.5P	Pipe-21
	For left hand threads	1 5 6 10 12	PF(LH)	TH2F08Q-L	HT	II	80	18	3.5P	Pipe-20
Long shank	1 5 6 11 12	LS-PF	L15F08Q	HT	II	150	18	3.5P	Pipe-21	
			L20F08Q			200			Pipe-21	

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
PF Long shank	5 6 8 10 12	LS-SP-PF	SH2F08QL15	SP	II	150	18	2.5P	Pipe-22	
	For stainless steels	6 7 8	SU-PF	TU2F08Q	HT	II	80	18	3.5P	Pipe-22
	For cast irons	1 4 5 12	FC-PF	FCPF08Q	HT	II	80	18	3.5P	Pipe-23
	Carbide	1 12 13	CT-PF	TCPF08Q	HT	II	80	18	3.5P	Pipe-23
Taps 5/8-14										
PT Standard	For PT threads	1 5 6 10 12	PT	TH2T10Q	HT	II	82	19	2.5P	Pipe-1
PS Standard		1 5 6 10 12	PS	TH2P10Q	HT	II	82	19	3.5P	Pipe-15
PF Standard		1 5 6 10 12	PF	TH2F10Q	HT	II	82	19	3.5P	Pipe-19
Taps 3/4-14										
Rc Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC12Q	HT	II	96	23	2.5P	Pipe-1
PT Standard	For PT threads	1 5 6 10 12	PT	TH2T12Q	HT	II	85	23	2.5P	Pipe-1
		5 6 8								

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
PF	Long shank	1 5 6 10 12	LS-PF	L20F12Q	HT	II	200	23	3.5P	Pipe-21
		5 6 8 11 12	LS-SP-PF	SH2F12QL15	SP	II	150	23	2.5P	Pipe-22
	For stainless steels	6 7 8	SU-PF	TU2F12Q	HT	II	85	23	3.5P	Pipe-22
	For cast irons	1 4 5 12	FC-PF	FCPF12Q	HT	II	85	23	3.5P	Pipe-23
	Carbide	1 12 13	CT-PF	TCPF12Q	HT	II	85	23	3.5P	Pipe-23

Taps 7/8-14

PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T14Q	HT	II	90	24	2.5P	Pipe-1
PS	Standard		1 5 6 10 12	PS	TH2P14Q	HT	II	90	24	3.5P	Pipe-15
PF	Standard		1 5 6 10 12	PF	TH2F14Q	HT	II	90	24	3.5P	Pipe-20

Taps 1-11

Rc	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC16U	HT	II	109	26	2.5P	Pipe-1		
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T16U	HT	II	95	26	2.5P	Pipe-1		
			5 6 8 11 12	SP-PT	SH2T16U	SP	II	95	26	2.5P	Pipe-5		
		For PT threads short (lg) type	1 5 6 10 12	S-PT	TSPT16U	HT	II	95	26	2.5P	Pipe-3		
				5 6 8 11 12	SP-S-PT	SSPT16U	SP	II	95	26	2.5P	Pipe-6	
	For left hand threads	For PT threads	1 5 6 10 12	PT(LH)	TH2T16U-L	HT	II	95	26	2.5P	Pipe-2		
		For PT threads short (lg) type	1 5 6 10 12	S-PT(LH)	TSPT16U-L	HT	II	95	26	2.5P	Pipe-3		
	Long shank	For PT threads		1 5 6 11 12	LS-PT	L15T16U	HT	II	150	26	2.5P	Pipe-4	
				5 6 8 11 12	LS-SP-PT	SH2T16UL15	SP	II	150	26	2.5P	Pipe-7	
					5 6 8 11 12		SH2T16UL20	SP	II	200	26	2.5P	Pipe-7
		For PT threads short (lg) type		1 5 6 11 12	LS-S-PT	TSPT16UL15	HT	II	150	26	2.5P	Pipe-5	
					5 6 8 11 12	LS-SP-S-PT	SSPT16UL15	SP	II	150	26	2.5P	Pipe-7
				5 6 8 11 12		SSPT16UL20	SP	II	200	26	2.5P	Pipe-7	
Interrupted	For PT threads	6 7 8	INT-PT	TINT16U	SL	II	95	26	3P	Pipe-8			
	For PT threads short (lg) type	6 7 8	INT-S-PT	TIST16U	SL	II	95	26	3P	Pipe-8			
	Long shank for PT threads	6 7 8	LS-INT-PT	TINT16UL15	SL	II	150	26	3P	Pipe-9			
				6 7 8		TINT16UL20	SL	II	200	3P	Pipe-9		
	Long shank for PT threads short (lg) type	6 7 8	LS-INT-S-PT	TIST16UL15	SL	II	150	26	3P	Pipe-10			
			6 7 8		TIST16UL20	SL	II	200	3P	Pipe-10			
For low carbon steels	For PT threads	6 8	LC-PT	LCPT16U	HT	II	95	26	2.5P	Pipe-10			
	For PT threads short (lg) type	6 8	LC-S-PT	LCSP16U	HT	II	95	26	2.5P	Pipe-11			
For stainless steels	For PT threads	6 7 8	SU-PT	TU2T16U	HT	II	95	26	2.5P	Pipe-11			
			SU-SP-PT	-	SP					Pipe-12			
	For PT threads short (lg) type	6 7 8	SU-S-PT	TUST16U	HT	II	95	26	2.5P	Pipe-11			
			SU-SP-S-PT	-	SP					Pipe-12			
For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT16U	HT	II	95	26	2.5P	Pipe-13			
	For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSP16U	HT	II	95	26	2.5P	Pipe-13			
Carbide	For PT threads	1 12 13	CT-PT	TCPT16U	HT	II	95	26	2.5P	Pipe-14			
Rp	Standard (ISO standard)		1 5 6 10 12	Rp	TH2RP16U	HT	II	109	26	3.5P	Pipe-15		
PS	Standard		1 5 6 11 12	PS	TH2P16U	HT	II	95	26	3.5P	Pipe-15		
					TH2P16U1	HT	II	95	26	1.5P	Pipe-16		
			5 6 8 10 12	SP-PS	SH2P16U	SP	II	95	26	2.5P	Pipe-17		
	For left hand threads		1 5 6 10 12	PS(LH)	TH2P16U-L	HT	II	95	26	3.5P	Pipe-16		
	Long shank		1 5 6 11 12	LS-PS	L15P16U	HT	II	150	26	3.5P	Pipe-17		
						L20P16U	HT	II	200	3.5P	Pipe-17		
			5 6 8 11 12	LS-SP-PS	SH2P16UL15	SP	II	150	26	2.5P	Pipe-18		
				5 6 8 11 12		SH2P16UL20	SP	II	200	2.5P	Pipe-18		
	Carbide		1 12 13	CT-PS	TCPS16U	HT	II	95	26	3.5P	Pipe-18		

G	Standard (ISO standard)		1 5 6 10 12	G	TH2G16U	HT	II	109	26	3.5P	Pipe-19
PF	Standard		1 5 6 11 12	PF	TH2F16U	HT	II	95	26	3.5P	Pipe-19
					TH2F16U1	HT	II	95	26	1.5P	Pipe-20
			5 6 8 10 12	SP-PF	SH2F16U	SP	II	95	26	2.5P	Pipe-21
	For left hand threads		1 5 6 10 12	PF(LH)	TH2F16U-L	HT	II	95	26	3.5P	Pipe-20
	Long shank		1 5 6 11 12	LS-PF	L15F16U	HT	II	150	26	3.5P	Pipe-21
			5 6 8 11 12	LS-SP-PF	SH2F16UL15	SP	II	150	26	2.5P	Pipe-22
					SH2F16UL20	SP	II	200	2.5P	Pipe-22	
For stainless steels		6 7 8	SU-PF	TU2F16U	HT	II	95	26	3.5P	Pipe-22	
	For cast irons	1 4 5 12	FC-PF	FCPF16U	HT	II	95	26	3.5P	Pipe-23	
Carbide		1 12 13	CT-PF	TCPF16U	HT	II	95	26	3.5P	Pipe-23	

Taps 1 1/8-11

PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T18U	HT	II	100	28	2.5P	Pipe-1
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Taps 1 1/4-11

Rc	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC20U	HT	II	119	32	2.5P	Pipe-1	
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T20U	HT	II	105	32	2.5P	Pipe-1	
			5 6 8 10 12	SP-PT	SH2T20U	SP	II	105	32	2.5P	Pipe-5	
		For PT threads short (lg) type	1 5 6 10 12	S-PT	TSPT20U	HT	II	105	32	2.5P	Pipe-3	
				5 6 8 10 12	SP-S-PT	SSPT20U	SP	II	105	32	2.5P	Pipe-6
	For left hand threads	For PT threads	1 5 6 10 12	PT(LH)	TH2T20U-L	HT	II	105	32	2.5P	Pipe-2	
	For PT threads short (lg) type	1 5 6 10 12	S-PT(LH)	TSPT20U-L	HT	II	105	32	2.5P	Pipe-3		
Long shank	For PT threads	1 5 6 10 12	LS-PT	-	HT	II	200	32	2.5P	Pipe-4		
	Interrupted	For PT threads	6 7 8	INT-PT	TINT20U	SL	II	105	32	3P	Pipe-8	
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST20U	SL	II	105	32	3P	Pipe-8	
For low carbon steels	For PT threads	6 8	LC-PT	LCPT20U	HT	II	105	32	2.5P	Pipe-10		
	For PT threads short (lg) type	6 7 8	SU-PT	TU2T20U	HT	II	105	32	2.5P	Pipe-11		
For stainless steels	For PT threads	6 7 8	SU-S-PT	TUST20U	HT	II	105	32	2.5P	Pipe-11		
	For PT threads short (lg) type	6 7 8	SU-S-PT	TUST20U	HT	II	105	32	2.5P	Pipe-11		
For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT20U	HT	II	105	32	2.5P	Pipe-13		
	For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSP20U	HT	II	105	32	2.5P	Pipe-13		
Rp	Standard (ISO standard)		1 5 6 10 12	Rp	TH2RP20U	HT	II	119	32	3.5P	Pipe-15	
PS	Standard		1 5 6 11 12	PS	TH2P20U	HT	II	105	32	3.5P	Pipe-16	
					TH2P20U1	HT	II	105	32	1.5P	Pipe-16	
			5 6 8 10 12	SP-PS	SH2P20U	SP	II	105	32	2.5P	Pipe-17	
	For left hand threads		1 5 6 10 12	PS(LH)	TH2P20U-L	HT	II	105	32	3.5P	Pipe-16	
G	Standard (ISO standard)		1 5 6 10 12	G	TH2G20U	HT	II	119	32	3.5P	Pipe-19	
PF	Standard		1 5 6 11 12	PF	TH2F20U	HT	II	105	32	3.5P	Pipe-20	
					TH2F20U1	HT	II	105	32	1.5P	Pipe-20	
			5 6 8 10 12	SP-PF	SH2F20U	SP	II	105	32	2.5P	Pipe-21	
	For left hand threads		1 5 6 10 12	PF(LH)	TH2F20U-L	HT	II	105	32	3.5P	Pipe-20	
	For cast irons		1 4 5 12	FC-PF	FCPF20U	HT	II	105	32	3.5P	Pipe-23	

Taps 1 1/2-11

Rc	Standard (ISO standard)	Standard	1 5 6 10 12	Rc	TH2RC24U	HT	II	125	38	2.5P	Pipe-1	
PT	Standard	For PT threads	1 5 6 10 12	PT	TH2T24U	HT	II	110	38	2.5P	Pipe-1	
			5 6 8 10 12	SP-PT	SH2T24U	SP	II	110	38	2.5P	Pipe-5	
		For PT threads short (lg) type	1 5 6 10 12	S-PT	TSPT24U	HT	II	110	38	2.5P	Pipe-3	
				5 6 8 10 12	SP-S-PT	SSPT24U	SP	II	110	38	2.5P	Pipe-6
	For left hand threads	For PT threads	1 5 6 10 12	PT(LH)	TH2T24U-L	HT	II	110	38	2.5P	Pipe-2	
	For PT threads short (lg) type	1 5 6 10 12	S-PT(LH)	TSPT24U-L	HT	II	110	38	2.5P	Pipe-3		

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Srew threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page	
PT	Long shank	For PT threads	1 3 6 10 12	LS-PT	-	HT	II	200	32	2.5P	Pipe-4
	Interrupted	For PT threads	6 7 8	INT-PT	TINT24U	SL	II	110	38	3P	Pipe-8
	For low carbon steels	For PT threads short (lg) type	6 7 8	INT-S-PT	TIST24U	SL	II	110	38	3P	Pipe-8
		For PT threads	6 8	LC-PT	LCPT24U	HT	II	110	38	2.5P	Pipe-10
	For stainless steels	For PT threads	6 7 8	SU-PT	TU2T24U	HT	II	110	38	2.5P	Pipe-11
		For PT threads short (lg) type	6 7 8	SU-S-PT	TUST24U	HT	II	110	38	2.5P	Pipe-11
	For cast irons	For PT threads	1 4 5 12	FC-PT	FCPT24U	HT	II	110	38	2.5P	Pipe-13
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT24U	HT	II	110	38	2.5P	Pipe-13
Rp	Standard (ISO standard)		1 3 6 10 12	Rp	TH2RP24U	HT	II	125	38	3.5P	Pipe-15
PS	Standard		1 5 6 11 12	PS	TH2P24U	HT	II	110	38	3.5P	Pipe-16
			5 6 8 10 12	SP-PS	SH2P24U	SP	II	110	38	2.5P	Pipe-17
	For left hand threads		1 3 6 10 12	PS(LH)	TH2P24U-L	HT	II	110	38	3.5P	Pipe-16
G	Standard (ISO standard)		1 3 6 10 12	G	TH2G24U	HT	II	125	38	3.5P	Pipe-19
PF	Standard		1 5 6 11 12	PF	TH2F24U	HT	II	110	38	3.5P	Pipe-20
			5 6 8 10 12	SP-PF	SH2F24U	SP	II	110	38	2.5P	Pipe-21
	For left hand threads		1 3 6 10 12	PF(LH)	TH2F24U-L	HT	II	110	38	3.5P	Pipe-20
	For cast irons		1 4 5 12	FC-PF	FCPF24U	HT	II	110	38	3.5P	Pipe-23

Taps		1 3/4-11									
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T28U	HT	II	115	42	2.5P	Pipe-1
		For PT threads short (lg) type	1 3 6 10 12	S-PT	TSPT28U	HT	II	115	42	2.5P	Pipe-3

Taps		2-11									
Rc	Standard (ISO standard)	Standard	1 3 6 10 12	Rc	TH2RC32U	HT	II	140	46	2.5P	Pipe-1
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T32U	HT	II	120	46	2.5P	Pipe-1
			5 6 8 10 12	SP-PT	SH2T32U	SP	II	120	46	2.5P	Pipe-5
		For PT threads short (lg) type	1 3 6 10 12	S-PT	TSPT32U	HT	II	120	46	2.5P	Pipe-3
			5 6 8 10 12	SP-S-PT	SSPT32U	SP	II	120	46	2.5P	Pipe-6
	For left hand threads	For PT threads	1 3 6 10 12	PT(LH)	TH2T32U-L	HT	II	120	46	2.5P	Pipe-2
		For PT threads short (lg) type	1 3 6 10 12	S-PT(LH)	TSPT32U-L	HT	II	120	46	2.5P	Pipe-3
Interrupted		For PT threads	6 7 8	INT-PT	TINT32U	SL	II	120	46	3P	Pipe-8
		For PT threads short (lg) type	6 7 8	INT-S-PT	TIST32U	SL	II	120	46	3P	Pipe-8
For low carbon steels		For PT threads	6 8	LC-PT	LCPT32U	HT	II	120	46	2.5P	Pipe-10
		For cast irons	1 4 5 12	FC-PT	FCPT32U	HT	II	120	46	2.5P	Pipe-13
		For PT threads short (lg) type	1 4 5 12	FC-S-PT	FCSPT32U	HT	II	120	46	2.5P	Pipe-13
Rp	Standard (ISO standard)		1 3 6 10 12	Rp	TH2RP32U	HT	II	140	46	3.5P	Pipe-15
PS	Standard		1 3 6 10 12	PS	TH2P32U	HT	II	120	46	3.5P	Pipe-16
			5 6 8 10 12	SP-PS	SH2P32U	SP	II	120	46	2.5P	Pipe-17
	For left hand threads		1 3 6 10 12	PS(LH)	TH2P32U-L	HT	II	120	46	3.5P	Pipe-16
G	Standard (ISO standard)		1 3 6 10 12	G	TH2G32U	HT	II	140	46	3.5P	Pipe-19
PF	Standard		1 5 6 11 12	PF	TH2F32U	HT	II	120	46	3.5P	Pipe-20
			5 6 8 10 12	SP-PF	SH2F32U	SP	II	120	46	2.5P	Pipe-21
		For left hand threads	1 3 6 10 12	PF(LH)	TH2F32U-L	HT	II	120	46	3.5P	Pipe-20
	For cast irons		1 4 5 12	FC-PF	FCPF32U	HT	II	120	46	3.5P	Pipe-23

Taps		2 1/4-11									
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T36U	HT	II	145	50	2.5P	Pipe-2

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
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Taps		2 1/2-11									
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T40U	HT	II	145	55	2.5P	Pipe-2
		For PT threads short (lg) type	1 3 6 10 12	S-PT	TSPT40U	HT	II	145	55	2.5P	Pipe-3
PS	Standard		1 3 6 10 12	PS	TH2P40U	HT	II	145	55	3.5P	Pipe-16
PF	Standard		1 3 6 10 12	PF	TH2F40U	HT	II	145	55	3.5P	Pipe-20

Taps		3-11									
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T48U	HT	II	155	65	2.5P	Pipe-2
		For PT threads short (lg) type	1 3 6 10 12	S-PT	TSPT48U	HT	II	155	65	2.5P	Pipe-3
PS	Standard		1 3 6 10 12	PS	TH2P48U	HT	II	155	65	3.5P	Pipe-16
PF	Standard		1 3 6 10 12	PF	TH2F48U	HT	II	155	65	3.5P	Pipe-20

Taps		3 1/2-11									
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T56U	HT	II	165	70	2.5P	Pipe-2
PF	Standard		1 3 6 10 12	PF	TH2F56U	HT	II	165	70	3.5P	Pipe-20

Taps		4-11									
PT	Standard	For PT threads	1 3 6 10 12	PT	TH2T64U	HT	II	170	75	2.5P	Pipe-2
PS	Standard		1 3 6 10 12	PS	TH2P64U	HT	II	170	75	3.5P	Pipe-16
PF	Standard		1 3 6 10 12	PF	TH2F64U	HT	II	170	75	3.5P	Pipe-20

Dies selection		Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page	
Dies PT1/16-28										
PT	For PT threads	Solid dies	SKS	6 8 11 12	SR-D PT	25	11	2~2.5P	DGST01K	Di-18
						38			DJST01K	Di-18
		Adjustable dies	SKS	6 8 11 12	AR-D PT	25	9	2~2.5P	GGST01K	Di-19
						38	13		GJST01K	Di-19

Dies		PF1/16-28								
PF	For PF threads	Adjustable dies	SKS	6 8 11 12	AR-D PF	25	9	2~2.5P	GGSF01K	Di-20

Dies		PT1/8-28								
PT	For PT threads	Solid dies	SKS	6 8 11 12	SR-D PT	25	11	2~2.5P	DGST02K	Di-18
						38	11	2~2.5P	DJST02K	Di-18
		Adjustable dies				50	16		DMST02K	Di-18
			SKS	6 8 11 12	AR-D PT	25	9	2~2.5P	GGST02K	Di-19
						38	13	2~2.5P	GJST02K	Di-19
						50	16		GMST02K	Di-19
	For PT left hand threads	Solid dies	HSS	6 8 11 12	SR-D PT HSS	38	11	2~2.5P	HJPT02K	Di-18
						38	13	2~2.5P	HJPT02K-A	Di-19
		Adjustable dies	SKS	6 8 11 12	SR-D PT LH	38	11	2~2.5P	DJST02K-L	Di-18
			SKS	6 8 11 12	AR-D PT LH	38	13	2~2.5P	GJST02K-L	Di-19

Dies		PS1/8-28								
PS	For PS threads	Adjustable dies	SKS	6 8 11 12	AR-D PS	25	9	2~2.5P	GGSP02K	Di-20
						38	13		GJSP02K	Di-20
	For PS left hand threads	Adjustable dies	SKS	6 8 11 12	AR-D PS LH	38	13	2~2.5P	GJSP02K-L	Di-20

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
L	D _s	ℓ _c

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Dies selection		Material	Main material	Symbol	Class	Thickness	Front face	Code	Product page
Dies PF1/8-28									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	25	9		GG5F02K	Di-20
				AR-D PF	38	13	2~2.5P	GJSF02K	Di-20
				AR-D PF HSS	38	13		HJSF02K	Di-21
	For PF left hand threads	Adjustable dies	SKS	AR-D PF LH	38	13	2~2.5P	GJSF02K-L	Di-21
Dies PT1/4-19									
PT	For PT threads	Solid dies	SKS	SR-D PT	38	16	2~2.5P	DJST04-	Di-18
					50			DMST04-	Di-18
		Adjustable dies	SKS	AR-D PT	38	13	2~2.5P	GJST04-	Di-19
					50	16		GMST04-	Di-19
For PT left hand threads	Solid dies	HSS	SR-D PT HSS	38	16	2~2.5P	HJPT04-	Di-18	
				38	13	2~2.5P	HJPT04-A	Di-19	
	Adjustable dies	SKS	SR-D PT LH	38	16	2~2.5P	DJST04-L	Di-18	
				38	13	2~2.5P	GJST04-L	Di-19	
Dies PS1/4-19									
PS	For PS threads	Adjustable dies	SKS	AR-D PS	38	13	2~2.5P	GJSP04-	Di-20
				AR-D PS	50	16		GMSP04-	Di-20
				AR-D PS LH	38	13	2~2.5P	GJSP04-L	Di-20
	For PS left hand threads	Adjustable dies	SKS	AR-D PS LH	38	13	2~2.5P	GJSP04-L	Di-20
Dies PF1/4-19									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	38	13		GJSF04-	Di-20
				AR-D PF	50	16	2~2.5P	GMSF04-	Di-20
				AR-D PF HSS	38	13		HJSF04-	Di-21
				AR-D PF LH	38	13	2~2.5P	GJSF04-L	Di-21
	For PF left hand threads	Adjustable dies	SKS	AR-D PF LH	38	13	2~2.5P	GJSF04-L	Di-21
Dies PT3/8-19									
PT	For PT threads	Solid dies	SKS	SR-D PT	38	16	2~2.5P	DJST06-	Di-18
					50	18		DMST06-	Di-18
		Adjustable dies	SKS	AR-D PT	38	13	2~2.5P	GJST06-	Di-19
					50	16		GMST06-	Di-19
		Solid dies	HSS	SR-D PT HSS	50	18	2~2.5P	HMPT06-	Di-18
				AR-D PT HSS	50	16	2~2.5P	HMPT06-A	Di-19
For PT left hand threads	Solid dies	SKS	SR-D PT LH	50	18	2~2.5P	DMST06-L	Di-18	
			AR-D PT LH	50	16	2~2.5P	GMST06-L	Di-19	
Dies PS3/8-19									
PS	For PS threads	Adjustable dies	SKS	AR-D PS	38	13	2~2.5P	GJSP06-	Di-20
				AR-D PS	50	16		GMSP06-	Di-20
				AR-D PS LH	50	16	2~2.5P	GMSP06-L	Di-20
	For PS left hand threads	Adjustable dies	SKS	AR-D PS LH	50	16	2~2.5P	GMSP06-L	Di-20
Dies PF3/8-19									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	38	13		GJSF06-	Di-20
				AR-D PF	50	16	2~2.5P	GMSF06-	Di-20
				AR-D PF HSS	50	16		HMSF06-	Di-21
				AR-D PF LH	50	16	2~2.5P	GMSF06-L	Di-21
	For PF left hand threads	Adjustable dies	SKS	AR-D PF LH	50	16	2~2.5P	GMSF06-L	Di-21
Dies PT1/2-14									
PT	For PT threads	Solid dies	SKS	SR-D PT	50	22	2~2.5P	DMST08Q	Di-18
		Adjustable dies	SKS	AR-D PT	50	16	2~2.5P	GMST08Q	Di-19

Dies selection		Material	Main material	Symbol	Class	Thickness	Front face	Code	Product page
PT	For PT threads	Solid dies	HSS	SR-D PT HSS	50	22	2~2.5P	HMPT08Q	Di-18
				AR-D PT HSS	50	16	2~2.5P	HMPT08Q-A	Di-19
	For PT left hand threads	Solid dies	SKS	SR-D PT LH	50	22	2~2.5P	DMST08Q-L	Di-18
				AR-D PT LH	50	16	2~2.5P	GMST08Q-L	Di-19
Dies PS1/2-14									
PS	For PS threads	Adjustable dies	SKS	AR-D PS	50	16	2~2.5P	GMSP08Q	Di-20
	For PS left hand threads	Adjustable dies	SKS	AR-D PS LH	50	16	2~2.5P	GMSP08Q-L	Di-20
Dies PF1/2-14									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	50	16	2~2.5P	GMSF08Q	Di-20
				AR-D PF HSS				HMSF08Q	Di-21
				AR-D PF LH	50	16	2~2.5P	GMSF08Q-L	Di-21
	For PF left hand threads	Adjustable dies	SKS	AR-D PF LH	50	16	2~2.5P	GMSF08Q-L	Di-21
Dies PT5/8-14									
PT	For PT threads	Solid dies	SKS	SR-D PT	63	22	2~2.5P	DRST10Q	Di-18
		Adjustable dies	SKS	AR-D PT	50	16	2~2.5P	GMST10Q	Di-19
Dies PS5/8-14									
PS	For PS threads	Adjustable dies	SKS	AR-D PS	50	16	2~2.5P	GMSP10Q	Di-20
Dies PF5/8-14									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	50	16	2~2.5P	GMSF10Q	Di-21
Dies PT3/4-14									
PT	For PT threads	Solid dies	SKS	SR-D PT	50	24	2~2.5P	DMST12Q	Di-18
					63			DRST12Q	Di-18
		Adjustable dies	SKS	AR-D PT	50	16	2~2.5P	GMST12Q	Di-19
					63	20		GRST12Q	Di-19
		Solid dies	HSS	SR-D PT HSS	63	24	2~2.5P	HRPT12Q	Di-18
				AR-D PT HSS	63	20	2~2.5P	HRPT12Q-A	Di-19
For PT left hand threads	Adjustable dies	SKS	AR-D PT LH	63	20	2~2.5P	GRST12Q-L	Di-19	
Dies PS3/4-14									
PS	For PS threads	Adjustable dies	SKS	AR-D PS	50	16	2~2.5P	GMSP12Q	Di-20
				AR-D PS	63	20		GRSP12Q	Di-20
	For PS left hand threads	Adjustable dies	SKS	AR-D PS LH	63	20	2~2.5P	GRSP12Q-L	Di-20
Dies PF3/4-14									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	50	16		GMSF12Q	Di-20
				AR-D PF	63	20	2~2.5P	GRSF12Q	Di-20
				AR-D PF HSS	50	16		HMSF12Q	Di-21
				AR-D PF LH	63	20	2~2.5P	GRSF12Q-L	Di-21
	For PF left hand threads	Adjustable dies	SKS	AR-D PF LH	63	20	2~2.5P	GRSF12Q-L	Di-21
Dies PT7/8-14									
PT	For PT threads	Solid dies	SKS	SR-D PT	75	25	2~2.5P	DUST14Q	Di-18
Dies PS7/8-14									
PS	For PS threads	Adjustable dies	SKS	AR-D PS	63	20	2~2.5P	GRSP14Q	Di-20
Dies PF7/8-14									
PF	For PF threads	Adjustable dies	SKS	AR-D PF	75	25	2~2.5P	GUSF14Q	Di-20

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For screw threads used on tapping machines Dies
For Pipe threads Dies
For American pipe threads Dies
For Miniature threads Dies

Icons of main materials

- 1 Cast iron, Ductile cast iron, Sintered material
- 2 High hardness material
- 3 Heat treated steel (45-55HRC)
- 4 Heat treated steel (25-45HRC)
- 5 High carbon steel, Tool steel, Alloy steel, Heat treated steel
- 6 Medium carbon steel, Cast steel
- 7 Stainless steel
- 8 Low carbon steel
- 9 Titanium alloy
- 10 Nickel base alloy
- 11 Rolled aluminum, Copper, Copper alloy
- 12 Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- 13 Thermosetting plastic

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth Taps
For 3mm threads used in some machines Taps (mm)
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Dies selection		Material	Main material	Symbol	Class	Thickness	Front face	Code	Product page
Dies PT1-11									
PT	For PT threads	Solid dies	SKS	6 8 11 12	SR-D PT	75 28	2~2.5P	DUST16U	Di-18
		Adjustable dies	SKS	6 8 11 12	AR-D PT	75 25	2~2.5P	GUST16U	Di-19
	For PT left hand threads	Solid dies	HSS	6 8 11 12	SR-D PT HSS	75 28	2~2.5P	HUPT16U	Di-18
		Adjustable dies	HSS	6 8 11 12	AR-D PT HSS	75 25	2~2.5P	HUPT16U-A	Di-19
Dies PS1-11									
PS	For PS threads	Adjustable dies	SKS	6 8 11 12	AR-D PS	75 25	2~2.5P	GUSP16U	Di-20
	For PS left hand threads	Adjustable dies	SKS	6 8 11 12	AR-D PS LH	75 25	2~2.5P	GUSP16U-L	Di-20
Dies PF1-11									
PF	For PF threads	Adjustable dies	SKS	6 8 11 12	AR-D PF	75 25	2~2.5P	GUSF16U	Di-20
	For PF left hand threads	Adjustable dies	SKS	6 8 11 12	AR-D PF LH	75 25	2~2.5P	GUSF16U-L	Di-21
Dies PT1 1/4-11									
PT	For PT threads	Solid dies	SKS	6 8 11 12	SR-D PT	75 30	2~2.5P	DUST20U	Di-18
		Adjustable dies	SKS	6 8 11 12	AR-D PT	75 25	2~2.5P	GUST20U	Di-19
Dies PS1 1/4-11									
PS	For PS threads	Adjustable dies	SKS	6 8 11 12	AR-D PS	75 25	2~2.5P	GUSP20U	Di-20
Dies PF1 1/4-11									
PF	For PF threads	Adjustable dies	SKS	6 8 11 12	AR-D PF	75 25	2~2.5P	GUSF20U	Di-20
Dies PT1 1/2-11									
PT	For PT threads	Solid dies	SKS	6 8 11 12	SR-D PT	75 30	2~2.5P	DUST24U	Di-18
			105 30	2~2.5P	DYST24U	Di-18			
		Adjustable dies	SKS	6 8 11 12	AR-D PT	105 30	2~2.5P	GWST24U	Di-19
Dies PS1 1/2-11									
PS	For PS threads	Adjustable dies	SKS	6 8 11 12	AR-D PS	105 28	2~2.5P	GYP24U	Di-20
Dies PF1 1/2-11									
PF	For PF threads	Adjustable dies	SKS	6 8 11 12	AR-D PF	75 25 105 28	2~2.5P	GUSF24U GYSF24U	Di-20
Dies PT2-11									
PT	For PT threads	Solid dies	SKS	6 8 11 12	SR-D PT	105 36	2~2.5P	DYST32U	Di-18
Dies PS2-11									
PS	For PS threads	Adjustable dies	SKS	6 8 11 12	AR-D PS	105 28	2~2.5P	GYP32U	Di-20
Dies PF2-11									
PF	For PF threads	Adjustable dies	SKS	6 8 11 12	AR-D PF	105 28	2~2.5P	GYSF32U	Di-20

Tap selection		Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page
Taps 1/16-27										
NPT	Standard	For NPT threads	1 3 6 11 12	NPT	TNPT01L	HT ANS/G	54	8	3P	Pipe-24
			5 6 8 10 12	SP-NPT	SNPT01L	SP ANS/G	54	8	2.5P	Pipe-25
		For NPT threads short (lg) type	1 3 6 10 12	S-NPT	TSNPT01L	HT ANS/G	54	8	3P	Pipe-24
	Long shank	For NPT threads	1 3 6 11 12	LS-NPT	TNPT01LL10	HT ANS/G	100	8	3P	Pipe-25
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT01L	SL ANS/G	54	8	3P
	For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT01L	SL ANS/G	54	8	3P	Pipe-27	
NPTF	Standard	1 3 6 11 12	NPTF	TNTF01L	HT ANS/G	54	8	3P	Pipe-27	
	Long shank	1 3 6 11 12	LS-NPTF	TNTF01LL10	HT ANS/G	100	8	3P	Pipe-28	
NPS	Standard	1 3 6 11 12	NPS	TNPS01L	HT ANS/G	54	8	5P	Pipe-28	
NPSF	Standard	1 3 6 11 12	NPSF	TNSF01L	HT ANS/G	54	8	5P	Pipe-29	
Taps 1/8-27										
NPT	Standard	For NPT threads	1 3 6 11 12	NPT	TNPT02L	HT ANS/G	55	8	3P	Pipe-24
			5 6 8 10 12	SP-NPT	SNPT02L	SP ANS/G	55	8	2.5P	Pipe-25
		For NPT threads short (lg) type	1 3 6 10 12	S-NPT	TSNPT02L	HT ANS/G	55	8	3P	Pipe-24
	Long shank	For NPT threads	1 3 6 11 12	LS-NPT	TNPT02LL10	HT ANS/G	100	8	3P	Pipe-25
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT02L	SL ANS/G	55	8	3P
	For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT02L	SL ANS/G	55	8	3P	Pipe-27	
NPTF	Standard	1 3 6 11 12	NPTF	TNTF02L	HT ANS/G	55	8	3P	Pipe-27	
	Long shank	1 3 6 11 12	LS-NPTF	TNTF02LL10	HT ANS/G	100	8	3P	Pipe-28	
							150		Pipe-28	
NPS	Standard	1 3 6 11 12	NPS	TNPS02L	HT ANS/G	55	8	5P	Pipe-28	
NPSF	Standard	1 3 6 11 12	NPSF	TNSF02L	HT ANS/G	55	8	5P	Pipe-29	
Taps 1/4-18										
NPT	Standard	For NPT threads	1 3 6 11 12	NPT	TNPT04O	HT ANS/G	62	11	3P	Pipe-24
			5 6 8 10 12	SP-NPT	SNPT04O	SP ANS/G	62	11	2.5P	Pipe-25
		For NPT threads short (lg) type	1 3 6 10 12	S-NPT	TSNPT04O	HT ANS/G	62	11	3P	Pipe-24
	Long shank	For NPT threads	1 3 6 11 12	LS-NPT	TNPT04OL10	HT ANS/G	100	11	3P	Pipe-25
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT04O	SL ANS/G	62	11	3P
	For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT04O	SL ANS/G	62	11	3P	Pipe-27	
NPTF	Standard	1 3 6 11 12	NPTF	TNTF04O	HT ANS/G	62	11	3P	Pipe-27	
	Long shank	1 3 6 11 12	LS-NPTF	TNTF04OL10	HT ANS/G	100	11	3P	Pipe-28	
							150		Pipe-28	
NPS	Standard	1 3 6 11 12	NPS	TNPS04O	HT ANS/G	62	11	5P	Pipe-28	
NPSF	Standard	1 3 6 11 12	NPSF	TNSF04O	HT ANS/G	62	11	5P	Pipe-29	
Taps 3/8-18										
NPT	Standard	For NPT threads	1 3 6 11 12	NPT	TNPT06O	HT ANS/G	65	14	3P	Pipe-24
			5 6 8 10 12	SP-NPT	SNPT06O	SP ANS/G	65	14	2.5P	Pipe-25
		For NPT threads short (lg) type	1 3 6 10 12	S-NPT	TSNPT06O	HT ANS/G	65	14	3P	Pipe-24
	Long shank	For NPT threads	1 3 6 11 12	LS-NPT	TNPT06OL10	HT ANS/G	100	14	3P	Pipe-25
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT06O	SL ANS/G	65	14	3P
	For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT06O	SL ANS/G	65	14	3P	Pipe-27	

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page			
NPTF	Standard	1 5 6 11 12	TNTF06O	HT	ANSIG	65	14	3P	Pipe-27			
	Long shank	1 5 6 11 12	TNTF06OL10 TNTF06OL15	HT	ANSIG	100 150	14	3P	Pipe-28 Pipe-28			
NPS	Standard	1 5 6 11 12	TNPS06O	HT	ANSIG	65	14	5P	Pipe-28			
NPSF	Standard	1 5 6 11 12	TNSF06O	HT	ANSIG	65	14	5P	Pipe-29			
Taps 1/2-14												
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT08Q	HT	ANSIG	80	18	3P	Pipe-24	
			5 6 8 11 12	SP-NPT	SNPT08Q	SP	ANSIG	80	18	2.5P	Pipe-25	
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT08Q	HT	ANSIG	80	18	3P	Pipe-24	
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT08QL15	HT	ANSIG	150	18	3P	Pipe-25	
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT08QL15	SP	ANSIG	150	18	2.5P	Pipe-26	
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT08Q	SL	ANSIG	80	18	3P	Pipe-26
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT08Q	SL	ANSIG	80	18	3P	Pipe-27	
NPTF	Standard	1 5 6 11 12	TNTF08Q	HT	ANSIG	80	18	3P	Pipe-27			
	Long shank	1 5 6 11 12	TNTF08QL15	HT	ANSIG	150	18	3P	Pipe-28			
NPS	Standard	1 5 6 11 12	TNPS08Q	HT	ANSIG	80	18	5P	Pipe-28			
NPSF	Standard	1 5 6 11 12	TNSF08Q	HT	ANSIG	80	18	5P	Pipe-29			
Taps 3/4-14												
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT12Q	HT	ANSIG	85	23	3P	Pipe-24	
			5 6 8 11 12	SP-NPT	SNPT12Q	SP	ANSIG	85	23	2.5P	Pipe-25	
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT12Q	HT	ANSIG	85	23	3P	Pipe-24	
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT12QL15	HT	ANSIG	150	23	3P	Pipe-25	
		For NPT threads short (lg) type	5 6 8 11 12	LS-SP-S-NPT	SSNPT12QL15	SP	ANSIG	150	23	2.5P	Pipe-26	
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT12Q	SL	ANSIG	85	23	3P	Pipe-26
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT12Q	SL	ANSIG	85	23	3P	Pipe-27	
NPTF	Standard	1 5 6 11 12	TNTF12Q	HT	ANSIG	85	23	3P	Pipe-27			
	Long shank	1 5 6 11 12	TNTF12QL15	HT	ANSIG	150	23	3P	Pipe-28			
NPS	Standard	1 5 6 11 12	TNPS12Q	HT	ANSIG	85	23	5P	Pipe-28			
NPSF	Standard	1 5 6 11 12	TNSF12Q	HT	ANSIG	85	23	5P	Pipe-29			
Taps 1-11.5												
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT16T	HT	ANSIG	95	26	3P	Pipe-24	
			5 6 8 11 12	SP-NPT	SNPT16T	SP	ANSIG	95	26	2.5P	Pipe-25	
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT16T	HT	ANSIG	95	26	3P	Pipe-24	
	Long shank	For NPT threads	1 5 6 11 12	LS-NPT	TNPT16TL15	HT	ANSIG	150	26	3P	Pipe-25	
		Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT16T	SL	ANSIG	95	26	3P	Pipe-26
			For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT16T	SL	ANSIG	95	26	3P	Pipe-27
NPTF	Standard	1 5 6 11 12	TNTF16T	HT	ANSIG	95	26	3P	Pipe-27			
	Long shank	1 5 6 11 12	TNTF16TL15	HT	ANSIG	150	26	3P	Pipe-28			
NPS	Standard	1 5 6 11 12	TNPS16T	HT	ANSIG	95	26	5P	Pipe-28			
NPSF	Standard	1 5 6 11 12	TNSF16T	HT	ANSIG	95	26	5P	Pipe-29			
Taps 1 1/4-11.5												
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT20T	HT	ANSIG	105	32	3P	Pipe-24	
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT20T	HT	ANSIG	105	32	3P	Pipe-24	
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT20T	SL	ANSIG	105	32	3P	Pipe-26	
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT20T	SL	ANSIG	105	32	3P	Pipe-27	
NPTF	Standard	1 5 6 11 12	TNTF20T	HT	ANSIG	105	32	3P	Pipe-27			
NPS	Standard	1 5 6 11 12	TNPS20T	HT	ANSIG	105	32	5P	Pipe-28			
NPSF	Standard	1 5 6 11 12	TNSF20T	HT	ANSIG	105	32	5P	Pipe-29			

Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	ℓ _c	Product page		
Taps 1 1/2-11.5											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT24T	HT	ANSIG	110	38	3P	Pipe-24
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT24T	HT	ANSIG	110	38	3P	Pipe-24
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT24T	SL	ANSIG	110	38	3P	Pipe-26
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT24T	SL	ANSIG	110	38	3P	Pipe-27
NPTF	Standard	1 5 6 11 12	TNTF24T	HT	ANSIG	110	38	3P	Pipe-27		
NPS	Standard	1 5 6 11 12	TNPS24T	HT	ANSIG	110	38	5P	Pipe-28		
NPSF	Standard	1 5 6 11 12	TNSF24T	HT	ANSIG	110	38	5P	Pipe-29		
Taps 2-11.5											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT32T	HT	ANSIG	120	46	3P	Pipe-24
		For NPT threads short (lg) type	1 5 6 11 12	S-NPT	TSNPT32T	HT	ANSIG	120	46	3P	Pipe-24
	Interrupted	For NPT threads	6 7 8	INT-NPT	TINPT32T	SL	ANSIG	120	46	3P	Pipe-26
		For NPT threads short (lg) type	6 7 8	INT-S-NPT	TISNT32T	SL	ANSIG	120	46	3P	Pipe-27
NPTF	Standard	1 5 6 11 12	TNTF32T	HT	ANSIG	120	46	3P	Pipe-27		
NPS	Standard	1 5 6 11 12	TNPS32T	HT	ANSIG	120	46	5P	Pipe-28		
NPSF	Standard	1 5 6 11 12	TNSF32T	HT	ANSIG	120	46	5P	Pipe-29		
Taps 2 1/2-8											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT40X	HT	ANSIG	145	55	3P	Pipe-24
Taps 3-8											
NPT	Standard	For NPT threads	1 5 6 11 12	NPT	TNPT48X	HT	ANSIG	155	65	3P	Pipe-24

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

- M2 Dies
- M3 Dies
- M4 Dies
- M5 Dies
- M6 Dies
- M8 Dies
- M10 Dies
- M12 Dies
- M1-M7 Dies
- M9-M24 Dies
- M25-M48 Dies
- For Unified threads Dies
- For Whitworth threads Dies
- For Small threads used on some machines Dies (SM)
- For Pipe threads Dies
- For American pipe threads Dies
- For Miniature threads Dies

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies NPT1/16-27										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	38	11	2~2.5P	DJNT01L	Di-21
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPT	38	13	2~2.5P	GJNT01L	Di-22
Dies NPTF1/16-27										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	38	11	2~2.5P	DJNF01L	Di-22
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	38	13	2~2.5P	GJNF01L	Di-22
Dies NPSM1/16-27										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	38	13	2~2.5P	GJNM01L	Di-23
Dies NPT1/8-27										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	38	11	2~2.5P	DJNT02L	Di-21
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPT	38	13	2~2.5P	GJNT02L	Di-22
Dies NPTF1/8-27										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	38	11	2~2.5P	DJNF02L	Di-22
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	38	13	2~2.5P	GJNF02L	Di-22
Dies NPSM1/8-27										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	38	13	2~2.5P	GJNM02L	Di-23
Dies NPT1/4-18										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	38	16	2~2.5P	DJNT04O	Di-21
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPT	38	13	2~2.5P	GJNT04O	Di-22
Dies NPTF1/4-18										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	38	16	2~2.5P	DJNF04O	Di-22
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	38	13	2~2.5P	GJNF04O	Di-22
Dies NPSM1/4-18										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	38	13	2~2.5P	GJNM04O	Di-23
Dies NPT3/8-18										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	50	16	2~2.5P	DMNT06O	Di-21
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPT	38	13	2~2.5P	GJNT06O	Di-22
						50	16		GMNT06O	Di-22
Dies NPTF3/8-18										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	50	16	2~2.5P	DMNF06O	Di-22
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	50	16	2~2.5P	GMNF06O	Di-22
Dies NPSM3/8-18										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	50	16	2~2.5P	GMNM06O	Di-23
Dies NPT1/2-14										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	50	22	2~2.5P	DMNT08Q	Di-21
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPT	50	16	2~2.5P	GMNT08Q	Di-22
Dies NPTF1/2-14										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	50	22	2~2.5P	DMNF08Q	Di-22

Dies selection		Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
NPTF	For NPTF threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	50	16	2~2.5P	GMNF08Q	Di-22
Dies NPSM1/2-14										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	50	16	2~2.5P	GMNM08Q	Di-23
Dies NPT3/4-14										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	63	22	2~2.5P	DRNT12Q	Di-21
Dies NPTF3/4-14										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	63	22	2~2.5P	DRNF12Q	Di-22
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	63	20	2~2.5P	GRNF12Q	Di-22
Dies NPSM3/4-14										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	63	20	2~2.5P	GRNM12Q	Di-23
Dies NPT1-11.5										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	75	28	2~2.5P	DUNT16T	Di-21
Dies NPTF1-11.5										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	75	28	2~2.5P	DUNF16T	Di-22
		Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPTF	75	25	2~2.5P	GUNF16T	Di-22
Dies NPSM1-11.5										
NPSM	For NPSM threads	Adjustable dies	SKS	⑥ ⑧ ⑪ ⑫	AR-D NPSM	75	25	2~2.5P	GUNM16T	Di-23
Dies NPT1 1/4-11.5										
NPT	For NPT threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPT	75	28	2~2.5P	DUNT20T	Di-21
Dies NPTF1 1/4-11.5										
NPTF	For NPTF threads	Solid dies	SKS	⑥ ⑧ ⑪ ⑫	SR-D NPTF	75	28	2~2.5P	DUNF20T	Di-22

Note 1: Product symbols shown in red mean the tap special for full rigid tapping

Symbol of size

Overall length	Shank dia.	Chamfer length
<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>

Symbol of flute design

Symbol of flute design	Spiral	Straight	Spiral point	Left hand spiral	Roll
	SP	HT	PO	SL	RO
Drill hole shape					P: B:

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page
Taps S0.6×0.15									
Cutting	8 11 12	MS+TR	GMHRP0.6-3	HT	-	36	3	3P	etc-3
		MS-TR	GMHR0.6-3		-	18	1.5		etc-3
Thread forming taps for miniature screw threads	8 11 12	MS+RS	MSP20.6-B	RO	GS2	36	3	2P	etc-2
		MS-RS	RS30.6-B		G3	18	1.5		etc-2
Combined half cutting and half forming	8 11 12	MS-TF	GMHF0.6-3	HT	-	18	1.5	3P	etc-2
Taps S0.7×0.175									
Cutting	8 11 12	MS+TR	GMHRP0.7-3	HT	-	36	3	3P	etc-3
		MS-TR	GMHR0.7-3		-	25	1.5		etc-3
Thread forming taps for miniature screw threads	8 11 12	MS+RS	MSP30.7-B	RO	GS3	36	3	2P	etc-2
		MS-RS	RS30.7-B		G3	25	1.5		etc-2
Combined half cutting and half forming	8 11 12	MS-TF	GMHF0.7-3	HT	-	25	1.5	3P	etc-2
Taps S0.8×0.2									
Cutting	8 11 12	MS+TR	GMHRP0.8-3	HT	-	36	3	3P	etc-3
		MS-TR	GMHR0.8-3		-	25	1.5		etc-3
Thread forming taps for miniature screw threads	8 11 12	MS+RS	MSP30.8-B	RO	GS3	36	3	2P	etc-2
		MS-RS	RS40.8-B		G4	25	1.5		etc-2
Combined half cutting and half forming	8 11 12	MS-TF	GMHF0.8-3	HT	-	25	1.5	3P	etc-2
Taps S0.9×0.225									
Cutting	8 11 12	MS+TR	GMHRP0.9-3	HT	-	36	3	3P	etc-3
		MS-TR	GMHR0.9-3		-	25	1.5		etc-3
Thread forming taps for miniature screw threads	8 11 12	MS+RS	MSP40.9-B	RO	GS4	36	3	2P	etc-2
		MS-RS	RS40.9-B		G4	25	1.5		etc-2
Combined half cutting and half forming	8 11 12	MS-TF	GMHF0.9-3	HT	-	25	1.5	3P	etc-2
Taps 5V1									
Standard	11 12	HT	TV5.0A1	HT	-	62	6	1.5P	etc-5
Taps 8V1									
Standard	11 12	HT	TV8.0B1	HT	-	70	6.2	1.5P	etc-5
Taps 8V2									
Standard	11 12	HT	TV8.0H1	HT	-	70	6.2	1.5P	etc-5
Taps 9V1									
Standard	11 12	HT	TV9.0B1	HT	-	75	7	1.5P	etc-5
Taps 10V1									
Standard	11 12	HT	TV010G1	HT	-	75	7	1.5P	etc-5
Taps 10V2									
Standard	11 12	HT	TV010D1	HT	-	82	8.5	1.5P	etc-5
Taps 11V1									
Standard	11 12	HT	TV011H1	HT	-	82	8.5	1.5P	etc-5
Taps 12V1									
Standard	11 12	HT	TV012F1	HT	-	88	10.5	1.5P	etc-5

Tap selection	Main material	Symbol	Code	Flute	Class	<i>L</i>	<i>D_s</i>	<i>ℓ_c</i>	Product page
Taps 13V1									
Standard	11 12	HT	TV013H1	HT	-	88	10.5	1.5P	etc-5
Taps 13V2									
Standard	11 12	HT	TV013B1	HT	-	88	10.5	1.5P	etc-5
Taps 15V1									
Standard	11 12	HT	TV015G1	HT	-	95	12.5	1.5P	etc-5
Taps 16V1									
Standard	11 12	HT	TV016E1	HT	-	95	12.5	1.5P	etc-5
Taps 17V1									
Standard	11 12	HT	TV017G1	HT	-	100	14	1.5P	etc-5
Taps 17V2									
Standard	11 12	HT	TV017H1	HT	-	100	14	1.5P	etc-5
Taps 17V3									
Standard	11 12	HT	TV017J1	HT	-	100	14	1.5P	etc-5
Taps 19V1									
Standard	11 12	HT	TV019J1	HT	-	105	15	1.5P	etc-5
Taps 20V1									
Standard	11 12	HT	TV020G1	HT	-	115	17	1.5P	etc-5
Taps CTV5-36									
Standard	11 12	HT	TCV5.0A1	HT	-	62	6	1.5P	etc-5
Taps CTV5-24									
Standard	11 12	HT	TCV5.0H1	HT	-	62	6	1.5P	etc-5
Taps CTV8-32									
Standard	11 12	HT	TCV8.0B1	HT	-	70	6.2	1.5P	etc-5
Taps CTV8-30									
Standard	11 12	HT	TCV8.0C1	HT	-	70	6.2	1.5P	etc-5
Taps CTC19-16									
Standard	7 8	HT	TCC019P5	HT	-	105	15	5P	etc-6
Taps CTC25-16									
Standard	7 8	HT	TCC025P5	HT	-	130	20	5P	etc-6
Taps CTC31-16									
Standard	7 8	HT	TCC031P5	HT	-	135	24	5P	etc-6
Taps CTC39-16									
Standard	7 8	HT	TCC039P5	HT	-	135	30	5P	etc-6

M2 Taps
M3 Taps
M4 Taps
M5 Taps
M6 Taps
M8 Taps
M10 Taps
M12 Taps
M1-M7 Taps
M9-M24 Taps
M25-M48 Taps
For Unified threads Taps
For Whitworth threads Taps
For Screw threads used on stamping machines Taps
For Pipe threads Taps
For American pipe threads Taps
For Miniature threads Taps

Icons of main materials

- ① Cast iron, Ductile cast iron, Sintered material
- ② High hardness material
- ③ Heat treated steel (45-55HRC)
- ④ Heat treated steel (25-45HRC)
- ⑤ High carbon steel, Tool steel, Alloy steel, Heat treated steel
- ⑥ Medium carbon steel, Cast steel
- ⑦ Stainless steel
- ⑧ Low carbon steel
- ⑨ Titanium alloy
- ⑩ Nickel base alloy
- ⑪ Rolled aluminum, Copper, Copper alloy
- ⑫ Aluminum diecasting, Aluminum zinc diecasting, Magnesium alloy, Bronze
- ⑬ Thermosetting plastic

M2 Dies
M3 Dies
M4 Dies
M5 Dies
M6 Dies
M8 Dies
M10 Dies
M12 Dies
M1-M7 Dies
M9-M24 Dies
M25-M48 Dies
For Unified threads Dies
For Whitworth threads Dies
For Screw threads and other matching Dies (see)

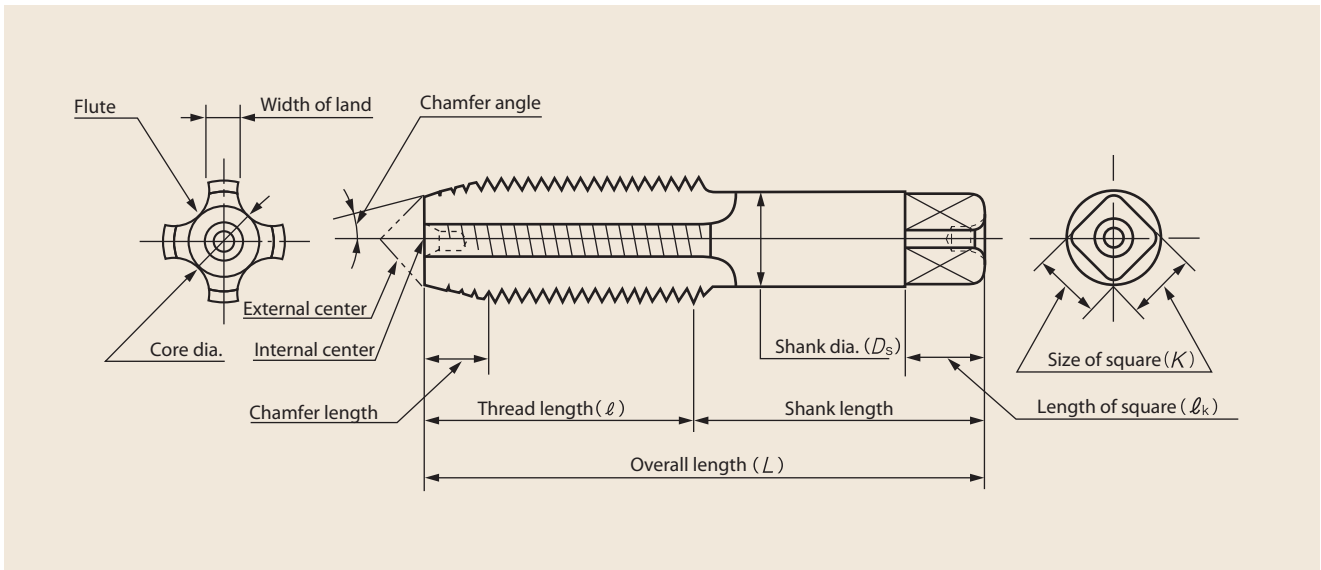
Tap selection	Main material	Symbol	Code	Flute	Class	L	D _s	l _c	Product page
Taps CTC51-16									
Standard	⑦ ⑧	HT	TC051P5	HT	-	145	40	5P	etc-6
Taps CTC63-16									
Standard	⑦ ⑧	HT	TC063P5	HT	-	160	48	5P	etc-6
Taps CTC75-16									
Standard	⑦ ⑧	HT	TC075P5	HT	-	170	58	5P	etc-6
Taps CTG16-14									
Standard	⑦ ⑧	HT	TCG016Q5	HT	-	115	17	5P	etc-6
Taps CTG22-14									
Standard	⑦ ⑧	HT	TCG022Q5	HT	-	130	20	5P	etc-6
Taps CTG28-11									
Standard	⑦ ⑧	HT	TCG028U5	HT	-	135	26	5P	etc-6
Taps CTG36-11									
Standard	⑦ ⑧	HT	TCG036U5	HT	-	135	32	5P	etc-6
Taps CTG42-11									
Standard	⑦ ⑧	HT	TCG042U5	HT	-	140	38	5P	etc-6
Taps CTG54-11									
Standard	⑦ ⑧	HT	TCG054U5	HT	-	155	46	5P	etc-6
Taps CTG70-11									
Standard	⑦ ⑧	HT	TCG070U5	HT	-	170	58	5P	etc-6
Taps CTG82-11									
Standard	⑦ ⑧	HT	TCG082U5	HT	-	180	60	5P	etc-6
Taps CTG92-11									
Standard	⑦ ⑧	HT	TCG092U5	HT	-	190	65	5P	etc-6
Taps CTG104-11									
Standard	⑦ ⑧	HT	TCG104U5	HT	-	200	70	5P	etc-6

Dies selection	Material	Main material	Symbol	Class	Outside diameter	Thickness	Front face	Code	Product page
Dies S0.5×0.125									
For miniature screw threads	Rolling dies	HSS	⑥ ⑦ ⑧ ⑪ ⑫	MS-RS-D	6	2	-	RA20.5-	Di-16
Dies S0.6×0.15									
For miniature screw threads	Rolling dies	HSS	⑥ ⑦ ⑧ ⑪ ⑫	MS-RS-D	6	2	-	RA20.6-	Di-16
Dies S0.7×0.175									
For miniature screw threads	Rolling dies	HSS	⑥ ⑦ ⑧ ⑪ ⑫	MS-RS-D	6	2	-	RA20.7-	Di-16
Dies S0.8×0.2									
For miniature screw threads	Rolling dies	HSS	⑥ ⑦ ⑧ ⑪ ⑫	MS-RS-D	8	3	-	RO20.8-	Di-16

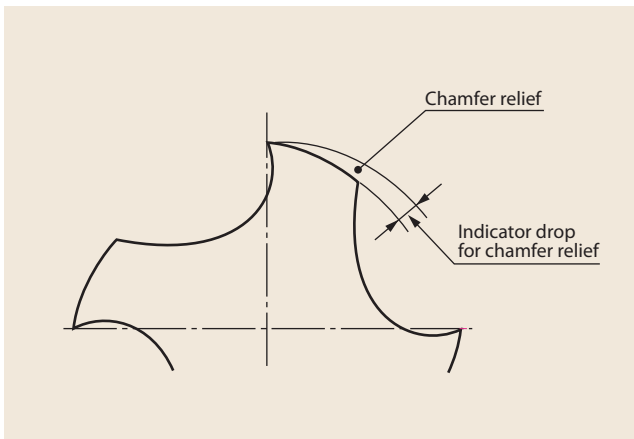
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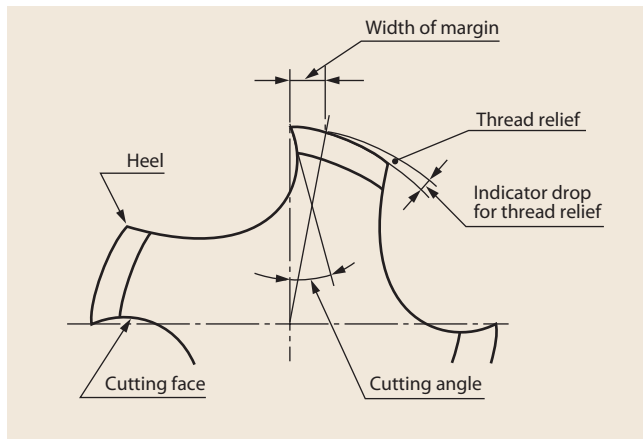
1. Terminology of Taps



■ Chamfer relief

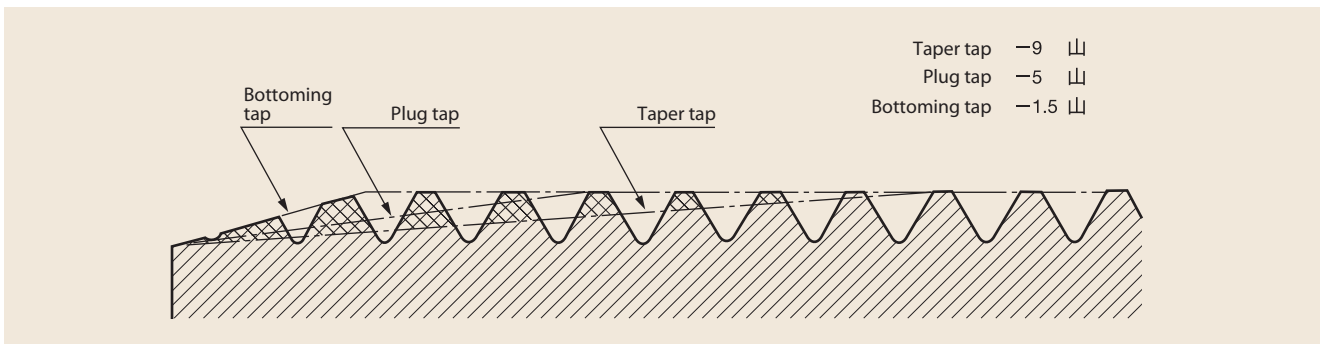


■ Thread relief and cutting angle



Edge angle, including chamfer relief, thread relief, cutting angle and others, and heat treatment, have important functions affecting on workpiece shape, tool life, surface finish of internal screw thread, and so on.

■ Chamfer of hand tap

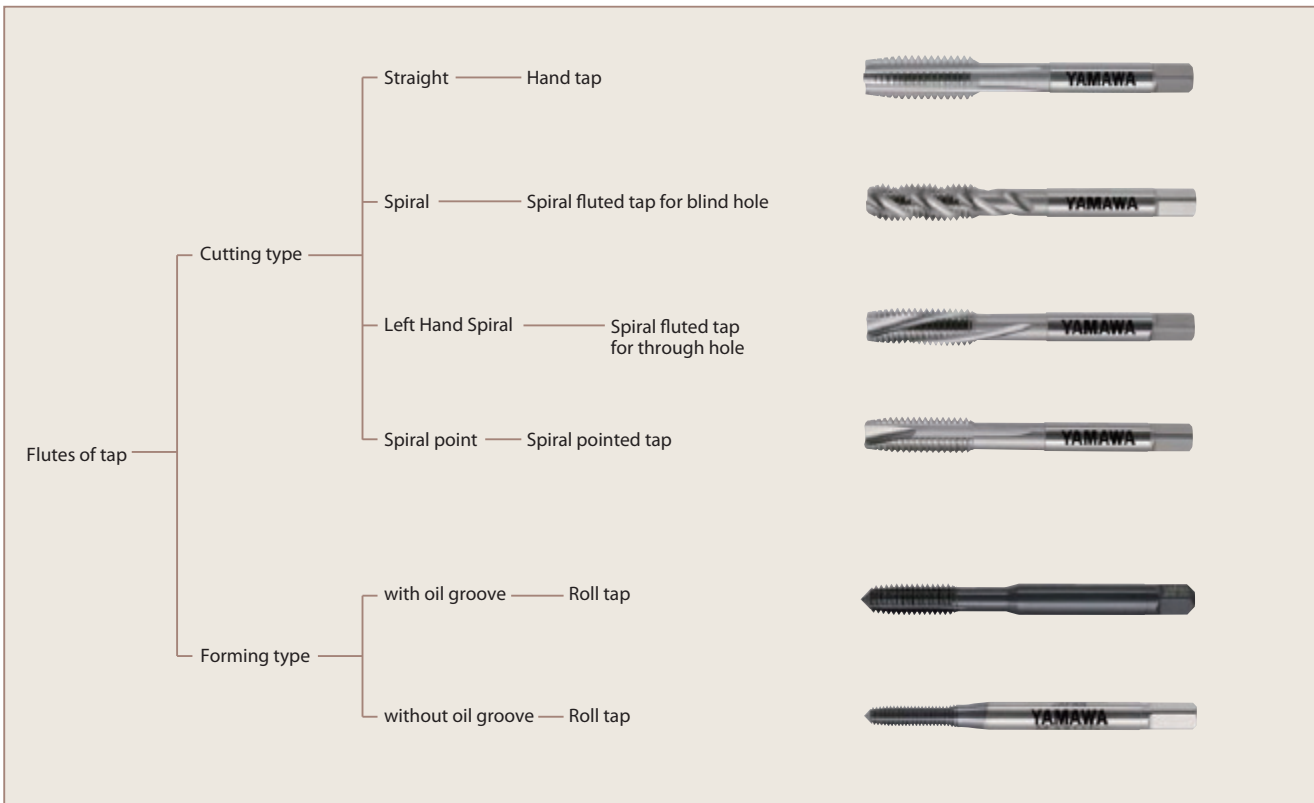


In general, tap chamfer is the most important part of taps to create internal thread. The function of full thread part of taps is to make a guidance.

2. Flutes

Major functions of flutes are :

1) Chips' pocket, 2) Lubricant supply route, 3) rake angle formation, 4) to determine cutting amount in relation to the number of chamfer threads. And all are very important. Taps' flutes are classified into following groups by tapping methods, fluting method, tapping direction, and hand of screw thread.



Type of Flute

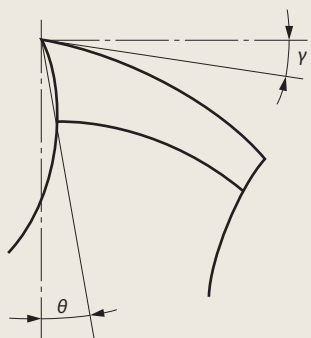
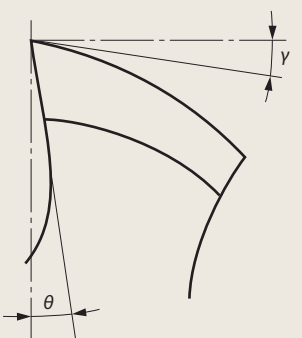
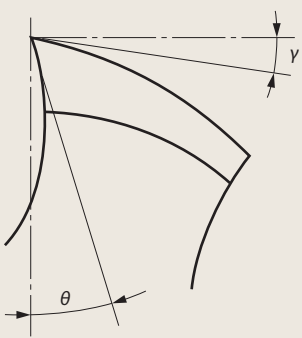
Type of Taps	Cutting type		Type of Taps	Forming type
Flute			Flute	
Straight Flute			With oil groove	
Spiral Flute				
Spiral Point Flute			Without oil groove	

In general, the number of flutes for cutting type taps are usually increased as O.D. becomes larger. However, it is also influenced by tap's strength and rigidity, the accomodation of chip, the amount of cutting, and lubricant supply system.

3. Edge angle and Cutting allowance of taps

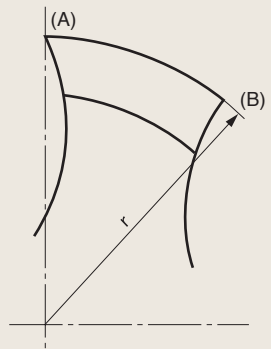
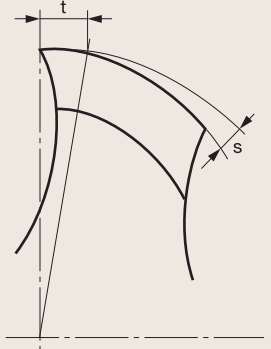
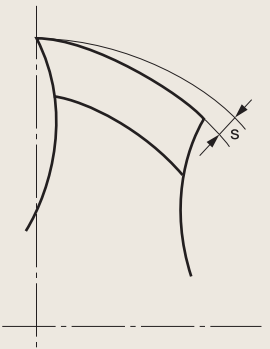
Cutting angle and Chamfer relief

θ : Cutting angle γ : Chamfer relief

Chordal Hook Angle	Rake Angle	Tangential Hook Angle
		
Cutting angle of hook face. The angle between the center line passing the cutting edge and the straight line linking the cutting edge with the thread root.	Cutting angle of rake face. The angle between the center line passing the cutting edge and the straight line linking the cutting edge with thread root.	Cutting angle of hook face. The angle between the center line passing the cutting edge and the straight line tangent to the rake face on the cutting edge.

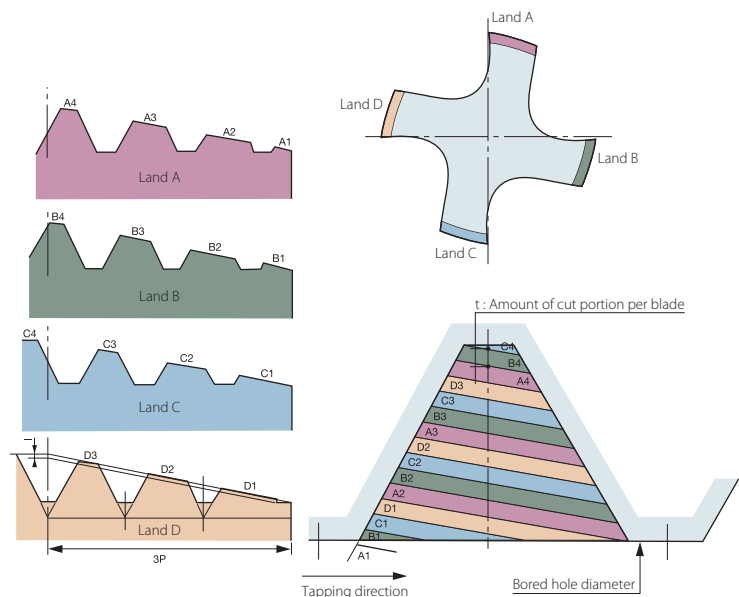
Thread relief

S: Thread relief

Concentric-unrelieved	Con-eccentric thread relief	Eccentric thread relief
		
No relief exists at land. Start (A) and heel (B) of thread land have same concentricity.	Radial relief in the thread form starts at the back of a concentric margin.	Radial relief in the thread form starts at the cutting edge and continues to the heel.

The amount of cut portion

Please refer to the pictures shown.
In such taps as have 4 flutes and 3 thread chamfer, the cutting operation progresses in order from the edge of A1, B1, C1, D1...A2, B2...A4. Tap end is usually smaller than the size of bored hole, and A1 may not make any cutting operation.



4. Recommended Tapping Speeds

■ Tapping Speeds

Following usage conditions affect tapping speeds : kind of taps, workpieces, number of chamfered threads, materials, hole condition and fluid. It is necessary to select the suitable tapping speed by paying attention to these conditions.

When work material has excellent workability, when there is a little depth of tapping, or when tapping fluid can be sufficient, select rather higher tapping speed. When workability of work material is unknown, to be safe, try nearly the lowest tapping speed at first, and then increase the speed gradually.

Unit : m/min

Workpiece Materials		Tapping Speed				
		Spiral Fluted	Spiral Pointed	Roll Taps	Straight Fluted	Cemented Carbide
Low Carbon Steels	SS400 S10C~S25C	8~15	10~20	8~15	6~10	—
Medium Carbon Steels	S25C~S45C	6~12	8~14	7~12	5~9	—
High Carbon Steels	S45C~S58C	5~10	8~12	5~10	5~8	—
Alloy Steels	SCM · SNCM	5~10	7~10	5~10	5~8	—
Heat treated Steels	20~45HRC	3~5	4~7	—	3~6	—
Stainless Steels	SUS	3~8	4~9	6~15	3~7	—
Tool Steels	SKD	5~8	6~10	—	5~9	—
Cast Steels	SC	6~10	8~13	—	6~10	—
Cast Irons	FC	—	—	—	12~17	15~25
Ductile Cast Irons	FCD	5~10	5~10	—	5~8	12~20
Coppers	Cu	8~12	8~13	25~35	7~11	15~33
Brass · Brass Casting	Bs · BsC	11~22	13~25	25~35	10~20	23~33
Phosphor Bronze · Phosphor Bronze Casting	PB · PBC	8~15	10~18	25~35	8~15	18~33
Wrought Aluminum	Al	15~25	20~25	25~35	15~20	23~40
Aluminum Alloy Castings	AC · ADC	11~22	12~24	15~25	10~20	15~25
Magnesium Alloy Castings	MC	7~15	10~20	—	7~15	12~20
Zinc Alloy Diecastings	ZDC	7~15	10~20	15~25	7~15	12~20
Thermosetting Plastic	Bakelite (Phenol-PF)	11~17	12~18	—	10~15	15~25
Thermoplastic resin	PVC, Nylon	11~17	12~18	—	10~15	15~25
Titanium Alloys	Ti-6Al-4Vetc	6~9	6~9	—	—	—
Nickel Base Alloys	Hastelloy, Inconel, Waspaloy	3~6	3~6	—	—	—

■ Formula

Tapping Speed (Vc)

$$Vc = \frac{\pi \cdot Dc \cdot n}{1000} \text{ (m/min)}$$

n : Revolution of tap (min⁻¹)
 π : 3.14
 Dc : Nominal dia. of tap (mm)

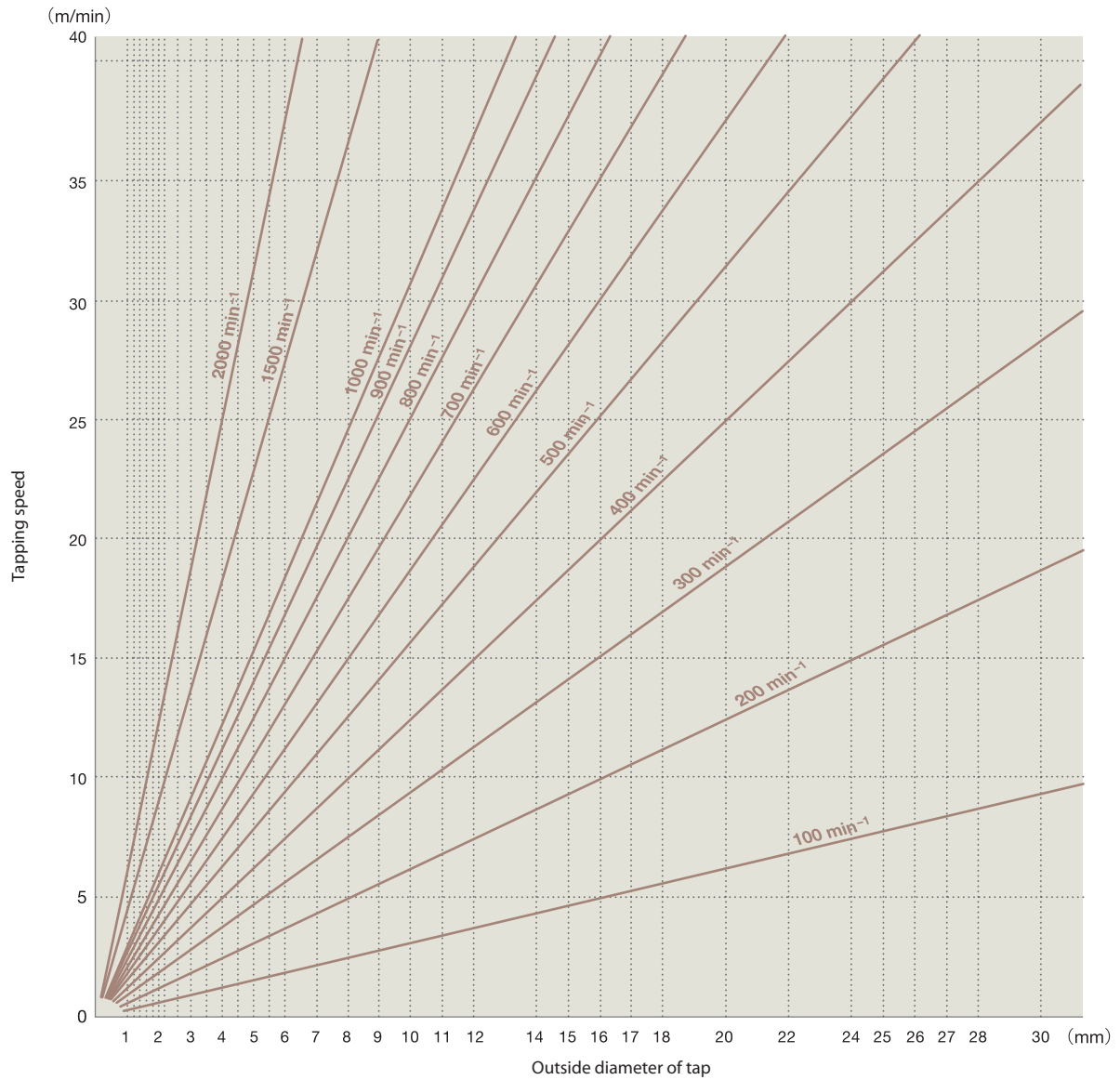
Revolution of tap (n)

$$n = \frac{1000 \cdot Vc}{\pi \cdot Dc} \text{ (min}^{-1}\text{)}$$

Vc : Tapping Speed (m/min)
 Dc : Nominal dia. of tap (mm)
 π : 3.14

5. Tapping speed and Revolution

■ Conversion table



6. Tapping Torque




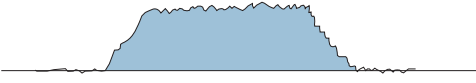

■ Tapping Torque of Cutting type Taps

The torque starts increasing as the threads of chamfer enter the workpiece material. It becomes highest when all threads of chamfer cut into workpiece material, and is in plateau until the chamfer cuts through the workpiece. After that, the torque will decrease until the end of tapping.

■ Cutting Torque Line

Cutting torque lines in the test of different kinds of taps, hand tap, spiral fluted tap, spiral pointed tap are shown below.

Tapping Condition	
Tap : HSS P2 M8x1.25	Bored hole size : 6.8mm
Cutting speed : 6.1m/min	Cutting oil : Water insoluble oil
Workpiece material : S50C	Machine : Drilling machine
Tapping type : 10mm Through hole	Measurement equipment : Piezoelectric torque tester

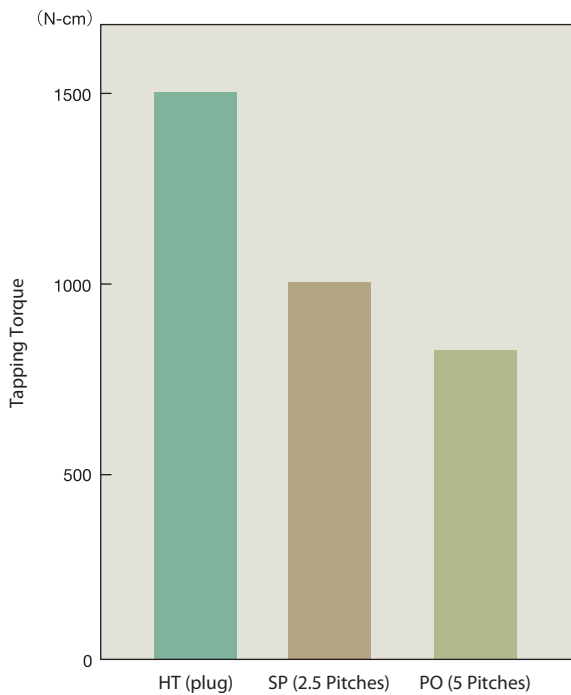
Type of tap	Torque lines	Description
Hand tap (P2)	Taper tap (9 threads) 	Gentle slope is observed because of less cutting by each cutting chamfer, but longer tapping time is taken than in the other hand taps.
	Plug tap (5 threads) 	Plateau is observed since whole chamfer threads enter the workpiece material. Tapping time is much shorter than that of the taper tap.
	Bottoming tap (1.5 threads) 	Plateau is also observed since whole short chamfer threads enter the workpiece material. Tapping process time is shorter than that of the plug tap.
Spiral fluted tap (P2, 2.5 threads) 	Spiral fluted tap pulls out the chips, good choice for blind hole tapping. The cutting torque of spiral fluted taps is smaller than that of the hand taps.	
Spiral pointed tap (P2, 5 threads) 	Spiral pointed tap pushes out the chips forward. It is good choice for through hole use. Cutting torque is smallest in all taps.	

The cutting torque will change depending on the kind of taps, cutting chamfer, number of flutes, workpiece materials and their hardness, lubrication types, and chips.

6. Tapping Torque

■ Comparison of Cutting Torque by Different Type of Taps

Cutting torque of hand tap (HT), and spiral fluted tap (SP), and spiral pointed tap (PO) differs, shown in the chart below.



Tapping Condition

Tap : HSS P2 M10×1.5
Cutting speed : 10m/min
Workpiece material : S50C
Hole condition : 20mm through hole
Bored hole size : ϕ 8.5, drill
Lubrication : Water insoluble oil
Machine : Radial drilling machine
Measurement equipment : Piezoelectric torque tester

If the cutting torque of hand tap is assumed as 100, the cutting torque of other taps is as follows :

Hand Tap : 100
Spiral fluted Tap : 70~75
Spiral Pointed Tap : 60~65

■ Tapping Torque of Forming type Taps

■ Calculation for Tapping Torque of Roll Taps

○ It is hard to calculate tapping torque for roll taps because they contain more complicated factor than the cutting taps.

According to our experience, tapping torque of roll taps is twice or three times larger than that of the cutting taps in general.

○ Major factors increasing or decreasing tapping torque of roll taps are :

- (1) Mechanical characteristic of workpiece (Tensile strength, hardness, spring back feature, work hardening index) : As the tensile strength gets larger, the threading torque becomes larger.
- (2) Size and length of bored hole: Bored hole size is usually defined to obtain 75% thread height of basic thread profile. Roll taps may be shattered due to the excessive tapping torque when the bored hole size is made smaller to obtain higher thread height. Tapping torque gets larger as the efficient length of internal screw becomes longer because there is an increase in friction coefficient caused by spring back of workpiece material.
- (3) Tapping process (tapping speed, lubricant, and rigidity of main spindle).
- (4) Surface treatment of taps (oxidizing, nitriding, TiN, and TiCN coatings).

○Tapping Torque Equation for Forming Taps

Based on the tensile strength of workpiece material, we prepare following equation to obtain tapping torque of standard formig taps.
Condition : Effective length of internal screw is 1.5D, Thread height is 75%.

Tapping Torque Equation for Forming Taps

$$T = K_f \times D_c \times P^2 / 1000$$

T : Tapping Torque (N-m)
Dc : Nominal Diameter of Tap (mm)
P : Pitch (mm)
Kf : Deforming resistance (Nmm²)

Workpiece Materials	Deforming resistance (N/mm ²)
General Structure Steels, Low Carbon Steels	750~850
Medium Carbon Steels, Alloy Steels	1150~1350
Stainless Steels	1100~1300
Wrought Aluminum	250~350
Aluminum Die castings	380~530
Coppers, Wrought Copper Alloys	750~1050

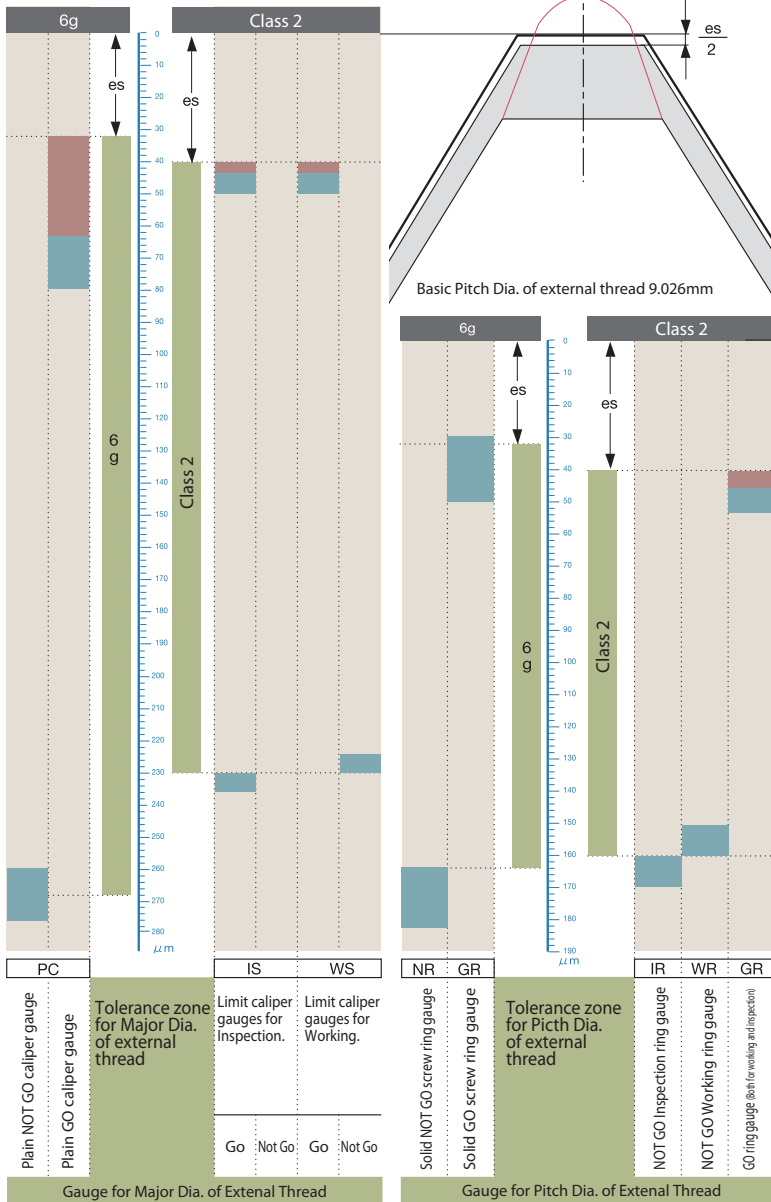
7. Metric Thread and Gauge Profile

Relation of tolerance position between screw thread classes and thread gauge classes in ISO(new JIS) and old JIS standard.

External threads and Limit gauges for external threads

Example : ISO M10×1.5/6g and old JIS M10×1.5/Class 2

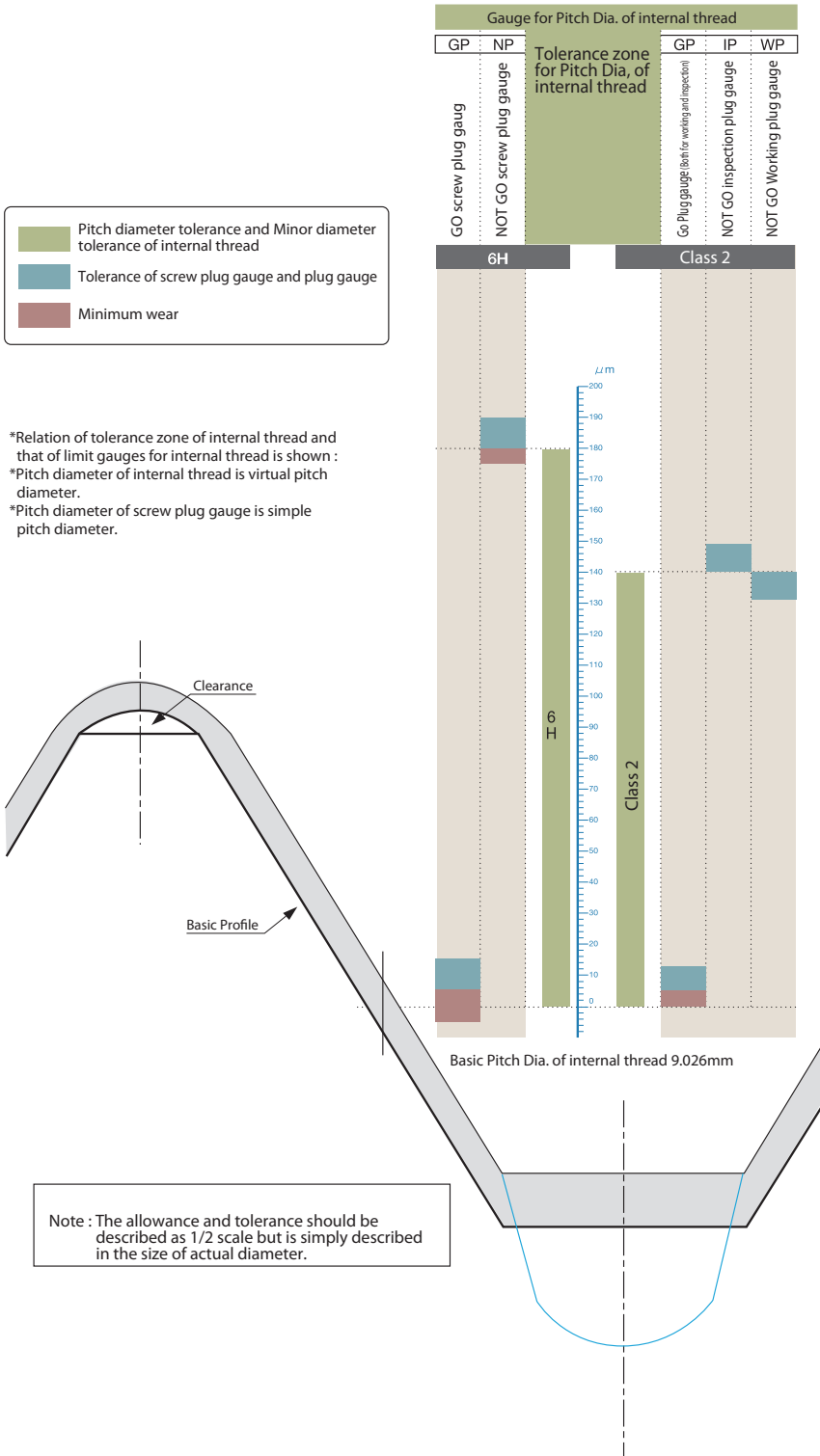
Basic Major Dia. of external thread 10mm



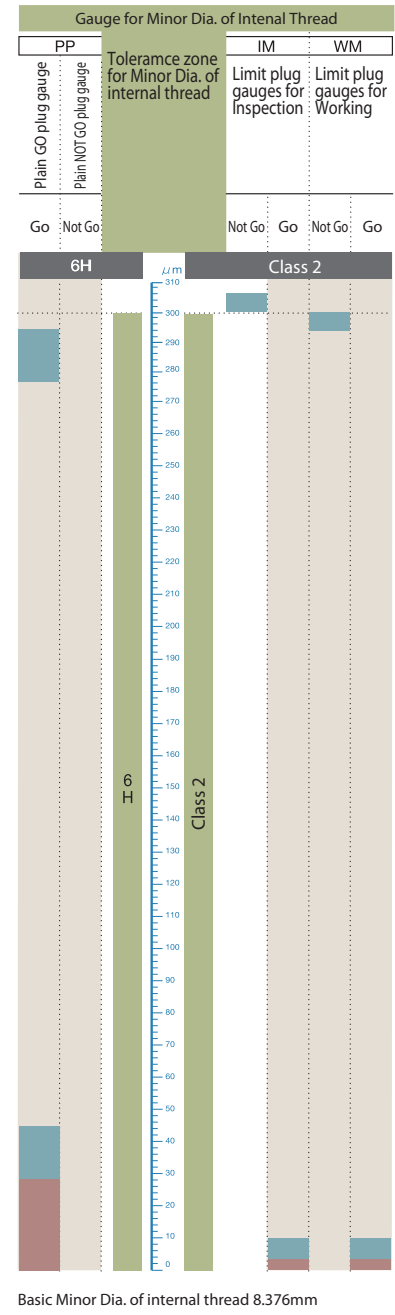
*Relation of tolerance zone of external thread and that of limit gauges for external thread is shown.
 *Pitch Dia. of external thread is virtual pitch Dia.
 *Pitch Dia. of screw ring gauge is simple pitch Dia.

· Only pitch diameter is described.

Internal threads and Limit gauges for internal threads
 Example : ISO M10x1.5/6H and old JIS M10x1.5/Class 2



Note : The allowance and tolerance should be described as 1/2 scale but is simply described in the size of actual diameter.



- Limit gauges for screw threads
 JIS B 0251-2008
 JIS B 0251-1975 Limit gauges for metric coarse threads Appendix
 JIS B 0253-1985 Gauge for taper pipe threads
 JIS B 0255-1975 Limit gauge for unified coarse threads

- JIS B 0252-1996 Limit gauge for metric fine threads
 JIS B 0254-1985 Gauge for parallel pipe threads
 JIS B 0256-1975 Limit gauge for unified fine threads, Appendix

8. Length of engagement

Length of engagement

Thread tolerance class is chosen in consideration of "engagement classification" and "engagement length". To realize the stable tapping, it is necessary to fully understand the relation between these factors and to choose the suitable tolerance class.

On "engagement classification : middle", the tolerance class 6H is almost always chosen for standard internal threads. However, in case of "engagement length : L", tolerance class 7H can also be chosen.

On M12x1.75, the tolerance of 7H is 25% (50µm) larger than that of 6H. And this widens the selection range of the tolerance class for taps to customer's advantage.

[M12x1.75]

6H Pitch diameter : 10.863 ~ 11.063mm (tolerance 0.200 mm)

7H Pitch diameter : 10.863 ~ 11.113mm (tolerance 0.250 mm)

1) Engagement classification

classification	application
fine	precise screw threads with a little allowance
middle	standard screw threads used for machines, apparatuses and constructions bodies
coarse	screw threads used for construction and building installation, and screw threads for which threading operation is very difficult such as threading of hot rolled steel bars.

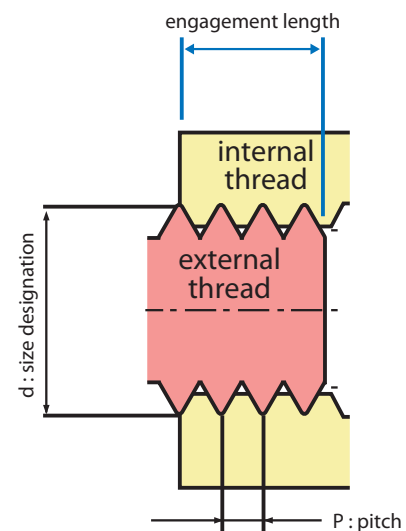
2) Classification of engagement length

symbol	classification	limit size
S	short	up to and including $2.24Pd^{0.2}$
N	normal	over $2.24Pd^{0.2}$ up to and including $6.7Pd^{0.2}$
L	long	over $6.7Pd^{0.2}$

3) Selection rule of internal threads and external threads

Selection rule of the tolerance class of internal threads

tolerance position	H		
engagement length	S	N	L
engagement classification			
fine	4H	5H	6H
middle	5H	6H	7H
coarse	-	7H	8H



Selection rule of the tolerance class of external threads

tolerance position	h			g		
engagement length	S	N	L	S	N	L
engagement classification						
fine	(3h4h)	4h	(5h4h)	-	-	-
middle	(5h6h)	6h	(7h6h)	(5g6g)	6g	(7g6g)
coarse	-	-	-	-	8g	(9g8g)

4) engagement length

size	pitch	S		N		L	
		up to and including	over	up to and including	over	up to and including	over
M1	0.25	0.6	0.6	1.7	1.7		
M1	0.2	0.5	0.5	1.4	1.4		
M1.1	0.25	0.6	0.6	1.7	1.7		
M1.1	0.2	0.5	0.5	1.4	1.4		
M1.2	0.25	0.6	0.6	1.7	1.7		
M1.2	0.2	0.5	0.5	1.4	1.4		
M1.4	0.3	0.7	0.7	2	2		
M1.4	0.2	0.5	0.5	1.4	1.4		
M1.6	0.35	0.8	0.8	2.6	2.6		
M1.6	0.2	0.5	0.5	1.5	1.5		
M1.8	0.35	0.8	0.8	2.6	2.6		
M1.8	0.2	0.5	0.5	1.5	1.5		
M2	0.4	1	1	3	3		
M2	0.25	0.6	0.6	1.9	1.9		
M2.2	0.45	1.3	1.3	3.8	3.8		
M2.2	0.25	0.6	0.6	1.9	1.9		
M2.5	0.45	1.3	1.3	3.8	3.8		
M2.5	0.35	0.8	0.8	2.6	2.6		
M3	0.5	1.5	1.5	4.5	4.5		
M3	0.35	1	1	3	3		
M3.5	0.6	1.7	1.7	5	5		
M3.5	0.35	1	1	3	3		
M4	0.7	2	2	6	6		
M4	0.5	1.5	1.5	4.5	4.5		
M4.5	0.75	2.2	2.2	6.7	6.7		
M4.5	0.5	1.5	1.5	4.5	4.5		
M5	0.8	2.5	2.5	7.5	7.5		
M5	0.5	1.5	1.5	4.5	4.5		
M5.5	0.5	1.5	1.5	4.5	4.5		
M6	1	3	3	9	9		
M6	0.75	2.4	2.4	7.1	7.1		
M7	1	3	3	9	9		
M7	0.75	2.4	2.4	7.1	7.1		
M8	1.25	4	4	12	12		
M8	1	3	3	9	9		
M8	0.75	2.4	2.4	7.1	7.1		
M9	1.25	4	4	12	12		
M9	1	3	3	9	9		
M9	0.75	2.4	2.4	7.1	7.1		

Unit: mm

size	pitch	S		N		L	
		up to and including	over	up to and including	over	up to and including	over
M10	1.5	5	5	15	15		
M10	1.25	4	4	12	12		
M10	1	3	3	9	9		
M10	0.75	2.4	2.4	7.1	7.1		
M11	1.5	5	5	15	15		
M11	1	3	3	9	9		
M11	0.75	2.4	2.4	7.1	7.1		
M12	1.75	6	6	18	18		
M12	1.5	5.6	5.6	16	16		
M12	1.25	4.5	4.5	13	13		
M12	1	3.8	3.8	11	11		
M14	2	8	8	24	24		
M14	1.5	5.6	5.6	16	16		
M14	1	3.8	3.8	11	11		
M15	1.5	5.6	5.6	16	16		
M15	1	3.8	3.8	11	11		
M16	2	8	8	24	24		
M16	1.5	5.6	5.6	16	16		
M16	1	3.8	3.8	11	11		
M17	1.5	5.6	5.6	16	16		
M17	1	3.8	3.8	11	11		
M18	2.5	10	10	30	30		
M18	2	8	8	24	24		
M18	1.5	5.6	5.6	16	16		
M18	1	3.8	3.8	11	11		
M20	2.5	10	10	30	30		
M20	2	8	8	24	24		
M20	1.5	5.6	5.6	16	16		
M20	1	3.8	3.8	11	11		
M22	2.5	10	10	30	30		
M22	2	8	8	24	24		
M22	1.5	5.6	5.6	16	16		
M22	1	3.8	3.8	11	11		
M24	3	12	12	36	36		
M24	2	8.5	8.5	25	25		
M24	1.5	6.3	6.3	19	19		
M24	1	4	4	12	12		

9. Classes of Internal Threads and Classes of Taps

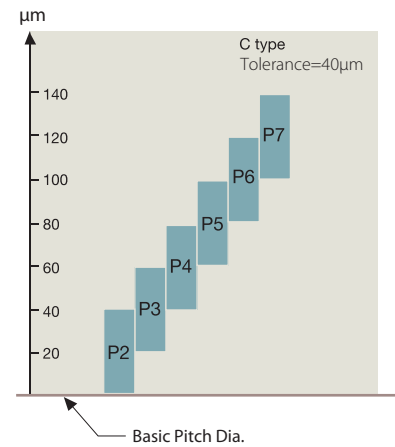
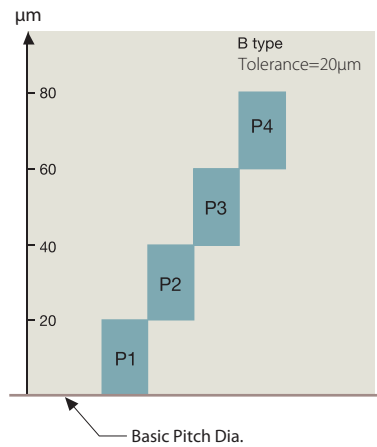
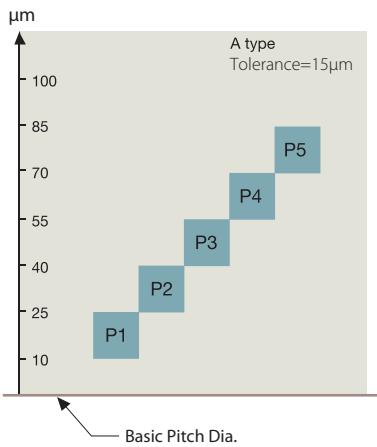
1. YAMAWA P Class System

YAMAWA P Class system for thread limits is specified in accordance with JSCTA (The Japan Solid Cutting Tools' Association). Pitch diameter tolerance zone for normal size M1~M52 (U,W up to 2") are shown in the table below. Depending on pitch diameter tolerance and tolerance position, pitch diameter tolerance zones are classified into three types, A, B and C.

- (1) A type : 15 μ m tolerance. The tolerance of P1, P2, P3... is defined as basic +10~+25 μ m, +25~+40 μ m, +40~+55 μ m and so on, respectively.
 - (2) B type : 20 μ m tolerance. The tolerance of P1, P2, P3... is defined as basic +0~+20 μ m, +20~+40 μ m, +40~+60 μ m and so on, respectively.
 - (3) C type : 40 μ m tolerance. The tolerance of P2, P3, P4... is defined as basic +0~+40 μ m, +20~+60 μ m, +40~+80 μ m and so on, respectively.
- YAMAWA P class system is made in a step form. It can be used to select depending on the tapping conditions.

Pitch Tolerance zone for P Class with Nominal size and Pitch

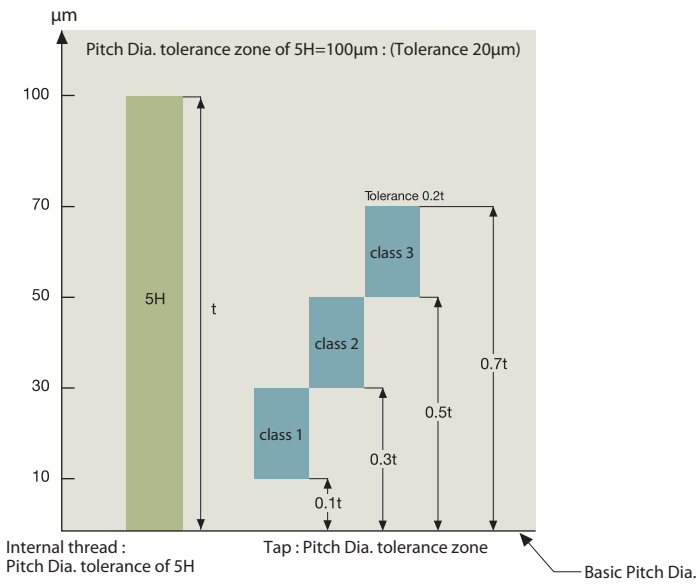
Pitch	Nominal Size		
	1mm \leq Size \leq 24mm (7/8)	24mm (7/8) < Size \leq 30mm	30mm (1 1/4) < Size \leq 52mm (2)
\leq 0.6mm	A type	B type	B type
0.6mm < Pitch \leq 1.75mm	B type	B type	B type
1.75mm < Pitch \leq 2mm	B type	B type	C type
2mm < Pitch \leq 5mm	B type	C type	C type



2. JIS Limit

Thread limits of taps for metric threads : Today the thread limits of ISO2857 are specified in the main book of JIS, and those of old 1st class, 2nd class and 3rd class are specified in JIS Appendix. In the thread limits of 1st, 2nd and 3rd classes (old JIS), the pitch diameter tolerances change depending on nominal size and pitch even if the class is same. On the other hand, in the thread limit of ISO2857 (current JIS), the pitch diameter tolerance is same and only the tolerance position changes as far as the nominal size is same.

The tolerance, as shown in the next picture (Page 669), is specified as X% of internal thread tolerance and it changes depending on nominal diameter and pitch. Thread classes of the main book of JIS will be said to be a system located in the middle of YAMAWA P class and old JIS class. To show clearly, thread limit classification is called Class 1, Class 2 and Class 3 in current JIS, and 1st class, 2nd class and 3rd class in old JIS.

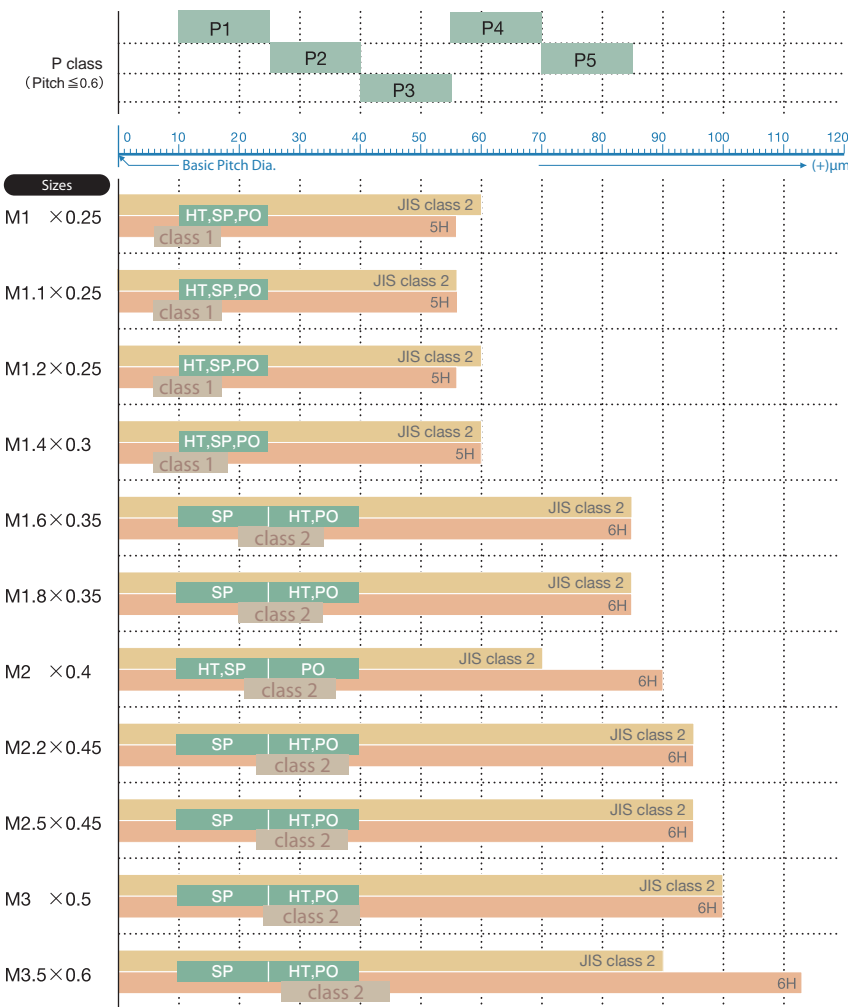


3. Comparison of pitch diameter tolerance zone for the classes of internal thread and tap.

Following graph shows :

In metric coarse threads

- (1) Tap limit classes of YAMAWA P class.
- (2) Pitch diameter tolerance zone of 2nd class (Tap) of JIS Appendix (old JIS) and that of class 2 (Tap) <class 1 for M1.4 and smaller> of the main book of JIS (current JIS).
- (3) Pitch diameter tolerance zone of old JIS 2nd class (Internal thread) and that of JIS 6H class (Internal thread) <5H class for M1.4 and smaller>
- (4) Pitch diameter tolerance zone of standard classes of YAMAWA P class.



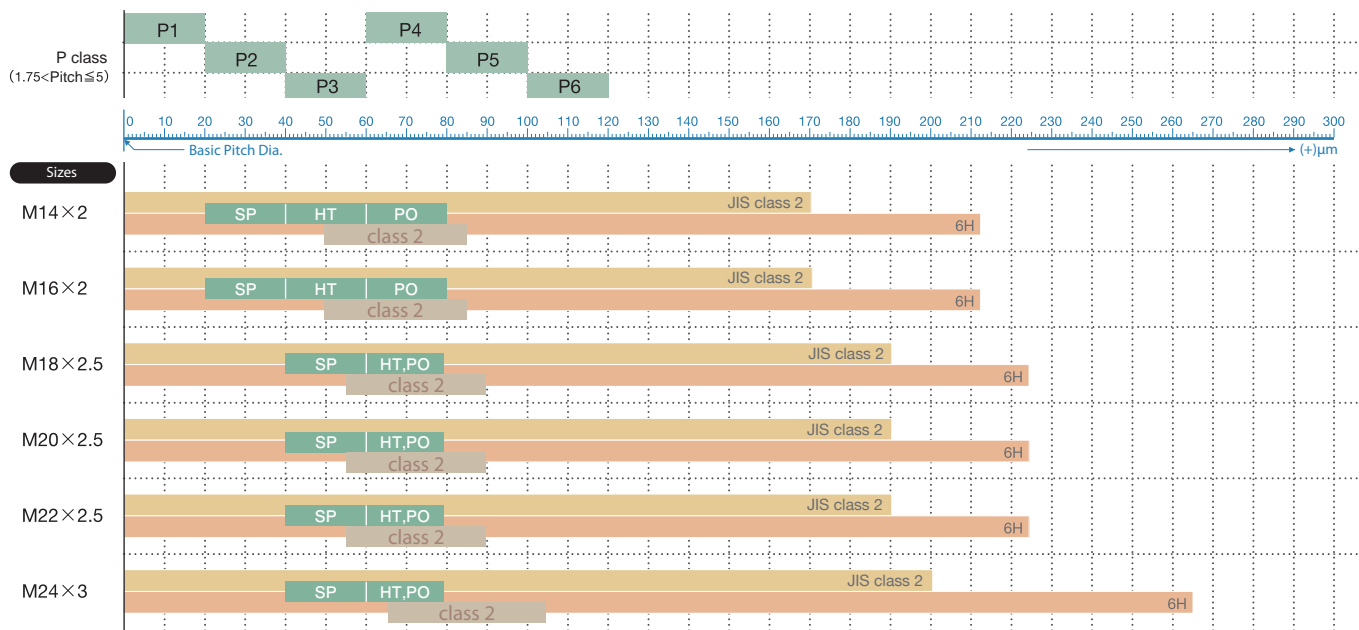
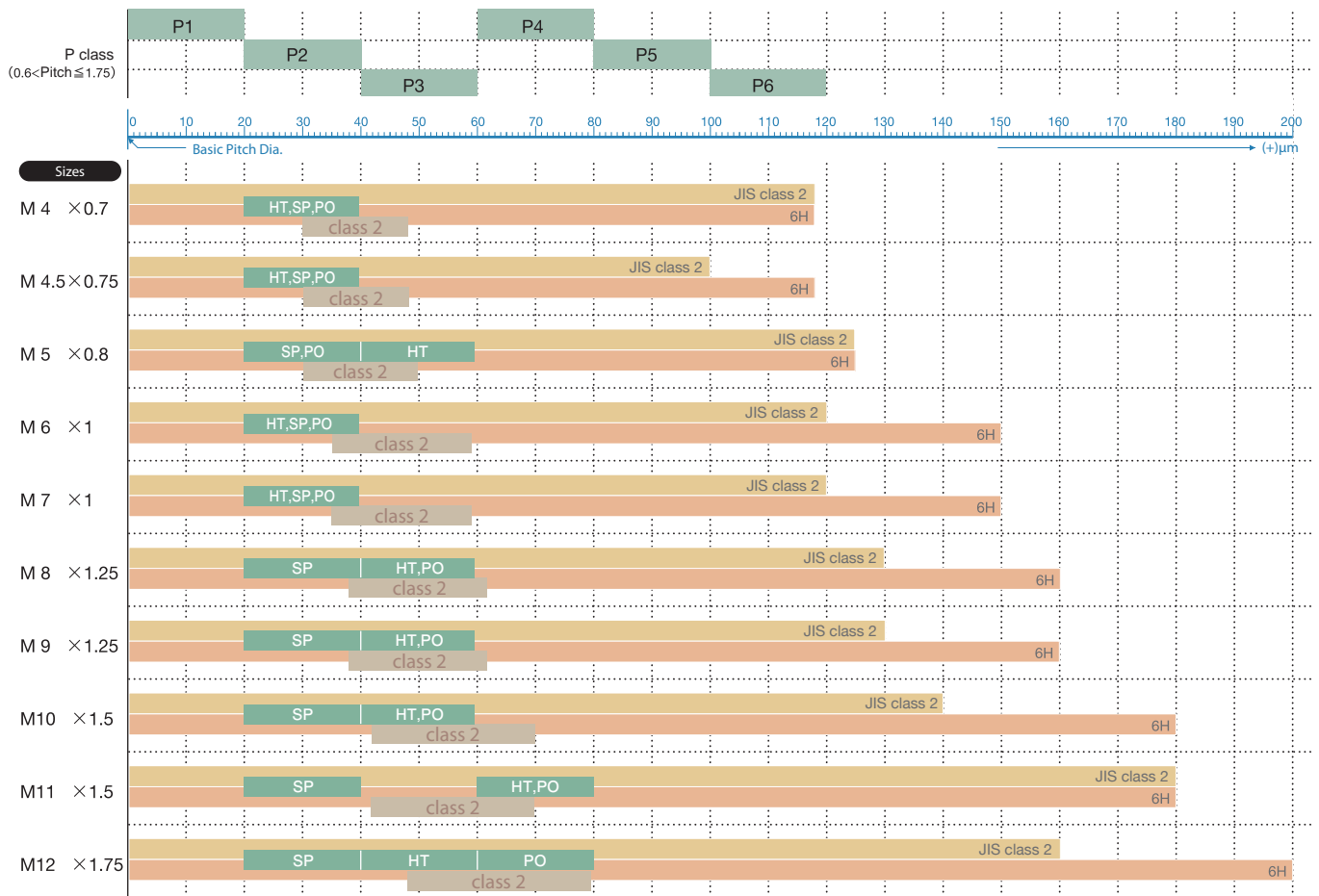
P class

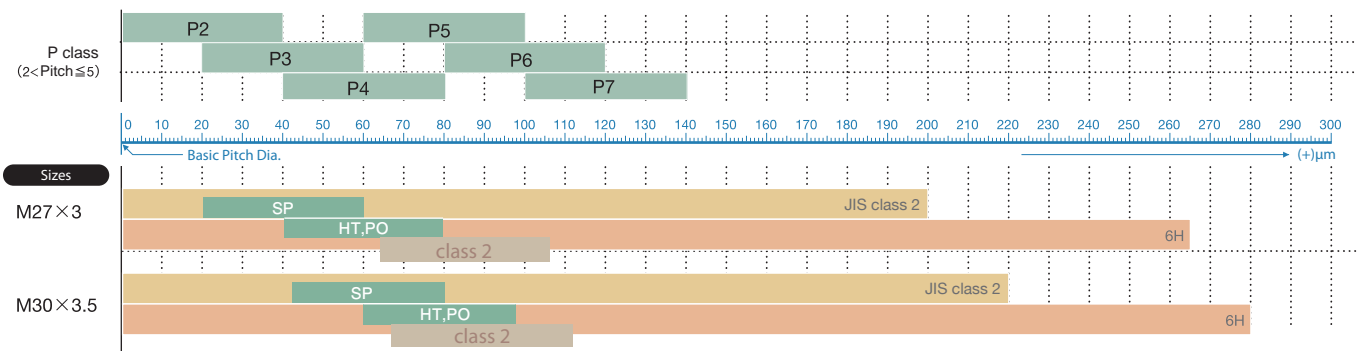
- Pitch diameter tolerance zone of recommended class for YAMAWA P class
- **SP**
Standard class of YAMAWA Spiral Fluted Tap
- **PO**
Standard class of YAMAWA Spiral Pointed Tap
- **HT**

class

- Pitch diameter tolerance zone of tap in the main book of JIS (current JIS).
Class 1 for M1.4 and smaller, class 2 for M1.6 and larger
- Pitch diameter tolerance zone of internal threads in old JIS class 2.
- Pitch diameter tolerance zone of internal thread in current JIS (ISO)
Class 5H for M1.4 and smaller, class 6H for M1.6 and larger

9. Classes of Internal Threads and Classes of Taps





4. Standard Class and Oversize

The standard class of the tap which we have been manufacturing for general use is JIS 2nd class. This JIS 2nd class is basically defined as the thread limit of the tap which can cut the internal thread of old JIS 2nd class. With technical innovation such as various tap classification, high precision tapping machines, workpiece materials and diversity of workpieces' dimension, conventional products having JIS 2nd class could not always satisfy customers requirement due to following situations.

- (1) In cutting taps, the shape of flutes influences the thrust of axial direction. We explain about oversize cutting tendency caused by the thrust force of axial direction by referring to that of Straight fluted hand taps as a basic. Spiral pointed taps have little tendency of oversize cutting, but Spiral fluted taps have a tendency of oversize cutting.
- (2) Due to the relation between pitch diameter of JIS 2nd class tap and that of GO thread plug gauge for the internal thread of old JIS 2nd class, if the cutting edge of tap wears normally, the taps will become gauge out quickly resulting in short tool life.
- (3) Due to the material or shape of workpiece, the material can shrink. In these cases, it would be better to use oversized taps to compensate for shrinkage after tapping.
- (4) When plating is to be applied to internal threads after threading, we should use oversized taps to compensate for the thickness amount of plating.
- (5) Where little tendency of oversize cutting is expected, but large wear in tools is expected during tapping operation, it is better to consider using oversized taps as much as possible.

From these situations, in spiral pointed taps, spiral fluted taps and various types of special purpose taps, YAMAWA has adopted the P class limit system which is explained in previous pages. Depending on the type and designation of taps, YAMAWA has selected from the P class system the tap's thread limit which the tap manufacturer recommends for general tapping operation. From the reason of (1) stated above, even in the same tap designation, the recommendation for spiral pointed taps is different from that for spiral fluted taps. Especially in the standard products of spiral pointed taps and spiral fluted taps, YAMAWA has specified the recommendation differently in the relation to oversize cutting tendency. Oversize taps mean the taps of which thread limits are oversize above the recommendation. This is due to the reasons (3), (4) and (5) stated above. Usually for oversize taps, YAMAWA recommends the taps which thread tolerance classes are one or two steps above the standard recommendation.

As you can see in the picture drawn in previous pages, the recommendation can be used for cutting JIS (ISO) 6H internal threads.

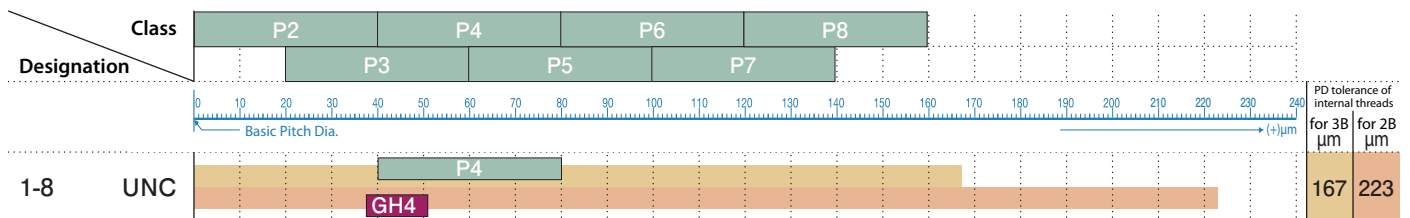
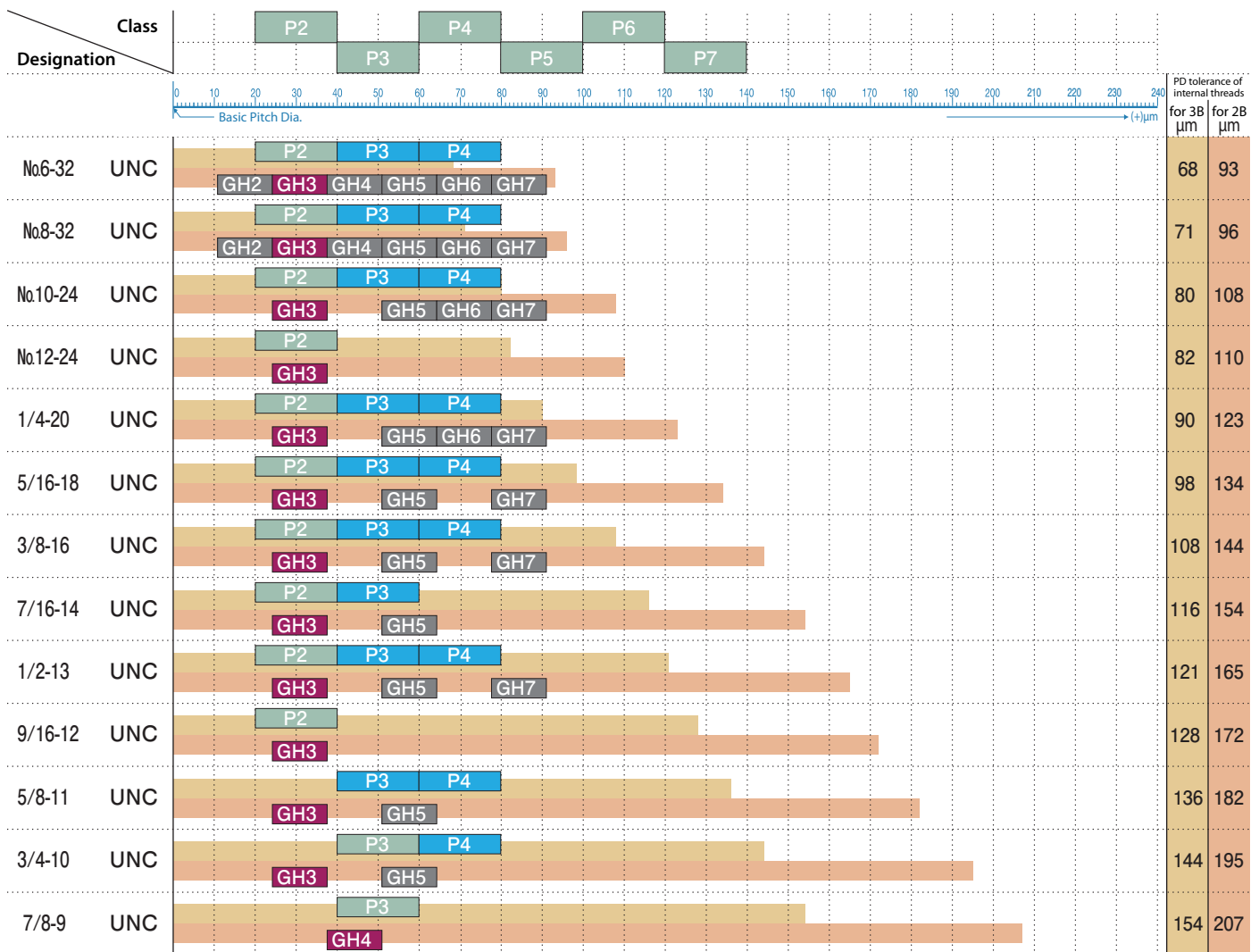
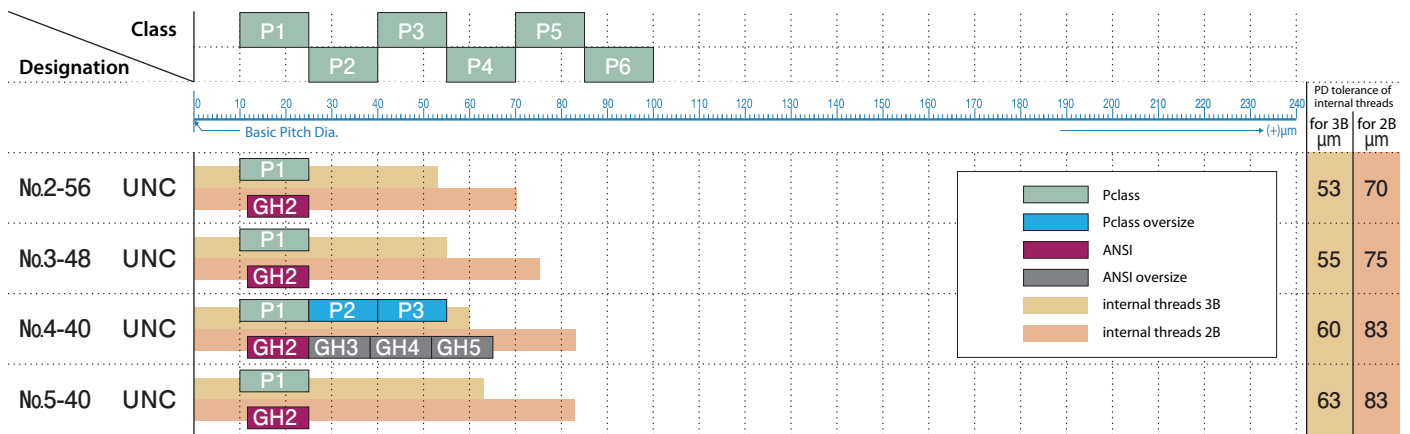
5. Classes of Taps for European market, and PD tolerance zone of taps.

Unit : μm

UNC	2B	UNF	2B	BSW	—	G	—
Nr. 1 - 64	+28~+12	Nr. 0 - 80	+26~+11	1/16 X 60	+28~+13	1/8 - 28	+43~+21
Nr. 2 - 56	+30~+13	Nr. 1 - 72	+28~+12	3/32 X 48	+32~+15	1/4 - 19	+50~+25
Nr. 3 - 48	+32~+14	Nr. 2 - 64	+29~+12	1/8 X 19	+35~+15	3/8 - 19	+50~+25
Nr. 4 - 40	+34~+16	Nr. 3 - 56	+31~+13	5/32 X 32	+40~+18	1/2 - 14	+57~+28
Nr. 5 - 40	+35~+16	Nr. 4 - 48	+32~+14	3/16 X 24	+44~+21	5/8 - 14	+57~+28
Nr. 6 - 32	+38~+18	Nr. 5 - 44	+34~+15	1/4 X 20	+46~+23	3/4 - 14	+57~+28
Nr. 8 - 32	+39~+18	Nr. 6 - 40	+36~+16	5/16 X 18	+49~+23	1 - 11	+72~+36
Nr.10 - 24	+42~+20	Nr. 8 - 36	+38~+17	3/8 X 16	+51~+25	1 1/4 - 11	+72~+36
Nr.12 - 24	+43~+20	Nr.10 - 32	+40~+18	7/16 X 14	+56~+28	1 1/2 - 11	+72~+36
1/4 - 20	+46~+22	Nr.12 - 28	+42~+19	1/2 X 12	+61~+30		
5/16 - 18	+49~+23	1/4 - 28	+43~+19	9/16 X 12	+61~+30		
3/8 - 16	+53~+25	5/16 - 24	+46~+20	5/8 X 11	+63~+30		
7/16 - 14	+56~+27	3/8 - 24	+48~+20	3/4 X 10	+69~+33		
1/2 - 13	+58~+28	7/16 - 20	+51~+22	7/8 X 9	+69~+33		
9/16 - 12	+60~+29	1/2 - 20	+52~+23	1 X 8	+74~+36		
5/8 - 11	+63~+30	9/16 - 18	+54~+23	1 1/8 X 7	+79~+38		
3/4 - 10	+66~+31	5/8 - 18	+56~+23	1 1/4 X 7	+79~+38		
7/8 - 9	+70~+33	3/4 - 16	+60~+25	1 3/8 X 6	+83~+41		
1 - 8	+73~+35	7/8 - 14	+64~+27	1 1/2 X 6	+84~+40		
		1 - 12	+67~+29	1 5/8 X 5	+90~+45		
				1 3/4 X 5	+92~+46		
				1 7/8 X 4.5	+95~+48		
				2 X 4.5	+96~+48		

9. Classes of Internal Threads and Classes of Taps

6. Comparison table of tap's classes for American market and PD tolerance for ANSI unified internal threads.



10. Guide to Thread Forming Taps (Roll Taps)

Thread Forming Taps are the tools used for producing internal threads by a thread forming process. Currently, YAMAWA's Thread Forming Taps have a good reputation by being used in large area. They are widely used along with the diversity of workpieces and with the change into miniaturization of workpieces. Followings are the characteristics and features of Thread Forming Taps (Roll Tap) which cutting type taps do not have.

<Features of Roll Taps>

- **Tapping without producing chips.** They are suitable for blind hole tapping. In producing internal threads with no chips, they save you a time for chip disposal.
- **Roll taps are stronger than cutting taps due to their design.** The effect of fluteless design gives a large cross-section area to the tap, which effectively eliminates the problem of chip jamming and thus make Roll taps very strong.
- **Roll taps produce excellent pitch diameter well within pitch diameter tolerances.** Material deformation process produces the internal threads with good surface finish as well as precise pitch diameter.
- **High efficiency and tool life** The configuration of the lobes at the crests of the tap threads make high speed tapping possible and extends tool life compared with cutting type taps. The addition of a supplemental tap surface treatment, such as Oxide, Nitride, TiN, and TiCN can extend tool life 2 to 20 times over an uncoated (bright) taps performance.

<Points to note during a Roll tapping operation>

- Tapping torque is 2 to 3 times larger than that of cutting type taps.
- Roll tapping is only applicable to stringy materials.
- The deviation of hole size before tapping should be about 5% of pitch. The control of hole size before tapping should be more severe than that of cutting type taps.
- The selection of lubricants is important to prevent sticking or welding.
- Burrs at the face of an internal thread are larger than those produced by cutting type taps, in some cases it is necessary to take additional counter-sink processing at the top of hole.
- In the minor diameter of internal thread, U-shape form (Tine form) at the hole entrance can be seen. U-shape form is never seen when using cutting type taps.

<Selection of YAMAWA Roll Taps>

- **Types of Roll Taps** YAMAWA produces various types of Roll Taps which include General purpose taps, Special purpose taps for non-ferrous and steel, as well as special purpose taps with surface treatment for the specified applications. To provide for longer tool life, specially developed premium materials are also used together with physical vapor deposition (PVD) such as TiN and TiCN. In particular, OL-RZ is superior product developed for dry machining with good regards to tapping environment and performance.
- **Tap Materials** YAMAWA's standard tap material is SKH58 designed for improving torque, superior anti-friction properties as well as toughness. To extend tool life, we use SKH56, or SKH10(Powder HSS) which is the best tap material for antifriction.
- **Tolerance Class** Using the datum 12.7μm in a step form, in accordance with ANSI standard GH class, we made up YAMAWA's G class system. The differences in materials being Roll tapped, as well as hole size, contribute to differences in thread forming. YAMAWA offers 2 to 3 oversized tap tolerance classes in order to achieve the most suitable internal thread pitch diameter size.
- **Chamfer length** Chamfer lengths : 2 pitches for blind hole use and 4 pitches for through hole use. Basically 4 pitches have longer tool life than 2 pitches because force applied on one blade at 4 pitch chamfer is smaller than that at 2 pitch chamfer. However, it is difficult to say about tool life in a few words because each different tapping condition influences the tool life.

<Shape of internal threads and the ratio of thread engagement affected by bored hole diameter>

Compared with the basic height of thread engagement, the actual height of the thread engagement is called "thread engagement ratio" in percentage. Depending on the bored hole diameter, internal threads and thread engagement ratio will change.

In tapping, the tapping condition must be chosen by referring to the thread engagement ratio.

In tapping, it can reduce cutting space and forming space to make bored hole diameters as large as possible. This, through reducing the load on taps, can restrict tap's wear and damage.

S50C, minor diameter of threads cut M24x3 minor dia tolerance of internal threads φ20.752~φ21.252		Aluminum, minor diameter of threads formed M25x2 minor dia tolerance of internal threads φ22.835~φ23.210	
<p>【S50C internal threads cut ①】 M24x3 bored hole size : φ20.652 minor dia tolerance of internal threads NG thread engagement ratio : 103.1%</p>		<p>【Aluminum, internal threads formed ①】 M25x2 bored hole size : φ23.903 minor diameter of finished internal threads : 22.723mm minor dia tolerance of internal threads NG thread engagement ratio : 105.2%</p>	
<p>【S50C internal threads cut ③】 M24x3 bored hole size : φ21.000 minor dia tolerance of internal threads: Middle thread engagement ratio : 92.4%</p>		<p>【Aluminum, internal threads formed ③】 M25x2 bored hole size : φ24.042mm minor diameter of finished internal threads : 23.067mm minor dia tolerance of internal threads : Middle thread engagement ratio : 89.3%</p>	
<p>【S50C internal threads cut ⑤】 M24x3 bored hole size : φ21.352 minor dia tolerance of internal threads NG thread engagement ratio : 81.5%</p>		<p>【Aluminum, internal threads formed ⑤】 M25x2 bored hole size : φ24.240mm minor diameter of finished internal threads : 23.462mm minor dia tolerance of internal threads NG thread engagement ratio : 71.0%</p>	

10. Guide to Threads Forming Taps (Roll Taps)

<Condition of use>

○Relation between tapping speed and tapping lubricant depending on work materials.

Work Material		Tapping Speed (m/min)	Tapping lubricant*
Aluminum and Aluminum Alloy	Die Cast Materials	15~25	Sulfer-chlorinated Mineral oil Chlorinated non-soluble oil Non-soluble oil
	Cold Drawn, Cold Forged, Cast	25~35	
Zinc and Zinc Alloy	Die Cast Materials	15~25	
	Cold Drawn, Cold Forged, Cast	25~35	
Copper	Cold Forged, Cast	25~35	
Brass	Cold Drawn, Cold Forged	25~35	
Steel	Mild Steel, Medium Carbon Steel, Stainless Steel	6~15	Chlorinated non-soluble oil
	Free Cutting Steel, Soft Magnetic Iron	15~25	

*Basis of selection of JIS symbols

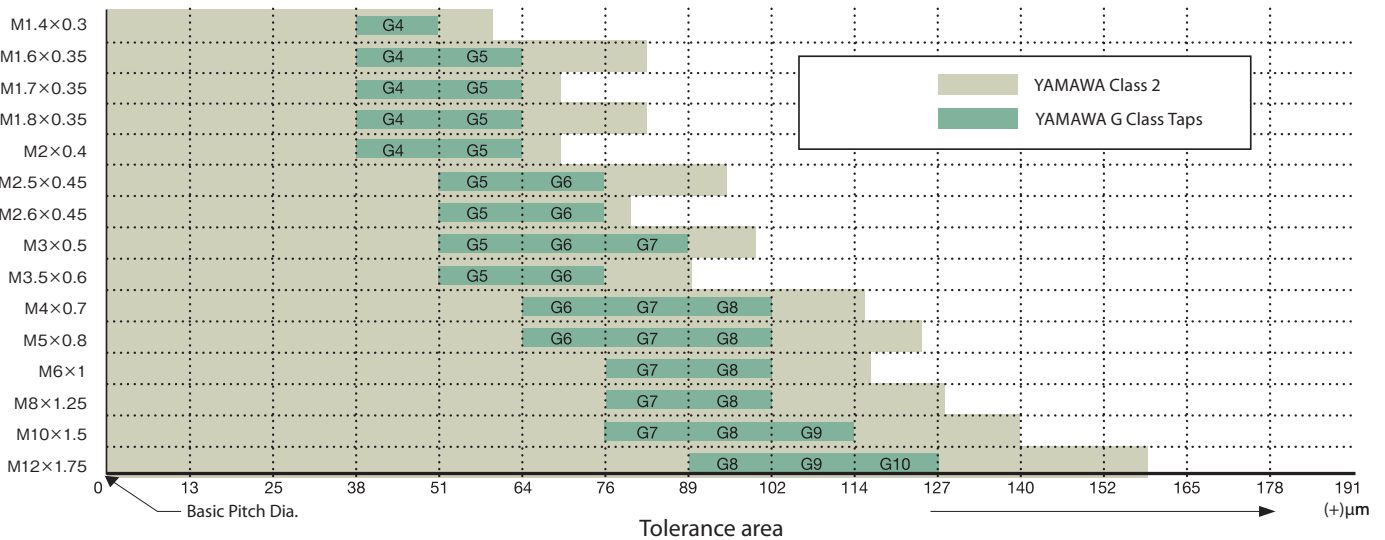
Note : It is necessary to carefully select a suitable tapping speed taking into consideration : machining conditions, style of tap, number of tap chamfered threads, work piece design, material being tapped, hole condition and type of tapping fluid.

<Accuracy of roll taps>

■YAMAWA G class system Thread Forming Taps

- YAMAWA G class system is made by using the datum 0.0005 inch (12.7μm) in a step form in accordance with ANSI standard GH class.
- The upper deviation of G class is decided by rounding off the grade No.× 12.7 to 1 decimal.
- The lower deviation of G class is specified in the same upper tolerance of one lower step.
- The tolerances are either 12 μm or 13μm.

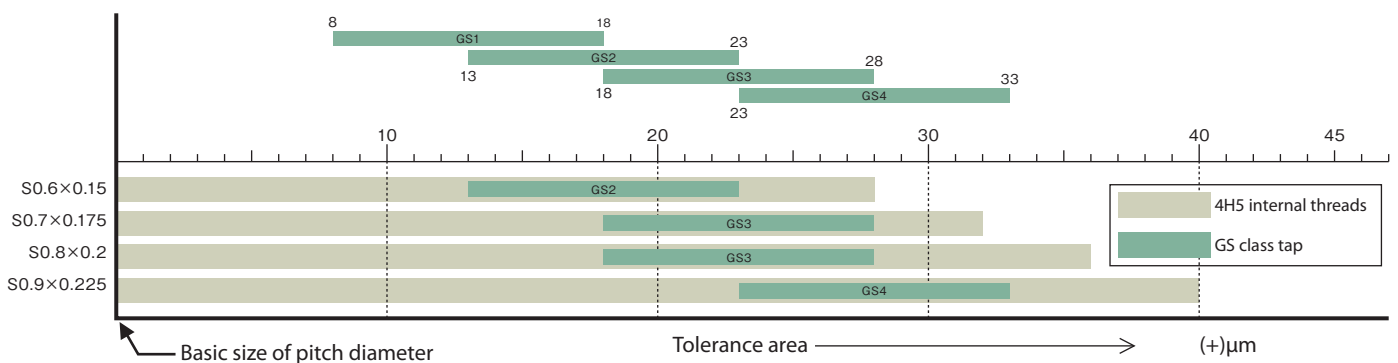
■Comparison of pitch tolerance zone between class 2 internal threads and recommended Roll Taps G Class.



■Roll taps for miniature threads, Accuracy GS class

○GS class is the accuracy class special for roll taps for miniature threads.

Comparison table of PD tolerance of GS class of roll taps for miniature threads and 4H5 internal threads.

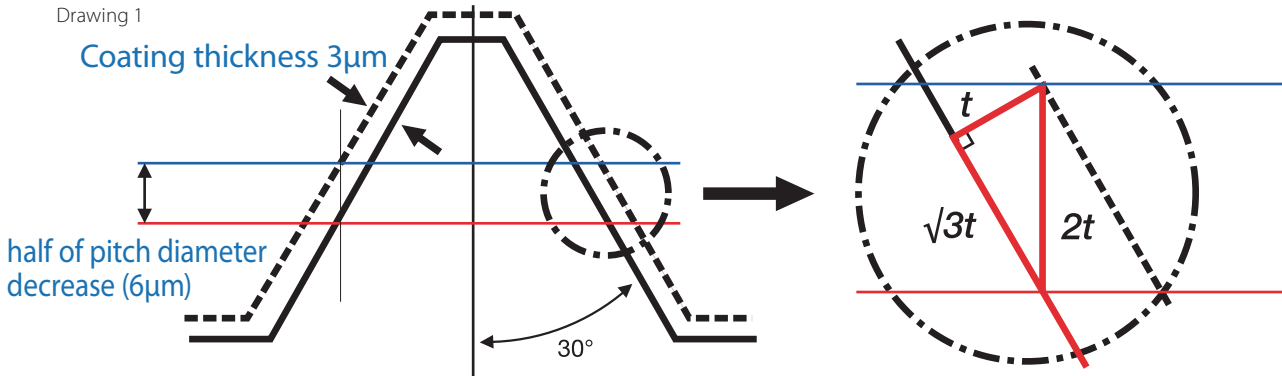


1.1. How to set the tap's oversize to meet with the coating margin of internal threads

1) Relation between coating thickness and pitch diameter when applied with coating

Dwg.1 shows the relation between coated internal thread and pitch diameter

* Thickness of coating is measured at right angle to flank face. Pitch diameter is measured at right angle to axis (radially).

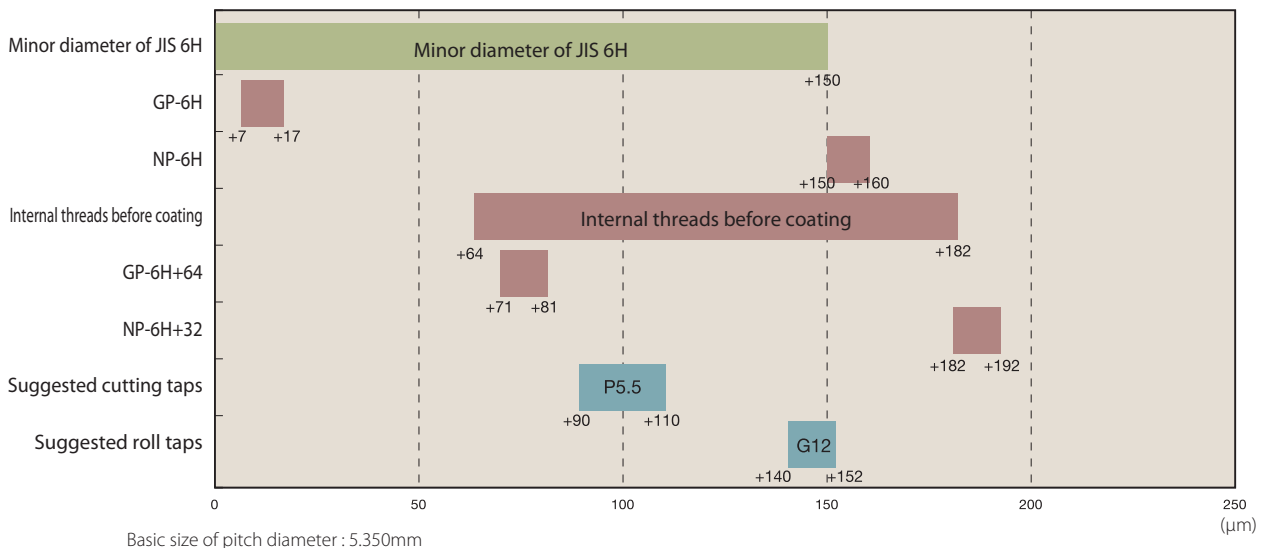


Where t (coating thickness) equals $3\mu\text{m}$, by using following formula, oversize is roughly calculated.
Pitch diameter decrease $2t \times 2$ (both side of threads) = $3\mu\text{m} \times 2 \times 2 = 12\mu\text{m}$ (rough over size)

2) How to specify taps for coating

- We suppose the accuracy of finished internal threads is 6H class, and inspection is done with GP-6H and NP-6H.
- We suppose the disperse of coating thickness is controlled within the tolerance of 8~16µm.
The disperse of coating thickness, when it is exchanged into pitch diameter, will become the disperse of 32~64µm.
- Accuracy of internal threads before coating is the thread accuracy which GP-6H goes through (OK), even when max coating (64µm) is applied.
And this accuracy is the thread accuracy which NP-6H does not go through (OK), when min coating (32µm) is applied.
- We propose followings for inspecting the accuracy of internal threads before coating :
GO gauge before coating : GP-6H+64
- Next, based on GO gauge before coating and NOT GO gauge before coating, we study to specify the suitable accuracy of the tap before coating.

M6x1 How to specify the accuracy of tap before coating (Coating thickness 8~16µm)



M6x1 Basic size of pitch diameter	: 5.350mm	
Internal thread tolerance 6H	: 0~+150µm (Tolerance : 150µm)	
Accuracy GP-6H	: +7~+17µm	Accuracy NP-6H : +150~+160µm
Internal thread tolerance before coating	: +64~+182µm (Tolerance : 118µm)	
Accuracy GP-6H+64	: +71~+81µm	Accuracy NP-6H+32 : +182~+192µm
Accuracy of suggested cutting taps (P5.5)	: +90~+110µm	
Accuracy of suggested roll taps (G12)	: +140~+152µm	

12. Recommended bored hole sizes

For Metric Threads

Unit : mm

Nominal size	Minor diameter of internal threads (D ₁)		Drill Size
	Max.	Min.	
M1 × 0.25	(0.785)	(0.729)	0.75
M1 × 0.2	(0.821)	(0.783)	0.80
M1.1 × 0.25	(0.885)	(0.829)	0.85
M1.1 × 0.2	(0.921)	(0.883)	0.90
M1.2 × 0.25	(0.985)	(0.929)	0.95
M1.2 × 0.2	(1.021)	(0.983)	1.00
M1.4 × 0.3	(1.142)	(1.075)	1.10
M1.4 × 0.2	(1.221)	(1.183)	1.20
M1.6 × 0.35	1.321	1.221	1.25
M1.6 × 0.2	(1.421)	(1.383)	1.40
※ M1.7 × 0.35	1.421	1.321	1.35
※ M1.7 × 0.2	1.521	1.483	1.50
M1.8 × 0.35	1.521	1.421	1.45
M1.8 × 0.2	(1.621)	(1.583)	1.60
M2 × 0.4	1.679	1.567	1.60
M2 × 0.25	(1.785)	(1.729)	1.75
M2.2 × 0.45	1.838	1.713	1.75
M2.2 × 0.25	(1.985)	(1.929)	1.95
※ M2.3 × 0.4	1.979	1.867	1.90
※ M2.3 × 0.25	2.085	2.029	2.05
M2.5 × 0.45	2.138	2.013	2.1
M2.5 × 0.35	2.221	2.121	2.2
※ M2.6 × 0.45	2.238	2.113	2.2
※ M2.6 × 0.35	2.321	2.221	2.3
M3 × 0.5	2.599	2.459	2.5
M3 × 0.35	2.721	2.621	2.7
M3.5 × 0.6	3.010	2.850	2.9
M3.5 × 0.35	3.221	3.121	3.2
M4 × 0.7	3.422	3.242	3.3
M4 × 0.5	3.599	3.459	3.5
M4.5 × 0.75	3.878	3.688	3.8
M4.5 × 0.5	4.099	3.959	4.0
M5 × 0.8	4.334	4.134	4.2
M5 × 0.5	4.599	4.459	4.5
M5.5 × 0.5	5.099	4.959	5.0
M6 × 1	5.153	4.917	5.0
M6 × 0.75	5.378	5.188	5.3
※ M6 × 0.5	5.599	5.459	5.5
M7 × 1	6.153	5.917	6.0

Nominal size	Minor diameter of internal threads (D ₁)		Drill Size
	Max.	Min.	
M7 × 0.75	6.378	6.188	6.3
※ M7 × 0.5	6.599	6.459	6.5
M8 × 1.25	6.912	6.647	6.8
M8 × 1	7.153	6.917	7.0
M 8 × 0.75	7.378	7.188	7.3
※ M 8 × 0.5	7.599	7.459	7.5
M 9 × 1.25	7.912	7.647	7.8
M 9 × 1	8.153	7.917	8.0
M 9 × 0.75	8.378	8.188	8.3
M10 × 1.5	8.676	8.376	8.5
M10 × 1.25	8.912	8.647	8.8
M10 × 1	9.153	8.917	9.0
M10 × 0.75	9.378	9.188	9.3
※ M10 × 0.5	9.599	9.459	9.5
M11 × 1.5	9.676	9.376	9.5
M11 × 1	10.153	9.917	10.0
M11 × 0.75	10.378	10.188	10.3
※ M11 × 0.5	10.599	10.459	10.5
M12 × 1.75	10.441	10.106	10.3
M12 × 1.5	10.676	10.376	10.5
M12 × 1.25	10.912	10.647	10.8
M12 × 1	11.153	10.917	11.0
※ M12 × 0.5	11.599	11.459	11.5
M14 × 2	12.210	11.835	12.0
M14 × 1.5	12.676	12.376	12.5
M14 × 1	13.153	12.917	13.0
M15 × 1.5	13.676	13.376	13.5
M15 × 1	14.153	13.917	14.0
M16 × 2	14.210	13.835	14.0
M16 × 1.5	14.676	14.376	14.5
M16 × 1	15.153	14.917	15.0
M17 × 1.5	15.676	15.376	15.5
M17 × 1	16.153	15.917	16.0
M18 × 2.5	15.744	15.294	15.5
M18 × 2	16.210	15.835	16.0
M18 × 1.5	16.676	16.376	16.5
M18 × 1	17.153	16.917	17.0
M20 × 2.5	17.744	17.294	17.5

The recommended tap drill sizes indicated above are for JIS 6H (Class 2) Metric Threads.

- D₁: Minor diameter of JIS 6H (Class 2) internal thread. The Minor diameters D₁ shown in () are of 5H (Class 2) for coarse threads and of 4H • 5H (Class 1) for fine threads.
- ※Marked sizes have been eliminated from JIS.

Unit : mm

Nominal size	Minor diameter of internal threads (D _i)		Drill Size
	Max.	Min.	
M20×2	18.210	17.835	18.0
M20×1.5	18.676	18.376	18.5
M20×1	19.153	18.917	19.0
M22×2.5	19.744	19.294	19.5
M22×2	20.210	19.835	20.0
M22×1.5	20.676	20.376	20.5
M22×1	21.153	20.917	21.0
M24×3	21.252	20.752	21.0
M24×2	22.210	21.835	22.0
M24×1.5	22.676	22.376	22.5
M24×1	23.153	22.917	23.0
M25×2	23.210	22.835	23.0
M25×1.5	23.676	23.376	23.5
M25×1	24.153	23.917	24.0
M26×1.5	24.676	24.376	24.5
M27×3	24.252	23.752	24.0
M27×2	25.210	24.835	25.0
M27×1.5	25.676	25.376	25.5
M27×1	26.153	25.917	26.0
M28×2	26.210	25.835	26.0
M28×1.5	26.676	26.376	26.5
M28×1	27.153	26.917	27.0
M30×3.5	26.771	26.211	26.5
M30×3	27.252	26.752	27.0
M30×2	28.210	27.835	28.0
M30×1.5	28.676	28.376	28.5
M30×1	29.153	28.917	29.0
M32×2	30.210	29.835	30.0
M32×1.5	30.676	30.376	30.5
M33×3.5	29.771	29.211	29.5
M33×3	30.252	29.752	30.0
M33×2	31.210	30.835	31.0
M33×1.5	31.676	31.376	31.5
M35×1.5	33.676	33.376	33.5
M36×4	32.270	31.670	32.0
M36×3	33.252	32.752	33.0
M36×2	34.210	33.835	34.0
M36×1.5	34.676	34.376	34.5

• D_i: Minor diameter of JIS 6H (Class 2) internal thread.

Nominal size	Minor diameter of internal threads (D _i)		Drill Size
	Max.	Min.	
M38×1.5	36.676	36.376	36.5
M39×4	35.270	34.670	35.0
M39×3	36.252	35.752	36.0
M39×2	37.210	36.835	37.0
M39×1.5	37.676	37.376	37.5
M40×3	37.252	36.752	37.0
M40×2	38.210	37.835	38.0
M40×1.5	38.676	38.376	38.5
M42×4.5	37.799	37.129	37.5
M42×4	38.270	37.670	38.0
M42×3	39.252	38.752	39.0
M42×2	40.210	39.835	40.0
M42×1.5	40.676	40.376	40.5
M45×4.5	40.799	40.129	40.5
M45×4	41.270	40.670	41.0
M45×3	42.252	41.752	42.0
M45×2	43.210	42.835	43.0
M45×1.5	43.676	43.376	43.5
M48×5	43.297	42.587	43.0
M48×4	44.270	43.670	44.0
M48×3	45.252	44.752	45.0
M48×2	46.210	45.835	46.0
M48×1.5	46.676	46.376	46.5
M50×3	47.252	46.752	47.0
M50×2	48.210	47.835	48.0
M50×1.5	48.676	48.376	48.5

1.2. Recommended bored hole sizes

■ For Unified Threads

Unit : mm

Nominal size	Minor diameter of internal threads (D _i)		Drill Size
	Max.	Min.	
No. 0 - 80UNF	1.305	1.182	1.25
No. 1 - 64UNC	1.582	1.425	1.55
No. 1 - 72UNF	1.612	1.474	1.55
No. 2 - 56UNC	1.871	1.695	1.80
No. 2 - 64UNF	1.912	1.756	1.85
No. 3 - 48UNC	2.146	1.941	2.1
No. 3 - 56UNF	2.197	2.025	2.1
No. 4 - 40UNC	2.385	2.157	2.3
No. 4 - 48UNF	2.458	2.271	2.4
No. 5 - 40UNC	2.697	2.487	2.6
No. 5 - 44UNF	2.740	2.551	2.7
No. 6 - 32UNC	2.895	2.642	2.8
No. 6 - 40UNF	3.022	2.820	2.9
No. 8 - 32UNC	3.530	3.302	3.4
No. 8 - 36UNF	3.606	3.404	3.5
No.10 - 24UNC	3.962	3.683	3.9
No.10 - 32UNF	4.165	3.963	4.1
No.12 - 24UNC	4.597	4.344	4.5
No.12 - 28UNF	4.724	4.496	4.6
No.12 - 32UNEF	4.826	4.623	4.7
1/4 - 20UNC	5.257	4.979	5.1
1/4 - 28UNF	5.588	5.360	5.5
1/4 - 32UNEF	5.689	5.487	5.6
5/16 - 18UNC	6.731	6.401	6.6
5/16 - 24UNF	7.035	6.782	6.9
5/16 - 32UNEF	7.264	7.087	7.1
3/8 - 16UNC	8.153	7.798	8.0
3/8 - 24UNF	8.636	8.382	8.5
3/8 - 32UNEF	8.864	8.662	8.7
7/16 - 14UNC	9.550	9.144	9.4
7/16 - 20UNF	10.033	9.729	9.9
7/16 - 28UNEF	10.337	10.135	10.2
1/2 - 13UNC	11.023	10.592	10.9
1/2 - 20UNF	11.607	11.329	11.5
1/2 - 28UNEF	11.938	11.710	11.8
9/16 - 12UNC	12.446	11.989	12.2
9/16 - 18UNF	13.081	12.751	12.9
9/16 - 24UNEF	13.385	13.132	13.2

Nominal size	Minor diameter of internal threads (D _i)		Drill Size
	Max.	Min.	
5/8 - 11UNC	13.868	13.386	13.6
5/8 - 18UNF	14.681	14.351	14.5
5/8 - 24UNEF	14.986	14.732	14.8
3/4 - 10UNC	16.840	16.307	16.6
3/4 - 16UNF	17.678	17.323	17.5
3/4 - 20UNEF	17.957	17.679	17.8
7/8 - 9UNC	19.761	19.177	19.6
7/8 - 14UNF	20.675	20.270	20.5
7/8 - 20UNEF	21.132	20.854	21.0
1 - 8UNC	22.606	21.971	22.3
1 - 12UNF	23.571	23.114	23.3
1 - 14UNS	23.825	23.445	23.6
1 - 20UNEF	24.307	24.029	24.1
1 1/8 - 7UNC	25.349	24.638	25.0
1 1/8 - 8UN	25.781	25.146	25.5
1 1/8-12UNF	26.746	26.289	26.5
1 1/8-18UNEF	27.381	27.051	27.2
1 1/4 - 7UNC	28.524	27.813	28.2
1 1/4 - 8UN	28.956	28.321	28.5
1 1/4-12UNF	29.921	29.464	29.6
1 1/4-18UNEF	30.556	30.226	30.3
1 3/8 - 6UNC	31.115	30.353	30.8
1 3/8 - 8UN	32.131	31.496	31.8
1 3/8-12UNF	33.096	32.639	32.8
1 3/8-18UNEF	33.731	33.401	33.5
1 1/2 - 6UNC	34.290	33.528	34.0
1 1/2 - 8UN	35.306	34.671	35.0
1 1/2-12UNF	36.271	35.814	36.0
1 1/2-18UNEF	36.906	36.576	36.7
1 5/8 - 8UN	38.481	37.846	38.1
1 5/8-12UN	39.446	38.989	39.1
1 5/8-18UNEF	40.081	39.751	39.8
1 3/4 - 5UNC	39.827	38.964	39.5
1 3/4 - 8UN	41.656	41.021	41.3
1 3/4-12UN	42.621	42.164	42.3
2 - 4 1/2UNC	45.593	44.679	45.2
2 - 8UN	48.006	47.371	47.8
2 - 12UN	48.971	48.514	48.6

• The recommended tap drill sizes indicated above are for JIS Class 2B UNC & UNF threads, and ANSI B1.1 Class 2B UNEF, UN & UNS threads.

■ For Metric Threads Using with Helical Coil Wire Inserts

Nominal size	Bored hole size		Drill Size
	Max.	Min.	
M 2 ×0.4	2.16	2.10	2.13
M 2.5×0.45	2.68	2.6	2.6
M 2.6×0.45	2.78	2.7	2.7
M 3 ×0.5	3.20	3.12	3.15
M 4 ×0.7	4.30	4.17	4.2
M 5 ×0.8	5.33	5.16	5.2
M 6 ×1	6.42	6.25	6.3
M 8 ×1.25	8.52	8.31	8.4
M10 ×1.5	10.62	10.37	10.5
M10 ×1.25	10.52	10.31	10.4
M10×1	10.42	10.25	10.3
M12×1.75	12.73	12.43	12.6
M12×1.5	12.62	12.37	12.5
M12×1.25	12.52	12.31	12.4

Unit : mm

Nominal size	Bored hole size		Drill Size
	Max.	Min.	
M14×2	14.83	14.49	14.7
M14×1.5	14.62	14.37	14.5
M14×1.25	14.52	14.31	14.4
M16×2	16.83	16.49	16.7
M16×1.5	16.62	16.37	16.5
M18×2.5	19.04	18.58	18.9
M18×1.5	18.62	18.37	18.5
M20×2.5	21.04	20.58	20.9
M20×1.5	20.62	20.37	20.5
M22×2.5	23.04	22.58	22.9
M22×1.5	22.62	22.37	22.5
M24×3	25.25	24.70	25.1
M24×1.5	24.62	24.37	24.5

• The figures listed above are according to the data provided by helical coil wire insert manufacturers.

■ Pipe Thread (Rc, PT)

Nominal size	Drill Size		Internal Thread Minor Dia. On [Min.] Length of Useful Thread	Internal Thread Minor Dia. On [Min.] Gauge Length
	With Reaming Before Tapping	Without Reaming Before Tapping		
Rc 1/16 - 28	6.1	6.2	6.244	6.384
Rc 1/8 - 28	8.1	8.2	8.249	8.388
Rc 1/4 - 19	10.7	11.0	10.962	11.174
Rc 3/8 - 19	14.2	14.5	14.448	14.658
Rc 1/2 - 14	17.6	18.0	17.979	18.263
Rc 3/4 - 14	23.0	23.5	23.378	23.663
Rc 1 - 11	29.0	29.5	29.459	29.822
Rc 1 1/4 - 11	37.5	38.0	37.976	38.339
Rc 1 1/2 - 11	43.4	44.0	43.869	44.232
Rc 2 - 11	54.9	55.5	55.412	55.844

Unit : mm

■ For Whitworth Coarse Threads

Nominal size	Minor diameter of internal threads (D _i)		Drill Size
	Max.	Min.	
※W 1/8 - 40	(2.591)	(2.362)	2.55
※W 3/16 - 24	(3.744)	(3.406)	3.70
W 1/4 - 20	5.204	4.914	5.1
W 5/16 - 18	6.670	6.340	6.6
W 3/8 - 16	8.113	7.733	8.0
W 7/16 - 14	9.508	9.048	9.4
W 1/2 - 12	10.830	10.310	10.7
W 9/16 - 12	12.418	11.898	12.3
W 5/8 - 11	13.817	13.257	13.7
W 3/4 - 10	16.778	16.178	16.6
W 7/8 - 9	19.691	19.031	19.5
W 1 - 8	22.514	21.814	22.3

Unit : mm

■ For Sewing Machine Threads

Nominal size	Minor diameter of internal threads (D _i)		Drill Size
	Max.	Min.	
1/8 SM44	2.605	2.485	2.5
9/16 SM40	2.948	2.818	2.9
11/16 SM40	3.742	3.612	3.7

Unit : mm

• D_i: Minor diameter of JIS Class 2 internal thread.
 • Whitworth Threads have been eliminated from JIS.
 • ※Marked sizes are in accordance with BSW.

1.2. Recommended bored hole sizes

■ Pipe Thread

○Rp, PS

Unit : mm

Nominal size	Minor Diameter of JIS internal thread (D1)		Drill Size
	Max.	Min.	
Rp 1/16 - 28	6.632	6.490	6.5
Rp 1/8 - 28	8.637	8.495	8.5
Rp 1/4 - 19	11.549	11.341	11.4
Rp 3/8 - 19	15.054	14.846	14.9
Rp 1/2 - 14	18.773	18.489	18.6
Rp 3/4 - 14	24.259	23.975	24.0
Rp 1 - 11	30.472	30.110	30.2
Rp 1 1/4-11	39.133	38.771	38.8
Rp 1 1/2-11	45.026	44.664	44.7
Rp 2 - 11	56.837	56.475	56.5

○G, PF

Unit : mm

Nominal size	Minor Diameter of JIS internal thread (D1)		Drill Size
	Max.	Min.	
G 1/16 - 28	6.843	6.561	6.7
G 1/8 - 28	8.848	8.566	8.7
G 1/4 - 19	11.890	11.445	11.7
G 3/8 - 19	15.395	14.950	15.2
G 1/2 - 14	19.172	18.631	19.0
G 5/8 - 14	21.128	20.587	21.0
G 3/4 - 14	24.658	24.117	24.5
G 7/8 - 14	28.418	27.877	28.2
G 1 - 11	30.931	30.291	30.6
G 1 1/8-11	35.579	34.939	35.2
G 1 1/4-11	39.592	38.952	39.2
G 1 1/2-11	45.485	44.845	45.0
G 1 3/4-11	51.428	50.788	51.0
G 2 - 11	57.296	56.656	57.0

■ American Standard Pipe Thread

Unit : mm

Nominal size	Tap Drill Size					
	NPT				NPS	
	With Reaming Before Tapping		Without Reaming Before Tapping		mm	inch
	mm	inch	mm	inch		
1/16 - 27	5.94	0.234	6.15	0.242	6.35	0.250
1/8 - 27	8.33	0.328	8.43	0.332	8.74	0.344
1/4 - 18	10.72	0.422	11.13	0.438	11.13	0.438
3/8 - 18	14.27	0.562	14.27	0.562	14.68	0.578
1/2 - 14	17.48	0.688	17.86	0.703	18.26	0.719
3/4 - 14	22.63	0.891	23.01	0.906	23.42	0.922
1 - 11 1/2	28.58	1.125	28.98	1.141	29.36	1.156
1 1/4-11 1/2	37.31	1.469	37.69	1.484	38.10	1.500
1 1/2-11 1/2	43.26	1.703	43.66	1.719	44.45	1.750
2 - 11 1/2	55.17	2.172	55.58	2.188	56.36	2.219
2 1/2 - 8	65.48	2.578	66.27	2.609	67.46	2.656

• The drill sizes are according to ANSI/ASME B1.20.1-1983 PIPE THREADS, GENERAL PURPOSE (INCH) (partial listing).

Dryseal American Standard Pipe Thread

Unit : mm

Nominal size	Tap Drill Size					
	NPT				NPSC	
	With Reaming Before Tapping		Without Reaming Before Tapping		mm	inch
mm	inch	mm	inch			
1/16 - 27	5.94	0.234	6.15	0.242	6.25	0.246
1/8 - 27	8.33	0.328	8.43	0.332	8.61	0.339
1/4 - 18	10.72	0.422	11.13	0.438	11.13	0.438
3/8 - 18	14.27	0.562	14.27	0.562	14.68	0.578
1/2 - 14	17.48	0.688	17.86	0.703	17.86	0.703
3/4 - 14	22.63	0.891	23.01	0.906	23.42	0.922
1 - 11 1/2	28.58	1.125	28.98	1.141	29.36	1.156
1 1/4-11 1/2	37.31	1.469	37.69	1.484		
1 1/2-11 1/2	43.26	1.703	43.66	1.719		
2 - 11 1/2	55.17	2.172	55.58	2.188		
2 1/2 - 8	65.48	2.578	66.27	2.609		

• The drill sizes are according to ANSI B1.20.3-1976 Dryseal Pipe Threads (Inch) (partial listing).

Percentage of Thread Engagement & Relation between Percentage of Thread Height and Area Removed at A Thread Height

Percentage of Thread Engagement

$$\frac{\text{Basic Major Dia. – Hole Size Before Tapping}}{2 \times (\text{Basic Thread Overlap})} \times 100$$

Basic Thread Overlap

Metric & Unified Thread	0.5413P
Whitworth Thread	0.5664P
Pipe Thread (Rc, Rp, G, PT, PS, PF)	0.6403P

P=Pitch

As shown above, when the thread height increases, the amount of material to be removed increases rapidly, so it is an advantage to tap users to keep the hole size (thread minor diameter) as large as possible.

13. Recommended Hole Sizes for Thread Forming Taps

For Metric Threads

Unit : mm

Nominal size	Tolerance Class of Tap	Recommended Hole Size	
		Max.	Min.
M1 × 0.25	G4	0.92	0.89
M1.2 × 0.25	G4	1.11	1.09
M1.4 × 0.3	G4	1.30	1.26
M1.6 × 0.35	G4	1.47	1.43
M1.7 × 0.35	G4	1.57	1.52
M1.8 × 0.35	G4	1.67	1.62
M2 × 0.4	G4	1.84	1.79
M2 × 0.25	G4	1.91	1.89
M2.2 × 0.45	G5	2.04	1.98
M2.3 × 0.4	G4	2.14	2.09
M2.5 × 0.45	G5	2.34	2.27
M2.5 × 0.35	G5	2.38	2.34
M2.6 × 0.45	G5	2.44	2.37
M3 × 0.5	G5	2.82	2.75
M3 × 0.35	G5	2.87	2.82

Nominal size	Tolerance Class of Tap	Recommended Hole Size	
		Max.	Min.
M 3.5 × 0.6	G5	3.27	3.19
M 3.5 × 0.35	G5	3.37	3.32
M 4 × 0.7	G6	3.72	3.65
M 4 × 0.5	G6	3.83	3.76
M 5 × 0.8	G6	4.67	4.59
M 5 × 0.5	G6	4.83	4.76
M 6 × 1	G7	5.59	5.49
M 6 × 0.75	G6	5.69	5.61
M 7 × 1	G7	6.59	6.48
M 7 × 0.75	G7	6.70	6.62
M 8 × 1.25	G7	7.49	7.36
M 8 × 1	G7	7.59	7.48
M 8 × 0.75	G7	7.70	7.62
M10 × 1.5	G7	9.34	9.22
M10 × 1.25	G7	9.49	9.35

Nominal size	Tolerance Class of Tap	Recommended Hole Size	
		Max.	Min.
M10 × 1	G 7	9.59	9.48
M12 × 1.75	G 8	11.23	11.09
M12 × 1.5	G 8	11.34	11.22
M12 × 1.25	G 9	11.50	11.36
M12 × 1	G 7	11.58	11.47
M14 × 2	G10	13.14	12.98
M14 × 1.5	G 9	13.35	13.22
M14 × 1	G 8	13.59	13.48
M16 × 2	G10	15.14	14.97
M16 × 1.5	G 9	15.34	15.22
M16 × 1	G 8	15.59	15.48
M18 × 2.5	G11	16.93	16.73
M18 × 1.5	G10	17.35	17.23
M20 × 2.5	G11	18.92	18.72
M20 × 1.5	G10	19.35	19.22

· According to the ductility, hardness and dimension of the workpiece to be tapped, the recommended hole sizes for thread forming tapping may have to be altered. The values listed above should only be used as an aid in selecting suitable drills when using thread forming taps, the correct hole sizes should be decided based on test result. Further, the values listed above are suitable for 0.5D~2D threading length in relatively ductile materials (D : thread major diameter).

For Unified Threads

Unit : mm

Nominal size	Tolerance Class of Tap	Recommended Hole Size	
		Max.	Min.
No.0 - 80UNF	G5	1.45	1.39
No.1 - 64UNC	G5	1.76	1.68
No.1 - 72UNF	G5	1.77	1.70
No.2 - 56UNC	G4	2.04	1.96
No.2 - 64UNF	G4	2.06	1.98
No.3 - 48UNC	G4	2.35	2.25
No.3 - 56UNF	G4	2.37	2.29
No.4 - 40UNC	G5	2.64	2.54
No.4 - 48UNF	G5	2.68	2.59
No.5 - 40UNC	G5	2.97	2.87

Nominal size	Tolerance Class of Tap	Recommended Hole Size	
		Max.	Min.
No. 5 - 44UNF	G5	2.99	2.90
No. 6 - 32UNC	G5	3.22	3.11
No. 6 - 40UNF	G5	3.29	3.19
No. 8 - 32UNC	G6	3.89	3.78
No. 8 - 36UNF	G5	3.91	3.81
No.10 - 24UNC	G6	4.44	4.30
No.10 - 32UNF	G6	4.53	4.44
No.12 - 24UNC	G6	5.07	4.96
No.12 - 28UNF	G6	5.13	5.03
1/4 - 20UNC	G7	5.86	5.73

Nominal size	Tolerance Class of Tap	Recommended Hole Size	
		Max.	Min.
1/4 - 28UNF	G7	6.00	5.91
5/16 - 18UNC	G7	7.38	7.23
5/16 - 24UNF	G7	7.53	7.42
3/8 - 16UNC	G7	8.89	8.72
3/8 - 24UNF	G7	9.10	8.99
7/16 - 14UNC	G8	10.40	10.20
7/16 - 20UNF	G8	10.62	10.48
1/2 - 13UNC	G8	11.92	11.70
1/2 - 20UNF	G8	12.20	12.06

· According to the ductility, hardness and dimension of the workpiece to be tapped, the recommended hole sizes for thread forming tapping may have to be altered. The values listed above should only be used as an aid in selecting suitable drills when using thread forming taps, the correct hole sizes should be decided based on test result. Further, the values listed above are suitable for 0.5D~2D threading length in relatively ductile materials (D : thread major diameter).

14. Bar diameter for external threads (for cutting type dies)

■ Tolerable limit size and tolerance of outside diameter for metric external screws

Unit : mm

size designation	pitch <i>P</i>	outside diameter of external screws					
		ISO			old JIS		
		<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a	<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a
M1	0.25	1.000	0.933	0.067	0.985	0.940	0.045
	0.2	1.000	0.944	0.056	0.980	0.930	0.050
M1.1	0.25	1.100	1.033	0.067	1.100	1.033	0.067
	0.2	1.100	1.044	0.056	1.100	1.044	0.056
M1.2	0.25	1.200	1.133	0.067	1.185	1.140	0.045
	0.2	1.200	1.144	0.056	1.180	1.130	0.050
M1.4	0.3	1.400	1.325	0.075	1.380	1.320	0.060
	0.2	1.400	1.344	0.056	1.380	1.330	0.050
M1.6	0.35	1.581	1.496	0.085	1.581	1.496	0.085
	0.2	1.583	1.527	0.056	1.583	1.527	0.056
M1.8	0.35	1.781	1.696	0.085	1.781	1.696	0.085
	0.2	1.783	1.727	0.056	1.783	1.727	0.056
M2	0.4	1.981	1.886	0.095	1.980	1.890	0.090
	0.25	1.982	1.915	0.067	1.980	1.930	0.050
M2.2	0.45	2.180	2.080	0.100	2.180	2.080	0.100
	0.25	2.182	2.115	0.067	2.182	2.115	0.067
M2.5	0.45	2.480	2.380	0.100	2.480	2.380	0.100
	0.35	2.481	2.396	0.085	2.481	2.396	0.085
M3	0.5	2.980	2.874	0.106	2.980	2.874	0.106
	0.35	2.981	2.896	0.085	2.980	2.880	0.100
M3.5	0.6	3.479	3.354	0.125	3.470	3.360	0.110
	0.35	3.481	3.396	0.085	3.480	3.380	0.100
M4	0.7	3.978	3.838	0.140	3.978	3.838	0.140
	0.5	3.980	3.874	0.106	3.970	3.860	0.110
M4.5	0.75	4.478	4.338	0.140	4.470	4.340	0.130
	0.5	4.480	4.374	0.106	4.470	4.360	0.110
M5	0.8	4.976	4.826	0.150	4.976	4.826	0.150
	0.5	4.980	4.874	0.106	4.970	4.860	0.110
M5.5	0.5	5.480	5.374	0.106	5.470	5.360	0.110
	1	5.974	5.794	0.180	5.970	5.820	0.150
M6	0.75	5.978	5.838	0.140	5.970	5.850	0.120
	1	6.974	6.794	0.180	6.970	6.820	0.150
M7	0.75	6.978	6.838	0.140	6.970	6.850	0.120
	1.25	7.972	7.760	0.212	7.960	7.790	0.170
M8	1	7.974	7.794	0.180	7.970	7.830	0.140
	0.75	7.978	7.838	0.140	7.970	7.830	0.140
M9	1.25	8.972	8.760	0.212	8.960	8.790	0.170
	1	8.974	8.794	0.180	8.970	8.830	0.140
M10	0.75	8.978	8.838	0.140	8.970	8.830	0.140
	1.5	9.968	9.732	0.236	9.960	9.770	0.190
M11	1.25	9.972	9.760	0.212	9.960	9.810	0.150
	1	9.974	9.794	0.180	9.970	9.820	0.150
M12	0.75	9.978	9.838	0.140	9.978	9.838	0.140
	1.5	10.968	10.732	0.236	10.968	10.732	0.236
M13	1	10.974	10.794	0.180	10.970	10.820	0.150
	0.75	10.978	10.838	0.140	10.978	10.838	0.140
M14	1.75	11.966	11.701	0.265	11.950	11.760	0.190
	1.5	11.968	11.732	0.236	11.960	11.790	0.170
M15	1.25	11.972	11.760	0.212	11.972	11.760	0.212
	1	11.974	11.794	0.180	11.960	11.810	0.150
M16	2	13.962	13.682	0.280	13.950	13.740	0.210
	1.5	13.968	13.732	0.236	13.960	13.790	0.170
M17	1	13.974	13.794	0.180	13.960	13.810	0.150
	1.5	14.968	14.732	0.236	14.960	14.790	0.170
M18	1	14.974	14.794	0.180	14.960	14.810	0.150

size designation	pitch <i>P</i>	outside diameter of external screws					
		ISO			old JIS		
		<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a	<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a
M16	2	15.962	15.682	0.280	15.950	15.740	0.210
	1.5	15.968	15.732	0.236	15.960	15.790	0.170
M17	1	15.974	15.794	0.180	15.960	15.810	0.150
	1.5	16.968	16.732	0.236	16.968	16.732	0.236
M18	1	16.974	16.794	0.180	16.974	16.794	0.180
	2.5	17.958	17.623	0.335	17.950	17.710	0.240
M20	2	17.962	17.682	0.280	17.950	17.650	0.300
	1.5	17.968	17.732	0.236	17.950	17.780	0.170
M22	1	17.974	17.794	0.180	17.960	17.810	0.150
	2.5	19.958	19.623	0.335	19.950	19.710	0.240
M24	2	19.962	19.682	0.280	19.950	19.650	0.300
	1.5	19.968	19.732	0.236	19.950	19.780	0.170
M25	1	19.974	19.794	0.180	19.960	19.810	0.150
	2.5	21.958	21.623	0.335	21.950	21.710	0.240
M26	2	21.962	21.682	0.280	21.950	21.650	0.300
	1.5	21.968	21.732	0.236	21.950	21.780	0.170
M27	1	21.974	21.794	0.180	21.960	21.810	0.150
	3	23.952	23.577	0.375	23.940	23.680	0.260
M28	2	23.962	23.682	0.280	23.940	23.640	0.300
	1.5	23.968	23.732	0.236	23.950	23.780	0.170
M29	1	23.974	23.794	0.180	23.960	23.810	0.150
	2	24.962	24.682	0.280	24.940	24.640	0.300
M30	1.5	24.968	24.732	0.236	24.950	24.780	0.170
	1	24.974	24.794	0.180	24.960	24.810	0.150
M31	1.5	25.968	25.732	0.236	25.950	25.780	0.170
	3	26.952	26.577	0.375	26.940	26.680	0.260
M32	2	26.962	26.682	0.280	26.962	26.682	0.280
	1.5	26.968	26.732	0.236	26.950	26.780	0.170
M33	1	26.974	26.794	0.180	26.974	26.794	0.180
	2	27.962	27.682	0.280	27.940	27.640	0.300
M34	1.5	27.968	27.732	0.236	27.950	27.780	0.170
	1	27.974	27.794	0.180	27.960	27.810	0.150
M35	2	29.947	29.522	0.425	29.940	29.660	0.280
	3	29.952	29.577	0.375	29.952	29.577	0.375
M36	2	29.962	29.682	0.280	29.940	29.640	0.300
	1.5	29.968	29.732	0.236	29.950	29.780	0.170
M37	1	29.974	29.794	0.180	29.960	29.810	0.150
	2	31.962	31.682	0.280	31.940	31.640	0.300
M38	1.5	31.968	31.732	0.236	31.950	31.780	0.170
	3	32.947	32.522	0.425	32.940	32.660	0.280
M39	3	32.952	32.577	0.375	32.952	32.577	0.375
	2	32.962	32.682	0.280	32.962	32.682	0.280
M40	1.5	32.968	32.732	0.236	32.950	32.780	0.170
	1.5	34.968	34.732	0.236	34.950	34.780	0.170
M41	4	35.940	35.465	0.475	35.930	35.630	0.300
	3	35.952	35.577	0.375	35.952	35.577	0.375
M42	2	35.962	35.682	0.280	35.940	35.640	0.300
	1.5	35.968	35.732	0.236	35.950	35.780	0.170
M43	1.5	37.968	37.732	0.236	37.950	37.780	0.170
	4	38.940	38.465	0.475	38.930	38.630	0.300
M44	3	38.952	38.577	0.375	38.952	38.577	0.375
	2	38.962	38.682	0.280	38.962	38.682	0.280
M45	1.5	38.968	38.732	0.236	38.968	38.732	0.236
	3	39.952	39.577	0.375	39.952	39.577	0.375
M46	2	39.962	39.682	0.280	39.940	39.640	0.300
	1.5	39.968	39.732	0.236	39.950	39.780	0.170

ISO tolerance area Class 6g (M1.6 and larger) 6h (M1.4 and smaller) old JIS 2nd class old JIS 2nd class

· ISO : from table 2 JIS B0209-2 and from table 1 JIS B0209-3

· Old JIS : from the tolerable limit size and the tolerance of metric coarse threads (for 2nd class external threads, JIS B 0209-1982 appendix 1, appendix 1 attachment 4. from the tolerable limit size and the tolerance of metric fine threads (for 2nd class external threads), JIS B 0211-1982 appendix, appendix attachment 4

14. Bar diameter for external threads (for cutting type dies)

Unit : mm

size designation	pitch <i>P</i>	outside diameter of external screws					
		ISO			old JIS		
		<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a	<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a
M42	4.5	41.937	41.437	0.500	41.930	41.610	0.320
	4	41.940	41.465	0.475	41.940	41.465	0.475
	3	41.952	41.577	0.375	41.952	41.577	0.375
	2	41.962	41.682	0.280	41.940	41.640	0.300
	1.5	41.968	41.732	0.236	41.950	41.780	0.170
M45	4.5	44.937	44.437	0.500	44.930	44.610	0.320
	4	44.940	44.465	0.475	44.940	44.465	0.475
	3	44.952	44.577	0.375	44.952	44.577	0.375
	2	44.962	44.682	0.280	44.940	44.640	0.300
M48	5	47.929	47.399	0.530	47.930	47.590	0.340
	4	47.940	47.465	0.475	47.940	47.465	0.475
	3	47.952	47.577	0.375	47.952	47.577	0.375
	2	47.962	47.682	0.280	47.940	47.640	0.300
	1.5	47.968	47.732	0.236	47.950	47.780	0.170

Tolerable limit size and tolerance of outside diameter for unified external screws (for 2A thread)

Unit : mm

size designation	outside diameter of external screws		
	<i>d</i> _{max}	<i>d</i> _{min}	<i>T</i> _a
No0-80UNF	1.511	1.431	0.080
No.1-64UNC	1.838	1.743	0.095
No.1-72UNF	1.838	1.751	0.087
No.2-56UNC	2.169	2.066	0.103
No.2-64UNF	2.169	2.073	0.096
No.3-48UNC	2.496	2.383	0.113
No.3-56UNF	2.496	2.393	0.103
No.4-40UNC	2.824	2.695	0.129
No.4-48UNF	2.827	2.713	0.114
No.5-40UNC	3.154	3.026	0.128
No.5-44UNF	3.157	3.036	0.121
No.6-32UNC	3.484	3.333	0.151
No.6-40UNF	3.484	3.356	0.128
No.8-32UNC	4.142	3.991	0.151
No.8-36UNF	4.145	4.006	0.139
No.10-24UNC	4.800	4.618	0.182
No.10-32UNF	4.803	4.651	0.152
No.12-24UNC	5.461	5.279	0.182
No.12-28UNF	5.461	5.296	0.165
1/4-20UNC	6.322	6.117	0.205
1/4-28UNF	6.324	6.160	0.164
5/16-18UNC	7.907	7.687	0.220
5/16-24UNF	7.909	7.727	0.182
3/8-16UNC	9.491	9.254	0.237
3/8-24UNF	9.497	9.315	0.182
7/16-14UNC	11.076	10.816	0.260
7/16-20UNF	11.079	10.874	0.205
1/2-13UNC	12.661	12.386	0.275
1/2-20UNF	12.666	12.462	0.204
9/16-12UNC	14.246	13.958	0.288
9/16-18UNF	14.251	14.031	0.220
5/8-11UNC	15.834	15.528	0.306
5/8-18UNF	15.839	15.619	0.220
3/4-10UNC	19.004	18.677	0.327
3/4-16UNF	19.011	18.774	0.237
7/8-9UNC	22.176	21.824	0.352
7/8-14UNF	22.184	21.923	0.261
1-8UNC	25.349	24.969	0.380
1-12UNF	25.354	25.065	0.289
1 1/8-7UNC	28.519	28.103	0.416
1 1/8-12UNF	28.529	28.240	0.289
1 1/4-7UNC	31.694	31.278	0.416
1 1/4-12UNF	31.704	31.415	0.289
1 3/8-6UNC	34.864	34.402	0.462
1 3/8-12UNF	34.876	34.588	0.288
1 1/2-6UNC	38.039	37.577	0.462
1 1/2-12UNF	38.051	37.763	0.288
1 3/4-5UNC	44.381	43.861	0.520
2-4 1/2UNC	50.726	50.168	0.558

· from table 4 JIS B0210 and table 4 JIS B0212

Tolerable limit size and tolerance of outside diameter for sewing machine screw external screws (for 2nd thread)

Unit : mm

thread designation	outside diameter of external screws		
	d_{max}	d_{min}	T_d
1/16 SM80	1.588	1.518	0.070
5/64 SM64	1.984	1.904	0.080
3/32 SM56	2.381	2.286	0.095
3/32 SM100	2.381	2.306	0.075
1/8 SM40	3.175	3.045	0.130
1/8 SM44	3.175	3.055	0.120
1/8 SM48	3.175	3.065	0.110
9/64 SM40	3.572	3.442	0.130
11/64 SM40	4.366	4.236	0.130
3/16 SM24	4.762	4.602	0.160
3/16 SM28	4.762	4.602	0.160
3/16 SM32	4.762	4.602	0.160
7/32 SM32	5.556	5.396	0.160
15/64 SM28	5.953	5.773	0.180
1/4 SM24	6.350	6.170	0.180
1/4 SM40	6.350	6.220	0.130

· from table 2 JIS B 0226 (void in 2001)

Pipe taper threads (R, PT)

Unit : mm

Designation	bar diameter (ref.)	
	Straight	taper (dia of thread end)
R 1/16	7.9	7.5
R 1/8	9.9	9.5
R 1/4	13.4	12.8
R 3/8	16.9	16.3
R 1/2	21.3	20.5
R 3/4	26.8	25.9
R 1	33.7	32.7
R 1·1/4	42.3	41.2
R 1·1/2	48.2	47.1
R 2	60.1	58.7

Pipe parallel threads (G, PF)

Unit : mm

Designation	outside diameter of external screws	
	d_{max}	d_{min}
G 1/16	7.723	7.509
G 1/8	9.728	9.514
G 1/4	13.157	12.907
G 3/8	16.662	16.412
G 1/2	20.955	20.671
G 5/8	22.911	22.627
G 3/4	26.441	26.157
G 7/8	30.201	29.917
G 1	33.249	32.889
G 1·1/4	41.910	41.550
G 1·1/2	47.803	47.443
G 2	59.614	59.254

15. Bar diameter of external screws (for thread rolling dies)

○NRS-D recommendation for bar diameter for metric external screws

Unit : mm

designation	recommended bar diameter	
	Max	Min
M3×0.5	2.64	2.62
M4×0.7	3.54	3.52
M5×0.8	4.40	4.38
M6×1	5.30	5.28
M8×1.25	7.10	7.07

○RS-D recommendation for bar diameter for metric external screws

Unit : mm

designation	recommended bar diameter	
	Max	Min
M1×0.25	0.808	0.785
M1.1×0.25	0.918	0.891
M1.2×0.25	1.007	0.984
M1.4×0.3	1.168	1.142
M1.6×0.35	1.332	1.300
M1.7×0.35	1.432	1.401
M1.8×0.35	1.530	1.498
M2×0.4	1.699	1.669
M2×0.25	1.796	1.771
M2.2×0.45	1.863	1.827

designation	recommended bar diameter	
	Max	Min
M2.3×0.4	1.998	1.968
M2.3×0.25	2.096	2.071
M2.5×0.45	2.162	2.126
M2.5×0.35	2.228	2.196
M2.6×0.45	2.262	2.226
M2.6×0.35	2.318	2.278
M3×0.5	2.627	2.589
M3×0.35	2.718	2.677
M4×0.5	3.607	3.561
M5×0.5	4.606	4.560

○MS-RS-D recommendation for bar diameter for metric external screws

Unit : mm

designation	recommended bar diameter	
	Max	Min
S0.5×0.125	0.410	0.396
S0.6×0.15	0.494	0.479
S0.7×0.175	0.575	0.559
S0.8×0.2	0.658	0.640
S0.9×0.225	0.741	0.720

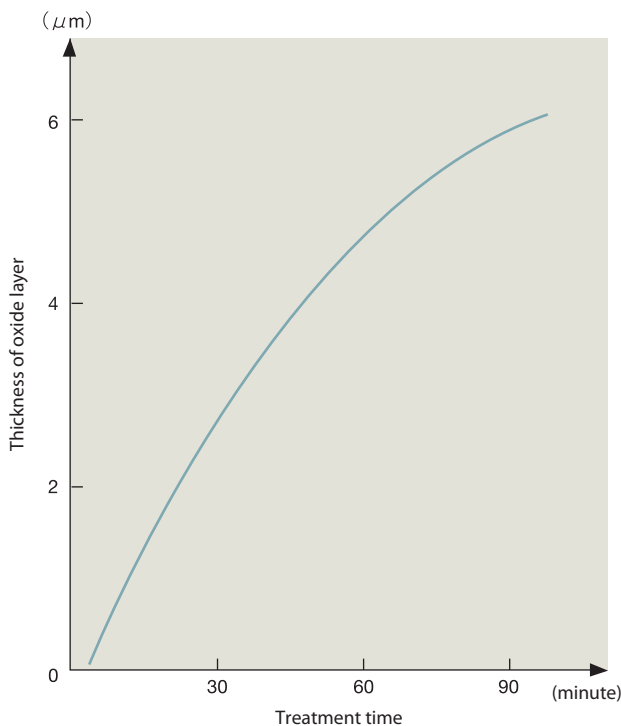
16. Surface Treatment

The best surface treatment is applied to each tap depending on the tapping purpose. Characteristics and effectiveness of surface treatment are introduced at next section.

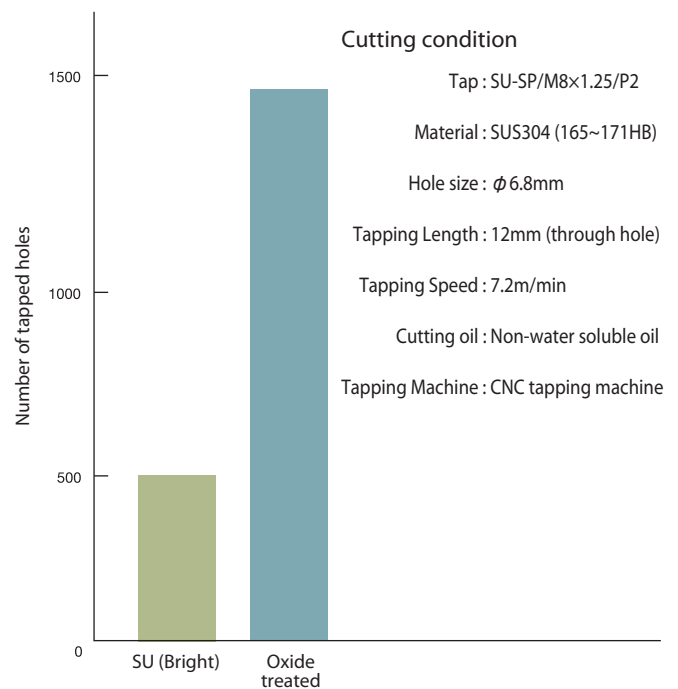
■Oxidizing

- This treatment was processed by using HOMO furnace being made by LEED AND NORTHUP company USA in 1938, and it is called HOMO treatment. This treatment is also called vapor treatment and steam treatment. Through this treatment, Fe3O4 layer of blue black color is produced over the tool surface.
- Oxidization treatment produces porous layer on tool's surface. This porous layer works as oil pocket to reduce friction, to avoid welding and to improve the surface roughness of internal screw. Moreover, longer tool life is expected because the treatment reduces the remaining stress of HSS tools.
- This treatment does not increase the hardness on tool surface. Using the furnace of YAMAWA original design and choosing the proper treatment time, we have marked good result of oxidizing for YAMAWA HSS tools.
- Stainless steel and low carbon steel are the materials that are easy to get welding. We are applying this treatment to the special purpose taps for these materials to get good result. Further due to the reduction of friction resistance, this treatment has good result for wide range of steel type material.
- We combine oxidizing with nitriding for the taps designed for such steel and alloy tool steel. This double treatment wins good reputation of the market.

■Thickness of oxide layer and the time of treatment



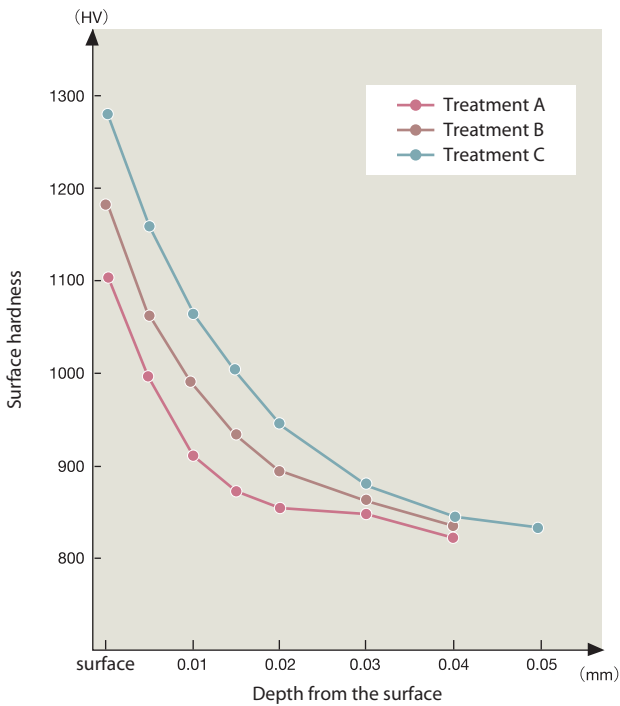
■Efficiency of oxide treatment



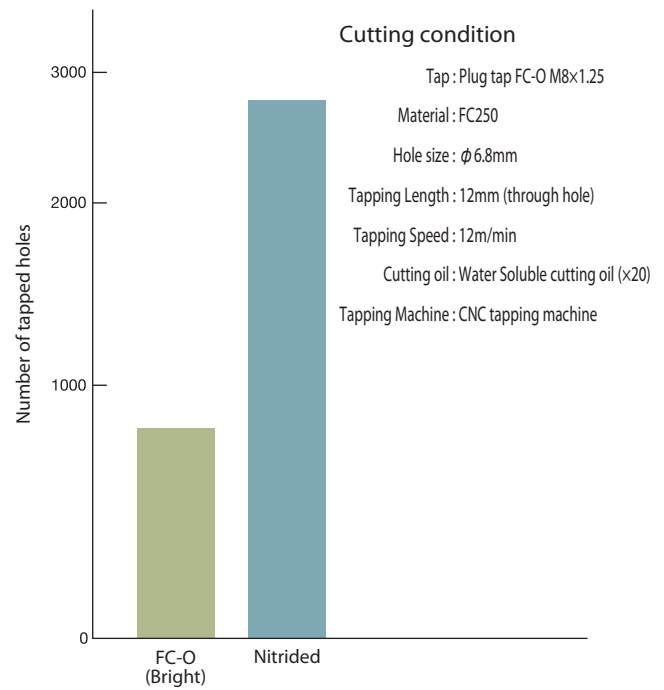
Nitriding

- In this treatment, we have Nitrogen and Carbon soak into the surface of HSS tools, and react with chemical of HSS material to produce hard nitride. There are 3 method in the treatment, as composition gas method, salt bath nitride method and ion nitride method.
- Salt bath nitride treatment is shifted into gas nitride treatment method because of cyanic environmental pollution.
- The temperature of treatment is 500 to 550 degree. Hardness and depth of the treatment can be controlled by active nitrogen concentration and reaction time.
- The high hardness of tool surface minimizes chemical attraction. Result is less welding and friction resistance. Great improvement is expected in tool's performance.
- We have found out the best combinations of hardness and toughness through our treatment technology
- The nitriding treatment will be widely applicable to workpiece materials such as gray cast irons, special cast irons, aluminum diecastings with higher silicone content, copper alloys, and resinoids (plastics), these materials produce small segmental chips and are very abrasive.
- We combine nitrogen and oxidizing for comparatively sticky material such as high carbon steel and refined alloy steel. This double treatment improves the chipping resistance and have won good reputation.

Depth and hardness of Nitride Surface Treatment



Efficiency of Nitride Treatment



■ Hard coating

High speed cutting and hard-to-machine cutting are the recent technology. To meet this tendency, the hard layer coating by vapor deposition over tool's surface has become popular. There are two coating methods, CVD and PVD. PVD is mainly used for tap.

■ Physical Vapor Deposition

○Inside of the container of high vacuum, are heat vapor deposition materials. And we vapor deposit particles ionized by electric discharge on tool's surface.

○Due to its low reaction temperature (lower than 500°C), PVD makes little change in shape and hardness of HSS tools.

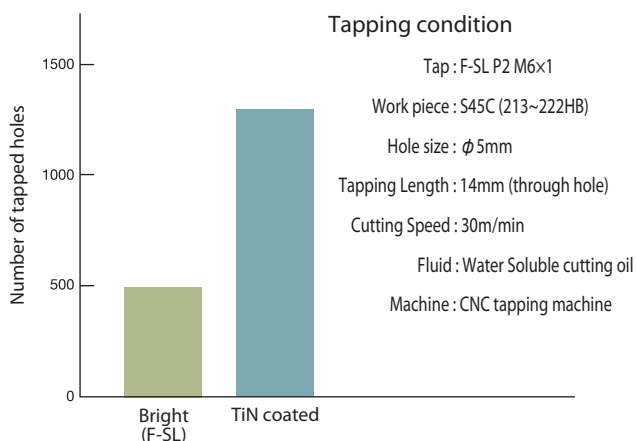
○We have adopted iron plating method, and are coating thin layer (1-4um) over our HSS and carbide tools. This layer processed by this method is very high in its adherence and its wear resistance.

■ The features and classification of coating

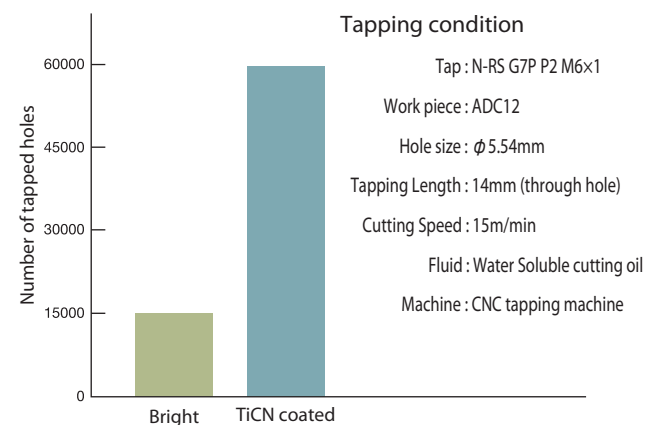
Classification	Titanium nitride (TiN)	Titanium carbonitride (TiCN)	Titanium nitride aluminum (TiAlN)	Hard chromium plating (CrN)
Vickers Hardness	2000~2400	3000~3500	2300~2700	1800~2200
Wear resistance	Good	Excellent	Excellent	Normal
Welding resistance	Good	Good	Good	Excellent
Heat resistance	Good	Normal	Excellent	Excellent
Acid resistance	Good	Normal	Excellent	Good
Slippery	Good	Excellent	Good	Excellent
Color	Gold	Blue Gray Violet	Violet	Silver
Workpiece materials	Carbon Steels Aluminum forging	Carbon Steels Hard Steels Stainless Steels Aluminum forging Cast Irons Brass · Bronze	Stainless Steels Cast Irons	Copper

Note: Evaluation (tri-level) of characteristic features is just comparative of these four coatings, TiN, TiCN, TiAlN, and CrN, in the table. These coatings have great advantages of wear resistance, welding resistance, and reduced friction resistance. The values of vickers hardness are also higher than the heat treatment or nitriding of HSS cutting tools from the table.

■ The efficiency of TiN coating



■ The efficiency of TiCN coating



17. Carbide Taps

Technological advances in machining automation and CNC machines and machining centers have helped improve the overall tapping process. YAMAWA was quick to respond to evolving customer needs resulting from technological innovations.

We can now recommend carbide taps, which provide tremendous improvements in mass-production and in reducing costs. It is estimated that carbide taps have 50 times more durability than HSS in tapping, when used properly. YAMAWA engineering believes the best carbide materials suitable for taps are ultramicro grain tungsten carbide, or ultrafine grain carbide made of high cobalt.

■ Features of Carbide Taps

- (1) Excellent durability with high toughness is obtainable.
- (2) High anti-friction features are provided by the material's high hardness and comparatively high stringiness, which ultimately results in a longer tool life.
- (3) Specially designed cutting angle and other dimensional features produce the internal threads with high tolerance accuracy and consistency.
- (4) Under certain tapping condition, YAMAWA carbide taps can be used even for tapping hard-to-machine materials.

■ Points to note during tapping with Carbide taps:

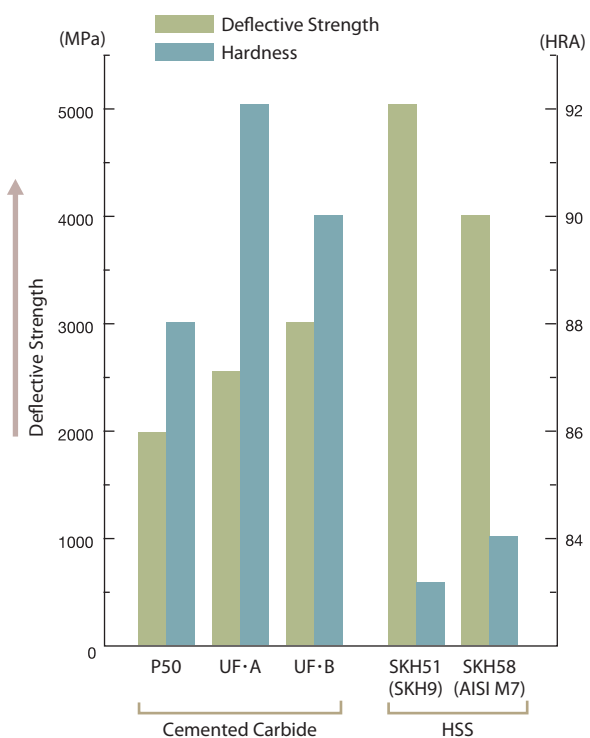
- (1) Machine vibration, or run-out, can lead to Carbide tap chipping and premature failure. Tapping vibrations need to be kept to a minimum.
- (2) Tap holder should be a rigid type for a Carbide tap. A holder attachment with axial float, or radial float tends to promote Carbide tap breakage and chipping.
- (3) The hole to be tapped must be located correctly and on center ; any centering off or non-straight drilled hole tends to cause Carbide tap breakage due to deflection. Select correct hole depth with respect to tapping length (for blind hole only). It is especially important to prevent tap damage from chip packing and bottom thrusting in blind hole tapping.
- (4) Cutting lubricants - select grade of lubricant. Improper flow of coolant, or lack of sufficient amount of lubricant, or cooling can increase the likelihood of Carbide tap chipping due to work material welding. Caution must be taken during dry machining to prevent chip welding to the tap.
- (5) Work pieces - we provide Carbide taps with increased toughness, but Carbide taps are inferior to High Speed Steel (HSS) in the area of toughness. As a matter of fact Carbide taps have limited application due to this difference in toughness to HSS.

■ Commonly used material and cutting conditions.

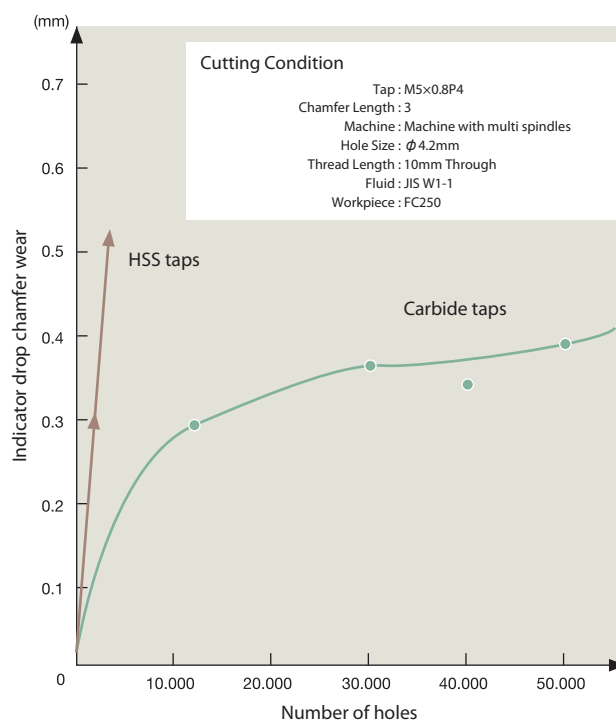
Work Material		Cutting Speed (m/min)	Cutting Fluid (General recommendation)	Cutting Fluid (JIS recommendation)
Cast Iron	Ordinary	15~25	Dry, light oil, water soluble oil	Un-soluble oil, 2nd kind No.11 and 13 Water soluble oil, W 1st kind No.1, W 2nd kind No.1
	Nodular Graphite	10~20	Light oil, water soluble oil	
	Malleable	10~20	Water soluble oil	
Aluminum		20~40	Light oil, water soluble oil	Un-soluble oil, 1st kind No.4-6 Un-soluble oil, 2nd kind No. 5-6 Water soluble oil, W 1st kind No.1
Copper		15~30	Light oil, water soluble oil	
Copper Alloy	Brass	20~30	Light oil, water soluble oil	
	Phosphor Bronze	15~30	Light oil, water soluble oil	
Die-Cast	Aluminum Alloy	15~25	Mixed oil of lard oil and kerosene	Un-soluble oil, 2nd kind No. 5-6 Water soluble oil, W 1st kind No.1
	Zinc Alloy	12~20	Mixed oil of lard oil and kerosene	
Plastic	Thermosetting	15~25	Water soluble oil, air	Water soluble oil, W 2nd kind No.3
	Thermo Plastic	15~25	Water soluble oil, air	
Hard Rubber		15~30	Dry, air	

Note : The table shows only general conditions. As for actual cutting operation, please consider the following points : (1) Machine Capacity, (2) Work piece(s), (3) Work Shape, (4) Setup (5) other factors.

■ Toughness and Hardness of Cemented Carbide and HSS



■ Chamfer wear and number of holes of Carbide taps and HSS taps



■ Carbide Taps examples and comparison of tool life

Classification		Size	M2×0.4	M8×1.25	M6×1	M8×1.25	M10×1.25
Workpiece	Material		Plastic with glass fibre	ADC12	FC250	FC250	FC250
	Part's name		Electric Parts	Car Parts	Electric Parts	Car Parts	Car Parts
Thread Condition	Tapping Hole. condition		φ 1.6 Through	φ 6.7 Blind	φ 5.0 Blind	φ 6.7 Blind	φ 8.7 Blind
	Tapping Length		4mm	18mm	10mm	16mm	18mm
Condition of Use	Machine		Special Machine	Special Machine	4Spindles Machine	Spindles Machine	Special Machine
	Cutting Speed		6.3m/min	8.5m/min	8m/min	6m/min	5.7m/min
	Fluid		Dry	Water soluble	Water soluble	Water soluble	Water soluble
Number of Holes	CT Tap		10.000	75.400	53.000	18.860	38.500
	HSS Tap		200	1.000	1.000	300	500
	Comparison of Life		50	75.4	53	62.9	77

Note : In above all situations, HSS taps are used standard ones. To use CT properly is capable of a long tool life. These datum have come from customers are using CT taps.

18. Pipe Taps Standard

1. JIS Pipe Taps

The pipe thread standard (JIS B 0202,0203) was revised in 1982 to meet ISO standard. In the same year, JIS B 4445 (straight pipe thread taps) and JIS B 4446 (taper pipe thread taps) were also revised.

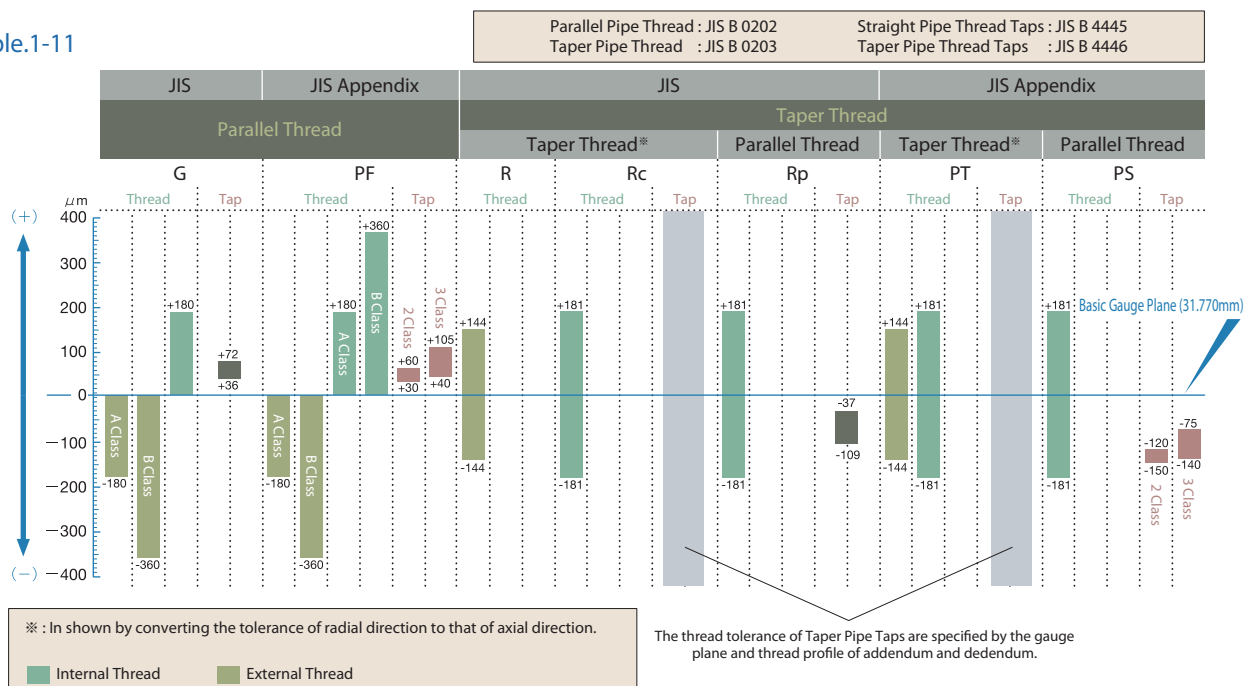
- A part of the pipe thread standard was revised in 1966 to meet ISO, but in the 1982 revision, the ISO standard was defined in the main book of JIS and the old 1966 standard was defined in JIS Appendix. For Pipe Threads, which are specified in the main book of JIS and JIS Appendix, thread symbols are different but the nominal size 1/8 to 6 inch are same. In the 1998 revision, the contents of the main book of JIS and JIS Appendix are not changed.
- ISO tap standard for pipe threads is different from the JIS tap standard in style, size and thread limit. Like the pipe thread standard, in JIS tap standards for pipe threads, style, size and thread limits of ISO standard are specified in the main book of JIS and those of old JIS standard are in the JIS Appendix. For ISO standard (style and size), please refer to the next page.
- Thread limits of Rp and G taps are the same as the ISO standard. The thread limit of Rc taps is the same as the JIS class 2 of PT taps shown in JIS Appendix because Rc is not specified in the ISO standard. Therefore, both Rc taps and PT taps can be used interchangeably. For the relation between thread limit of internal threads and tap thread limit, please refer to the table below.
- Pipe Taps standard was revised in 1987. And tap designations shown in JIS Appendix were changed to Parallel Pipe Thread Taps for PF, Taper Pipe Thread Taps for PT, Parallel Pipe Thread Taps for PS.

■ Symbol of Pipe threads

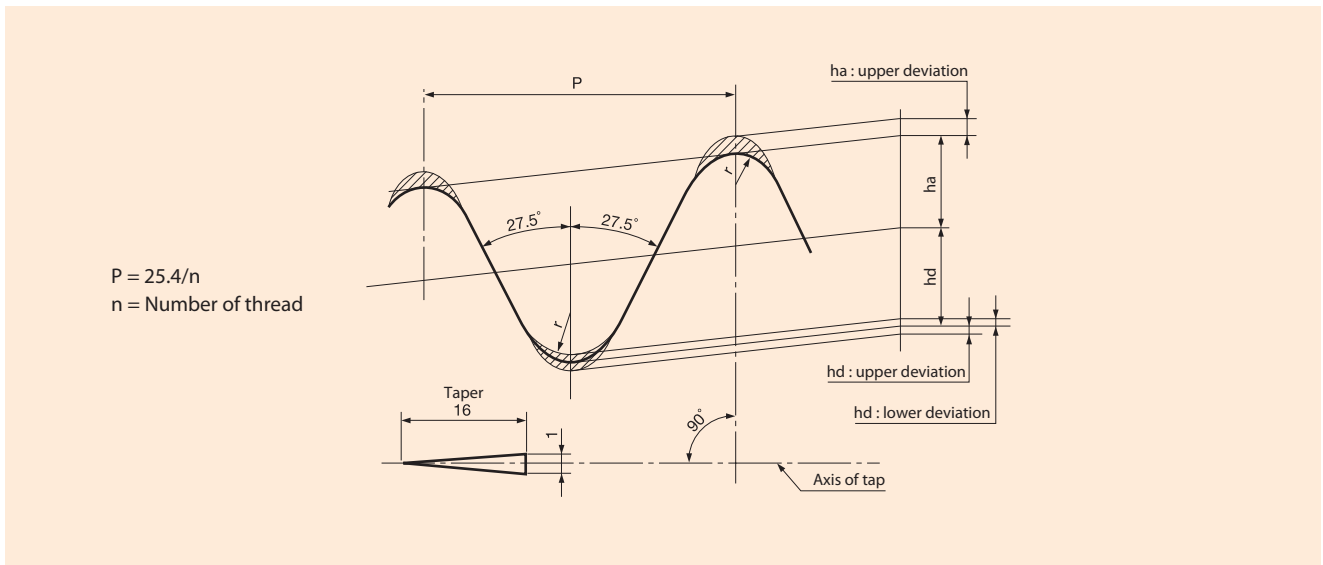
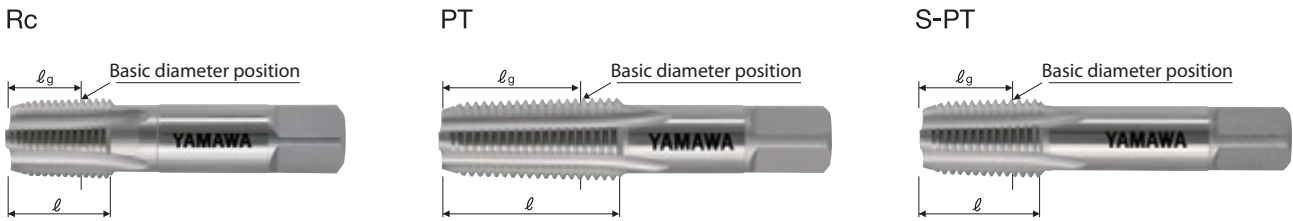
Type	Classification		Standard	JIS (ISO)	JIS Appendix
Taper Thread	Taper Thread	Internal Thread	JIS B 0203—1982	Rc	PT
		External Thread		R	PT
	Parallel Thread	Internal Thread		—	—
		External Thread		—	—
Parallel Thread	Parallel Thread	Internal Thread	JIS B 0202—1982	G	PF, A class
				—	PF, B class
		External Thread		G, A class	PF, A class
				G, B class	PF, B class

■ Relation of pitch diameter tolerance zone between thread and tap

Example.1-11



■ Comparison of the thread limit of taper pipe tap



Unit : mm

Nominal Size	Basic major Dia. of Gauge Plane	Number of Threads*	ISO (Rc)		Appendix (PT)				Thread Limit			
			Thread Length l	Basic Diameter Position l_g	PT Thread		S-PT Thread		ha		hd	
					Thread Length l	Basic Diameter Position l_g	Thread Length l	Basic Diameter Position l_g	Basic Size	Tolerance (μm)	Basic Size	Tolerance (μm)
1/16	7.723	28	14	10.1	—	—	—	—	0.291	0~+30	0.291	±15
1/8	9.728	28	15	10.1	19	13	16.5	10.5	0.291	0~+30	0.291	±15
1/4	13.157	19	19	15	28	21	19.5	12.5	0.428	0~+40	0.428	±20
3/8	16.662	19	21	15.4	28	21	21	14	0.428	0~+40	0.428	±20
1/2	20.955	14	26	20.5	35	25	27	17	0.581	0~+50	0.581	±25
3/4	26.441	14	28	21.8	35	25	29	19	0.581	0~+50	0.581	±25
1	33.249	11	33	26	45	32	35	22	0.740	0~+60	0.740	±30
1 1/4	41.910	11	36	28.3	45	32	37.5	24.5	0.740	0~+60	0.740	±30
1 1/2	47.803	11	37	28.3	45	32	38.5	25.5	0.740	0~+60	0.740	±30
2	59.614	11	41	32.7	50	35	42.5	27.5	0.740	0~+60	0.740	±30
2 1/2	75.184	11	45	37.1	—	—	—	—	0.740	0~+60	0.740	±30
3	87.884	11	48	40.2	—	—	—	—	0.740	0~+70	0.740	±35
4	113.030	11	53	46.2	—	—	—	—	0.740	0~+70	0.740	±35

Note : JIS standard has 2 types of Taper pipe thread, PT and S-PT taps ISO standard has one type of Taper pipe thread Rc, which can substitute, PT and S-PT taps

* : Threads per inch

Comparison of the thread limit for straight pipe taps

Unit : μm

Nominal Size	Number of Threads*	Pitch (mm)	The Thread Limit of ISO (G)								The Therad Limit of Appendix of PF							
			Major Dia		Pitch Dia				Minar Dia	Major Dia		Pitch Dia				Minar Dia		
			Basic Size (mm)	LT (+)	Basic Size (mm)	UT (+)	LT (+)	Tolerance	Basic Size (mm)	UT	Basic Size (mm)	LT (+)	Basic Size (mm)	UT (+)	LT (+)	Tolerance	Basic Size (mm)	UT (+)
1/16	28	0.9071	7.723	32	7.142	43	21	22	6.561	Not Specified	—		—				—	
1/8	28	0.9071	9.728	32	9.147	43	21	22	8.566		9.728	65	9.147	40	20	20	8.566	40
1/4	19	1.3368	13.157	37	12.301	50	25	25	11.445		13.157	90	12.301	50	25	25	11.445	50
3/8	19	1.3368	16.662	37	15.806	50	25	25	14.950		16.662	90	15.806	50	25	25	14.950	50
1/2	14	1.8143	20.955	43	19.793	57	28	29	18.631		20.955	115	19.793	55	25	30	18.631	55
5/8	14	1.8143	22.911	43	21.749	57	28	29	20.587		22.911	115	21.749	55	25	30	20.587	55
3/4	14	1.8143	26.441	43	25.279	57	28	29	24.117		26.441	115	25.279	55	25	30	24.117	55
7/8	14	1.8143	30.201	43	29.039	57	28	29	27.877		30.201	115	29.039	55	25	30	27.877	55
1	11	2.3091	33.249	54	31.770	72	36	36	30.291		33.249	145	31.770	60	30	30	30.291	60
1 1/8	11	2.3091	37.897	54	36.418	72	36	36	34.939		37.897	145	36.418	60	30	30	34.939	60
1 1/4	11	2.3091	41.910	54	40.431	72	36	36	38.952		41.910	145	40.431	65	30	35	38.952	65
1 1/2	11	2.3091	47.803	54	46.324	72	36	36	44.845		47.803	145	46.324	65	30	35	44.845	65
1 3/4	11	2.3091	53.746	54	52.267	72	36	36	50.788		53.746	145	52.267	65	30	35	50.788	65
2	11	2.3091	59.614	54	58.135	72	36	36	56.656		59.614	150	58.135	75	35	40	56.656	75
2 1/4	11	2.3091	65.710	65	64.231	87	43	44	62.752									
2 1/2	11	2.3091	75.184	65	73.705	87	43	44	72.226									
2 3/4	11	2.3091	81.534	65	80.055	87	43	44	78.576									
3	11	2.3091	87.884	65	86.405	87	43	44	84.926									
3 1/2	11	2.3091	100.330	65	98.851	87	43	44	97.372									
4	11	2.3091	113.030	65	111.551	87	43	44	110.072									

* : Threads per inch
UT : The upper deviation
LT : The lower deviation

Comparison of the thread limit of taper pipe taps

Unit : μm

Nominal Size	Number of Threads*	Pitch (mm)	The Thread Limit of ISO (Rp)								The Therad Limit of Appendix of PS									
			Major Dia		Pitch Dia				Minar Dia	Major Dia		Pitch Dia				Minar Dia				
			Basic Size (mm)	LT (-)	Basic Size (mm)	UT (-)	LT (-)	Tolerance	Basic Size (mm)	UT	Basic Size (mm)	UT	LT (-)	Basic Size (mm)	UT (-)	LT (-)	Tolerance	Basic Size (mm)	UT	LT (-)
1/16	28	0.9071	7.723	43	7.142	14	43	29	6.561	Not Specified	—			—				—		
1/8	28	0.9071	9.728	43	9.147	14	43	29	8.566		9.728	+10	50	9.147	30	50	20	8.566	+10	50
1/4	19	1.3368	13.157	63	12.301	21	63	42	11.445		13.157	+ 5	75	12.301	50	75	25	11.445	+ 5	75
3/8	19	1.3368	16.662	63	15.806	21	63	42	14.950		16.662	+ 5	75	15.806	50	75	25	14.950	+ 5	75
1/2	14	1.8143	20.955	86	19.793	29	86	57	18.631		20.955	-25	115	19.793	85	115	30	18.631	-25	115
3/4	14	1.8143	26.441	86	25.279	29	86	57	24.117		26.441	-25	115	25.279	85	115	30	24.117	-25	115
1	11	2.3091	33.249	109	31.770	37	109	72	30.291		33.249	-50	150	31.770	120	150	30	30.291	-50	150
1 1/4	11	2.3091	41.910	109	40.431	37	109	72	38.952		41.910	-50	150	40.431	115	150	35	38.952	-50	150
1 1/2	11	2.3091	47.803	109	46.324	37	109	72	44.845		47.803	-50	150	46.324	115	150	35	44.845	-50	150
2	11	2.3091	59.614	109	58.135	37	109	72	56.656		59.614	-45	145	58.135	105	145	40	56.656	-45	145
2 1/2	11	2.3091	75.184	130	73.705	43	130	87	72.226											
3	11	2.3091	87.884	130	86.405	43	130	87	84.926											
4	11	2.3091	113.030	130	111.551	43	130	87	110.072											

* : Threads per inch
UT : The upper deviation
LT : The lower deviation

2. American Pipe Thread Taps

American standard pipe thread has various types and are complicated. We show their symbols and engagement of threads as follows.

■ Pair groups of external thread and internal thread.

Standard	Symbol	Internal Thread	Mating Thread	External Thread	Mating Thread
Pipe Threads, General Purpose (ANSI/ASME B1.20.1)	American Standard Taper Pipe Thread for General Use	NPT	NPT	NPT	NPT NPSC
	American Standard Straight Pipe Thread in Pipe Couplings	NPSC	NPT	—	—
	American Standard Taper Pipe Threads for Railing Joints	NPTR	NPTR	NPTR	NPTR
	American Standard Straight Pipe Thread for Free-Fitting Mechanical Joints for Fixtures	NPSM	NPSM	NPSM	NPSM
	American Standard Straight Pipe Thread for Loose-Fitting Mechanical Joints with Locknuts	NPSL	NPSL	NPSL	NPSL
	American Standard Straight Pipe Threads for Loose-Fitting Mechanical Joints for Hose Couplings	NPSH	NPSH	NPSH	NPSH
Dryseal Pipe Threads (ANSI B1.20.3)	Dryseal American Standard Taper Pipe Thread	NPTF	NPTF PTF-SAE-SHORT	NPTF	NPTF,NPSF,NPSI PTF-SAE-SHORT
	Dryseal SAE Short Taper Pipe Thread	PTF-SAE-SHORT	NPTF	PTF-SAE-SHORT	NPTF NPSI
	Dryseal American Standard Fuel Internal Straight Pipe Thread	NPSF	NPTF	—	—
	Dryseal American Standard Intermediate Internal Straight Pipe Thread	NPSI	NPTF PTF-SAE-SHORT	—	—

Note: These symbols correspond to the name of American pipe thread.

These threads are

- (1) Thread angle is 60°
- (2) Taper of Taper Thread is 3/4" per foot.
- (3) Fundamental height of triangle : H=Height of triangle thread profile $H=0.866025P$
- (4) The difference between American Standard Pipe Thread for general use and Dryseal American Standard Pipe
 - Crests and roots truncation of thread is different.
 - The length of engagement for pipe thread is different by types.
 - With regard to standard, Dryseal American Standard Pipe Thread is available in right hand.

In accordance with ANSI B 94.9, 4 types of pipe thread are specified in American Pipe Thread Standard.

Please refer to next page about the relation between taps and threads and about thread tolerance.

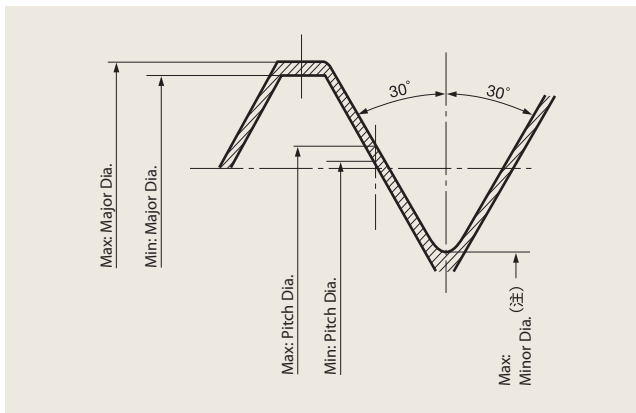
1.8. Pipe Taps Standard

○Classification of American pipe thread taps

Designation	Symbol	Class	Material	Threads to be cut	Range
Straight Pipe Thread Tap	NPS	Ground Thread	HSS	NPSC,NPSM	1/8~1
Dryseal Straight Pipe Thread Tap	NPSF	Ground Thread	HSS	NPSF	1/8~3/4
Taper Pipe Thread Tap	NPT	Ground Thread	HSS	NPT	1/16~2
Dryseal Taper Pipe Thread Tap	NPTF	Ground Thread	HSS	NPTF	1/16~2

■Thread limit of American Pipe Thread Taps

○Straight pipe thread taps for (NPS) G Class

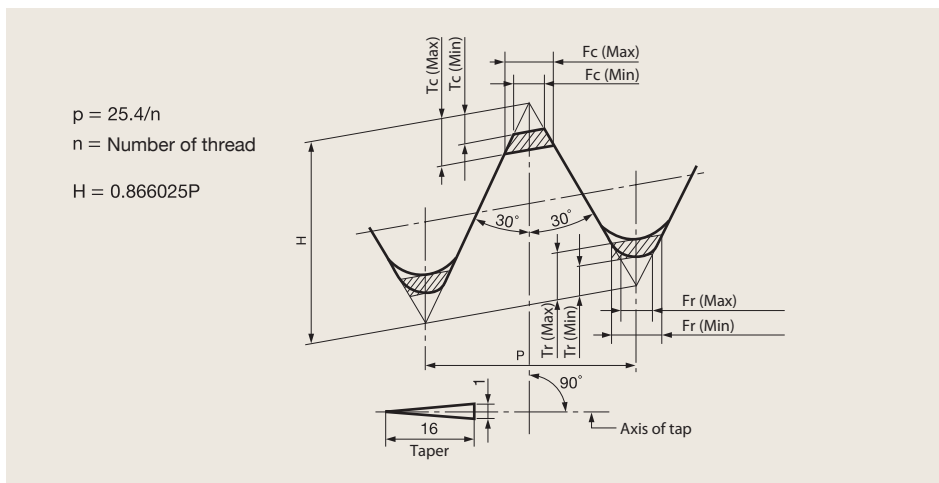


Unit : mm

Nominal Size	Major diameter			Pitch diameter			Minor diameter*
	Max : Major Dia.	Min : Major Dia.	Tolerance	Max : Pitch Dia.	Min : Pitch Dia.	Tolerance	Max : Minor Dia.
NPS 1/8 - 27	10.241	10.216	0.025	9.527	9.515	0.012	M-0.653
NPS 1/4 - 18	13.606	13.582	0.024	12.542	12.530	0.012	M-1.019
NPS 3/8 - 18	17.045	17.021	0.024	15.981	15.969	0.012	M-1.019
NPS 1/2 - 14	21.226	21.202	0.024	19.840	19.828	0.012	M-1.334
NPS 3/4 - 14	26.560	26.536	0.024	25.186	25.162	0.024	M-1.334
NPS 1 - 11 1/2	33.215	33.178	0.037	31.526	31.502	0.024	M-1.644

* : Above dimensions change depending on actually measured.

○Taper pipe thread taps (NPT) G Class

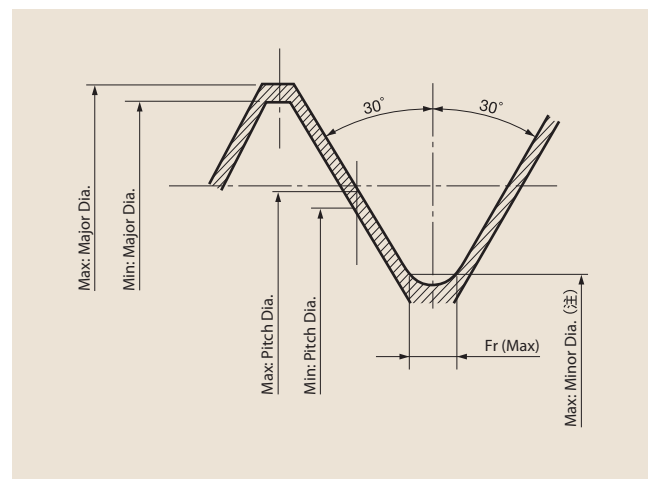
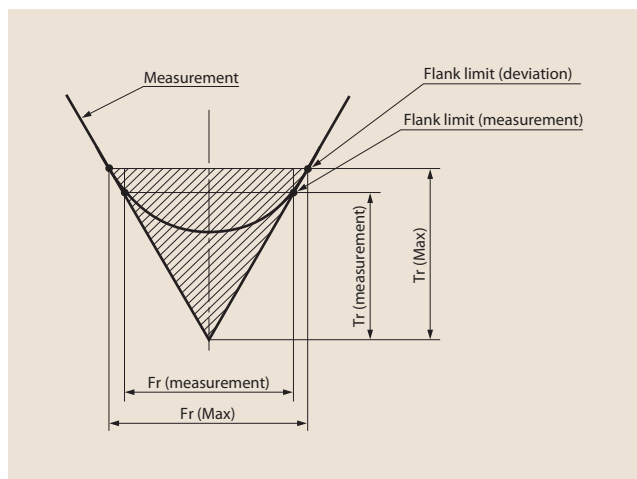


Unit : μm

Nominal Size	Crest				Root			
	Tc		Fc		Tr		Fr	
	Max	Min	Max	Min	Max	Min	Max	Min
NPT 1/16 - 27	68	32	78	37	80	32	92	37
NPT 1/8 - 27	68	32	78	37	80	32	92	37
NPT 1/4 - 18	92	48	106	56	101	48	116	56
NPT 3/8 - 18	92	48	106	56	101	48	116	56
NPT 1/2 - 14	106	61	122	71	118	61	136	71
NPT 3/4 - 14	106	61	122	71	118	61	136	71
NPT 1 - 11 1/2	120	74	138	85	134	74	154	85
NPT 1 1/4-11 1/2	120	74	138	85	134	74	154	85
NPT 1 1/2-11 1/2	120	74	138	85	134	74	154	85
NPT 2 - 11 1/2	120	74	138	85	134	74	154	85
NPT 2 1/2 - 8	147	105	169	122	173	105	199	122
NPT 3 - 8	147	105	169	122	173	105	199	122

■ Thread limit of Dryseal American Pipe Thread Taps

○ Straight pipe thread taps (NPSF) G Class



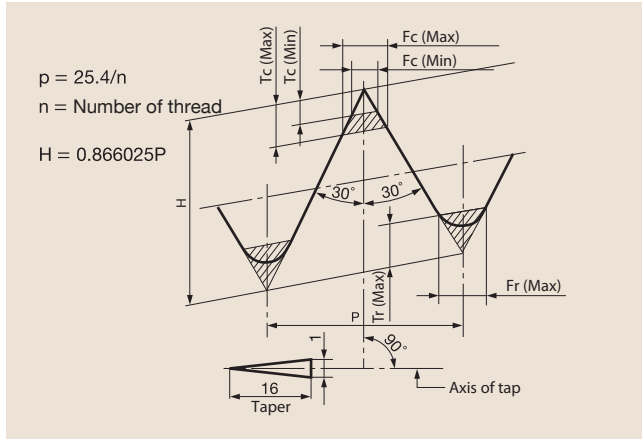
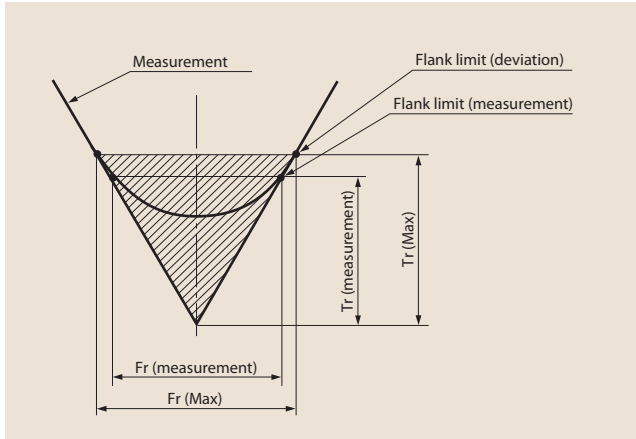
Unit : mm

Nominal Size	Major diameter			Pitch diameter			Minor diameter*		
	Max : Major Dia.	Min : Major Dia.	Tolerance	Max : Pitch Dia.	Min : Pitch Dia.	Tolerance	Max : Major Dia.	Fr (Max)	Tr (Max)
NPSF 1/16 - 27	7.665	7.641	0.024	7.053	7.041	0.012	M-0.638	0.101	0.086
NPSF 1/8 - 27	10.012	9.988	0.024	9.400	9.388	0.012	M-0.638	0.101	0.086
NPSF 1/4 - 18	13.332	13.308	0.024	12.354	12.342	0.012	M-1.004	0.127	0.109
NPSF 3/8 - 18	16.771	16.747	0.024	15.793	15.781	0.012	M-1.004	0.127	0.109
NPSF 1/2 - 14	20.929	20.905	0.024	19.601	19.589	0.012	M-1.354	0.127	0.109
NPSF 3/4 - 14	26.276	26.251	0.025	24.947	24.936	0.011	M-1.354	0.127	0.109

* : Above dimensions change depending on actually measured.

1.8. Pipe Taps Standard

○Taper pipe thread taps (NPTF) G Class

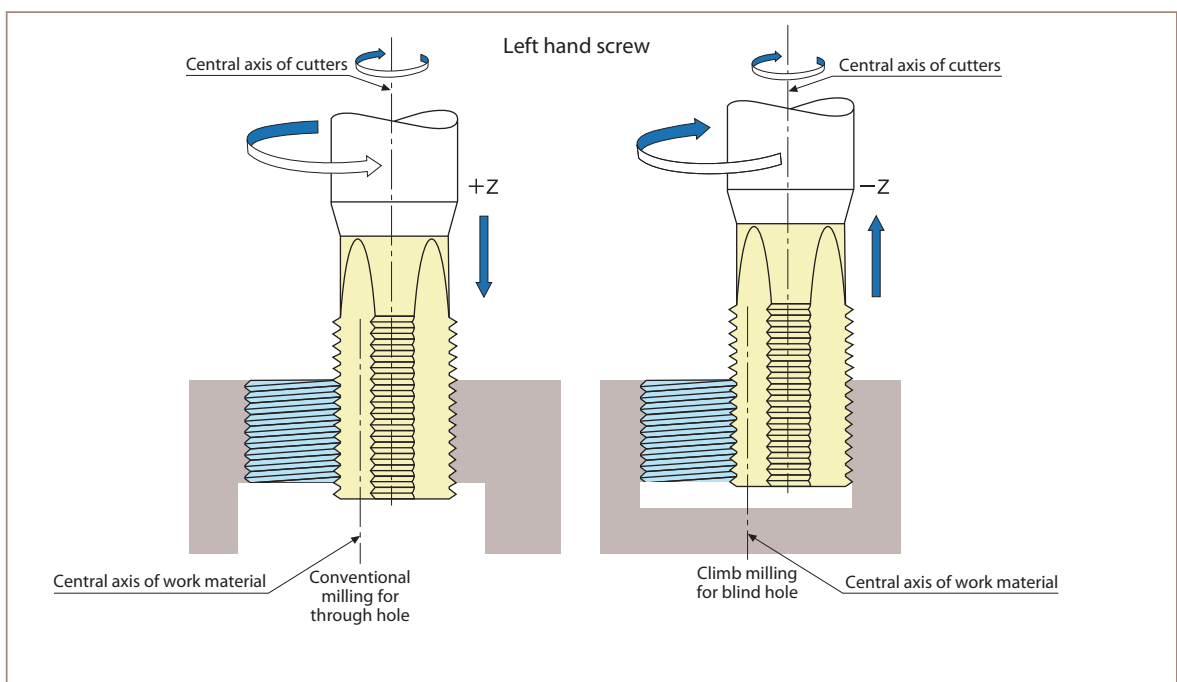
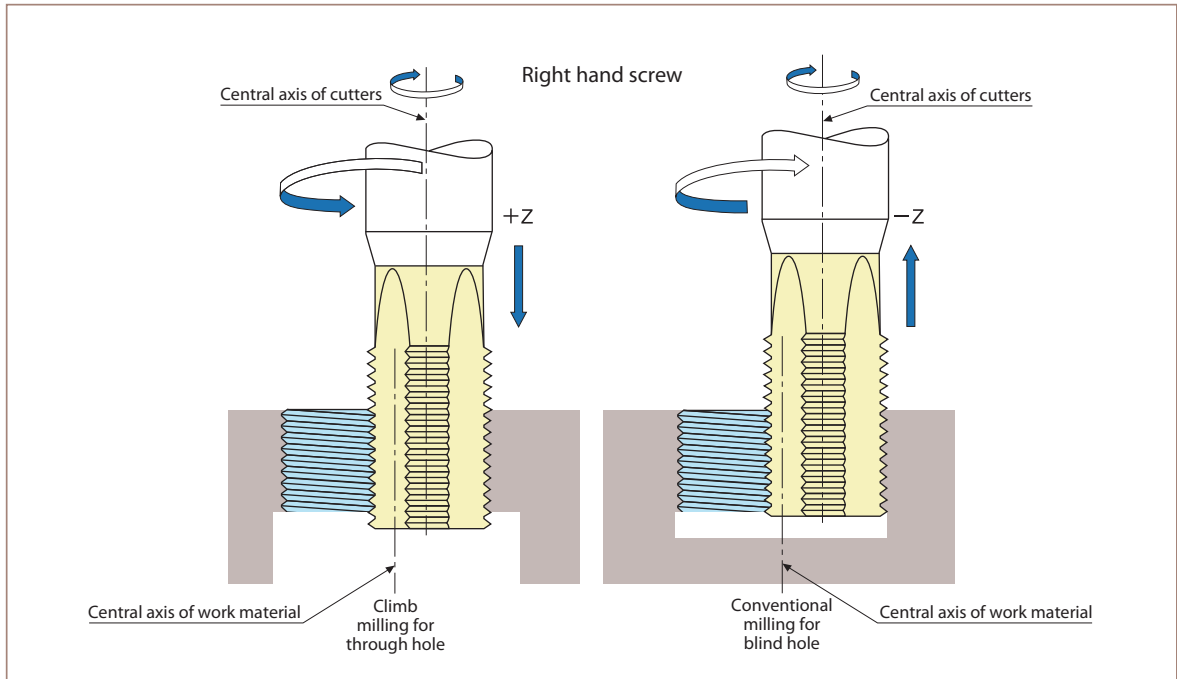


Unit: μm

Nominal Size	Crest				Root	
	Tc		Fc		Tr	Fr
	Max	Min	Max	Min	Max	Min
NPTF 1/16 - 27	110	89	127	103	86	101
NPTF 1/8 - 27	110	89	127	103	86	101
NPTF 1/4 - 18	132	110	152	127	109	125
NPTF 3/8 - 18	132	110	152	127	109	125
NPTF 1/2 - 14	131	109	151	126	108	124
NPTF 3/4 - 14	131	109	151	126	108	124
NPTF 1 - 11 1/2	176	133	203	154	132	152
NPTF 1 1/4 - 11 1/2	176	133	203	154	132	152
NPTF 1 1/2 - 11 1/2	176	133	203	154	132	152
NPTF 2 - 11 1/2	176	133	203	154	132	152

19. Features of MC-Helical Thread Mills

- Various nominal diameter internal threads of the same pitch can be produced with the same thread mills.
- The same mill can be used for both right-hand and left-hand internal threads.
- Chips become very minute, and troubles caused by chips are rarely expected.
- Internal threads of large diameter are obtainable even with low power machines.
- Size control (undersize or oversize) is easy on programming process. Thus, internal threads with voluntary thread limits can be obtained.
- When using MC-Helical threads mills for producing taper pipe threads, the threads are produced in a perfect cutting circle, and no stop marks which are inevitable in taper pipe threads tapping and high quality pressure-tight joint can be made.

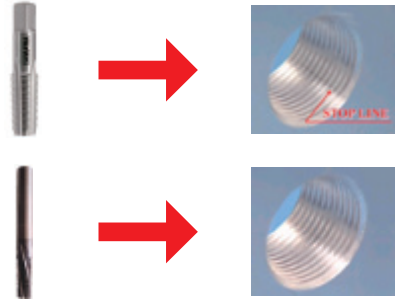


Note: Basically, conventional milling is recommended due to excellent chip ejection. However, climb milling is recommended in the case of poor horse power and poor rigidity of the machine.

■ Comparison of internal threads cut by helical cutter and by PT tap

■ By tap

When PT tap cuts internal threads, the tap cuts the threads with all cutting edges and the tap reverses from the position where each cutting edge on lands sticks into the material wall of internal threads. This results in the stop line due to a step caused by this sticking.



■ By helical cutter

Due to the thread cutting of 3 axis movement without reversing, the internal thread has no stop line.

■ Selection of tool diameter against the size of the internal screw

When cutting internal screws with MC-HLC, please choose the tool which diameter is smaller than 70% of internal threads diameter. The cutter of using larger outside diameter is preferable due to its high rigidity. But thread milling cutters do not have screw lead. Please select thread milling cutters by referring to the shape & size table.

■ Cutting Condition

○ Carbide helical cutter

Material	Cutting Speed (m/min)	Feed per tooth (mm/t)
Structural Steel	50~250	0.02~0.1
Carbon Steel	50~200	0.02~0.1
Alloy Steel	30~180	0.02~0.1
Tool Steel	30~150	0.02~0.1
Stainless Steel	30~200	0.03~0.1
Cast Iron	50~150	0.03~0.15
Aluminum, Aluminum Alloy	50~300	0.03~0.15
Copper, Copper Alloy	50~180	0.03~0.15

○ HSS helical cutter

Material	Cutting Speed (m/min)	Feed per tooth (mm/t)
Structural Steel	25~45	0.02~0.05
Carbon Steel	20~40	0.02~0.05
Alloy Steel	15~30	0.02~0.05
Tool Steel	10~15	0.02~0.04
Stainless Steel	10~15	0.03~0.05
Cast Iron	30~50	0.03~0.08
Aluminum, Aluminum Alloy	50~90	0.03~0.05
Copper, Copper Alloy	40~80	0.03~0.05

■ Feeding speed

Feeding speed is decided by the characteristic of work materials. Feeding speed is an important factor because machining time, thread finish and tool durability are getting influenced by the feeding speed.

In the material of low tensile strength, feed per tooth can be set up rather large. However, if you set up feed per one tooth too large, thread milling cutters can cause deflection and may badly cause thread limit.

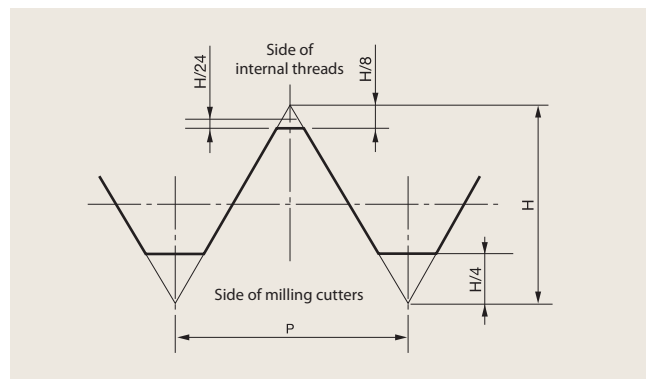
Feed speed of tool

$$F = fz \cdot Z \cdot n \cdot (Dc-d)/Dc \text{ (mm/min)}$$

- fz : Feed per tooth
- z : Number of tooth
- n : Spindles RPM
- d : Diameter of tool
- Dc : Nominal size of internal thread

■ Incision of cutters

Generally, incision of cutter is decided by the machine programming in which the machine enables the cutter to cut the thread height in one revolution. MC helical cutters is so designed that its minor diameter does not cut and the same bored hole size as that for cutting tap is adopted.



—Metric thread

[Minor diam basis]

Tool incision

$$\begin{aligned} KR &= H - (H/8 + H/4) + H/24 + TD_2/4 - (D'_1 - D_1)/2 \\ &= (D_1 - D'_1)/2 + 2H/3 + TD_2/4 \\ &= (D_1 - D_1) / 2 + 0.577P + TD_2/4 \end{aligned}$$

where,

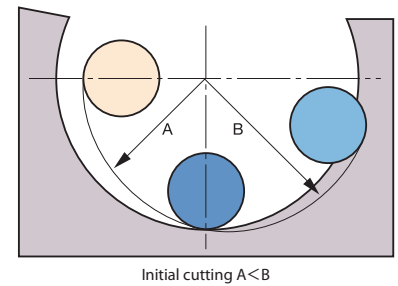
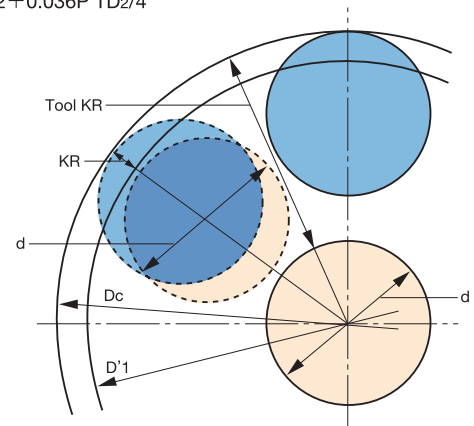
- Dc : Nominal size of internal threads
 D1 : Basic minor diameter of internal threads
 D'1 : Minor diameter before cutting
 d : Outside diameter of tool
 H : $0.866025P$
 P : Pitch
 TD₂ : Tolerance of pitch diameter for producing internal thread
 TD₂/4 : Shrinkage after cutting
 (Set up in the middle of pitch diameter tolerance)
 H/24 : Difference between of basic thread profile and O.D. of the cutters.

—Metric thread

[Tool basis]

Tool transverse

$$\begin{aligned} \text{Tool KR} &= Dc/2 - d/2 + H/24 + TD_2/4 \\ &= (Dc - d)/2 + H/24 + TD_2/4 \\ &= (Dc - d)/2 + 0.036P + TD_2/4 \end{aligned}$$



■ Approaching and leaving to and from work material

On approaching and leaving to and from work material, the cutter must always be traversed in helical interpolating movement so that the cutter enables smooth cutting in and out. And it is necessary to cut the material gradually by the lead of screw thread. Otherwise, threads can be thinned.

20. Selecting different tap holder combinations by machine feed system

The function of machine feed systems

Fully synchronous feed (Rigid) tapping system

Spindle revolution and machine feed are synchronized, a perfect thread lead and feed per revolution are realized.

Feed by lead screws

A better-feed condition is realized because the tap is fed by a master lead screw shaft that has the same thread lead as this tap.

Feed by gear

The tap is fed at the same thread lead by a combinations of gears. This creates a better-feed to thread lead condition.

Asynchronous feed system

Best used when the spindle rotation and the machine feed are set independently, especially, if the machine feed value cannot be accurately predicted to be that of the tap thread lead.

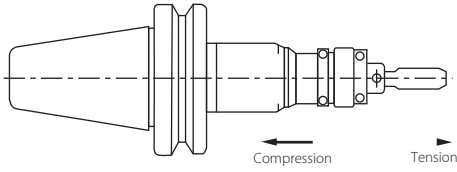
Hydraulic or Pneumatic pressure feed system

Feed is controlled by a pressure regulation system which normally results in an inaccurate feed per revolution compared to the tap thread lead.

Manual feed

Feed is controlled by operator which is difficult to keep a stable amount of feed per revolution.

Holders aspects



Spring direction

Completely rigid holder type

The tap is held with no axial or radial adjustment in the collet and holder.

Adjustable spring floating holder (Tension & Compression)

Machine feed and tap's thread lead errors are corrected by two types of spring system in the holder, the axial tension direction of the tap and the axial compression direction of the tap.

Characteristics of tap self-guiding behavior

r =tap's radius, s =thread relief, t =margin width

Eccentric thread relief (no width of margin)

Tap characteristics ; high cutting performance and machining performance, with little to no self-guiding features. Operation ; A fully synchronous machining system with fixed rigid holder is needed.
Example : "High speed tapping" and "fully synchronous tapping."

Con-eccentric thread relief (margin and thread relief)

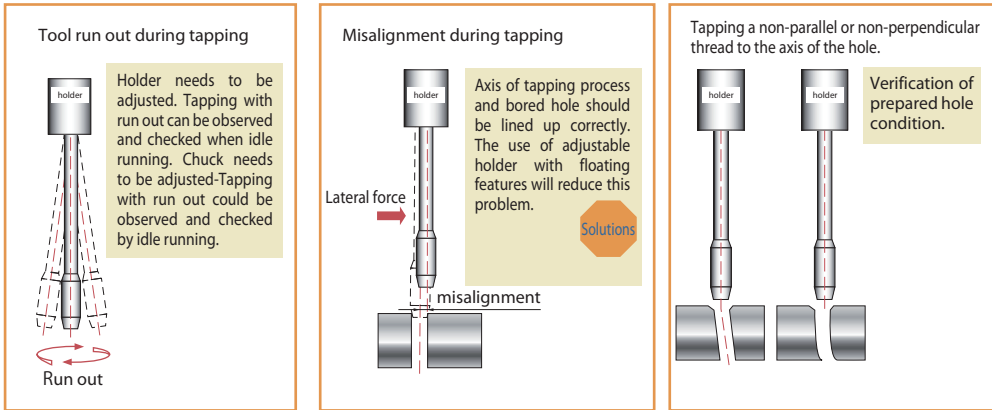
Tap ; High level of self-guidance due to suitable tap diameter margin and thread relief. The combination of nice portion of margin and chamfer relief helps to make appropriate tap guidance.

Concentric (No relief)

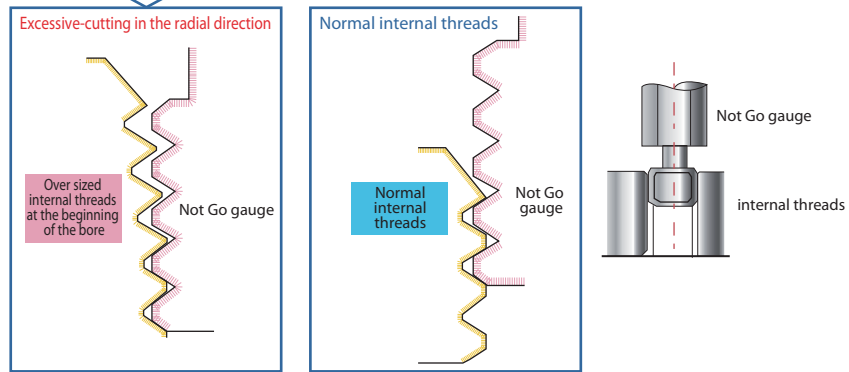
Tap ; A full thread land stays in contact with the thread major diameter at all times. Tap has no thread relief on major diameter, creating a high level of self-guidance even with unbalanced feeding conditions.

21. The common mechanics for a tap to cut oversize on an internal thread

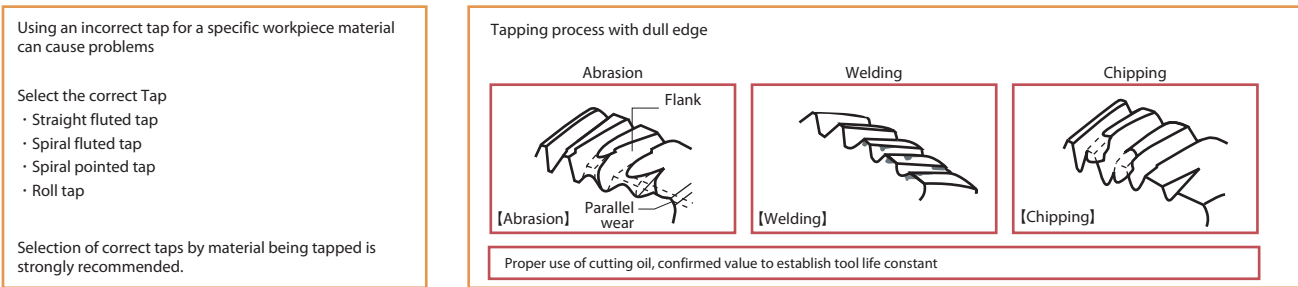
1. Run out, misalignment and tap cutting non perpendicular to holes → Over-cutting at radial direction



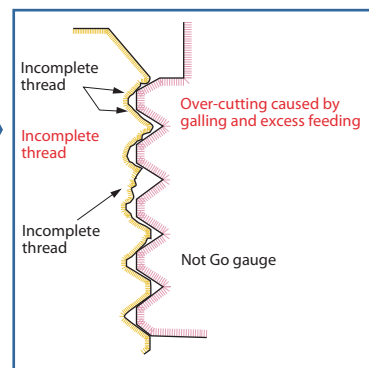
The tap normally follows the bored hole except when the tap cuts too large at the beginning of the hole from tap run out, misalignment of the tap is to the bore diameter or the bore is out of parallelism to the thread axis. These conditions cause the tap to cut over size at the beginning of the thread and cut smaller as the thread continues.



2. Using a tap not suitable for the operation or a tap with a dull cutting edge may cause galling which results in over-cutting. → Over-cutting caused by galling and excess cutting



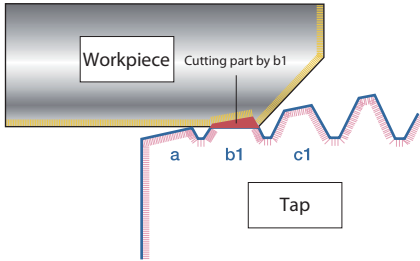
A torn thread is observed on all surfaces of internal thread, the flank angles, the major diameter and the minor diameter. When this situation is continued, an over-cutting of the internal thread occurs, there are deformed threads, there are interrupted threads, and finally it leads to over size cutting of internal thread.



3. Tapping with an improper feed condition → over-cutting at axial direction

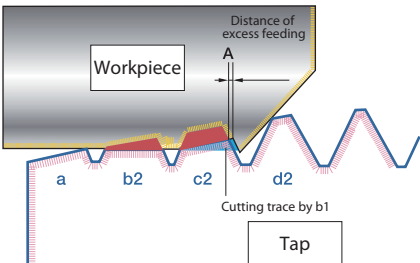
The main reasons for producing an incorrect thread

① At cutting edge b1, cutting chamfer of the tap



② Position of thread after the tap rotates 1 turn.

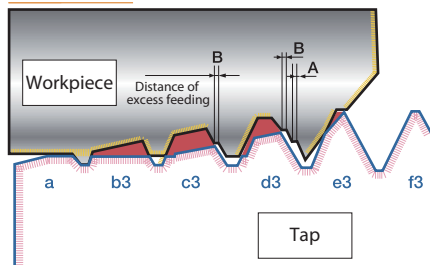
Tap Cutting advancement (b1) and thread advancement of cutting face (c2) are misaligned creating the distance of excessive feeding A.



③ Thread position after the tap rotates 2 turns.

Tap cutting chamfer (c3) is misaligned and the distance of excess feeding B and cutting chamfer (d3) is misaligned to create the distance of over feeding A+B.

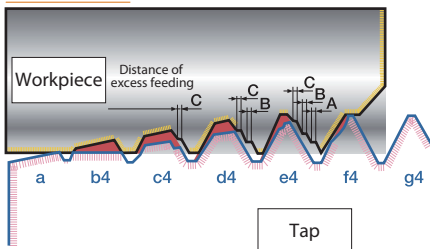
Cutting situation



④ The position of thread after 3 rotations of tap.

The thread continues to misalign until the distance of the thread lead is in error from excessive feeding C.

Cutting situation



Feed adjustment is strongly recommended.

* (Use of fully synchronous feed system and fixing holder)

When using machine that do not have the functions shown, such as drilling machine.

* The correct balance of main spindle adjustment is strongly recommended.

* Use an axial/radial floating holder for its adjustment.

Solutions

[Excessive-cutting of the thread with excessive feeding]

A clearance gap is created at the back flank of thread. More material is cut at front flank than at the back flank creating an incorrect threads

Not Go gauge

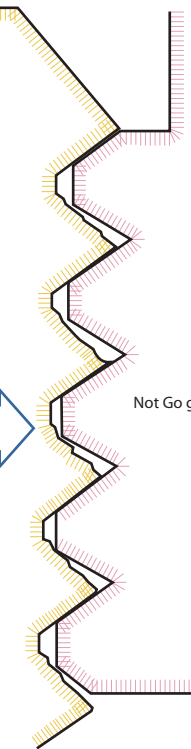
[over-cutting thread by too slow feeding]

This condition creates just the opposite of excess feeding or over-cutting internal thread. A clearance gap is created at the front flank and extra material is cut at back flank.

Not Go gauge

Reasons for over-cutting during tapping process (overview)

- ① The tap mounting condition in the holder.
- ② The condition of bored hole.
- ③ The cutting oil selection.
- ④ Incorrect adjustment of feed balance.
- ⑤ Selecting the correct tap by material being cut from the tap selection section.



22. Trouble Shooting

Troubles		Breakage			Excessive wear	
Check point		Prevent excessive cutting torque	Prevent clogging of chips	Tap	Workpiece	Tap
Segments						
Workpiece	Hardness	●Use workpiece which has even structure and hardness.			○Use workpiece which has even structure and hardness.	
	Shape	●Pay attention for tapping position and material thickness.			●Pay attention for tapping position and material thickness.	
	Bored hole	○Provide bigger bored holes. ●Prevent work hardening.			○Provide bigger bored holes. ●Provide countersinking on hole entrance. ○Prevent work hardening.	
○Provide deeper tapping hole. ●Prevent slanting of hole.						
Machine		●Avoid inconsistent feed. ●Adjust feed stroke.				
Jigs, Holders		●Use tap holder of floating type. ○Use tap holder with torque limiter.				
Cutting condition		○Reduce cutting speed.			○Reduce cutting speed.	
Lubricant		●Use the other cutting oil which prevents cold welding. ●Use non soluble type cutting oil.			●Provide proper timing for changing or filling-up of cutting oil. ●Prevent mixing of other oil into cutting oil. ●Use other cutting oil which prevents cold welding. ●Use cutting oil of non soluble type. ●Adjust flow of cutting oil and method of lubrication.	
On process			●Remove unnecessary chips during tapping. ●Provide bigger space for chips disposal.			
Tap	Selection			●Use PO tap(through hole). ●Use SP tap(blind hole). ●Use Roll tap.		
	Design		●Provide bigger chiproom.	●Change material of taps. ●Provide proper hardness on taps.		●Use set tap. ●Change material of taps. ●Provide proper hardness on taps.
		●Reconsider length of cutting chamfer. ●Use set tap.			●Reconsider length of cutting chamfer. ●Provide nitride on taps.	
Re-grind	●Be careful about burning during re-sharpening. ●Provide proper land.			●Be careful about burning during re-sharpening. ●Increase re-sharpening frequency.		

○ : Most suitable solution ○ : Second most suitable solution

Undersize cutting of internal thread			Bad surface, surface damaged		
Improve cutting performance	Selection and design of tap	Work material	Improve cutting performance	Prevent welding	Check cutting condition
		●Check workmaterial.			●Provide proper hardness on workpiece material.
		●Pay attention for tapping position and material thickness.			●Pay attention for tapping position and material thickness.
●Adopt bigger tapping hole. ●Prevent work hardening of material.					
			●Prevent work hardening.	●Provide bigger bored holes.	○Prevent slanting of hole.
					○Feed according to pitch.
					●Use the tap holder of floating type. ●Prevent vibrating of axis of tap ●Prevent centering-off with work piece.
			●Reduce cutting speed.		
			●Provide proper timing for changing or filling-up of cutting oil. ●Prevent mixing of other oil into cutting oil. ●Use other cutting oil which prevents cold welding. ●Use cutting oil of non soluble type. ●Adjust flow of cutting oil and method of lubrication.		
				●Remove unnecessary chips	
●Provide Nitride on taps.	○Use oversiza taps.		●Use spiral pointed taps (for through hole).	○Provide oxide coating on taps.	○Use oil hole taps.
○Provide larger cutting angle.	●Adjust relief angle on cutting chamfer. ○Provide thread relief.		○Provide larger cutting angle. ●Adjust relief angle on cutting chamfer. ○Provide more narrow margin.	●Change of no. of flutes on taps.	●Reconsider length of cutting chamfer.
●Increase re-sharpening frequency.			●Increase re-sharpening frequency.	●Provide better surface finishing on flutes.	
			●Provide precise re-sharpening. ●Be careful about burning during re-sharpening.		

22. Trouble Shooting

Troubles		Over-cutting of internal thread				
Check point		Prevent uneven in feed of tap	Prevent over cutting on thread	Prevent welding	Check cutting condition	Prevent unbalance on entering
Segments						
Workpiece	Hardness	●Use workpiece which has even structure and hardness.				
	Shape					
	Bored hole			●Provide bigger hole.	●Prevent slanting of hole.	●Provide countersinking on the hole entrance.
Machine		●Adjust a feed. ◎Feed according to pitch.				
Jigs, Holders					○Use tap holder of floating type.	◎Prevent vibrating of axis of tap. ○Prevent centering-off with work piece. ●Use tap holder of floating type.
Cutting condition				●Reduce cutting speed.		
Lubricant				●Use other cutting lubricant which prevents cold welding. ●Check the viscosity.		
On process						
Tap	Selection			◎Provide oxide surface treatment. ○Use tap with oil hole.		
	Design		○Provide small cutting angle. ●Adjust chamfer relief angle. ◎Check the width of thread margin.	●Provide short thread length.	●Reconsider number of flutes of tap.	●Reconsider number of flutes of tap.
	Re-grind		●Remove burrs on teeth after re-grinding. ●Provide proper land.		●Provide precise re-sharpening.	◎Care for vibration.

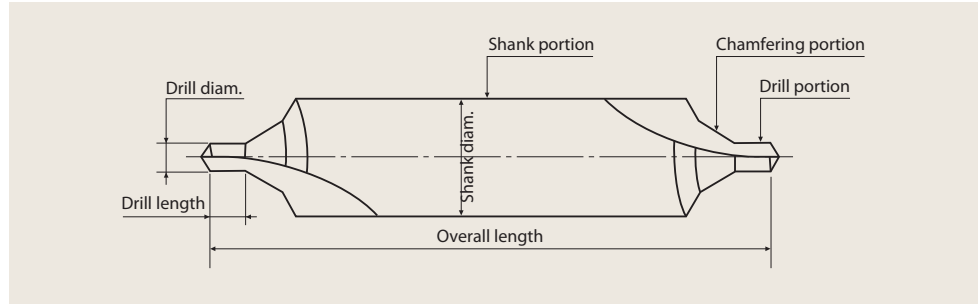
◎ : Most suitable solution ○ : Second most suitable solution

Chipping				Tapping operation	
Prevent clogging of chips	Prevent excessive cutting torque	Improve tapping method	Tap	Prevent clogging of chips	Tap
	●Use workpiece material which has even structure and hardness.				
		○Pay attention for tapping position and material thickness.		●If possible, use finer pitch tap or shorter tapping length.	
Provide deeper tapping hole (Blind hole).	○Provide bigger tapping hole. ●Prevent work hardening.	●Prevent slanting of holes.		○Reduce cutting speed. ○Provide deeper tapping hole (Blind hole).	
●Provide countersinking on hole the entrance.					
	●Avoid inconsistent feed.				
	○Use tapping holder with torque limiter.	●Prevent centering-off with workpiece. ●Prevent vibration of axis of tap. ●Use the tap holder of floating type.			●Use the tap holder of floating type. ●Prevent vibration of axis of tap. ●Prevent centering-off with workpiece.
●Reduce cutting speed.				●Reduce cutting speed.	
	●Use the other cutting oil which prevent cold welding.			●Check the viscosity.	
●Remove unnecessary chips during tapping. ●Provide bigger space for chip disposal.				●Remove unnecessary chips during tapping. ●Provide bigger space for chip disposal.	
			●Use PO taps (Through hole). ●Use SP taps (Blind hole). ●Use Roll tap.		●Use PO taps (Through hole). ●Use SP taps (Blind hole). ●Use Roll tap.
●Provide bigger chip room.			●Change material of tap. ●Provide smaller cutting angle. ●Provide proper hardness.	●Provide bigger chip room. ●Reconsider length of cutting chamfer. ○Use oil hole tap.	
●Reconsider length of cutting chamfer. ●Reduce cutting speed. ●Adjust relief angle on cutting chamfer.				●Provide shorter thread length to tap.	
●Be careful about burning during re-sharpening.					

23. Center Drills

Center Drills are the tool for making center hole. Center Drills are also used for positioning before drilling, and for chamfering of the hole.

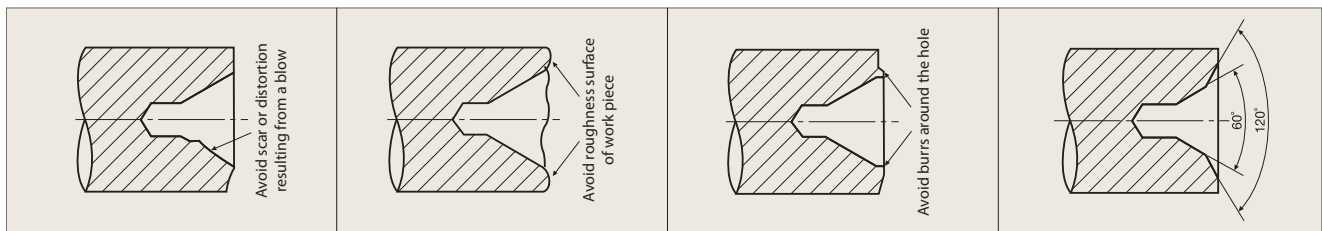
Names of each part



Shape of center hole and center

Type A (60°) Center hole & 60°center	Type B (60°) Center hole & 60°center	Type A (90°) Center hole & 90°center	Type R Center hole & 60°center

Advantage of Type B Center holes



Note : Advantage of Type B center holes : B type center drill protect the 60° conical bearing surface from scar or distortion resulting from a blow, roughness of workpiece surface or burrs around the hole.

Advantage of Type R Center holes

	Angle of center hole is higher than that of center.	Angle of center hole is lower than that of center.	Center hole and center are misaligned.
A type			
R type			

Note : R type center hole stably holds the center. It also some of advantage of B type center hole.

24. Table of recommend centering condition

Table of recommend centering condition.

HSS (PE-Q PE-90°)

Work material	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Stainless steels SUS304		Aluminum alloy casting AC4B	
Cutting speed (m/min)	30~40		22~30		20~25		10~15		70~100	
Diameter (mm)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)
3	3700	0.04~0.08	2750	0.04~0.08	2400	0.04~0.08	1350	0.04~0.08	9000	0.10~0.22
4	2800	0.05~0.10	2050	0.05~0.10	1800	0.05~0.10	1000	0.05~0.10	6750	0.12~0.26
6	1850	0.06~0.12	1400	0.06~0.12	1200	0.06~0.12	850	0.06~0.12	4500	0.15~0.30
8	1400	0.08~0.15	1050	0.08~0.15	900	0.08~0.15	500	0.08~0.15	3400	0.18~0.35
10	1100	0.10~0.18	850	0.10~0.18	700	0.10~0.18	400	0.10~0.18	2700	0.21~0.40
12	950	0.12~0.22	700	0.12~0.22	600	0.12~0.22	350	0.12~0.22	2250	0.25~0.45
16	700	0.16~0.26	500	0.16~0.26	450	0.16~0.26	250	0.16~0.26	1700	0.32~0.50
20	550	0.20~0.35	400	0.20~0.35	350	0.20~0.35	200	0.20~0.35	1350	0.40~0.60

HSS+TiCN (PE-Q-V PE-90°)

Work material	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Thermal refined steels SCM440 (30~35HRC)		Stainless steels SUS304		Aluminum alloy casting AC4B	
Cutting speed (m/min)	38~48		28~38		26~33		13~17		13~20		84~120	
Diameter (mm)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)
3	4550	0.04~0.08	3500	0.04~0.08	3150	0.04~0.08	1800	0.03~0.06	1750	0.04~0.08	10800	0.10~0.22
4	3400	0.05~0.10	2650	0.05~0.10	2350	0.05~0.10	1200	0.04~0.08	1300	0.05~0.10	8100	0.12~0.26
6	2300	0.06~0.12	1750	0.06~0.12	1550	0.06~0.12	800	0.05~0.10	900	0.06~0.12	5400	0.15~0.30
8	1700	0.08~0.15	1300	0.08~0.15	1150	0.08~0.15	600	0.06~0.12	650	0.08~0.15	4050	0.18~0.35
10	1350	0.10~0.18	1050	0.10~0.18	950	0.10~0.18	500	0.08~0.15	500	0.10~0.18	3250	0.21~0.40
12	1150	0.12~0.22	900	0.12~0.22	800	0.12~0.22	400	0.10~0.18	450	0.12~0.22	2700	0.25~0.45
16	850	0.16~0.26	650	0.16~0.26	600	0.16~0.26	300	0.12~0.22	350	0.16~0.26	2050	0.32~0.50
20	700	0.20~0.35	500	0.20~0.35	450	0.20~0.35	250	0.16~0.26	250	0.20~0.35	1600	0.40~0.60

Carbide+TiAlN (C-PE-Q-V PE-90°)

Work material	Soft structural steels SS400		Carbon steels S50C		Alloy steels SCM440		Thermal refined steels SCM440 (30~35HRC)		Stainless steels SUS304		Aluminum alloy casting AC4B	
Cutting speed (m/min)	87~102		65~78		60~70		32~40		35~45		120~160	
Diameter (mm)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)	Revolution (min ⁻¹)	Feed per revolution (mm/rev)
3	10050	0.04~0.08	7600	0.04~0.08	6900	0.04~0.08	3800	0.04~0.08	4250	0.04~0.08	14850	0.10~0.22
4	7500	0.05~0.10	5700	0.05~0.10	5150	0.05~0.10	2850	0.05~0.10	3200	0.05~0.10	11150	0.12~0.26
6	5000	0.06~0.12	3800	0.06~0.12	3450	0.06~0.12	1900	0.06~0.12	2100	0.06~0.12	7450	0.15~0.30
8	3750	0.08~0.15	2850	0.08~0.15	2600	0.08~0.15	1450	0.08~0.14	1800	0.08~0.15	5550	0.18~0.35
10	3000	0.10~0.18	2300	0.10~0.18	2050	0.10~0.18	1150	0.10~0.16	1250	0.10~0.18	4450	0.21~0.40
12	2500	0.12~0.22	1900	0.12~0.22	1700	0.12~0.22	950	0.10~0.18	1050	0.12~0.22	3700	0.25~0.45
16	1900	0.16~0.26	1400	0.16~0.26	1300	0.16~0.26	700	0.12~0.22	800	0.16~0.26	2800	0.32~0.50

1. Above Condition done by Water Soluble oil.
2. 20% lower feed is recommended when centering process to inclined plane.
3. 20% lower feed is recommended in the case of long shank point drills.

24. Table of recommend centering condition

■ Reference of drilling condition for Center drills (HSS)

Reference table of cutting speed and feed per revolution (when substrate is HSS)

· Drilling speed (Cone diameter at the larger end)

Workpiece materials	Drilling speed
Low carbon steels	15~30
Carbon steels	15~30
Alloy steels	10~25
Stainless steels	5~12
Cast iron	8~15

Drill diameter	Feed per revolution
1~ 3	0.02~0.07
3~ 4	0.04~0.12
4~ 6	0.06~0.17
6~ 8	0.10~0.20
8~10	0.14~0.23
10~12	0.18~0.26

■ Reference of drilling condition for Center drills (Carbide)

Reference table of cutting speed and feed per revolution (when substrate is Carbide)

· Drilling speed (Cone diameter at the larger end)

Workpiece materials	Drilling speed
Low carbon steels	30~50
Carbon steels	30~50
Alloy steels	20~40
Stainless steels	15~25
Cast iron	30~50

Drill diameter	Feed per revolution
1	0.01 ~0.03
2	0.01 ~0.035
3	0.015~0.05
4	0.02 ~0.06
5	0.03 ~0.07
6	0.04 ~0.07

■ Reference of drilling condition for NC-SD-V

Reference table of drilling speed, feed per revolution

· Drilling speed (Tool diameter)

Workpiece materials	Drilling speed
Low carbon steels	25~40
Carbon steels	25~32
Alloy steels	15~25
Alloy tool steels	7~12
Stainless steels	7~12
Cast iron	20~35
Aluminum	60~90

Tool diameter	Feed per revolution
3	0.03~0.06
4	0.05~0.10
6	0.08~0.15
8	0.10~0.18
10	0.15~0.20
12	0.15~0.25
16	0.15~0.30
20	0.20~0.30
25	0.20~0.30

■ Reference of chamfering condition for Countersinks

Reference table of drilling speed, feed per revolution

· Drilling speed (Tool diameter)

Workpiece materials	Drilling speed	
	Single edge	Multiple edges
Low carbon steels	18~25	20~27
Carbon steels	18~25	20~25
Alloy steels	8~16	8~15
Alloy tool steels	8~16	8~15
Stainless steels	8~13	5~10
Cast iron	20~30	15~25
Aluminum	20~70	20~80

Tool diameter	Feed per revolution	
	Single edge	Multiple edges
4	0.02~0.04	0.03~0.10
6	0.03~0.05	0.05~0.12
8	0.05~0.07	0.07~0.15
10	0.06~0.09	0.10~0.16
12	0.07~0.10	0.10~0.20
16	0.08~0.13	0.10~0.20
20	0.09~0.15	0.10~0.25
25	0.10~0.16	0.15~0.30

Unifined Threads

Size		Nominal Dia.		Threads per inch													
Column 1	Column 2	inch	mm	Coarse	Fine	Extra Fine	Constant pitch series						28UN	32UN			
				UNC	UNF	UNEF	4UN	6UN	8UN	12UN	16UN	20UN					
No. 0		0.0600	1.524		80												
	No. 1	0.0730	1.854	64	72												
No. 2		0.0860	2.184	56	64												
	No. 3	0.0990	2.515	48	56												
No. 4		0.1120	2.845	40	48												
No. 5		0.1250	3.175	40	44												
No. 6		0.1380	3.505	32	40												UNC
No. 8		0.1640	4.166	32	36												UNC
No.10		0.1900	4.826	24	32												UNC
	No.12	0.2160	5.486	24	28	32											UNC
¼		0.2500	6.350	20	28	32											UNC
⅜		0.3125	7.938	18	24	32											UNC
½		0.3750	9.525	16	24	32											UNC
⅝		0.4375	11.112	14	20	28											UNC
¾		0.5000	12.700	13	20	28											UNC
⅞		0.5625	14.288	12	18	24											UNC
1		0.6250	15.875	11	18	24											UNC
	1¼	0.6875	17.462			24											UNC
	1½	0.7500	19.050	10	16	20											UNC
	1¾	0.8125	20.638			20											UNC
⅙		0.8750	22.225	9	14	20											UNC
	1⅝	0.9375	23.812			20											UNC
1		1.0000	25.400	8	12	20											UNC
	1⅞	1.0625	26.988			18											UNC
	2	1.1250	28.575	7	12	18											UNC
	2¼	1.1875	30.162			18											UNC
1¼		1.2500	31.750	7	12	18											UNC
	2½	1.3125	33.338			18											UNC
1½		1.3750	34.925	6	12	18											UNC
	2¾	1.4375	36.512			18											UNC
1½		1.5000	38.100	6	12	18											UNC
	3	1.5625	39.688			18											UNC
1¾		1.6250	41.275			18											UNC
	3¼	1.6875	42.862			18											UNC
1¾		1.7500	44.450	5													UNC
	3½	1.8125	46.038														UNC
1¾		1.8750	47.625														UNC
	3¾	1.9375	49.212														UNC
2		2.0000	50.800														UNC
	4	2.1250	53.975	4 1/2													UNC
	4½	2.2500	57.150	4 1/2													UNC
2½		2.3750	60.325														UNC
	5	2.5000	63.500	4													UNC
2½		2.6250	66.675														UNC
2¾		2.7500	69.850	4													UNC
	5½	2.8750	73.025														UNC
3		3.0000	76.200	4													UNC
	6	3.1250	79.375														UNC
	6½	3.2500	82.550	4													UNC
	7	3.3750	85.725														UNC
3½		3.5000	88.900	4													UNC
	7½	3.6250	92.075														UNC
3¾		3.7500	95.250	4													UNC
	8	3.8750	98.425														UNC
4		4.0000	101.600	4													UNC
	8½	4.1250	104.775														UNC
4¼		4.2500	107.950														UNC
	9	4.3750	111.125														UNC
4½		4.5000	114.300														UNC
	9½	4.6250	117.475														UNC
4¾		4.7500	120.650														UNC
	10	4.8750	123.825														UNC
5		5.0000	127.000														UNC
	10½	5.1250	130.175														UNC
5¼		5.2500	133.350														UNC
	11	5.3750	136.525														UNC
5½		5.5000	139.700														UNC
	11½	5.6250	142.875														UNC
5¾		5.7500	146.050														UNC
	12	5.8750	149.225														UNC
6		6.0000	152.400														UNC

※ : Please select the first column by priority. And select second column and third column if necessary.

General size list of metric trapezoidal threads

Unit : mm

	1.5	2	3	4	5	6	7	8	10	12
Tr 8	1.5									
Tr 9	1.5	2								
Tr 10	1.5	2								
Tr 11		2	3							
Tr 12		2	3							
Tr 14		2	3							
Tr 16		2		4						
Tr 18		2		4						
Tr 20		2		4						
Tr 22			3		5			8		
Tr 24			3		5			8		
Tr 26			3		5			8		
Tr 28			3		5			8		
Tr 30			3			6			10	
Tr 32			3			6			10	
Tr 34			3			6			10	
Tr 36			3			6			10	
Tr 38			3				7		10	
Tr 40			3				7		10	
Tr 42			3				7		10	
Tr 44			3				7			12
Tr 46			3					8		12
Tr 48			3					8		12

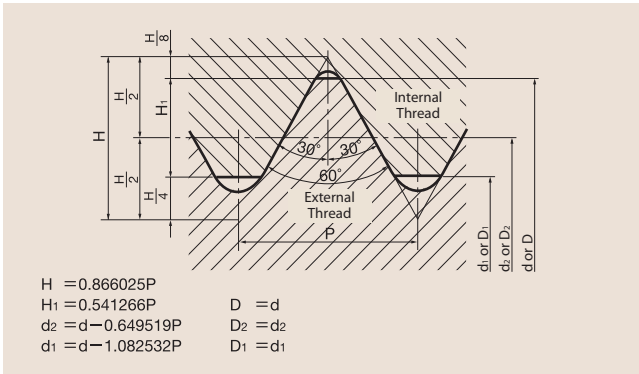
When the tap for the trapezoidal threads not listed in the catalogue is required, please contact Yamawa sales.

Conversion Table

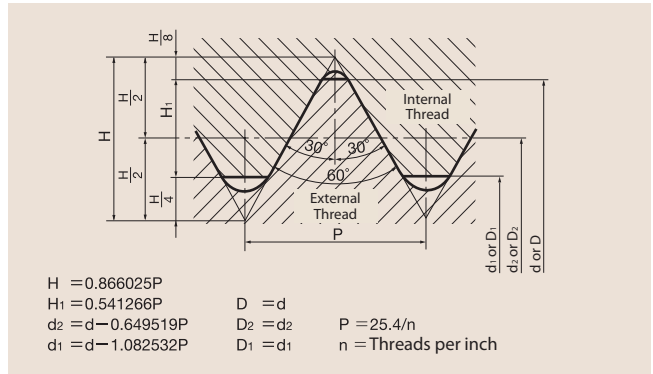
Threads per inch (25.4mm)	Pitch (mm)
100	0.2540
80	0.3175
72	0.3528
64	0.3969
60	0.4233
56	0.4536
48	0.5292
44	0.5773
40	0.6350
36	0.7056
32	0.7938
28	0.9071
27	0.9407
24	1.0583
20	1.2700
19	1.3368
18	1.4111
16	1.5875
14	1.8143
13	1.9538
12	2.1167
11 1/2	2.2087
11	2.3091
10	2.5400
9	2.8222
8	3.1750
7	3.6286
6	4.2333
5	5.0800
4 1/2	5.6444
4	6.3500

26. Basic profile of threads

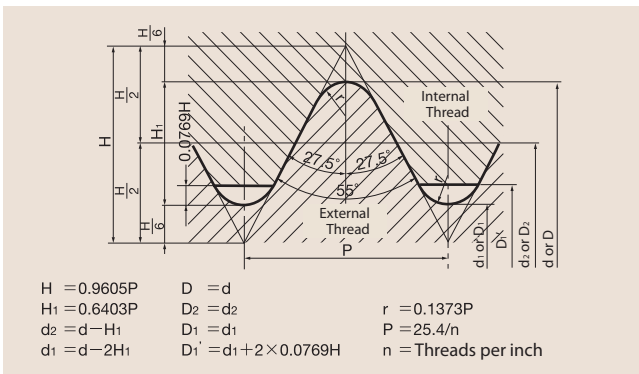
Metric Screw Threads



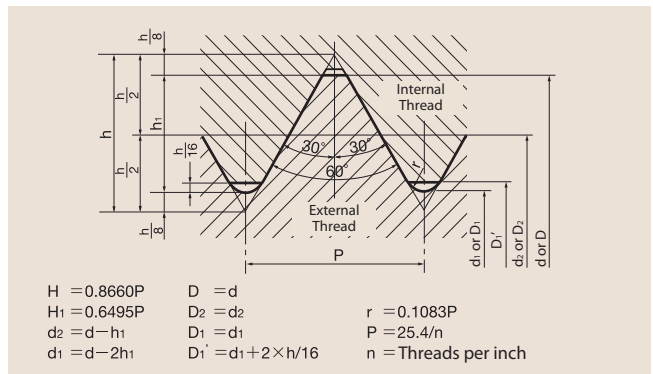
Unified Screw Threads



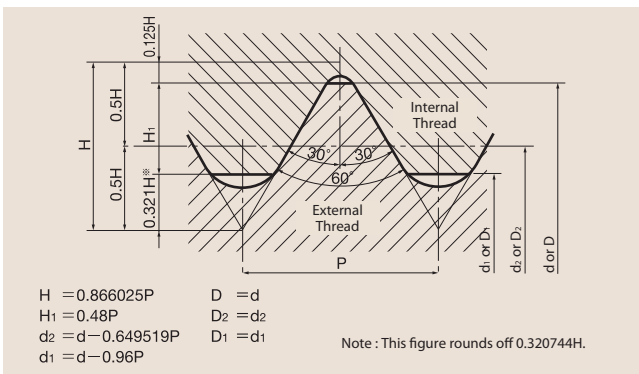
Whitworth Screw Threads



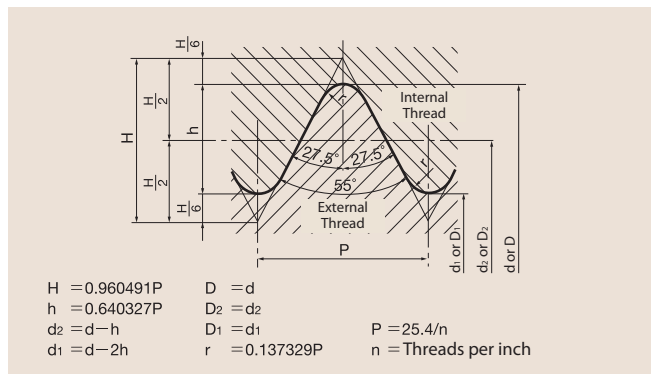
Screw Threads for Sewing Machine



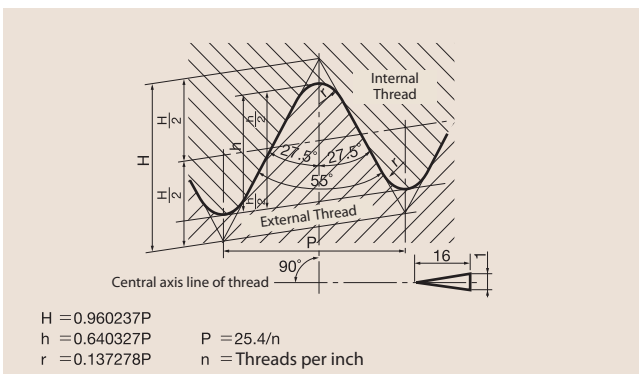
Miniature Screw Threads



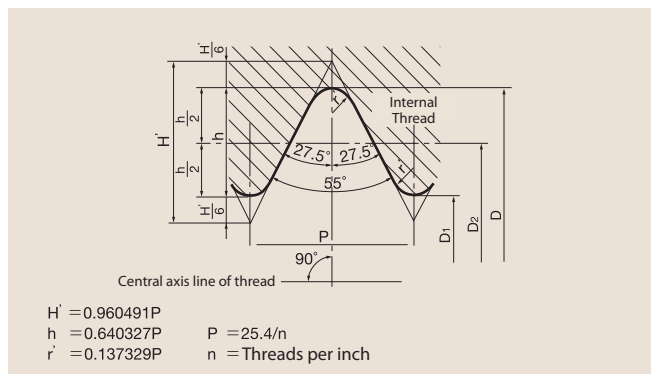
Parallel Pipe Threads



Taper Pipe Threads

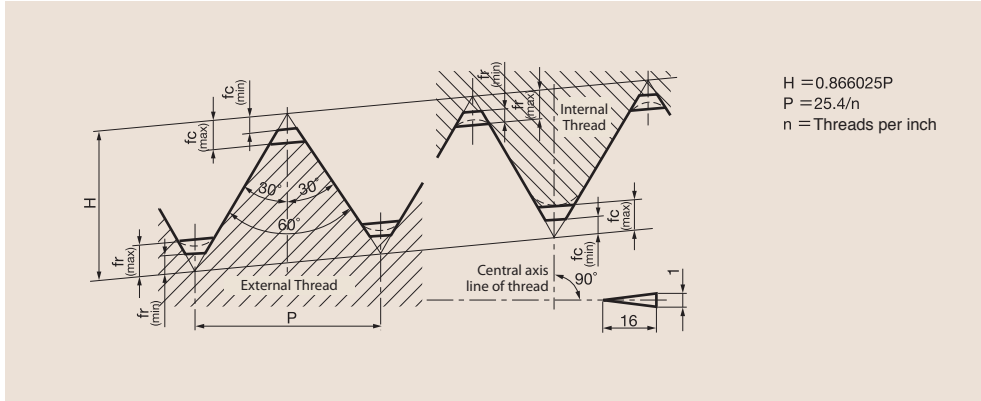


Taper Pipe Threads (Parallel)



26. Basic profile of threads

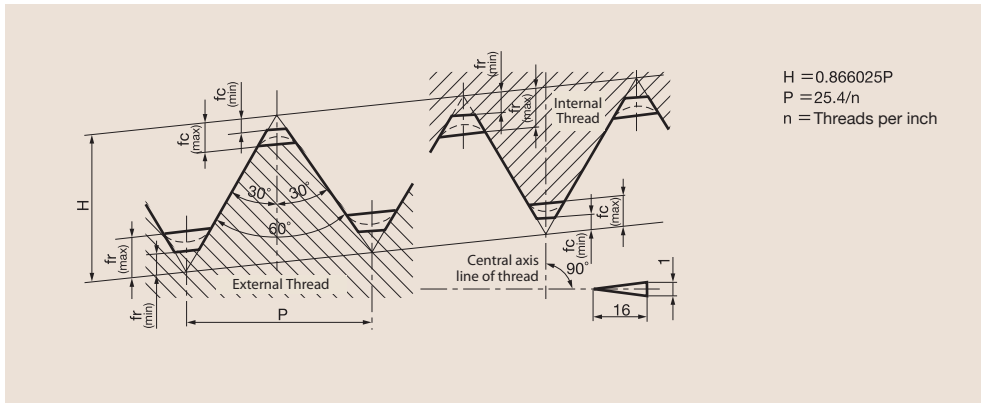
American Standard Taper Pipe Threads



Truncation Unit: mm

Threads per inch	Section	$f_c = f_r$
27	Max.	0.096P
	Min.	0.033P
18	Max.	0.088P
	Min.	0.033P
14	Max.	0.078P
	Min.	0.033P
11.5	Max.	0.073P
	Min.	0.033P
8	Max.	0.062P
	Min.	0.033P

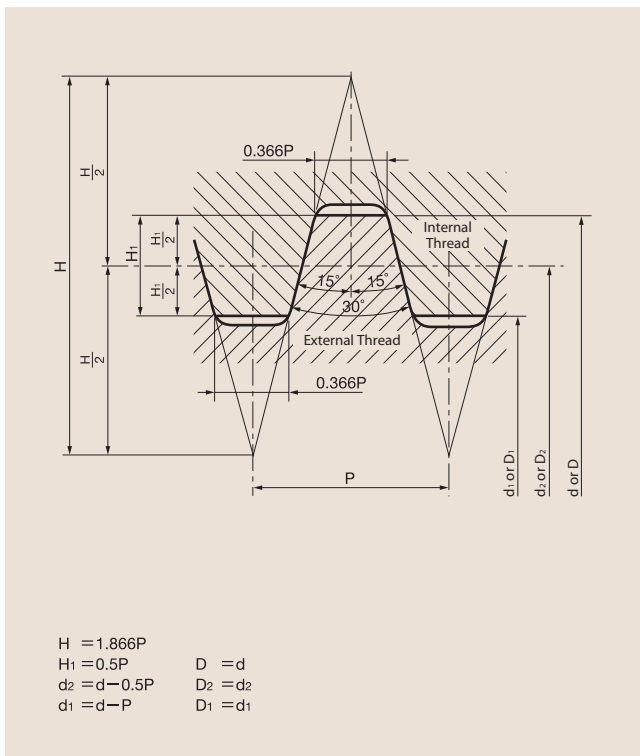
Dryseal American Standard Taper Pipe Threads



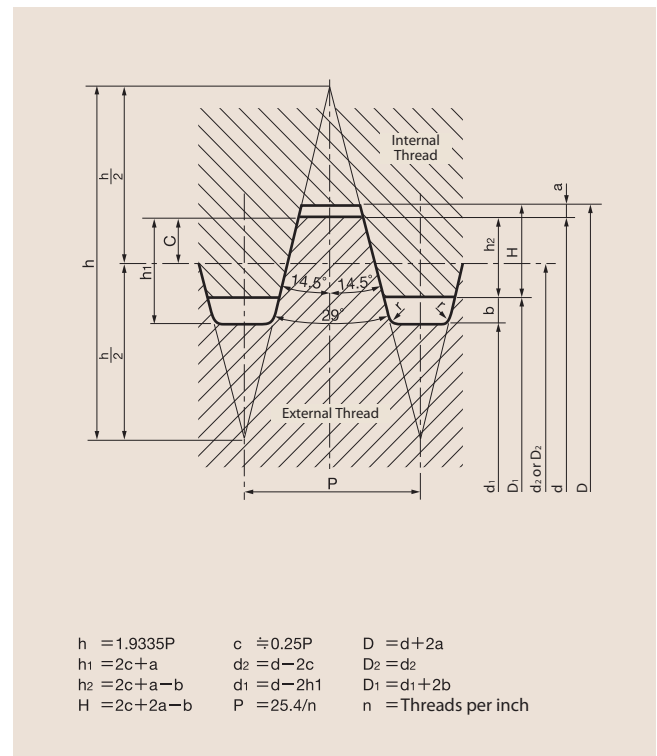
Truncation Unit: mm

Threads per inch	Section	f_c	f_r
27	Max.	0.094P	0.140P
	Min.	0.047P	0.094P
18	Max.	0.078P	0.109P
	Min.	0.047P	0.078P
14	Max.	0.060P	0.085P
	Min.	0.036P	0.060P
11.5	Max.	0.060P	0.090P
	Min.	0.040P	0.060P
8	Max.	0.055P	0.076P
	Min.	0.042P	0.055P

Metric Trapezoidal Screw Threads



29° Trapezoidal Screw Threads



27. Symbols for Standard Threads

Japan

Thread symbols	Kinds of threads	Related Standards
M	Metric screw threads	JIS B 0205-1~0205-4
S	Miniature screw threads	JIS B 0201
UNC	Unified threads, Coarse series	JIS B 0206
UNF	Unified threads, Fine series	JIS B 0208
Tr	Metric Trapezoidal screw threads	JIS B 0216
R	Taper external pipe threads	JIS B 0203 (JIS main book)
Rc	Taper internal pipe threads	JIS B 0203 (JIS main book)
Rp	Parallel internal pipe threads	JIS B 0203 (JIS main book)
G	Parallel pipe threads	JIS B 0202 (JIS main book)
PF	Parallel pipe threads	JIS B 0202 (JIS Appendix)
PT	Taper pipe threads	JIS B 0203 (JIS Appendix)
PS	Taper pipe threads (Parallel)	JIS B 0203 (JIS Appendix)
CTC	Screw threads for rigid metal thin-walled conduit and fitting	JIS C 8305
CTG	Screw threads for rigid metal thick-walled conduit and fitting	JIS C 8305
BC	Cycle threads	JIS B 0225
SM	Screw threads for sewing machine	JIS B 0226 (2001.2.20repeal)
E	Electric socket and lamp-base threads	JIS C 7709
V	Tire valve threads of automobile	JIS D 4207
CTV	Tire valve threads of cycle	JIS D 9422

ISO

Thread symbols	Kinds of threads	Related Standards
M	ISO Metric threads	ISO 261
S	ISO Miniature screw threads	ISO R 1501
Tr	ISO Metric trapezoidal screw threads	ISO 2902
UNC	ISO Unified threads, coarse series	ISO 263
UNF	ISO Unified threads, fine series	ISO 263
UNEF	ISO Unified threads, extra fine series	ISO 263
UN	ISO Unified threads, constant pitch series	ISO 263
UNJC	Unified threads (MIL Standard) coarse	ISO 3161
UNJF	Unified threads (MIL Standard) fine	ISO 3161
UNJEF	Unified threads (MIL Standard) extra fine	ISO 3161
UNJ	Unified threads (MIL Standard) constant pitch series	ISO 3161
MJ	Metric threads, MIL Standard	ISO 5855
R	Taper external pipe threads	ISO 7/1
Rc	Taper internal pipe threads	ISO 7/1
Rp	Parallel internal pipe threads	ISO 7/1
G	Parallel pipe threads	ISO 228/1
GL	Glass container threads	ISO R 1115
V	Tire valve threads	ISO 4570/1~3

27. Symbols for Standard Threads

America

Thread symbols	Kinds of threads	Related Standards
UN	Unified inch screw threads	ANSI B 1.1
UNC/UNRC	Unified coarse thread series	ANSI B 1.1
UNF/UNRF	Unified fine thread series	ANSI B 1.1
UNEF/UNREF	Unified extra-fine thread series	ANSI B 1.1
4UN/4UNR	Unified constant-pitch series with 4-threads	ANSI B 1.1
6UN/6UNR	Unified constant-pitch series with 6-threads	ANSI B 1.1
8UN/8UNR	Unified constant-pitch series with 8-threads	ANSI B 1.1
12UN/12UNR	Unified constant-pitch series with 12-threads	ANSI B 1.1
16UN/16UNR	Unified constant-pitch series with 16-threads	ANSI B 1.1
20UN/20UNR	Unified constant-pitch series with 20-threads	ANSI B 1.1
28UN/28UNR	Unified constant-pitch series with 28-threads	ANSI B 1.1
32UN/32UNR	Unified constant-pitch series with 32-threads	ANSI B 1.1
UNS/UNRS	Unified threads of special diameters, pitches and lengths of engagement	ANSI B 1.1
NR	American National thread with a 0.108p to 0.144p controlled root radius	MIL-B-7838
Acme	Acme screw threads	ANSI B 1.5
Stub-Acme	Stub Acme screw threads	ANSI B 1.8
Butt	Buttress inch screw threads	ANSI B 1.9
UNM	Unified miniature thread series	ANSI B 1.10
NC5	Class 5 interference-fit thread	ANSI B 1.12
NPT	American Standard taper pipe threads for general use	ANSI/ASME B 1.20.1
NPTR	American Standard taper pipe threads for railing joints	ANSI/ASME B 1.20.1
NPSC	American Standard straight pipe thread in pipe couplings	ANSI/ASME B 1.20.1
NPSL	American standard straight pipe threads for loose-fitting mechanical joints with locknuts	ANSI/ASME B 1.20.1
NPSM	American Standard straight pipe threads for free-fitting mechanical joints for fixture	ANSI/ASME B 1.20.1
NPSH	American Standard straight pipe threads for loose-fitting mechanical joints for hose couplings	ANSI/ASME B 1.20.1
NPTF	Dryseal American Standard taper pipe threads	ANSI B 1.20.3, 1.20.4
F-PTF	Dryseal fine taper pipe thread series	ANSI B 1.20.3, 1.20.4
PTF-SAE SHORT	Dryseal SAE short taper pipe threads	ANSI B 1.20.3, 1.20.4
PTF-SPL SHORT	Dryseal special short taper pipe threads	ANSI B 1.20.3, 1.20.4
PTF-SPL EXTRA SHORT	Dryseal special extra short taper pipe threads	ANSI B 1.20.3, 1.20.4
SPL-PTF	Dryseal special taper pipe threads	ANSI B 1.20.3, 1.20.4
NPSI	Dryseal American Standard intermediate internal straight pipe threads	ANSI B 1.20.3, 1.20.4
NPSF	Dryseal American Standard fuel internal straight pipe threads	ANSI B 1.20.3, 1.20.4
ANPT	Aeronautical National Form taper pipe threads	MIL-P-7150
NGO	National gas outlet threads	ANSI B 57.1
NGS	National gas straight threads	ANSI B 57.1
NGT	National gas taper threads	ANSI B 57.1
SGT	Special gas taper threads	ANSI B 57.1
NH	Hose coupling and firehose coupling threads	USAS B 2.4
NHR	Hose coupling and firehose coupling threads	USAS B 2.4
NPSH	Hose coupling and firehose coupling threads	USAS B 2.4
AMO	American standard microscope objective threads	ANSI B 1.11

British[※]

Thread symbols	Kinds of threads	Related Standards
UNS	Unified special series	BS 1580
B.S.W.	British Standard Whitworth coarse threads	BS 84
B.S.F.	British Standard fine threads	BS 84
BSP	British Standard pipe thread (corresponding to R, Rc, Rp of ISO)	BS 21,2779
B.A.	B.A.-Screw threads	BS 93
Acme	General purpose, Acme screw threads	BS 1104
Buttress	Buttress threads	BS 1657
BSC	Cycle threads	BS 811
BSMO	Microscope objective threads	BS 3569
E	Edison screw threads	BS 5042

※ : We left out the symbols after ISO standard was adopted.

German[※]

Thread symbols	Kinds of threads	Related Standards
GL	Glass containers thread	DIN 168
S	Buttress thread	DIN 513,2781,20401
Rd	Knuckle thread	DIN 262,3182,7273,15403,20400
W	Whitworth-gewinde	DIN 168,477,6630,49301
KS,KT	Screw siles for packages made of Plastics	DIN 6063
E	Edison screw thread	DIN 40400
Pg	Steel conduit thread	DIN 40430
Vg	Automobil tire valve thread	DIN 7756
Gf	Thread for freezing pipes	DIN 4930
Gg	Threads for drill pipe	DIN 4941,20314
HA	Thread for bone screws and nuts	DIN 58810
FG	Bicycle threads	DIN 79012

※ : We left out the symbols after ISO standard was adopted.

28. Cross chart of thread cutting tool standard

Tap and Die names	JIS	JSCTA	ISO	ANSI	BS	DIN
General specification		4051				
Measuring method		4053				
Technical requirement			8830			2197
Thread limit (Metric)		4052	2857			
Thread limit (Pipe)			5969			
Hand taps (Metric coarse)	B4430	4105	529	B94.9	949	352
Hand taps (Metric fine)	B4430	4106	529	B94.9	949	2181
Hand taps (Unified coarse)	B4432	4107	529	B94.9	949	
Hand taps (Unified fine)	B4438		529	B94.9	949	
Hand taps (Parallel pipe thread)	B4445		2284	B94.9	949	
Hand taps (Taper pipe thread)	B4446		2284	B94.9	949	
Hand taps (American parallel pipe thread)		4113		B94.9		
Hand taps (American taper pipe thread)		4114		B94.9		
Hand taps (American dryseal parallel pipe thread)		4115		B94.9		
Hand taps (American dryseal taper pipe thread)		4116		B94.9		
Nut taps (Metric coarse)	B4433	4109			357	
Nut taps (Metric fine)		4110				
Nut taps (Unified coarse)		4111		B94.9		
Nut taps (Unified fine)		4112				
Machine taps (Metric coarse)						371,376
Machine taps (Metric fine)						374
Bent shank taps (Metric coarse)		4101				
Bent shank taps (Metric fine)		4102				
Bent shank taps (Unified coarse)		4103				
Bent shank taps (Unified fine)		4104				
Long shank machine taps (Metric thread)		4153	2283			
Long shank machine taps (Inch thread)		4153	2283			
Spiral pointed taps		4155		B94.9		
Spiral fluted taps		4154		B94.9		
Shell taps (Metric thread)		4117				
Pulley taps				B94.9		
Thread Forming taps				B94.9		
Blanks for carbide taps				B94.1		
Thread cutting round dies (Metric coarse, Adjustable)	B4451					223
Thread cutting round dies (Metric fine, Adjustable)	B4451					223
Thread cutting round dies (Metric, Solid)	B4451		2568		1127	223
Thread cutting round dies (Unified coarse adjustable)	B4451					
Thread cutting round dies (Unified fine adjustable)	B4451					
Thread cutting round dies (Unified thread)	B4451		2568		1127	
Thread cutting round dies (Parallel pipe thread)	B4455		4231		1127	5158
Thread cutting round dies (Taper pipe thread)	B4456		4230			5159
Hexagon dies			7226		1127	382

Symbols : Organization names

ISO : International Organization for Standardization
 JIS : Japanese Industrial Standards Committee
 JSCTA : The Japan Solid Cutting Tools' Association

ANSI : American National Standards Institute
 BS : British Standards Institution, UK
 DIN : Deutsches Institut für Normung

29. Hardness conversion table

Conversion table from Rockwell C hardness of steel. (Approximate)

Rockwell C Scale Hardness	Vickers Hardness	Brinell Hardness		Rockwell Hardness ^{*2}			Rockwell Superficial Hardness			Shore Hardness	Tensile Strength MPa ^{*1}	Rockwell C Scale Hardness ^{*2}
		Standard ball	Tungsten Carbide ball	A scale	B scale	D scale	15-N scale	30-N scale	45-N scale			
HRC	HV	HB		HRA	HRB	HRD	HS15N	HS30N	HS45N	HS	—	HRC
68	940	—	—	85.6	—	76.9	93.2	84.4	75.4	97	—	68
67	900	—	—	85.0	—	76.1	92.9	83.6	74.2	95	—	67
66	865	—	—	84.5	—	75.4	92.5	82.8	73.3	92	—	66
65	832	—	(739)	83.9	—	74.5	92.2	81.9	72.0	91	—	65
64	800	—	(722)	83.4	—	73.8	91.8	81.1	71.0	88	—	64
63	772	—	(705)	82.8	—	73.0	91.4	80.1	69.9	87	—	63
62	746	—	(688)	82.3	—	72.2	91.1	79.3	68.8	85	—	62
61	720	—	(670)	81.8	—	71.5	90.7	78.4	67.7	83	—	61
60	697	—	(654)	81.2	—	70.7	90.2	77.5	66.7	81	—	60
59	674	—	(634)	80.7	—	69.9	89.8	76.6	65.5	80	—	59
58	653	—	615	80.1	—	69.2	89.3	75.7	64.3	78	—	58
57	633	—	595	79.6	—	68.5	88.9	74.8	63.2	76	—	57
56	613	—	577	79.0	—	67.7	88.3	73.9	62.0	75	—	56
55	595	—	560	78.5	—	66.9	87.9	73.0	60.9	74	2075	55
54	577	—	543	78.0	—	66.1	87.4	72.0	59.8	72	2015	54
53	560	—	525	77.4	—	65.4	86.9	71.2	58.6	71	1950	53
52	544	(500)	512	76.8	—	64.6	86.4	70.2	57.4	69	1880	52
51	528	(487)	496	76.3	—	63.8	85.9	69.4	56.1	68	1820	51
50	513	(475)	481	75.9	—	63.1	85.5	68.5	55.0	67	1760	50
49	498	(464)	469	75.2	—	62.1	85.0	67.6	53.8	66	1695	49
48	484	451	455	74.7	—	61.4	84.5	66.7	52.5	64	1635	48
47	471	442	443	74.1	—	60.8	83.9	65.8	51.4	63	1580	47
46	458	432	432	73.6	—	60.0	83.5	64.8	50.3	62	1530	46
45	446	421	421	73.1	—	59.2	83.0	64.0	49.0	60	1480	45
44	434	409	409	72.5	—	58.5	82.5	63.1	47.8	58	1435	44
43	423	400	400	72.0	—	57.7	82.0	62.2	46.7	57	1385	43
42	412	390	390	71.5	—	56.9	81.5	61.3	45.5	56	1340	42
41	402	381	381	70.9	—	56.2	80.9	60.4	44.3	55	1295	41
40	392	371	371	70.4	—	55.4	80.4	59.5	43.1	54	1250	40
39	382	362	362	69.9	—	54.6	79.9	58.6	41.9	52	1215	39
38	372	353	353	69.4	—	53.8	79.4	57.7	40.8	51	1180	38
37	363	344	344	68.9	—	53.1	78.8	56.8	39.6	50	1160	37
36	354	336	336	68.4	(109.0)	52.3	78.3	55.9	38.4	49	1115	36
35	345	327	327	67.9	(108.5)	51.5	77.7	55.0	37.2	48	1080	35
34	336	319	319	67.4	(108.0)	50.8	77.2	54.2	36.1	47	1055	34
33	327	311	311	66.8	(107.5)	50.0	76.6	53.3	34.9	46	1025	33
32	318	301	301	66.3	(107.0)	49.2	76.1	52.1	33.7	44	1000	32
31	310	294	294	65.8	(106.0)	48.4	75.6	51.3	32.5	43	980	31
30	302	286	286	65.3	(105.5)	47.7	75.0	50.4	31.3	42	950	30
29	294	279	279	64.7	(104.5)	47.0	74.5	49.5	30.1	41	930	29
28	286	271	271	64.3	(104.0)	46.1	73.9	48.6	28.9	41	910	28
27	279	264	264	63.8	(103.0)	45.2	73.3	47.7	27.8	40	880	27
26	272	258	258	63.3	(102.5)	44.6	72.8	46.8	26.7	38	860	26
25	266	253	253	62.8	(101.5)	43.8	72.2	45.9	25.5	38	840	25
24	260	247	247	62.4	(101.0)	43.1	71.6	45.0	24.3	37	825	24
23	254	243	243	62.0	100.0	42.1	71.0	44.0	23.1	36	805	23
22	248	237	237	61.5	99.0	41.6	70.5	43.2	22.0	35	785	22
21	243	231	231	61.0	98.5	40.9	69.9	42.3	20.7	35	770	21
20	238	226	226	60.5	97.8	40.1	69.4	41.5	19.6	34	760	20
(18)	230	219	219	—	96.7	—	—	—	—	33	730	(18)
(16)	222	212	212	—	95.5	—	—	—	—	32	705	(16)
(14)	213	203	203	—	93.9	—	—	—	—	31	675	(14)
(12)	204	194	194	—	92.3	—	—	—	—	29	650	(12)
(10)	196	187	187	—	90.7	—	—	—	—	28	620	(10)
(8)	188	179	179	—	89.5	—	—	—	—	27	600	(8)
(6)	180	171	171	—	87.1	—	—	—	—	26	580	(6)
(4)	173	165	165	—	85.5	—	—	—	—	25	550	(4)
(2)	166	158	158	—	83.5	—	—	—	—	24	530	(2)
(0)	160	152	152	—	81.7	—	—	—	—	24	515	(0)

*1 : 1MPa=1N/mm²

*2 : In above table, numbers in parenthesis are only for reference.

This table is abstracted from SAE J 417.

30. Conversion table from inch to millimeter

Conversion table from inch to millimeter

Designation		0"	1"	2"	3"	4"	5"	6"	7"	8"	9"
Fractional	Decimal										
0"	0"	—	25.400	50.800	76.200	101.600	127.000	152.400	177.800	203.200	228.600
1/64"	0.015625"	0.397	25.797	51.197	76.597	101.997	127.397	152.797	178.197	203.597	228.997
1/32"	0.03125"	0.794	26.194	51.594	76.994	102.394	127.794	153.194	178.594	203.994	229.394
3/64"	0.046875"	1.191	26.591	51.991	77.391	102.791	128.191	153.591	178.991	204.391	229.791
1/16"	0.0625"	1.588	26.988	52.388	77.788	103.188	128.588	153.988	179.388	204.788	230.188
3/64"	0.078125"	1.984	27.384	52.784	78.184	103.584	128.984	154.384	179.784	205.184	230.584
3/32"	0.09375"	2.381	27.781	53.181	78.581	103.981	129.381	154.781	180.181	205.581	230.981
7/64"	0.109375"	2.778	28.178	53.578	78.978	104.378	129.778	155.178	180.578	205.978	231.378
1/8"	0.125"	3.175	28.575	53.975	79.375	104.775	130.175	155.575	180.975	206.375	231.775
9/64"	0.140625"	3.572	28.972	54.372	79.772	105.172	130.572	155.972	181.372	206.772	232.172
3/32"	0.15625"	3.969	29.369	54.769	80.169	105.569	130.969	156.369	181.769	207.169	232.569
11/64"	0.171875"	4.366	29.766	55.166	80.566	105.966	131.366	156.766	182.166	207.566	232.966
3/16"	0.1875"	4.762	30.162	55.562	80.962	106.362	131.762	157.162	182.562	207.962	233.362
13/64"	0.203125"	5.159	30.559	55.959	81.359	106.759	132.159	157.559	182.959	208.359	233.759
7/32"	0.21875"	5.556	30.956	56.356	81.756	107.156	132.556	157.956	183.356	208.756	234.156
15/64"	0.234375"	5.953	31.353	56.753	82.153	107.553	132.953	158.353	183.753	209.153	234.553
1/4"	0.25"	6.350	31.750	57.150	82.550	107.950	133.350	158.750	184.150	209.550	234.950
17/64"	0.265625"	6.747	32.147	57.547	82.947	108.347	133.747	159.147	184.547	209.947	235.347
9/32"	0.28125"	7.144	32.544	57.944	83.344	108.744	134.144	159.544	184.944	210.344	235.744
19/64"	0.296875"	7.541	32.941	58.341	83.741	109.141	134.541	159.941	185.341	210.741	236.141
5/16"	0.3125"	7.938	33.338	58.738	84.138	109.538	134.938	160.338	185.738	211.138	236.538
21/64"	0.328125"	8.334	33.734	59.134	84.534	109.934	135.334	160.734	186.134	211.534	236.934
11/32"	0.34375"	8.731	34.131	59.531	84.931	110.331	135.731	161.131	186.531	211.931	237.331
23/64"	0.359375"	9.128	34.528	59.928	85.328	110.728	136.128	161.528	186.928	212.328	237.728
3/8"	0.375"	9.525	34.925	60.325	85.725	111.125	136.525	161.925	187.325	212.725	238.125
25/64"	0.390625"	9.922	35.322	60.722	86.122	111.522	136.922	162.322	187.722	213.122	238.522
13/32"	0.40625"	10.319	35.719	61.119	86.519	111.919	137.319	162.719	188.119	213.519	238.919
27/64"	0.421875"	10.716	36.116	61.516	86.916	112.316	137.716	163.116	188.516	213.916	239.316
7/16"	0.4375"	11.112	36.512	61.912	87.312	112.712	138.112	163.512	188.912	214.312	239.712
29/64"	0.453125"	11.509	36.909	62.309	87.709	113.109	138.509	163.909	189.309	214.709	240.109
15/32"	0.46875"	11.906	37.306	62.706	88.106	113.506	138.906	164.306	189.706	215.106	240.506
31/64"	0.484375"	12.303	37.703	63.103	88.503	113.903	139.303	164.703	190.103	215.503	240.903
1/2"	0.5"	12.700	38.100	63.500	88.900	114.300	139.700	165.100	190.500	215.900	241.300
33/64"	0.515625"	13.097	38.497	63.897	89.297	114.697	140.097	165.497	190.897	216.297	241.697
17/32"	0.53125"	13.494	38.894	64.294	89.694	115.094	140.494	165.894	191.294	216.694	242.094
35/64"	0.546875"	13.891	39.291	64.691	90.091	115.491	140.891	166.291	191.691	217.091	242.491
9/16"	0.5625"	14.288	39.688	65.088	90.488	115.888	141.288	166.688	192.088	217.488	242.888
37/64"	0.578125"	14.684	40.084	65.484	90.884	116.284	141.684	167.084	192.484	217.884	243.284
19/32"	0.59375"	15.081	40.481	65.881	91.281	116.681	142.081	167.481	192.881	218.281	243.681
39/64"	0.609375"	15.478	40.878	66.278	91.678	117.078	142.478	167.878	193.278	218.678	244.078
5/8"	0.625"	15.875	41.275	66.675	92.075	117.475	142.875	168.275	193.675	219.075	244.475
41/64"	0.640625"	16.272	41.672	67.072	92.472	117.872	143.272	168.672	194.072	219.472	244.872
21/32"	0.65625"	16.669	42.069	67.469	92.869	118.269	143.669	169.069	194.469	219.869	245.269
43/64"	0.671875"	17.066	42.466	67.866	93.266	118.666	144.066	169.466	194.866	220.266	245.666
11/16"	0.6875"	17.462	42.862	68.262	93.662	119.062	144.462	169.862	195.262	220.662	246.062
45/64"	0.703125"	17.859	43.259	68.659	94.059	119.459	144.859	170.259	195.659	221.059	246.459
23/32"	0.71875"	18.256	43.656	69.056	94.456	119.856	145.256	170.656	196.056	221.456	246.856
47/64"	0.734375"	18.653	44.053	69.453	94.853	120.253	145.653	171.053	196.453	221.853	247.253
3/4"	0.75"	19.050	44.450	69.850	95.250	120.650	146.050	171.450	196.850	222.250	247.650
49/64"	0.765625"	19.447	44.847	70.247	95.647	121.047	146.447	171.847	197.247	222.647	248.047
25/32"	0.78125"	19.844	45.244	70.644	96.044	121.444	146.844	172.244	197.644	223.044	248.444
51/64"	0.796875"	20.241	45.641	71.041	96.441	121.841	147.241	172.641	198.041	223.441	248.841
13/16"	0.8125"	20.638	46.038	71.438	96.838	122.238	147.638	173.038	198.438	223.838	249.238
53/64"	0.828125"	21.034	46.434	71.834	97.234	122.634	148.034	173.434	198.834	224.234	249.634
27/32"	0.84375"	21.431	46.831	72.231	97.631	123.031	148.431	173.831	199.231	224.631	250.031
55/64"	0.859375"	21.828	47.228	72.628	98.028	123.428	148.828	174.228	199.628	225.028	250.428
7/8"	0.875"	22.225	47.625	73.025	98.425	123.825	149.225	174.625	200.025	225.425	250.825
57/64"	0.890625"	22.622	48.022	73.422	98.822	124.222	149.622	175.022	200.422	225.822	251.222
29/32"	0.90625"	23.019	48.419	73.819	99.219	124.619	150.019	175.419	200.819	226.219	251.619
59/64"	0.921875"	23.416	48.816	74.216	99.616	125.016	150.416	175.816	201.216	226.616	252.016
15/16"	0.9375"	23.812	49.212	74.612	100.012	125.412	150.812	176.212	201.612	227.012	252.412
61/64"	0.953125"	24.209	49.609	75.009	100.409	125.809	151.209	176.609	202.009	227.409	252.809
31/32"	0.96875"	24.606	50.006	75.406	100.806	126.206	151.606	177.006	202.406	227.806	253.206
63/64"	0.984375"	25.003	50.403	75.803	101.203	126.603	152.003	177.403	202.803	228.203	253.603

31. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)							
			C	Si	Mn	P	S	Ni	Cr	Mo
Carbon steels for machine structural use	Low carbon steels	S10C	0.08~0.13	0.15~0.35	0.30~0.60	0.030 \geq	0.035 \geq	—	—	—
		S15C	0.13~0.18	0.15~0.35	0.30~0.60	0.030 \geq	0.035 \geq	—	—	—
		S20C	0.18~0.23	0.15~0.35	0.30~0.60	0.030 \geq	0.035 \geq	—	—	—
	Medium carbon steels	S25C	0.22~0.28	0.15~0.35	0.30~0.60	0.030 \geq	0.035 \geq	—	—	—
		S35C	0.32~0.38	0.15~0.35	0.60~0.90	0.030 \geq	0.035 \geq	—	—	—
		S45C	0.42~0.48	0.15~0.35	0.60~0.90	0.030 \geq	0.035 \geq	—	—	—
	High carbon steels	S48C	0.45~0.51	0.15~0.35	0.60~0.90	0.030 \geq	0.035 \geq	—	—	—
		S55C	0.52~0.58	0.15~0.35	0.60~0.90	0.030 \geq	0.035 \geq	—	—	—
		S58C	0.55~0.61	0.15~0.35	0.60~0.90	0.030 \geq	0.035 \geq	—	—	—
Alloy steels for machine structural use	Chromium Molybdenum Steels	SCM415	0.13~0.18	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.25
		SCM418	0.16~0.21	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.25
		SCM420	0.18~0.23	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.25
		SCM430	0.28~0.33	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.30
		SCM435	0.33~0.38	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.30
		SCM440	0.38~0.43	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.30
		SCM445	0.43~0.48	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	0.15~0.30
	Nickel Chromium Steels	SNC236	0.32~0.40	0.15~0.35	0.50~0.90	0.030 \geq	0.030 \geq	1.00~1.50	0.50~0.90	—
		SNC415	0.12~0.18	0.15~0.35	0.35~0.65	0.030 \geq	0.030 \geq	2.00~2.50	0.20~0.50	—
		SNC631	0.27~0.35	0.15~0.35	0.35~0.65	0.030 \geq	0.030 \geq	2.50~3.00	0.60~1.00	—
		SNC815	0.12~0.18	0.15~0.35	0.35~0.65	0.030 \geq	0.030 \geq	3.00~3.50	0.60~1.00	—
	Chromium Steels	SCr415	0.13~0.18	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	—
		SCr420	0.18~0.23	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	—
		SCr430	0.28~0.33	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	—
		SCr440	0.38~0.43	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.25 \geq	0.90~1.20	—
	Nickel Chromium Molybdenum Steels	SNCM220	0.17~0.23	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	0.40~0.70	0.40~0.60	0.15~0.25
		SNCM240	0.38~0.43	0.15~0.35	0.70~1.00	0.030 \geq	0.030 \geq	0.40~0.70	0.40~0.60	0.15~0.30
SNCM420		0.17~0.23	0.15~0.35	0.40~0.70	0.030 \geq	0.030 \geq	1.60~2.00	0.40~0.60	0.15~0.30	
SNCM439		0.36~0.43	0.15~0.35	0.60~0.90	0.030 \geq	0.030 \geq	1.60~2.00	0.60~1.00	0.15~0.30	

Chemical Composition (%)					Mechanical Property of Standard test block		
W	V	Pb	Cu	others	Tensile strength (N/mm ²)	Hardness	Heat treatment of standard test block
—	—	—	—	—	314 ≦	109~156 HB	900~950°C normalizing
—	—	—	—	—	373 ≦	111~167 HB	880~930°C normalizing
—	—	—	—	—	402 ≦	116~174 HB	870~920°C normalizing
—	—	—	—	—	441 ≦	123~183 HB	860~910°C normalizing
—	—	—	—	—	510 ≦	149~207 HB	840~890°C normalizing
					569 ≦	167~235 HB	840~890°C water hardening · 550~650°C air hardening
—	—	—	—	—	569 ≦	167~229 HB	820~870°C normalizing
					686 ≦	201~269 HB	820~870°C water hardening · 550~650°C air hardening
—	—	—	—	—	608 ≦	179~235 HB	810~860°C normalizing
					735 ≦	212~277 HB	810~860°C water hardening · 550~650°C air hardening
—	—	—	—	—	647 ≦	183~255 HB	800~850°C normalizing
					785 ≦	229~285 HB	800~850°C water hardening · 550~650°C air hardening
—	—	—	—	—	647 ≦	183~255 HB	800~850°C normalizing
					785 ≦	229~285 HB	800~850°C water hardening · 550~650°C air hardening
—	—	—	—	—	834 ≦	235~321 HB	850~900°C Oil hardening
—	—	—	—	—	883 ≦	248~331 HB	800~850°C Oil hardening
—	—	—	—	—	932 ≦	262~352 HB	150~200°C tempering
—	—	—	—	—	834 ≦	241~302 HB	830~880°C Oil hardening · 530~630°C air hardening 150~200°C tempering
—	—	—	—	—	932 ≦	269~331 HB	
—	—	—	—	—	980.7 ≦	285~352 HB	
—	—	—	—	—	1030 ≦	302~363 HB	
—	—	—	—	—	736 ≦	217~277 HB	820~880°C Oil hardening · 550~650°C air hardening 150~200°C tempering
—	—	—	—	—	785 ≦	235~341 HB	850~900°C Oil hardening 740~790°C Water hardening 150~200°C tempering
—	—	—	—	—	834 ≦	248~302 HB	820~880°C Oil hardening · 550~650°C air hardening
—	—	—	—	—	980.7 ≦	285~388 HB	830~880°C Oil hardening 750~800°C Oil hardening 150~200°C tempering
—	—	—	—	—	785 ≦	217~302 HB	850~900°C Oil hardening
—	—	—	—	—	834 ≦	235~321 HB	800~850°C Oil hardening 150~200°C tempering
—	—	—	—	—	785 ≦	229~293 HB	830~880°C Oil hardening · 520~620°C air hardening
—	—	—	—	—	932 ≦	269~331 HB	150~200°C tempering
—	—	—	—	—	834 ≦	248~341 HB	850~900°C Oil hardening 800~850°C Oil hardening 150~200°C tempering
—	—	—	—	—	883 ≦	255~311 HB	820~870°C Oil hardening · 580~680°C air hardening 150~200°C tempering
—	—	—	—	—	980.7 ≦	293~375 HB	850~900°C Oil hardening 770~820°C Oil hardening 150~200°C tempering
—	—	—	—	—	980.7 ≦	293~352 HB	820~870°C Oil hardening · 580~680°C air hardening 150~200°C tempering

31. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)							
			C	Si	Mn	P	S	Ni	Cr	Mo
Alloy steels for machine structural use	Nickel Chromium Molybdenum Steels	SNCM625	0.20~0.30	0.15~0.35	0.35~0.60	0.030 \geq	0.030 \geq	3.00~ 3.50	1.00~ 1.50	0.15~0.30
		SNCM630	0.25~0.35	0.15~0.35	0.35~0.60	0.030 \geq	0.030 \geq	2.50~ 3.50	2.50~ 3.50	0.50~0.70
		SNCM815	0.12~0.18	0.15~0.35	0.30~0.60	0.030 \geq	0.030 \geq	4.00~ 4.50	0.70~ 1.00	0.15~0.30
Tool steels	Chromium Tool steels	SK2	1.15~1.25	0.10~0.35	0.10~0.50	0.030 \geq	0.030 \geq	—	—	—
		SK4	0.90~1.00	0.10~0.35	0.10~0.50	0.030 \geq	0.030 \geq	—	—	—
		SK6	0.70~0.80	0.10~0.35	0.10~0.50	0.030 \geq	0.030 \geq	—	—	—
	Alloys Tool steels	SKS11	1.20~1.30	0.35 \geq	0.50 \geq	0.030 \geq	0.030 \geq	—	0.20~ 0.50	—
		SKS51	0.75~0.85	0.35 \geq	0.50 \geq	0.030 \geq	0.030 \geq	1.30~ 2.00	0.20~ 0.50	—
		SKS4	0.45~0.55	0.35 \geq	0.50 \geq	0.030 \geq	0.030 \geq	—	0.50~ 1.00	—
		SKS3	0.90~1.00	0.35 \geq	0.90~1.20	0.030 \geq	0.030 \geq	—	0.50~ 1.00	—
		SKS94	0.90~1.00	0.50 \geq	0.80~1.10	0.030 \geq	0.030 \geq	—	0.20~ 0.60	—
		SKD11	1.40~1.60	0.40 \geq	0.60 \geq	0.030 \geq	0.030 \geq	—	11.00~13.00	0.80~1.20
		SKD61	0.35~0.42	0.80~1.20	0.25~0.50	0.030 \geq	0.020 \geq	—	4.80~ 5.50	1.00~1.50
SKT3	0.50~0.60	0.35 \geq	0.60~1.00	0.030 \geq	0.020 \geq	0.25~ 0.60	0.90~ 1.20	0.30~0.50		
SKT4	0.50~0.60	0.10~0.40	0.60~0.90	0.030 \geq	0.020 \geq	1.50~ 1.80	0.80~ 1.20	0.35~0.55		
Stainless steels	Austenite type	SUS301	0.15 \geq	1.00 \geq	2.00 \geq	0.045 \geq	0.030 \geq	6.00~ 8.00	16.00~18.00	—
		SUS303	0.15 \geq	1.00 \geq	2.00 \geq	0.20 \geq	0.15 \leq	8.00~10.00	17.00~19.00	—
		SUS304	0.08 \geq	1.00 \geq	2.00 \geq	0.045 \geq	0.030 \geq	8.00~10.50	18.00~20.00	—
		SUS316	0.08 \geq	1.00 \geq	2.00 \geq	0.045 \geq	0.030 \geq	10.00~14.00	16.00~18.00	2.00~3.00
	Martensite type	SUS403	0.15 \geq	0.50 \geq	1.00 \geq	0.040 \geq	0.030 \geq	—	11.50~13.00	—
		SUS416	0.15 \geq	1.00 \geq	1.25 \geq	0.060 \geq	0.15 \leq	—	12.00~14.00	—
		SUS420J2	0.26~0.40	1.00 \geq	1.00 \geq	0.040 \geq	0.030 \geq	—	12.00~14.00	—
		SUS440C	0.95~1.20	1.00 \geq	1.00 \geq	0.040 \geq	0.030 \geq	—	16.00~18.00	—
	Ferrite type	SUS430	0.12 \geq	0.75 \geq	1.00 \geq	0.040 \geq	0.030 \geq	—	16.00~18.00	—
	Precipitation hardening	SUS630	0.07 \geq	1.00 \geq	1.00 \geq	0.040 \geq	0.030 \geq	3.00~ 5.00	15.00~17.50	—
Cast steels	Carbon steels Cast steels	SC360	0.20 \geq	—	—	0.040 \geq	0.040 \geq	—	—	—
		SC410	0.30 \geq	—	—	0.040 \geq	0.040 \geq	—	—	—
		SC450	0.35 \geq	—	—	0.040 \geq	0.040 \geq	—	—	—
		SC480	0.40 \geq	—	—	0.040 \geq	0.040 \geq	—	—	—
	Stainless steels casting	SCS13	0.08 \geq	2.00 \geq	2.00 \geq	0.040 \geq	0.040 \geq	8.00~11.00	18.00~21.00	—
		SCS14	0.08 \geq	2.00 \geq	2.00 \geq	0.040 \geq	0.040 \geq	10.00~14.00	17.00~20.00	2.00~3.00
	Steel casting for high temperature and high pressure	SCPH1	0.25 \geq	0.60 \geq	0.70 \geq	0.040 \geq	0.040 \geq	—	—	—
		SCPH2	0.30 \geq	0.60 \geq	1.00 \geq	0.040 \geq	0.040 \geq	—	—	—
		SCPH21	0.20 \geq	0.60 \geq	0.50~0.80	0.040 \geq	0.040 \geq	—	1.00~ 1.50	0.45~0.65
		SCPH32	0.20 \geq	0.60 \geq	0.50~0.80	0.040 \geq	0.040 \geq	—	2.00~ 2.75	0.90~1.20
Steel casting for welded structure	SCW480	0.22 \geq	0.80 \geq	1.50 \geq	0.040 \geq	0.040 \geq	0.50 \geq	0.50 \geq	—	

Chemical Composition (%)					Mechanical Property of Standard test block		
W	V	Pb	Cu	others	Tensile strength (N/mm ²)	Hardness	Heat treatment of standard test block
—	—	—	—	—	932 ≤	269~321 HB	820~870°C oil hardening · 570~670°C air hardening
—	—	—	—	—	1079 ≤	302~352 HB	850~950°C normalizing · 550~650°C air hardening
—	—	—	—	—	1079 ≤	311~375 HB	830~880°C Oil hardening 750~800°C Oil hardening 150~200°C tempering
—	—	—	—	—	—	212 HB ≤	750~780°C annealing
—	—	—	—	—	—	207 HB ≤	740~760°C annealing
—	—	—	—	—	—	201 HB ≤	730~760°C annealing
3.00~4.00	0.10~0.30	—	—	—	—	241 HB ≤	780~850°C annealing
—	—	—	—	—	—	207 HB ≤	750~800°C annealing
0.50~1.00	—	—	—	—	—	201 HB ≤	740~780°C annealing
0.50~1.00	—	—	—	—	—	217 HB ≤	750~800°C annealing
—	—	—	—	—	—	212 HB ≤	740~760°C annealing
—	0.20~0.50	—	—	—	—	255 HB ≤	830~880°C annealing
—	0.80~1.15	—	—	—	—	229 HB ≤	820~870°C annealing
—	—	—	—	—	—	235 HB ≤	760~810°C annealing
—	0.05~0.15	—	—	—	—	241 HB ≤	740~800°C annealing
—	—	—	—	—	520 ≤	187 HB ≤	1010~1150°C solution treatment
—	—	—	—	—	520 ≤	187 HB ≤	
—	—	—	—	—	520 ≤	187 HB ≤	
—	—	—	—	—	520 ≤	187 HB ≤	
—	—	—	—	—	—	200 HB ≤	800~900°C annealing
—	—	—	—	—	—	200 HB ≤	
—	—	—	—	—	—	235 HB ≤	
—	—	—	—	—	—	269 HB ≤	800~920°C annealing
—	—	—	—	—	451 ≤	183 HB ≤	780~850°C normalizing
—	—	—	3.00~5.00	Nb0.15~0.45	—	363 HB ≤	1020~1060°C solution treatment
—	—	—	—	—	363 ≤	—	annealing, normalizing, or normalizing, tempering
—	—	—	—	—	412 ≤	—	
—	—	—	—	—	451 ≤	—	
—	—	—	—	—	481 ≤	—	
—	—	—	—	—	440 ≤	183 HB ≤	1030~1150°C solution treatment
—	—	—	—	—	480 ≤	183 HB ≤	
—	—	—	—	—	412 ≤	—	annealing, normalizing, or normalizing, tempering
—	—	—	—	—	481 ≤	—	
—	—	—	—	—	481 ≤	—	
—	—	—	—	—	481 ≤	—	
—	—	—	—	—	480 ≤	—	

31. Chemical Component table of work materials

Production data

The name of work materials and material Symbols			Chemical Composition (%)							
			C	Si	Mn	P	S	Ni	Cr	Mo
Cast irons	Gray iron castings	FC150	—	—	—	—	—	—	—	—
		FC200	—	—	—	—	—	—	—	—
		FC250	—	—	—	—	—	—	—	—
		FC300	—	—	—	—	—	—	—	—
		FC350	—	—	—	—	—	—	—	—
Tough cast irons Ductile cast irons	Spheroidal graphite Cast irons	FCD400	2.5 \geq	—	—	—	0.02 \geq	—	—	—
		FCD450	2.5 \geq	—	—	—	0.02 \geq	—	—	—
		FCD500	2.5 \geq	—	—	—	0.02 \geq	—	—	—
		FCD600	2.5 \geq	—	—	—	0.02 \geq	—	—	—
		FCD700	2.5 \geq	—	—	—	0.02 \geq	—	—	—
High carbon chromium bearing steels	SUJ2	0.95~1.10	0.15~0.35	0.50 \geq	0.025 \geq	0.025 \geq	—	1.30~1.60	—	
	SUJ3	0.95~1.10	0.40~0.70	0.90~1.15	0.025 \geq	0.025 \geq	—	0.90~1.20	—	
	SUJ4	0.95~1.10	0.15~0.35	0.50 \geq	0.025 \geq	0.025 \geq	—	1.30~1.60	0.10~0.25	
	SUJ5	0.95~1.10	0.40~0.70	0.90~1.15	0.025 \geq	0.025 \geq	—	0.90~1.20	0.10~0.25	
Free cutting carbon steels	SUM22	0.13 \geq	—	0.70~1.00	0.07~0.12	0.24~0.33	—	—	—	
	SUM22L	0.13 \geq	—	0.70~1.00	0.07~0.12	0.24~0.33	—	—	—	
	SUM31	0.14~0.20	—	1.00~1.30	0.040 \geq	0.08~0.13	—	—	—	
	SUM31L	0.14~0.20	—	1.00~1.30	0.040 \geq	0.08~0.13	—	—	—	
	SUM42	0.37~0.45	—	1.35~1.65	0.040 \geq	0.08~0.13	—	—	—	
Rolled steels for general structure	SS330	—	—	—	0.050 \geq	0.050 \geq	—	—	—	
	SS400	—	—	—	0.050 \geq	0.050 \geq	—	—	—	
	SS490	—	—	—	0.050 \geq	0.050 \geq	—	—	—	
	SS540	0.30 \geq	—	1.60 \geq	0.040 \geq	0.040 \geq	—	—	—	
Cold-reduced carbon steel sheets	SPCC	0.15 \geq	—	0.60 \geq	0.100 \geq	0.035 \geq	—	—	—	
	SPCD	0.10 \geq	—	0.50 \geq	0.040 \geq	0.035 \geq	—	—	—	
	SPCE	0.08 \geq	—	0.45 \geq	0.030 \geq	0.030 \geq	—	—	—	

Technical Information

Chemical Composition (%)					Mechanical Property of Standard test block		
W	V	Pb	Cu	others	Tensile strength (N/mm ²)	Hardness	Heat treatment of standard test block
—	—	—	—	—	127~186	210~241 HB	—
—	—	—	—	—	167~235	217~255 HB	
—	—	—	—	—	216~275	229~269 HB	
—	—	—	—	—	265~304	248~269 HB	
—	—	—	—	—	314~343	269~277 HB	
—	—	—	—	—	392 ≤	201 HB ≥	—
—	—	—	—	—	441 ≤	143~217 HB	
—	—	—	—	—	490 ≤	170~241 HB	
—	—	—	—	—	588 ≤	192~269 HB	
—	—	—	—	—	686 ≤	229~302 HB	
—	—	—	—	—	—	201 HB ≥	spheroidizing
—	—	—	—	—	—	207 HB ≥	
—	—	—	—	—	—	201 HB ≥	
—	—	—	—	—	—	207 HB ≥	
—	—	—	—	—	—	—	—
—	—	0.10~0.35	—	—			
—	—	—	—	—			
—	—	0.10~0.35	—	—			
—	—	—	—	—	330~430	—	—
—	—	—	—	—			
—	—	—	—	—			
—	—	—	—	—			
—	—	—	—	—	270 ≤	65 HRB ≥	Standard thermal refining
—	—	—	—	—			
—	—	—	—	—			

31. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)									
			Cu	Pb	Fe	Sn	Zn	Al	Mn	Ni	P	Si
Copper	Oxygen free high conductivity copper	C1020	99.96 ≤	—	—	—	—	—	—	—	—	—
	tough pitch copper	C1100	99.90 ≤	—	—	—	—	—	—	—	—	—
	Phosphor deoxidized copper	C1201	99.90 ≤	—	—	—	—	—	—	—	0.004~0.015	—
		C1221	99.75 ≤	—	—	—	—	—	—	—	0.004~0.040	—
Brass	Brass	C2600	68.5~71.5	0.05 ≥	0.05 ≥	—	remaining	—	—	—	—	—
		C2720	62.0~64.0	0.05 ≥	0.05 ≥	—	remaining	—	—	—	—	—
		C2801	59.0~62.0	0.10 ≥	0.07 ≥	—	remaining	—	—	—	—	—
	Free cutting brass	C3560	61.0~64.0	2.0~3.0	0.10 ≥	—	remaining	—	—	—	—	—
		C3713	58.0~62.0	1.0~2.0	0.10 ≥	—	remaining	—	—	—	—	—
Brass casting	CAC201		83.0~88.0	0.5 ≥	0.2 ≥	0.1 ≥	11.0~17.0	0.2 ≥	—	0.2 ≥	—	—
	CAC203		58.0~64.0	0.5~3.0	0.8 ≥	1.0 ≥	30.0~41.0	0.5 ≥	—	1.0 ≥	—	—
Bronze casting	CAC401		79.0~83.0	3.0~7.0	0.35 ≥	2.0~4.0	8.0~12.0	—	—	1.0 ≥	—	—
	CAC403		86.5~89.5	1.0 ≥	0.2 ≥	9.0~11.0	1.0~3.0	—	—	1.0 ≥	—	—
	CAC406		83.0~87.0	4.0~6.0	0.3 ≥	4.0~6.0	4.0~6.0	—	—	1.0 ≥	—	—
Aluminum alloy	Aluminum rolling material	A1080	0.03 ≥	—	0.15 ≥	—	0.03 ≥	99.80 ≤	0.02 ≥	—	—	0.15 ≥
		A1080-H16										
		A2017	3.5~4.5	—	0.7 ≥	—	0.25 ≥	remaining	0.40~1.0	—	—	0.20~0.8
		A2017-T3										
		A3003	0.05~0.20	—	0.7 ≥	—	0.10 ≥	remaining	1.0~1.5	—	—	0.6 ≥
		A3003-H16										
		A5052	0.10 ≥	—	0.4 ≥	—	0.10 ≥	remaining	0.10 ≥	—	—	0.25 ≥
		A5052-H16										
		A6061	0.15~0.40	—	0.7 ≥	—	0.25 ≥	remaining	0.15 ≥	—	—	0.40~0.8
		A6061-T6										
	A7075	1.2~2.0	—	0.50 ≥	—	5.1~6.1	remaining	0.30 ≥	—	—	0.40 ≥	
	A7075-T6											
	Aluminum alloy casting	AC2A-F	3.0~4.5	0.15 ≥	0.8 ≥	0.05 ≥	0.55 ≥	remaining	0.55 ≥	0.30 ≥	—	4.0~6.0
		AC2A-T6										
		AC2B-F	2.0~4.0	0.20 ≥	1.0 ≥	0.10 ≥	1.0 ≥	remaining	0.50 ≥	0.35 ≥	—	5.0~7.0
		AC2B-T6										
		AC4B-F	2.0~4.0	0.20 ≥	1.0 ≥	0.10 ≥	1.0 ≥	remaining	0.50 ≥	0.35 ≥	—	7.0~10.0
		AC4B-T6										
		AC4C-F	0.20 ≥	0.05 ≥	0.50 ≥	0.05 ≥	0.30 ≥	remaining	0.60 ≥	0.05 ≥	—	6.5~7.5
	AC4C-T6											
Aluminum alloy diecasting	ADC10	2.0~4.0	0.2 ≥	1.3 ≥	0.2 ≥	1.0 ≥	remaining	0.5 ≥	0.5 ≥	—	7.5~9.5	
	ADC12	1.5~3.5	0.2 ≥	1.3 ≥	0.2 ≥	1.0 ≥	remaining	0.5 ≥	0.5 ≥	—	9.6~12.0	

Chemical Composition (%)							Mechanical Property of Standard test block		
Mg	Cr	Ti	Zr	Zr+Ti,V,Zr	Cd	others	Tensile strength (N/mm ²)	Hardness	Heat treatment of standard test block
—	—	—	—	—	—	—	215~275	55~100 HV	C1020P-¼H
—	—	—	—	—	—	—	215~275	55~100 HV	C1100P-¼H
—	—	—	—	—	—	—	215~275	55~100 HV	C1201P-¼H
—	—	—	—	—	—	—	215~275	55~100 HV	C1221P-¼H
—	—	—	—	—	—	—	325~410	75~125 HV	C2600P-¼H
—	—	—	—	—	—	—	325~410	75~125 HV	C2720P-¼H
—	—	—	—	—	—	—	355~440	85~145 HV	C2801P-¼H
—	—	—	—	—	—	—	345~430	—	C3560P-¼H
—	—	—	—	—	—	—	375~460	—	C3713P-¼H
—	—	—	—	—	—	—	147≤	—	—
—	—	—	—	—	—	—	245≤	—	
—	—	—	—	—	—	impurity 2.0≥	167≤	—	
—	—	—	—	—	—	impurity 1.0≥	245≤	—	
—	—	—	—	—	—	impurity 2.0≥	196≤	—	—
0.02≥	—	0.03≥	—	—	—	—	54~94	—	annealing
							98~137	—	thermal refining
0.40~0.8	0.10≥	0.15≥	—	—	—	0.15≥	216≥	—	annealing
							373≤	—	—
—	—	—	—	—	—	0.15≥	94~127	—	annealing
							167~206	—	thermal refining
2.2~2.8	0.15~0.35	—	—	—	—	0.15≥	177~216	—	annealing
							255~304	—	thermal refining
0.8~1.2	0.04~0.35	0.15≥	—	—	—	0.15≥	147≥	—	annealing
							294≤	—	—
2.1~2.9	0.18~0.28	0.20≥	—	—	—	0.15≥	275≥	—	annealing
							530≤	—	—
0.25≥	0.15≥	0.20≥	—	—	—	—	186≤	about 75 HB	casted
							275≤	about 90 HB	—
0.50≥	0.20≥	0.20≥	—	—	—	—	157≤	about 70 HB	casted
							245≤	about 90 HB	—
0.50≥	0.20≥	0.20≥	—	—	—	—	177≤	about 80 HB	casted
							245≤	about 100 HB	—
0.2~0.4	—	0.20≥	—	—	—	—	157≤	about 55 HB	casted
							226≤	about 85 HB	—
0.3≥	—	0.3≥	—	—	—	—	—	—	—
0.3≥	—	0.3≥	—	—	—	—	—	—	—

31. Chemical Component table of work materials

The name of work materials and material Symbols			Chemical Composition (%)									
			Cu	Pb	Fe	Sn	Zn	Al	Mn	Ni	P	Si
Magnesium alloy Casting	Magnesium alloy	MC1-F	0.10 \geq	—	—	—	2.5~3.5	5.3~6.7	0.15~0.6	0.01 \geq	—	0.30 \geq
		MC1-T6	—	—	—	—	—	—	—	—	—	—
		MC3-F	0.10 \geq	—	—	—	1.6~2.4	8.3~9.7	0.10~0.5	0.01 \geq	—	0.30 \geq
		MC3-T6	—	—	—	—	—	—	—	—	—	—
		MC6-T5	0.10 \geq	—	—	—	3.6~5.5	—	—	0.01 \geq	—	—
	Magnesium alloy diecasting	MDC1A	0.10 \geq	—	—	—	0.35~1.0	8.3~9.7	0.15 \leq	0.03 \geq	—	0.50 \geq
		MDC1B	0.35 \geq	—	0.03 \geq	—	0.35~1.0	8.3~9.7	0.13~0.5	0.03 \geq	—	0.50 \geq
Zinc alloy	Zinc alloy diecasting	ZDC1	0.75~1.25	0.005 \geq	0.10 \geq	0.003 \geq	emaining	3.5~4.3	—	—	—	—
		ZDC2	0.25 \geq	0.005 \geq	0.10 \geq	0.003 \geq	emaining	3.5~4.3	—	—	—	—

Category and brevity code of thermoplastic resin

name	symbol	name	symbol
ASB resin	ASB	Polyethylene tephthalate	PETP
Acetal resin	POM	Polyethylene telephthalate	PBTP
Methacrylic resin	PMMA	Polyimid	PI
Acetyl cellulose	CA	Polyphenylene oxide	PPO
Tetrafluoride ethylene resin	PTFE	Polyphenylene sulfide	PPS
Trifluoride ethylene resin	PCTEF	Polyalysulfone	PASF
Hexafluoride ethylene resin	PFEP	Polyarylate	PAR
Fluoride vinyl resin	PVF	Polypropylene	PP
Fluoride vinyliden resin	PVDF	Polystyrene	PS
Ethylene tetrafluoride ethylene copolymer	ETFE	Polysulfone	PSF
Ionomer	IO	Vinyl acetate resin	PVAC
Methyl Benzene polyme	MPP	Vinylidene chloride fiber	PVDC
Nylon (Polyamide)	PA	AS resin	SAN
Polycarbonate	PC	Vinyl chloride resin	PVC
Polyethylene	PE		

· Thermoplastic resin : As temperature rises, this resin becomes soft → gammy → fluidity liquid. For example, polystyrene (PS) is like glass at normal temperature. From 60°C and higher its elastic modules decreases, from 110°C it becomes gammy, and higher than 170°C, it becomes sticky paste.

Chemical Composition (%)							Mechanical Property of Standard test block		
Mg	Cr	Ti	Zr	Zr+Ti,V,Zr	Cd	others	Tensile strength (N/mm ²)	Hardness	Heat treatment of standard test block
remaining	—	—	—	—	—	—	177 ≤	—	Casted
—	—	—	—	—	—	—	235 ≤		—
remaining	—	—	—	—	—	—	157 ≤		Casted
—	—	—	—	—	—	—	235 ≤		—
remaining	—	—	0.50~1.0	—	—	—	235 ≤	—	—
remaining	—	—	—	—	—	—	—		—
remaining	—	—	—	—	—	—	—	—	—
0.020~0.06	—	—	—	—	0.004 ≥	—	—		—
0.020~0.06	—	—	—	—	0.004 ≥	—	—	—	—

■ Kinds of thermosetting plastics and symbols

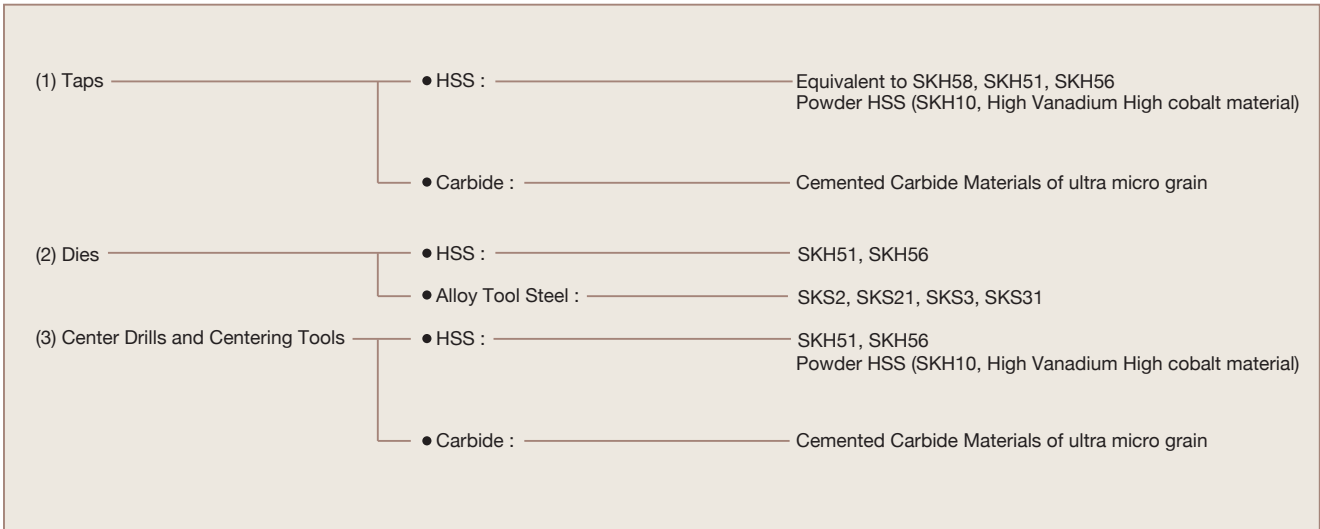
name	symbol	name	symbol
Alkyd resin	Alk	Phenol resin	PF
Allyl resin	DAP	Unsaturated polyester resin	UP
Urea resin	UF	Silicone resin	SI
Melamine resin	MF	Polyurethane	PUR
Epoxy resin	EP		

· Thermosetting resin : Heated at 80 °C, it becomes sticky paste with fluidity. Then it is injected into the mould under pressure. Once hardened, the plastics does not get soft owing to polymer processing.

32. Materials used for Cutting Tools

Materials

We have been seeking the best materials used for cutting tools since the company establishment because the performance of tools are depending on the selection of materials used. Major materials used in our company are listed below.



※For product's improvement, material may be changed without notice.

Circumstance of tools' materials

Tensile strength, heat resistance, corrosion resistance and accuracy are the important features required of tool' s materials. These requirements have been changing due to miniaturization and lightening of parts.

And manufacturing methods, as well, have been changing because of necessity of economical efficiency such as saving process/cycle time while parts become hard-to-machine type and their hardness increases.

As a result, the demand of industrial tools by users has become very tough.

For example, higher wear resistance and chipping resistance are required in the area of hardness, and heavy cutting process or high-speed cutting are required in the area of cycle time.

Moreover, product accuracy with its rigidity, laborsaving brought by uniformity, and systematic reliability are highly required.

Therefore, technological improvement of tool steels never stops developing so that they satisfy users needs.

○The major materials used for taps are already listed in the chart, but those materials are ready to develop from conventional alloy tool steels and current high speed steel into next generation materials such as cemented carbide and cermet materials.

New materials are developed even in high-speed tool steel area, such as SKH51 and SKH58 from SKH2, and they are moving into high performance materials, such as high vanadium, cobalt, and powder HSS made of high vanadium and high cobalt contents.

○As the material for round dies, were alloy tool steels mostly used because of the relationship with the use of adjustable round dies. However, for the hard-to-machine material, die material has been shifted into High Speed Steel.

○Major materials for center drills and centering tools are high speed steel materials, but they have been shifting to cobalt type or even cemented carbide from SKH51.

We keep on seeking to develop our technology to meet user's needs and are trying to find the best materials in collaboration with steel manufacturers.

Chemical composition of the materials specified in JIS

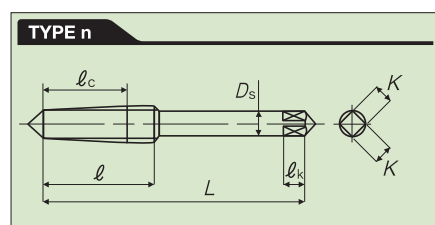
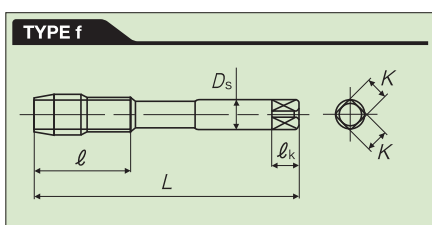
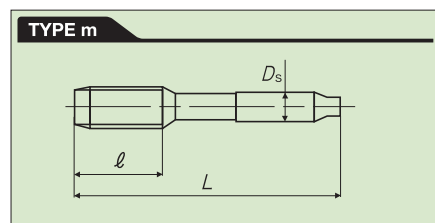
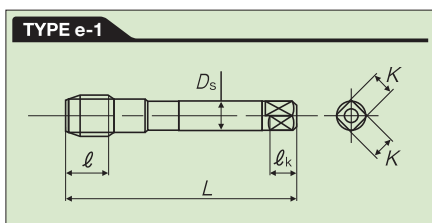
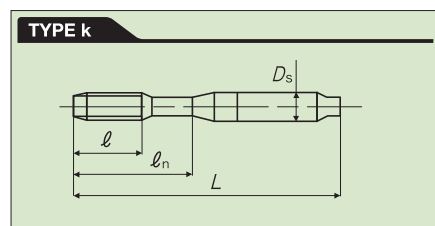
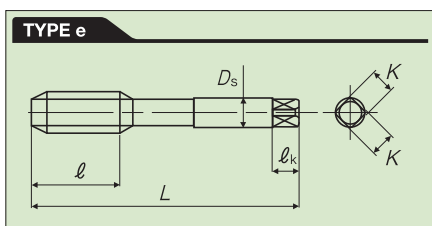
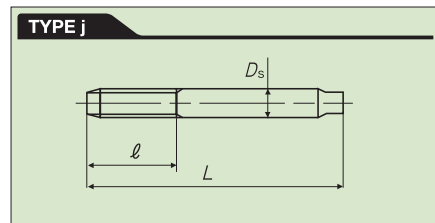
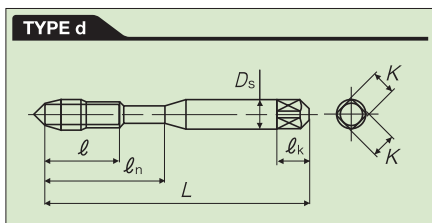
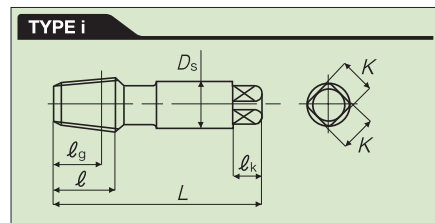
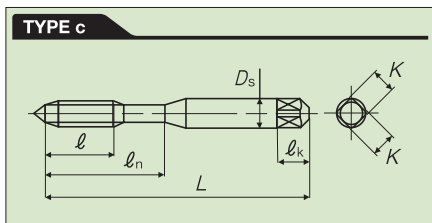
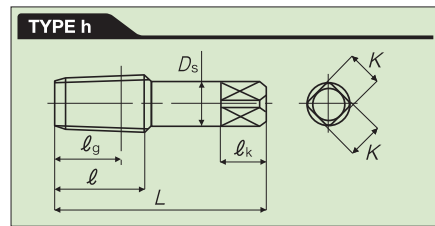
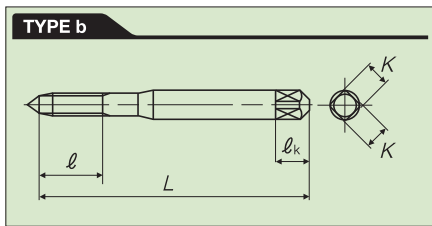
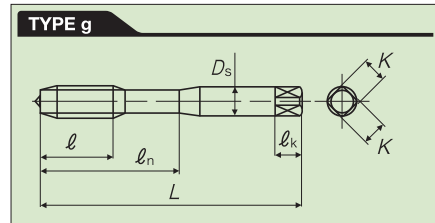
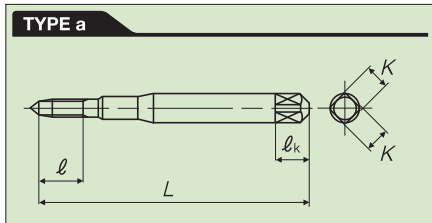
Classification	Symbols	Chemical composition									
		C	Si	Mn	P	S	Cr	Mo	W	V	Co
W type HSS	SKH 2	0.73~0.83	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	—	17.20~18.70	1.00~1.20	—
	SKH 3	0.73~0.83	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	—	17.00~19.00	0.80~1.20	4.50~ 5.50
	SKH 4	0.73~0.83	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	—	17.00~19.00	1.00~1.50	9.00~11.00
	SKH10	1.45~1.60	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	—	11.50~13.50	4.20~5.20	4.20~ 5.20
Mo type HSS	SKH51	0.80~0.88	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	4.70~ 5.20	5.90~ 6.70	1.70~2.10	—
	SKH52	1.00~1.10	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	5.50~ 6.50	5.90~ 6.70	2.30~2.80	—
	SKH53	1.15~1.25	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	4.70~ 5.20	5.90~ 6.70	2.70~3.20	—
	SKH54	1.25~1.40	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	4.20~ 5.00	5.20~ 6.00	3.70~4.20	—
	SKH55	0.87~0.95	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	4.70~ 5.20	5.90~ 6.70	1.70~2.10	4.50~ 5.00
	SKH56	0.85~0.95	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	4.70~ 5.20	5.90~ 6.70	1.70~2.10	7.00~ 9.00
	SKH57	1.20~1.35	≤0.45	≤0.4	≤0.030	≤0.030	3.80~4.50	3.20~ 3.90	9.00~10.00	3.00~3.50	9.50~10.50
	SKH58	0.95~1.05	≤0.7	≤0.4	≤0.030	≤0.030	3.50~4.50	8.20~ 9.20	1.50~ 2.10	1.70~2.20	—
	SKH59	1.05~1.15	≤0.7	≤0.4	≤0.030	≤0.030	3.50~4.50	9.00~10.00	1.20~ 1.90	0.90~1.30	7.50~ 8.50

Classification	Symbols	Usage	Cross chart		
			AISI	VDEH	ISO
W type HSS	SKH 2	Tools for general cutting and other kinds of tools.	T 1	S18-0-1	S1 (HS18-0-1)
	SKH 3	Tools for high speed heavy cutting and other kinds of tools.	T 4	S18-1-2-5	S7 (HS18-1-1-5)
	SKH 4	Tools for cutting hard -to-machine materials and other kinds of tools.	T 5	S18-1-2-10	S6 (HS18-0-1-10)
	SKH10	Tools for cutting ultra hard-to-machine materials and other kinds of tools.	T15	—	S9 (HS12-1-5-5)
Mo type HSS	SKH51	General cutting tools from which toughness is particularly required, and other kinds of tools.	M 2	S6-5-2	S4 (HS6-5-2)
	SKH52	Tools for cutting high hardness material from which comparatively high toughness is required and other kinds of tools.	M 3-1	—	—
	SKH53		M 3-2	S6-5-3	S5 (HS6-5-3)
	SKH54	Tools for cutting ultra hard-to-machine materials and other kinds of tools.	M 4	—	—
	SKH55	High speed cutting tools from which comparatively high toughness is required and other kinds of tools.	M35	S6-5-2-5	S8 (HS6-5-2-5)
	SKH56		M36	—	—
	SKH57	Tools for cutting ultra hard-to-machine materials and other kinds of tools.	—	S10-4-3-10	S10 (HS10-4-3-10)
	SKH58	General cutting tools from which toughness is particularly required, and other kinds of tools.	M 7	S2-9-2	S2 (HS2-9-2)
SKH59	High speed heavy cutting tools from which comparatively high toughness is required, and other kinds of tools.	M42	S2-10-1-8	S11 (HS2-9-1-8)	

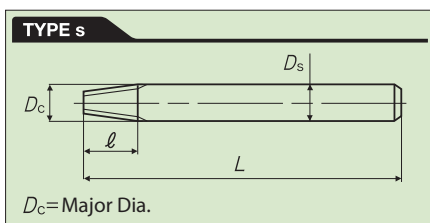
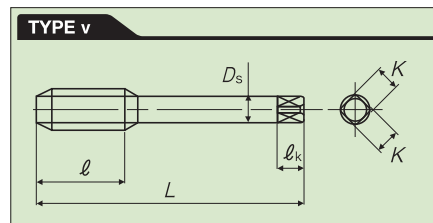
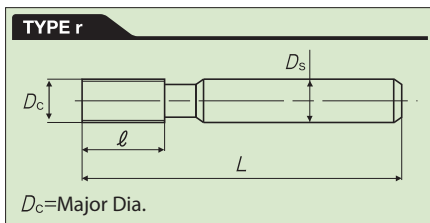
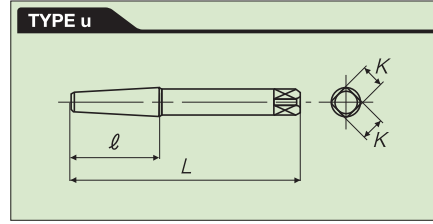
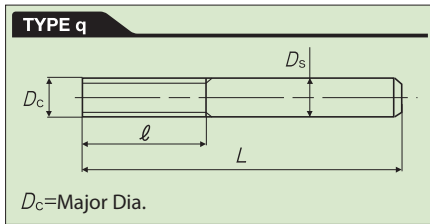
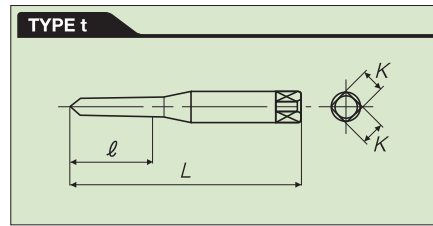
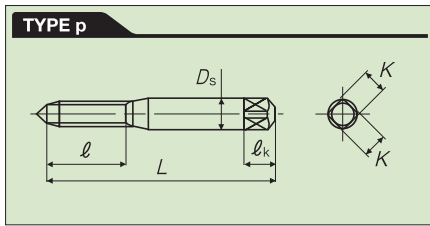
The standard of HSS material is specified in JIS. But there are many HSS materials which standard is not specified in JIS. Recently even the kind of HSS-P is getting wider and various. Besides, SKH10, SKH53, SKH57 and their equivalents, such Hi vanadium/hi cobalt material as contains 4-12% vanadium and 8-11% cobalt is now being manufactured. Material engineering will be developed rapidly in the future. Under such situation, there can be many cases where JIS symbols are not used, and the use of larger classification and their symbols is getting popular.

33. Design of taps and dies

* Design of oil hole : refer to icons shown in product page



No square : for M4 and smaller,
Internal center on tap end : M8 and larger

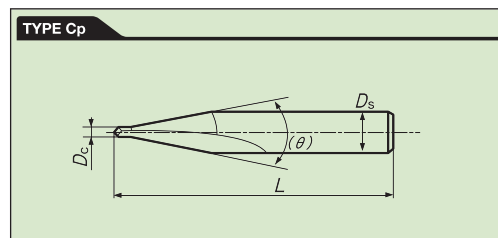
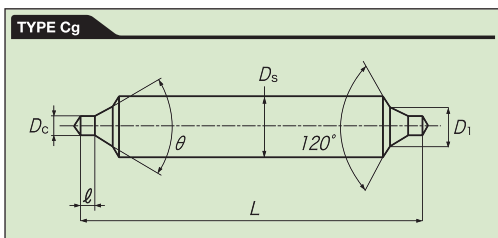
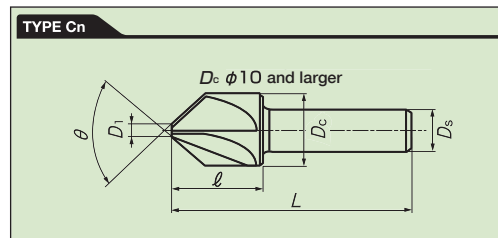
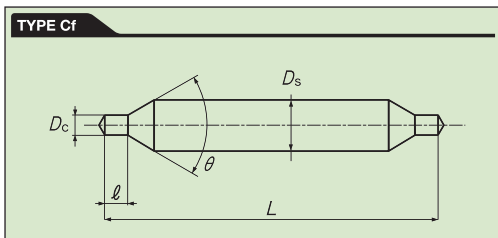
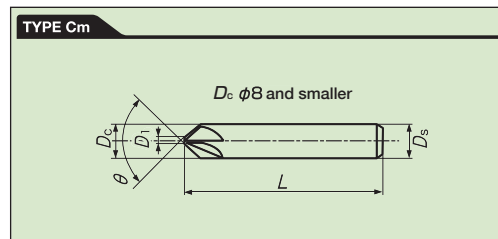
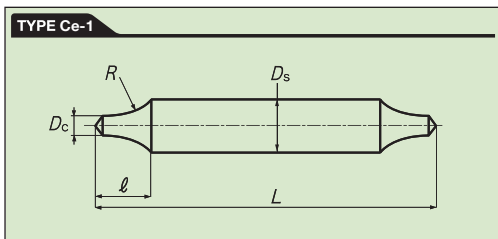
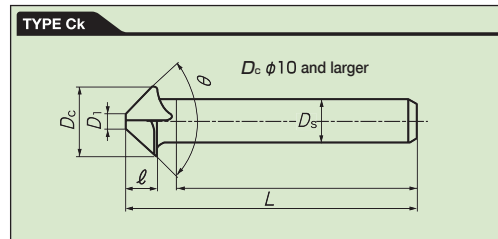
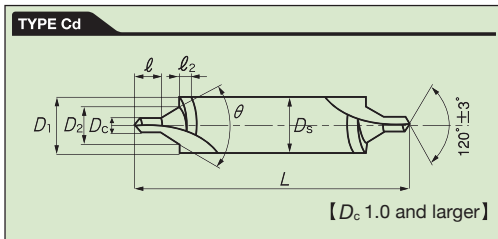
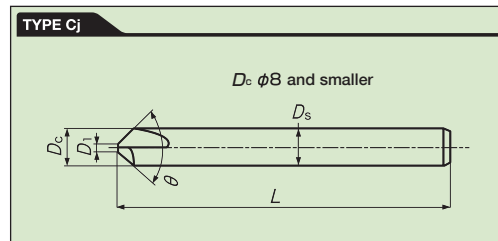
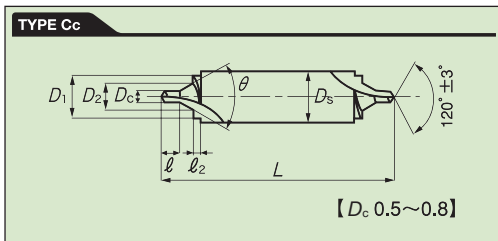
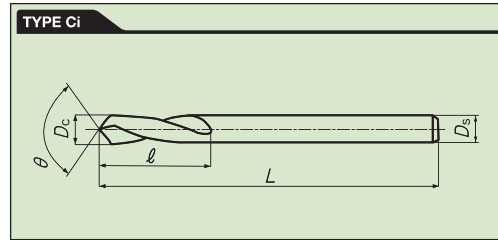
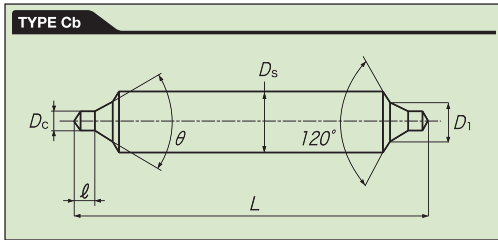
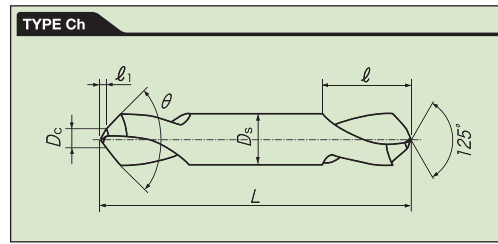
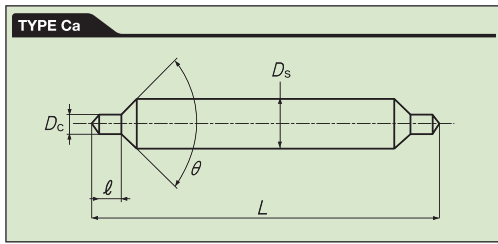


Symbols common in cutting tools and tool dimensions

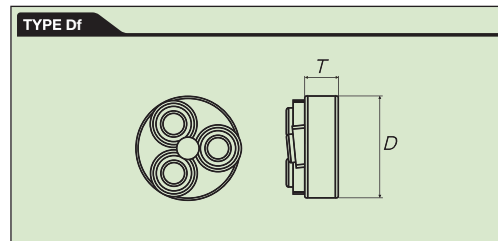
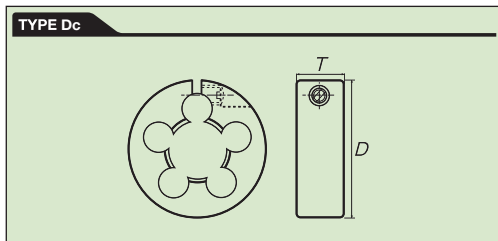
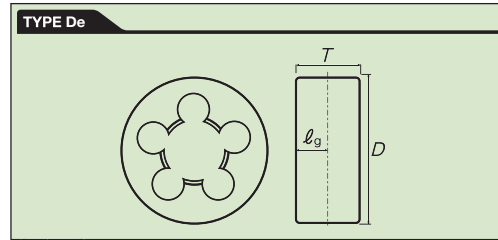
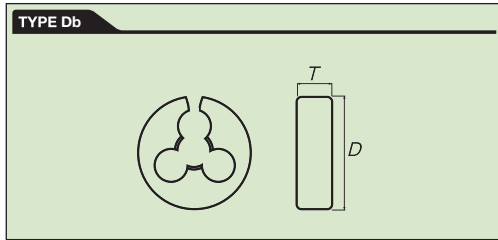
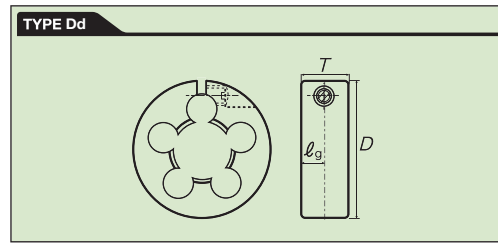
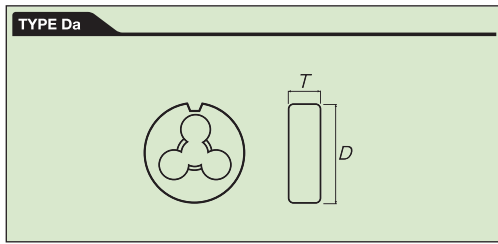
Symbols were used by each tool manufacturer by referring to his own specification, resulting in confusion. In order to increase convenience at customers, small tool association and carbide tool association in Japan confirmed the common symbols. Yamawa is adopting these common symbols in this catalogue.

Overall length	Thread length	Chamfer length	Thread+Neck length	Outside dia.	Shank dia.	Length of square	Size of square
L	l	l_c	l_n	D	D_s	l_k	K

34. Design of center drills and centering tools

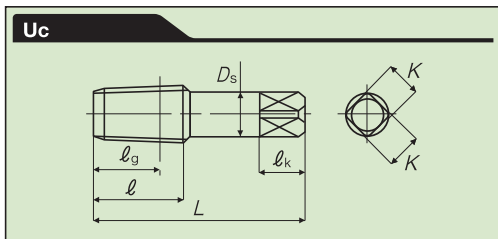
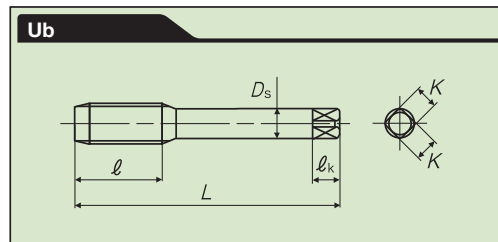
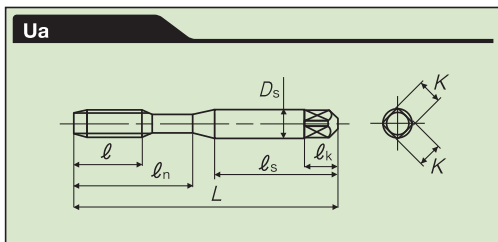


35. Design of dies

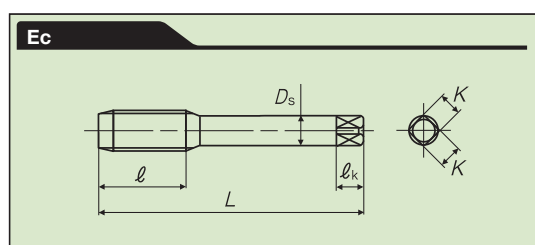
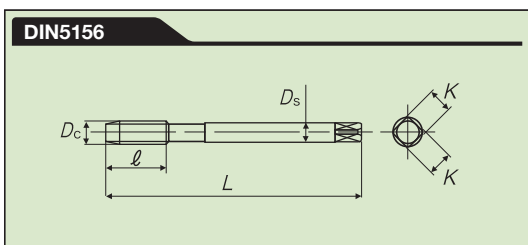
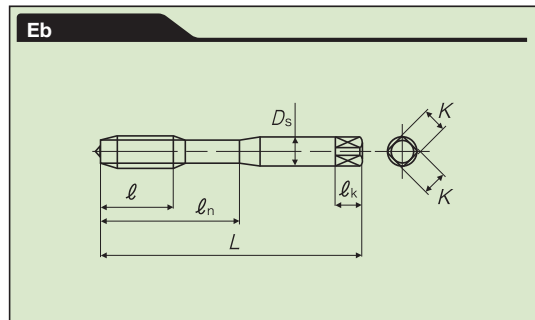
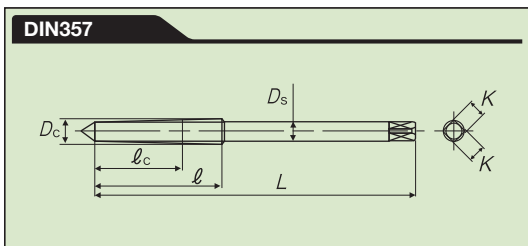
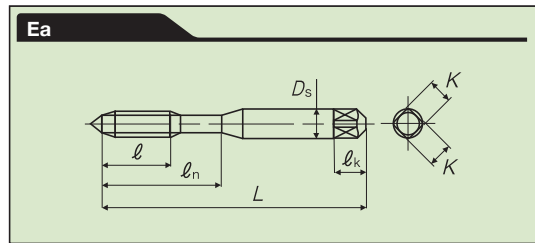
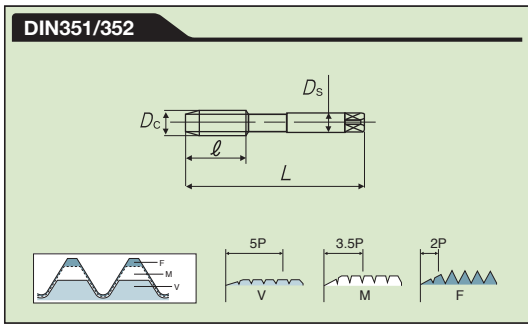
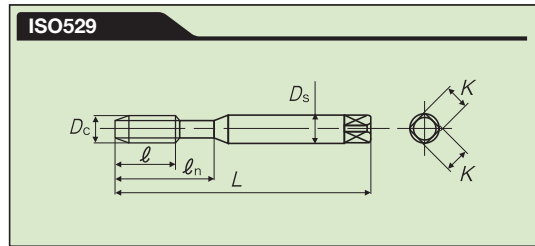
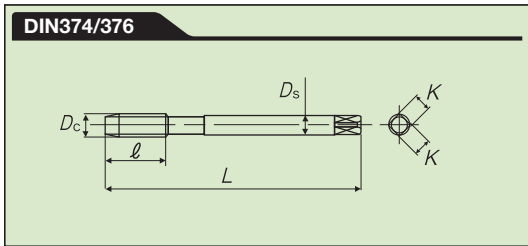
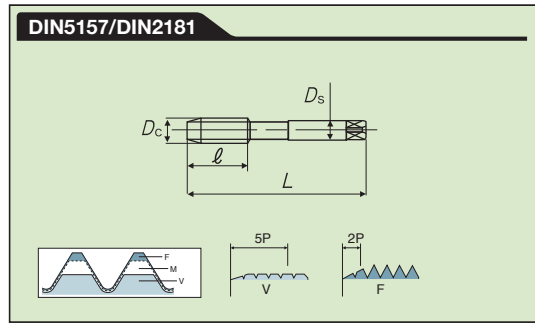
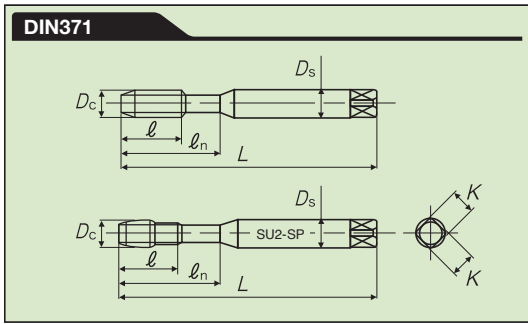


36. Design of taps for USA market and European market

Design of taps for USA market



Design of taps for European market



Searching table by product name

	Code No.	Product name	Page No.
A	ASH	AL+SP/AL-SP	SP-60
	C1	CD-S Old JIS Type 1	CE-2
	C2	CD-S Old JIS Type 2	CE-10
	CC***Q	C-CD-Q	CE-8
	CCD	C-CD-S	CE-3
	CCDL	C-CD-SL (L-100)	CE-5
	CCDM	C-CD-SL (L-150)	CE-5
	CCL***Q	C-CD-QL (L-100)	CE-9
	CCM***Q	C-CD-QL (L-150)	CE-9
	CD	CD-SL	CE-4
	CE	CE-S	CE-1
	CE***RI	CEIR	CE-9
	CE1	CE-S Old JIS Type 1	CE-1
	CE2	CE-S Old JIS Type 2	CE-10
	CEA	CESA	CE-1
	CEA***Q	CEQA	CE-6
	CEB	CESB	CE-10
	CEC	CESC	CE-11
	CEL	CE-SL (L-100)	CE-4
	CEM	CE-SL (L-150)	CE-4
C	CL***Z	CE-QL (L-100)	CE-8
	CM***Z	CE-QL (L-150)	CE-8
	CPCS	CPC-S	etc-7
	CPCT	CPC-T	etc-8
	CS***Q	CS-Q	CE-18
	CS***QM	CS-QM	CE-18
	CS-D	NC-SD	CE-18
	CS-G***2*J	CS-G (20°, L-57)	CE-19
	CS-G***2*K	CS-G (20°, L-70)	CE-19
	CS-G***2*LS	CS-G (20°, L-100)	CE-19
	CS-G***3*J	CS-G (30°, L-57)	CE-19
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	DEG	SD-Y 20mm OD	Di-1
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	DJG	SD-Y 38mm OD	Di-1
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	DMG	SD-Y 50mm OD	Di-1
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GMSP***--L	AR-D PS (LH) (SKS) 50mm OD	Di-20
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GRNM	AR-D NPSM (SKS) 63mm OD	Di-23
G GRPW***--L	AR-D (LH) (SKS) Whitworth Threads 63mm OD	Di-9
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GRSF***--L	AR-D PF (LH) (SKS) 63mm OD	Di-21
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GRST***--L	AR-D PT (LH) (SKS) 63mm OD	Di-19
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GUSF***--L	AR-D PF (LH) (SKS) 75mm OD	Di-21
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	C-CD-SL	Long Shank Cemented Carbide Center Drills-Type A 60°	CE-5
	CD-Q	Low Helix Center Drills- Type A 90°	CE-6
	CD-Q(LH)	Low Helix Center Drills- Type A 90°, Left Hand Cut	CE-7
	CD-Q-V	Low Helix Center Drills-Type A 90°, TiN Coated	CE-7
	CD-R	Low Helix Center Drills-Type R	CE-9
	CD-S	Low Helix Center Drills-Type A 60°	CE-2
	CD-S(I)	Low Helix Center Drills-Type A 60°, (Old JIS Type 1)	CE-2
	CD-S(II)	Low Helix Center Drills-Type B 60°, (Old JIS Type 2)	CE-10
	CD-S(LH)	Low Helix Center Drills-Type A 60°, Left Hand Cut	CE-2
	CD-SL	Long Shank Low Helix Center Drills-Type A 60°	CE-4
	CD-SL-V	Long Shank Low Helix Center Drills-Type A 60°, TiN Coated	CE-5
	CEIR	High Helix Center Drills-JIS Type R	CE-9
	CE-Q	High Helix Center Drills-Type A 90°	CE-6
	CEQA	High Helix Center Drills-JIS Type A 90°	CE-6
	CE-QL	Long Shank High Helix Center Drills-Type A 90°	CE-8
	CE-QL-V	Long Shank High Helix Center Drills-Type A 90°, TiN Coated	CE-8
	CE-Q-V	High Helix Center Drills-Type A 90°, TiN Coated	CE-7
	CE-S	High Helix Center Drills-Type A 60°	CE-1
	CE-S(I)	High Helix Center Drills-Type A 60°, (Old JIS Type 1)	CE-1
	CE-S(II)	High Helix Center Drills-Type B 60°, (Old JIS Type 2)	CE-10
	CESA	High Helix Center Drills-JIS Type A 60°	CE-1
	CESB	High Helix Center Drills-JIS Type B 60°	CE-10
	CESC	High Helix Center Drills-JIS Type C 60°	CE-11
	CE-SL	Long Shank High Helix Center Drills-Type A 60°	CE-4
	CE-SL-V	Long Shank High Helix Center Drills-Type A 60°, TiN Coated	CE-5
	CE-S-V	High Helix Center Drills-Type A 60°, TiN Coated	CE-3
	CE-S-V(I)	High Helix Center Drills-Type A 60°, TiN Coated, (Old JIS Type 1)	CE-3
	Check Pins for Bored Holes for R-Y	Check Pins for Bored Holes for R-Y	etc-9
	CPC-S	Check Pins for Bored Hole in Cutting (Straight Type)	etc-7
	CPC-T	Check Pins for Bored Holes in Cutting (Taper Type)	etc-8
	C-PE-Q-V	Cemented Carbide Point Drills, 90°, TiAlN coated	CE-15

Symbol	Application	Page No.	
C	C-PE-S-V	Cemented Carbide Point Drills, 60°, TiAlN coated	CE-17
	CS-G	Submarine Gate Cutter, 20°, 30°	CE-19
	CS-Q	Countersinks 90°, Single Point Type, Machining Center Use	CE-18
	CS-QM	Countersinks 90°and 60°, Multi Point Type, Drilling Machine Use	CE-18
	CT-PF	Cemented Carbide Pipe Taps for PF Threads	Pipe-23
	CT-PS	Cemented Carbide Pipe Taps for PS Threads	Pipe-18
	CT-PT	Cemented Carbide Pipe Taps for PT Threads	Pipe-14
CT-S-PT	Cemented Carbide Pipe Taps for PT Threads Short (lg) Type	Pipe-14	
E	EH-CT	Cemented Carbide Taps for Hard Materials	CT-10
	EH-HT	Hand Taps for Hard-to-Machine Materials	HT-93
	EH-PO	Spiral Pointed Taps for Hard-to-Machine Materials	PO-45
	E-SP	Spiral Fluted Taps for Soft Structural Steels	SP-55
F	FC-O	Hand Taps for Cast Irons	HT-77
	FC-PF	Pipe Taps for PF Threads for Cast Irons	Pipe-23
	FC-PT	Pipe Taps for PT Threads for Cast Irons	Pipe-13
	FC-S-PT	Pipe Taps for PT Threads Short (lg) Type for Cast Irons	Pipe-13
	F-SL	Spiral Fluted Taps for High Speed Tapping, Through Hole Use	SL-4
	F-SP	Spiral Fluted Taps for High Speed Tapping	SP-71
G	G	Pipe Taps for G Threads	Pipe-19
H	HC+PO	Spiral Pointed Taps for High Carbon Steels	PO-41
	HC+SP	Spiral Fluted Taps for High Carbon Steels	SP-56
	HC+SP-OX	Spiral Fluted Taps for High Carbon Steels, Oxided	SP-59
	HC-PO	Spiral Pointed Taps for High Carbon Steels	PO-41
	HC-SP	Spiral Fluted Taps for High Carbon Steels	SP-56
	HC-SP-OX	Spiral Fluted Taps for High Carbon Steels, Oxided	SP-59
	HDASP	Taps for Dry Tapping for Aluminum Castings/Die Castings	SP-75
	HDISL	Taps for Dry Tapping, Through Hole Use, for Steels	SL-6
	HDISP	Taps for Dry Tapping, Blind Hole Use, for Steels	SP-75
	HFACT-B	Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Aluminum Castings/Die Castings	CT-11
	HFACT-P	Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Aluminum Castings/Die Castings	CT-11
	HFAHS	Taps for Ultra Fast Tapping, Vertical Use, for Aluminum Castings/Die Castings	SP-74
	HFASP	Taps for Ultra Fast Tapping, Horizontal Use, for Aluminum Castings/Die Castings	SP-74
	HFICT-B	Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Cast Irons	CT-12
	HFICT-P	Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Cast Irons	CT-12
	HFIHS	Taps for Ultra Fast Tapping, Vertical Use, for Steels	SP-73
	HFISP	Taps for Ultra Fast Tapping, Horizontal Use, for Steels	SP-73
	HOLDER	Holders for Joint Tools	CE-14
	HP+RZ	High Performance Thread Forming Taps, TiCN Coated	RO-30
	HP-RZ	High Performance Thread Forming Taps, TiCN Coated	RO-30
HS-D	HSS Dies for Hard-to-Machine Materials	Di-14	
HT	Hand Taps	HT-2	
HT	Hand Taps for Thick Steel Conduit Threads	etc-6	
HT	Hand Taps for Tire Valve Threads	etc-5	
HT	Hand Taps for Bicycle Tire Valve Threads	etc-5	
HT	Hand Taps for Steel Conduit Tube Threads	etc-6	
HT	Hand Taps for Tripod Threads	etc-3	
HT	Taps for Camera Release Threads	etc-4	
HT(LH)	Hand Taps for Left Hand Threads	HT-40	
HT-Y	Hand Taps for Thin Soft Structural Steel Sheets	HT-2	
I	IHT	I Series Hand Taps	HT-1
	INT-NPT	Interrupted Pipe Taps for NPT Threads	Pipe-26
	INT-PT	Interrupted Pipe Taps for PT threads for Ductile Materials	Pipe-8
	INT-S-NPT	Interrupted Pipe Taps for NPT Threads Short Type	Pipe-27
	INT-S-PT	Interrupted Pipe Taps for PT Threads Short (lg) Type for Ductile Materials	Pipe-8
	IPO	I Series Spiral Pointed Taps	PO-1
ISP	I Series Spiral Fluted Taps for General Purpose	SP-1	
J	JO-C-CDS	Joint- Cemented Carbide Center Drills -Type A 60°	CE-12
	JO-CDS	Joint- Low Helix Center Drills, Type A 60°	CE-12

Alphabet of product name

Symbol	Application	Page No.
J	JO-CDS Joint- Low Helix Center Drills, Type B 60°, (Old JIS Type 2)	CE-12
	JO-CDSV Joint- Low Helix Center Drills, Type A 60°, TiN Coated	CE-12
	JO-CES Joint- High Helix Center Drills, Type A 60°	CE-11
	JO-CESV Joint- High Helix Center Drills, Type A 60°, TiN Coated	CE-11
	JO-C-PEQV Joint- Cemented Carbide Point Drills, 90°, TiCN Coated	CE-13
	JO-CSQM Joint- Countersinks, 90°, Drilling Machine Use	CE-14
	JO-NCSVDV Joint- Starting Drills, 90°, TiN Coated	CE-13
	JO-PEQ Joint- Point Drills, 90°	CE-13
	JO-PEQV Joint- Point Drills, 90°, TiCN Coated	CE-13
L	LA-O Hand Taps for Diecast Materials	HT-80
	LC-PT Pipe Taps for PT Threads for Low Carbon Steels	Pipe-10
	LC-S-PT Pipe Taps for PT Threads Short (lg) for Low Carbon Steels	Pipe-10
	LO-SP Low Spiral Fluted Taps	SP-64
	LS-F-SL Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use	SL-5
	LS-F-SP Long Shank Spiral Fluted Taps for High Speed Tapping	SP-72
	LS-HT Long Shank Hand Taps	HT-47
	LS-HT(LH) Long Shank Hand Taps for Left Hand Threads	HT-65
	LS-HT-V Long Shank Hand Taps, TiN Coated	HT-68
	LS-INT-PT Long Shank Interrupted Pipe Taps for PT Threads for Ductile Materials	Pipe-9
	LS-INT-S-PT Long Shank Interrupted Pipe Taps for PT Threads Short (lg) Type for Ductile Materials	Pipe-9
	LS-LO-SP Long Shank Low Spiral Fluted Taps	SP-65
	LS-N-CT Long Shank Cemented Carbide Taps	CT-7
	LS-N-PO Long Shank Spiral Pointed Taps	PO-23
	LS-N-PO-V Long Shank Spiral Pointed Taps, TiN coated	PO-31
	LS-NPT Long Shank Pipe Taps for NPT Threads	Pipe-25
	LS-NPTF Long Shank Pipe Taps for NPTF Dryseal Threads	Pipe-28
	LS-N-RS Long Shank Thread Forming Taps for Non-Ferrous Metals	RO-21
	LS-N-RZ Long Shank Thread Forming Taps for Steels	RO-9
	LS-N-SP Long Shank Spiral Fluted Taps	SP-30
	LS-N-SP(LH) Long Shank Spiral Fluted Taps for Left Hand Threads	SP-39
	LS-N-SP-V Long Shank Spiral Fluted Taps, TiN coated	SP-40
	LS-PF Long Shank Pipe Taps for PF Threads	Pipe-21
	LS-PM-PO Long Shank Spiral Pointed Taps for Hard-to-Machine Materials	PO-48
	LS-PM-SP Long Shank Spiral Fluted Taps for Hard-to-Machine Materials	SP-70
	LS-PO Long Shank Spiral Pointed Taps	PO-23
	LS-PO-K Long Shank Spiral Pointed Taps with Neck	PO-32
	LS-PO-V Long Shank Spiral Pointed Taps, TiN coated	PO-31
	LS-PS Long Shank Pipe Taps for PS Threads	Pipe-17
	LS-PT Long Shank Pipe Taps for PT Threads	Pipe-4
	LS-SP Long Shank Spiral Fluted Taps	SP-30
	LS-SP (LH) Long Shank Spiral Fluted Taps for Left Hand Threads	SP-39
	LS-SP-K Long Shank Spiral Fluted Taps with Neck	SP-41
LS-SP-PF Long Shank Spiral Fluted Pipe Taps for PF Threads	Pipe-22	
LS-SP-PS Long Shank Spiral Fluted Pipe Taps for PS Threads	Pipe-18	
LS-SP-PT Long Shank Spiral Fluted Pipe Taps for PT Threads	Pipe-7	
LS-SP-S-NPT Long Shank Spiral Fluted Pipe Taps for NPT Threads Short Type	Pipe-26	
LS-SP-S-PT Long Shank Spiral Fluted Pipe Taps for PT Threads Short (lg) Type	Pipe-7	
LS-S-PT Long Shank Pipe Taps for PT Threads Short (lg) Type	Pipe-4	
LS-SP-V Long Shank Spiral Fluted Taps, TiN coated	SP-40	
LS-SU-S-PO Long Shank Spiral Pointed Taps, for Deep Hole Use	PO-38	
LS-SU-S-SP Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use	SP-51	
M	MC-AD-CT Cemented Carbide Taps with Internal Coolant	CT-9
	MC-CSLC Cemented Carbide MC Helical Thread Mills	MC-1
	MC-HLC MC Helical Thread Mills	MC-3
	MC-HT Long Shank Hand Taps with Internal Coolant	HT-90
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	MC-SP Spiral Fluted Taps with Internal Coolant	SP-66
	MG-HT Hand Taps with Short Chamfer	HT-84

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	MS+TR Thread Cutting Taps for Miniature Screw Threads	etc-3
	MS-RS Thread Forming Taps for Miniature Screw Threads	etc-2
	MS-RS-D Rolling Dies for Miniature Screw Threads	Di-16
	MS-TF Thread Cutting&Forming Taps for Miniature Screw Threads	etc-2
	MS-TR Thread Cutting Taps for Miniature Screw Threads	etc-3
N	N+PO Spiral Pointed Taps	PO-15
	N+PO-OX Spiral Pointed Taps, Oxided	PO-18
	N+RS Thread Forming Taps for Non-Ferrous Metals	RO-11
	N+RZ Thread Forming Taps for Steels	RO-1
	N+SP Spiral Fluted Taps	SP-21
	N+SP-OX Sprial Fluted Taps, Oxided	SP-25
	NC-SD NC Starting Drills for Center Positioning (125°)	CE-18
	NC-SD-V NC Starting Drills for Beveling 90°	CE-17
	N-CT FC Cemented Carbide Taps for Cast Irons	CT-3
	N-CT LA Cemented Carbide Taps for Light Alloys	CT-1
	N-CT STI Cemented Carbide Taps for Helical Coil Wire Screw Thread Inserts	CT-9
	N-CT-PO Spiral Pointed Cemented Carbide Taps	CT-8
	N-CT-SP Spiral Fluted Cemented Carbide Taps	CT-8
	N-PO Spiral Pointed Taps	PO-2
	N-PO-OX Spiral Pointed Taps, Oxided	PO-17
	N-PO STI Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts	PO-43
	N-PO(LH) Spiral Pointed Taps for Left Hand Threads	PO-19
	N-PO-V Spiral Pointed Taps, TiN coated	PO-22
	NPS Pipe Taps for NPS Threads	Pipe-28
	NPSF Pipe Taps for NPSF Dryseal Threads	Pipe-29
	NPT Pipe Taps for NPT Threads	Pipe-24
	NPTF Pipe Taps for NPTF Dryseal Threads	Pipe-27
N-RS Thread Forming Taps for Non-Ferrous Metals	RO-11	
N-RS STI Thread Forming Taps for Helical Coil Wire Screw Thread Inserts for Non-Ferrous Metals	RO-23	
N-RSD New Rolling Dies	Di-17	
N-RZ Thread Forming Taps for Steels	RO-1	
N-SP Spiral Fluted Taps	SP-2	
N-SP Spiral Fluted Taps for Tripod Threads	etc-4	
N-SP(LH) Spiral Fluted Taps for Left Hand Threads	SP-26	
N-SP-OX Sprial Fluted Taps, Oxide	SP-23	
N-SP-V Spiral Fluted Taps, TiN coated	SP-29	
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	PE-QL-V Long Shank Point Drills 90°, TiCN Coated	CE-16
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	PE-S Point Drills 60°	CE-16
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	PM-PO Spiral Pointed Taps for Hard-to-Machine Materials	PO-47
	PM-SP Spiral Fluted Taps for Hard-to-Machine Materials	SP-69
	PO Spiral Pointed Taps	PO-2
	PO (LH) Spiral Pointed Taps for Left Hand Threads	PO-19
	PO-OX Spiral Pointed Taps, Oxided	PO-17
	PO STI Spiral Pointed Taps for Helical Coil Wire Screw Thread Inserts	PO-43
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PO-Y Spiral Pointed Taps for Thin Soft Structural Steel Sheets	PO-1	

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	PS(LH)	Pipe Taps for PS Left Hand Threads	Pipe-16
	PT	Pipe Taps for PT Threads	Pipe-1
	PT(LH)	Pipe Taps for PT Left Hand Threads	Pipe-2
	PT-X	X Series Pipe Taps for PT Threads Short (lg) Type	Pipe-2
R	R+V	Thread Forming Taps, TiN coated	RO-24
	Rc	Pipe Taps for Rc Threads	Pipe-1
	RD-DC	Die Collets for Die Holders	Di-23
	RD-DH	Die Holders for Solid Dies	Di-23
	Rp	Pipe Taps for Rp Threads	Pipe-15
	R-V	Thread Forming Taps, TiN coated	RO-24
	R-Y	Thread Forming Taps for Thin Soft Structural Steel Sheets	RO-1
S	SC-TL-RZ	Torqueless Thread Forming Taps with Short Chamfer	RO-35
	SD-Y	Solid Dies	Di-1
	SMT	Simple Thread Measuring Tools	etc-9
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	S-NPT	Pipe Taps for NPT Threads Short Type	Pipe-24
	SP	Spiral Fluted Taps	SP-2
	SP	Spiral Fluted Taps for Tripod Threads	etc-4
	SP (LH)	Spiral Fluted Taps for Left Hand Threads	SP-26
	SP-OX	Spiral Fluted Taps, Oxided	SP-23
	SP-D	Spiral Fluted Dies	Di-17
	SP-NPT	Spiral Fluted Taps for NPT Threads	Pipe-25
	S-PO	Spiral Pointed Taps, for Deep Hole Use	PO-39
	SP-PF	Spiral Fluted Pipe Taps for PF Threads	Pipe-21
	SP-PS	Spiral Fluted Taps for PS Threads	Pipe-17
	SP-PT	Spiral Fluted Pipe Taps for PT Threads	Pipe-5
	SP-PT-X	X Series Spiral Fluted Pipe Taps of PT Threads Short (lg) Type	Pipe-6
	SP-S-PT	Spiral Fluted Pipe Taps for PT Threads Short (lg) Type	Pipe-6
	S-PT	Pipe Taps for PT Threads Short (lg) Type	Pipe-3
	S-PT(LH)	Pipe Taps for PT Left Hand Threads Short (lg) Type	Pipe-3
	SP-V	Spiral Fluted Taps, TiN coated	SP-29
	SP-Y	Spiral Fluted Taps for Thin Soft Structural Steel Sheets	SP-1
	SR-D NPT	Solid Dies for NPT Threads	Di-21
	SR-D NPTF	Solid Dies for NPTF Dryseal Threads	Di-22
	SR-D PT	Solid Dies for PT Threads	Di-18
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	S-SP	Spiral Fluted Taps, Deep Hole Use	SP-52
	STI-HT	Hand Taps for Helical Coil Wire Screw Thread Inserts	HT-85
	STI-SP	Spiral Fluted Taps for Helical Coil Wire Screw Thread Inserts	SP-62
	SU+PO	Spiral Fluted Taps for Stainless Steels	PO-32
	SU+SL	Spiral Fluted Taps for Stainless Steel, Through Hole Use	SL-2
	SU+SP	Spiral Fluted Taps for Stainless Steels	SP-41
	SU2-SP	Spiral Fluted Taps for Tough Stainless Steels	SP-48
	SU-HT	Hand Taps for Stainless Steels	HT-70
	SU-PF	Pipe Taps for PF Threads for Stainless Steels	Pipe-22
	SU-PO	Spiral Fluted Taps for Stainless Steels	PO-32
	SU-PT	Pipe Taps for PT Threads for Stainless Steels	Pipe-11
	SU-SP	Spiral Fluted Taps for Stainless Steels	SP-41
	SU-SP-PT	Spiral Fluted Pipe Taps for PT Threads for Stainless Steels	Pipe-12
	SU-SP-S-PT	Spiral Fluted Pipe Taps for PT Threads Short (lg) Type for Stainless Steels	Pipe-12
SU-S-PT	Pipe Taps for PT Threads Short (lg) Type for Stainless Steels	Pipe-11	
SU-S-SP	Spiral Fluted Taps for Stainless Steels, Deep Hole Use	SP-50	
SUXSL	X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use	SL-3	
SUXSP	X Series Spiral Fluted Taps for Stainless Steels	SP-48	
U	UH-CT	Cemented Carbide Taps for Ultra Hard Materials	CT-10
	U-SP	Spiral Fluted Taps, Universal Use	SP-59

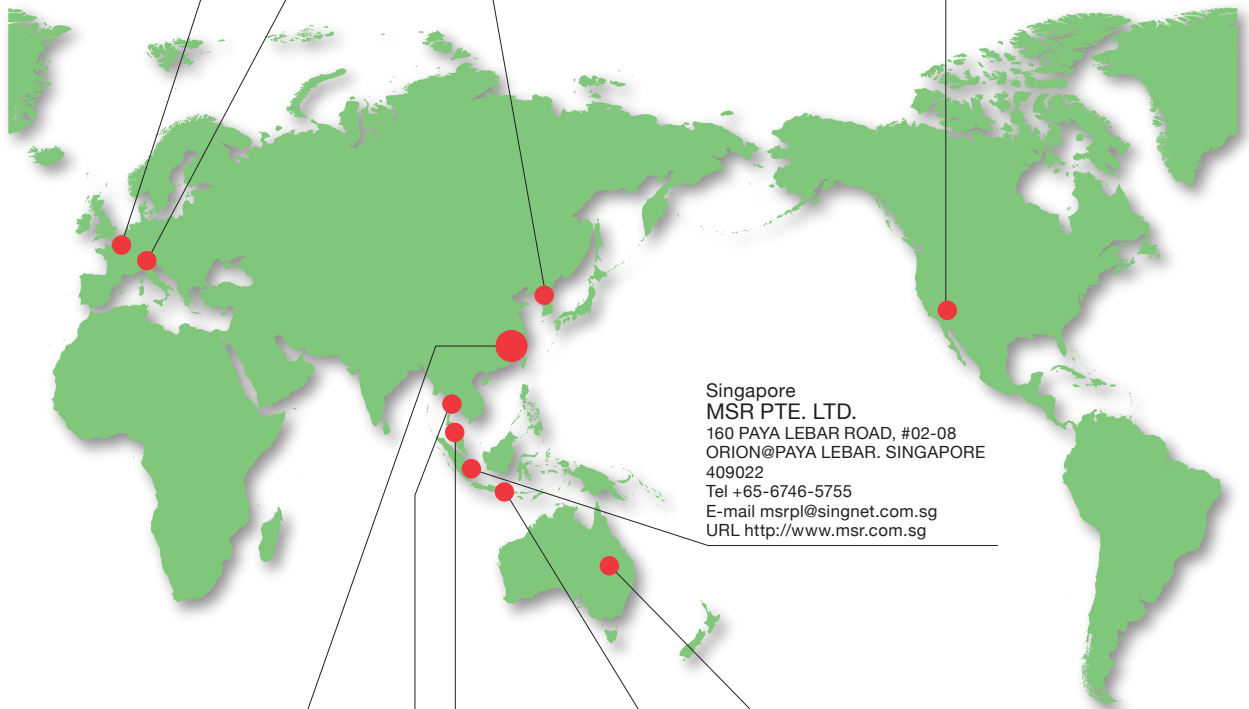
	Symbol	Application	Page No.
X	XSL	X Series Spiral Fluted Taps, Through Hole Use	SL-1
	XSP	X Series Spiral Fluted Taps	SP-22
Z	ZEN-B	Spiral Fluted Taps for Nickel Alloys, Bottom Hole Use	SP-68
	ZEN-P	Spiral Pointed Taps for Nickel Base Alloys, Through Hole Use	PO-46
	ZET-B	Spiral Fluted Taps for Titanium Alloys, Bottom Hole Use	SP-67
	ZET-P	Spiral Fluted Taps for Titanium Alloys, Through Hole Use	SL-3
+	+PO	Plus Series Spiral Pointed Taps	PO-15
	+SP	Plus Series Spiral Fluted Taps	SP-21
	+PO-OX	Plus Series Spiral Pointed Taps, Oxided	PO-18
	+SP-OX	Plus Series Spiral Fluted Taps, Oxided	SP-25

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Yonezawa Plant (ISO9001 : 1996)
(ISO14001 : 2003)



Yonezawa is the main manufacturing plant of the Yamawa Group, this location is equipped with production lines and is the Quality Control Center. The plant obtained ISO 9001 certification in 1996. Of the four Yamawa plants, the Yonezawa location has the longest history of manufacturing and the highest production capacity. Products include roll taps, spiral pointed, pipe and hand taps. The Yonezawa Plant stepped ahead of our competitors by receiving ISO 9001 before any other cutting tool manufacturing in Japan.

Fukushima Plant (ISO9001 : 2000)
(ISO14001 : 2002)



The Fukushima plant provides both tap production lines and in-house facilities for the manufacturing of specialized production machine tools to produce the exceptional high quality cutting tools. This plant develops and manufactures special tap and die production equipment. It also supplies these machines to our other manufacturing sites. Products include spiral fluted taps, dies and combined drills/countersinks as well as production machinery.

Aizu Plant (ISO9001 : 2000)
(ISO14001 : 2002)



Equipped with the most sophisticated machine tools available, this plant is famous for its automation and robotized labor saving manufacturing processes. The plant is designed for mass production of the highest quality cutting tools and screw thread tools. Products include spiral fluted taps and carbide taps.

Tsutsumi Plant (ISO9001 : 2011)
(ISO14001 : 2011)



The Tsutsumi plant is the main tool blank manufacturing operation of Yamawa group. This location is also the testing center where Yamawa executes the innovation in metal machining and performance tests of the products for the Yamawa group.

Head Office (ISO9001 : 2012)
(ISO14001 : 2003)



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Spiral Fluted Taps
Spiral Pointed Taps
Roll Taps
Helical Thread Mills Nut Taps
Cemented Carbide Taps
Center Drills Centering Tools
Hand Taps
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