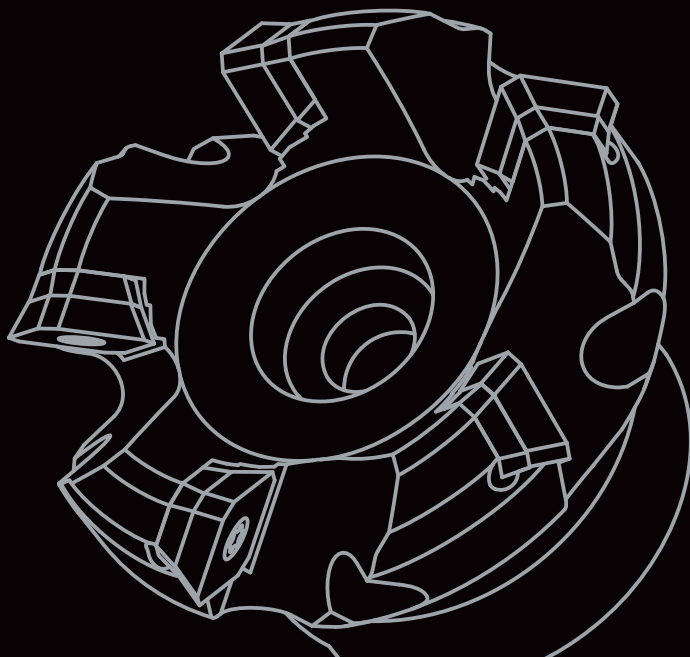


CATALOGUE 2014



• KOTOLS



STOCK CLASSIFICATION

- , ● Standard stock items, usually available in warehouse.
- , ○ Non standard stock items, please ask for availability and minimum order quantity if applicable.
- Stock exhaustion.
- ★ Future introduction.
- , ● Not included in the previous catalogue.

STANDARD PACKAGING

- holders, PCBN, diamond 1 piece
- carbide, ceramic 10 pieces

Due to continuous evolution of cutting materials and introduction of new products, stock situation reported in the present catalogue may vary without notice.



CLASSIFICAZIONE STOCK

- , ● Materiale stock standard, normalmente disponibile a magazzino.
- , ○ Materiale NON stock standard, richiedere disponibilità ed eventuale quantitativo minimo.
- Esaurimento stock.
- ★ Articolo di futura introduzione.
- , ● Non incluso nel catalogo precedente.

CONFEZIONAMENTO STANDARD

- holders, PCBN, diamond 1 pezzo
- carbide, ceramic 10 pezzi

Grazie alla continua introduzione di nuovi prodotti ed all'evoluzione dei materiali da taglio, la situazione stock menzionata nel presente catalogo può variare senza preavviso.



KLASSIFIZIERUNG DER VERFÜGBARKEIT

- , ● Stock standard, normalerweise Verfügbar - Lagerware.
- , ○ NICHT Stock standard, KEINE Lagerware. Verfügbarkeit und Mindestmenge muss angefragt werden.
- Vorraterschöpfung.
- ★ Artikel, der in Zukunft eingeführt wird.
- , ● Nicht im vorherigen Katalog vorhanden.

STANDARD VERPACKUNGSEINHEIT

- holders, PCBN, diamond 1 Stk
- carbide, ceramic 10 Stk

Wegen der ständigen Entwicklung neuer Produkte und Schneidstoffe, kann die angegebene Verfügbarkeit der Produkte in jedem Moment ohne Voranmeldung geändert werden.



CLASSIFICATION STOCK

- , ● Matériel stock standard, normalement disponible en stock.
- , ○ Matériel stock non standard, demander disponibilité au magasin et éventuellement quantitatif minimum.
- Épuisement du stock.
- ★ Article prochainement introduit.
- , ● Pas présent dans l'ancien catalogue.

CONDITIONEMENT STANDARD

- holders, PCBN, diamond 1 pièce
- carbide, ceramic 10 pièce

Grace à l'introduction continue de nouveaux produits et à l'évolution des outils de coupe, la situation des stocks mentionnés dans ce catalogue peut être modifiée sans préavis.



CLASIFICACIÓN DE STOCK

- , ● Artículos stock standard, usualmente disponibles en almacén.
- , ○ Artículos NON stock standard, ponerse en contacto con nosotros para verificar disponibilidad y eventual cantidad mínima.
- Agotamiento de stock.
- ★ Artículo disponible en futuro.
- , ● Artículo non disponible anteriormente.

CAJA STANDARD

- holders, PCBN, diamond 1 unidad
- carbide, ceramic 10 unidad

En consecuencia de la continua introducción de nuevos productos y de la evolución de los materiales de corte, la clasificación de stock indicada en el presente catálogo puede cambiar sin previo aviso.



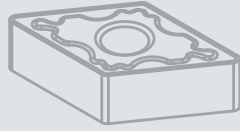
КЛАССИФИКАЦИЯ НАЛИЧИЯ НА СКЛАДЕ

- , ● Стандартный склад, обычно в наличии на складе.
- , ○ Нестандартный склад, наличие на складе не гарантируется.
- складские остатки.
- ★ Продукция на фазе внедрения
- , ● Отсутствует в предыдущем каталоге.

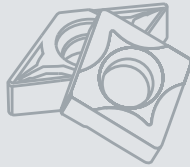
СТАНДАРТНАЯ УПАКОВКА

- holders, PCBN, diamond 1 ШТУКА
- carbide, ceramic 10 ШТУК

Благодаря постоянному внедрению новой продукции и разработке новых материалов, продукция упомянутая в данном каталоге, а также наличие на её складе, может изменяться без предварительного уведомления.



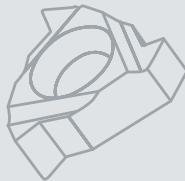
TURNING / 3



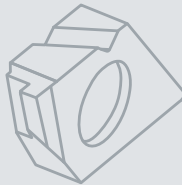
MICRONEGA / 171



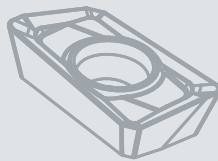
MICROBORING / 201



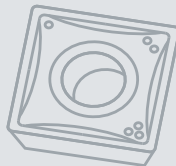
THREADING / 227



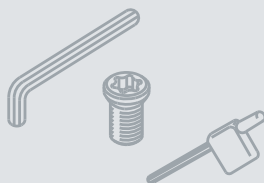
GROOVING / 251



MILLING / 269

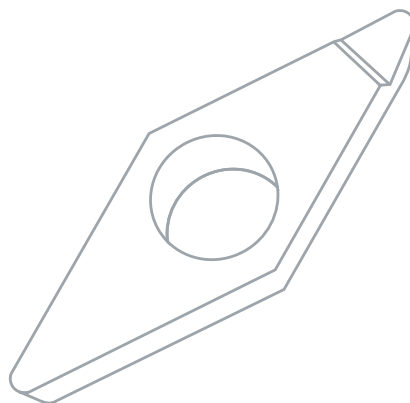
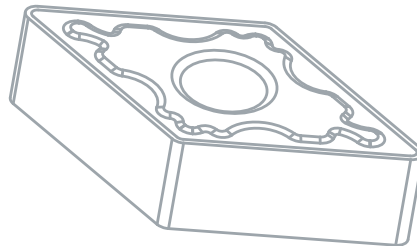
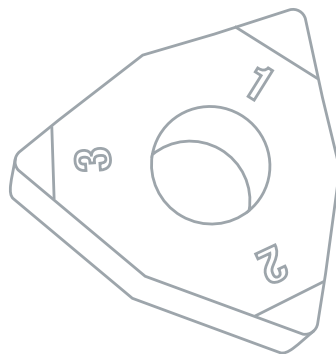


DRILLING / 341



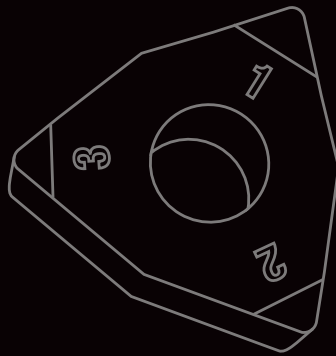
SPARE PARTS / 355

INDEX / 365

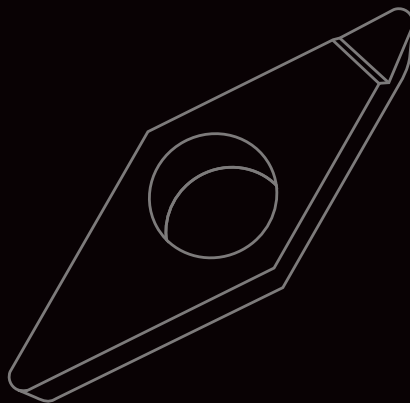
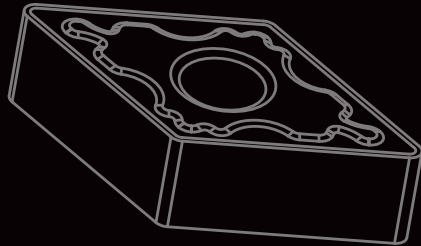


TURNING /

carbide / 5
PCBN / 43
diamond / 77
ceramic / 95
holders / 117


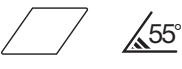



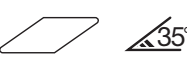




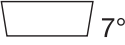
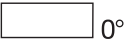
TURNING / carbide







ISO 1832








C	N	M	G	12	04	08	R	-	N	M	U	JC	80	25
1	2	3	4	5	6	7	8		9	10	11	12	13	14

1	GEOMETRY
C	
D	
K	
S	
T	
V	
W	

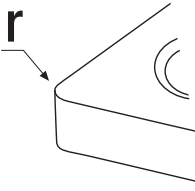
2	CLEARANCE ANGLE
B	
C	
N	



3	TOLERANCE [mm]	
		
G	±0.025	±0.13
M	±0.05 ~ ±0.15	±0.13
U	±0.08 ~ ±0.25	±0.13

4	SHAPE
A	
G	
M	
T	
X	NIKKO NORM




5	EDGE LENGTH [mm]
06 09 12 16 19 25	C 
07 11 15	D 
16	K 
09 12 15 19 25	S 
09 11 16 22	T 
11 16 22	V 
06 08 12 (06)	W 




6	THICKNESS [mm]
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35
09	9.52

7	RADIUS [mm]
...	

8	DIRECTION
L	
R	

C	N	M	G	12	04	08	R	-	N	M	U	JC	80	25
1	2	3	4	5	6	7	8		9	10	11	12	13	14



9	SHAPE STYLE
M	 negative single side
N	 negative double side
P	 positive

10	APPLICATION
F	 finishing
S	
M	 medium
U	
R	 roughing
T	

11	WORKPIECE MATERIAL
K	ISO K
M	ISO M
N	ISO N
P	ISO P
S	ISO S
U	UNIVERSAL

12	COATING TECHNOLOGY
JC	CVD
JD	DLC
JP	PVD
JU	UNCOATED






















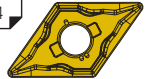



















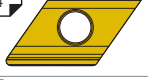




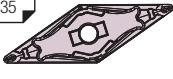








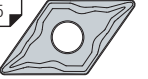


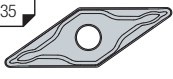

13	INSERT MATERIAL
30~34	CARBIDE ISO S
40~44	CERMET
50~54	CARBIDE UNIVERSAL
60~64	CARBIDE ISO N
70~74	CARBIDE ISO K
80~84	CARBIDE ISO P
90~94	CARBIDE ISO M

14	ISO CLASSIFICATION
05	
10	
15	
20	
25	
30	
35	
40	
45	

GRADES

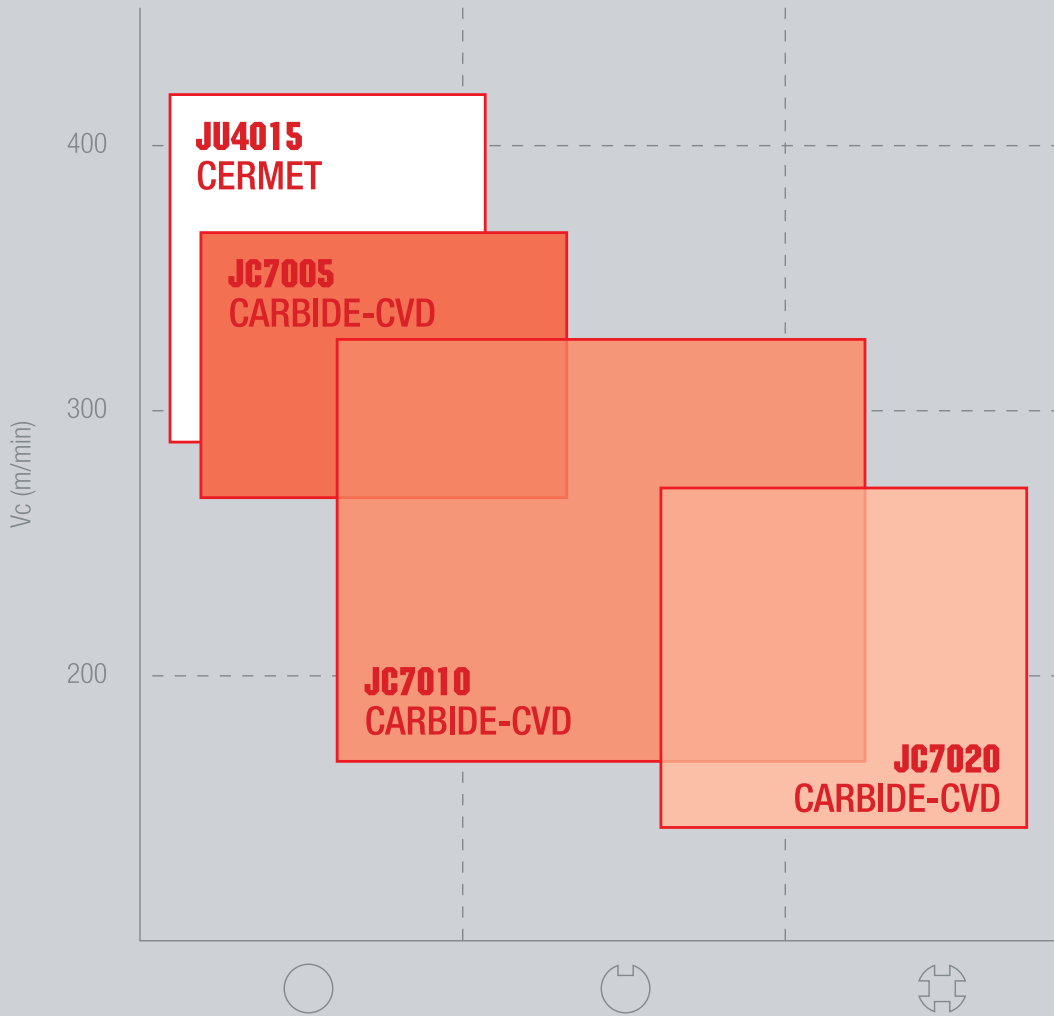
ISO DIN 513	K					P					M					N				
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	N01	N10	N20	N30	N40
CARBIDE CVD	JC7005	JC7010	JC7020			JC8005 ^{NEW}	JC8015	JC8025	JC8035		JC9025									
CARBIDE PVD		JP5025				JP5025					JP9015	JP5025	JP9030							
CARBIDE UNCOATED																JU6010	JU6020			
CERMET UNCOATED	JU4015					JU4015					JU4015									

CHIPBREAKERS SELECTION (NEGATIVE )

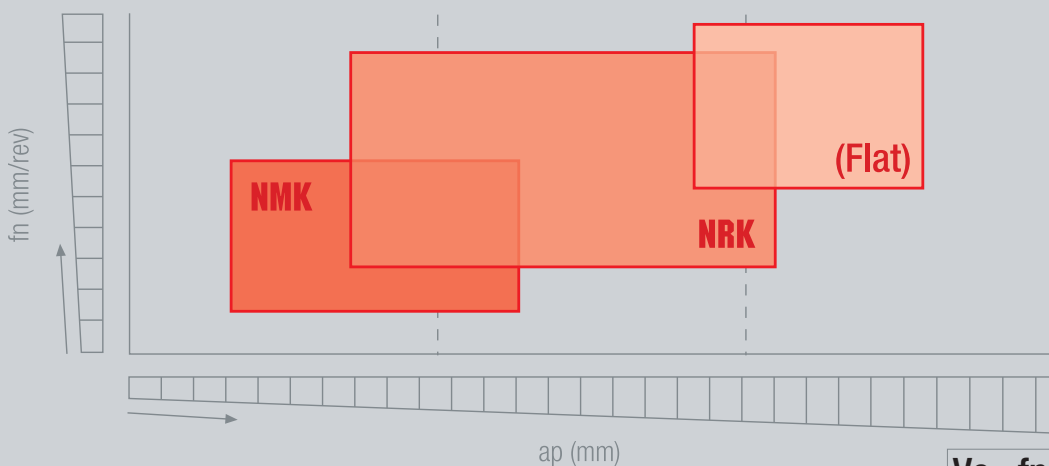
	CN□□	DN□□	SN□□	TN□□	VN□□	WN□□
K NMK	20 	24 	28 	31 	35 	37 
Edge Length	12 16 19	15	12	16 22	16	08
K NRK	20 	24 	28 	31 	35 	37 
Edge Length	12 16 19	15	12 19	16 22	16	06 08
K (Flat)	20 	24 	28 	31 		37 
Edge Length	12 16 19	15	09 12	16 22		06 08
P NSP	20 	24 	28 	31 	35 	37 
Edge Length	12	11 15	12	16	16	06 08
P NFP	20 	24 	28 	31 	35 	37 
Edge Length	12	11 15	12	16	16	06 08
P NMP	20 	24 	28 	31 	35 	37 
Edge Length	12 16 19	11 15	12	16 22	16	06 08
P NUP	21 	24 	28 	31 	35 	37 
Edge Length	12 16 19	11 15	12	16 22	16	06 08
P NRP	21 	24 	28 	31 		37 
Edge Length	12 16 19	15	12 19	16 22		08
P NTP	21 	24 	28 			37 
Edge Length	12 16 19	15	12			08
P <small>NEW</small> MRP	21 		29 			
Edge Length	19 25		19 25			
P M NMU	21 	24 	29 	32 		
Edge Length	12	15	12	16		
M <small>NEW</small> NFM	21 	25 	29 	32 	35 	38 
Edge Length	12	11 15	12	16	16	06 08
M NMM	21 	25 	29 	32 	35 	38 
Edge Length	12 16 19	11 15	12 19	16 22	16	06 08
N NMN	22 	25 	29 	32 	35 	38 
Edge Length	12	15	12	16	16	06 08

RANGE ISO **K** (NEGATIVE )

GRADES



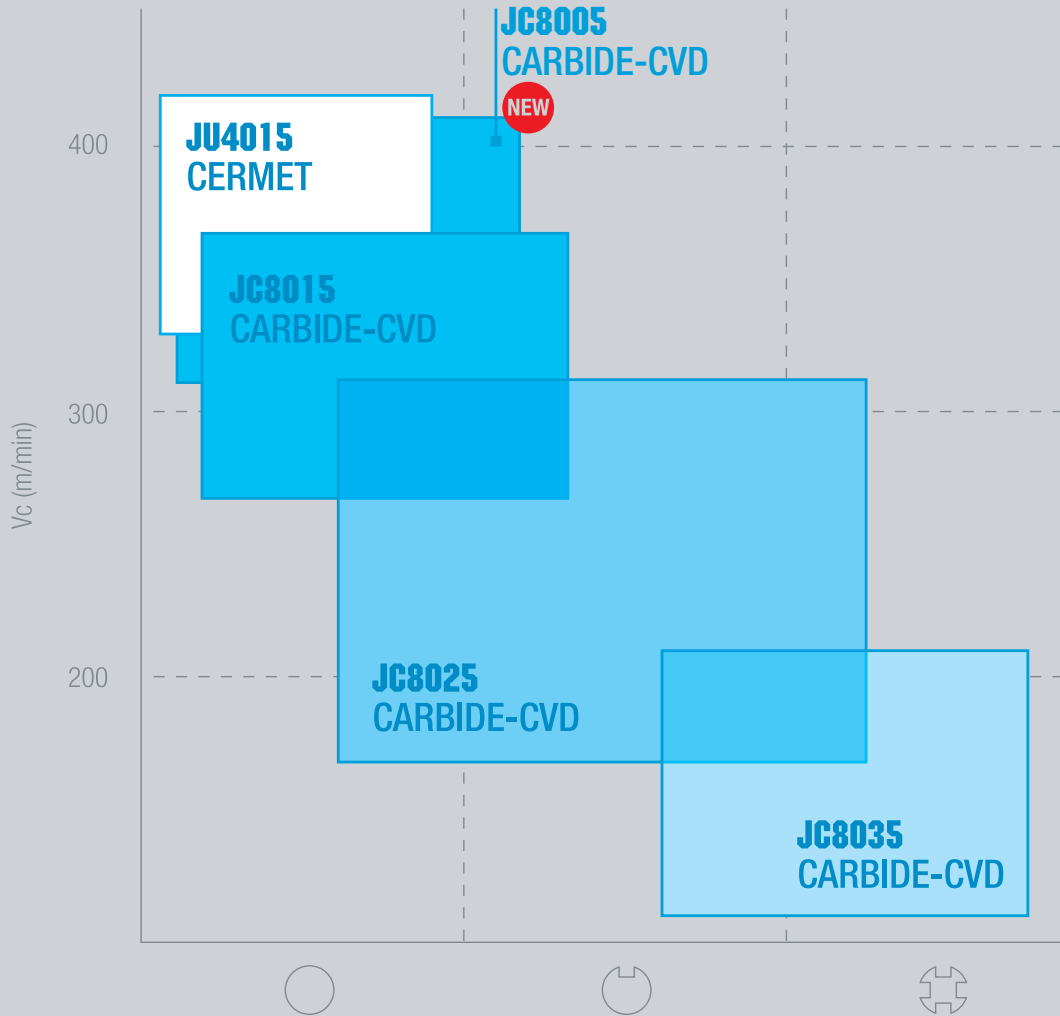
CHIPBREAKERS



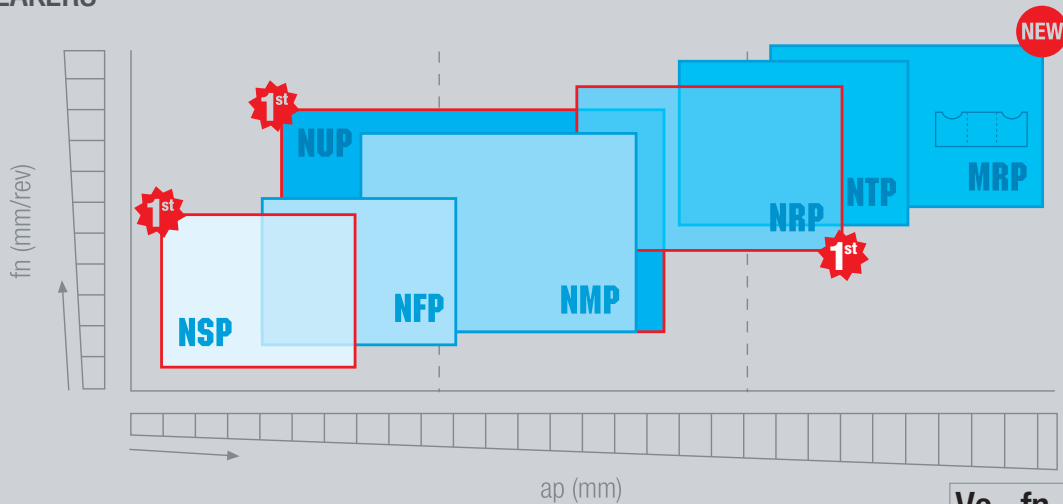
$V_c \cdot f_n \cdot a_p$

RANGE ISO **P** (NEGATIVE )

GRADES

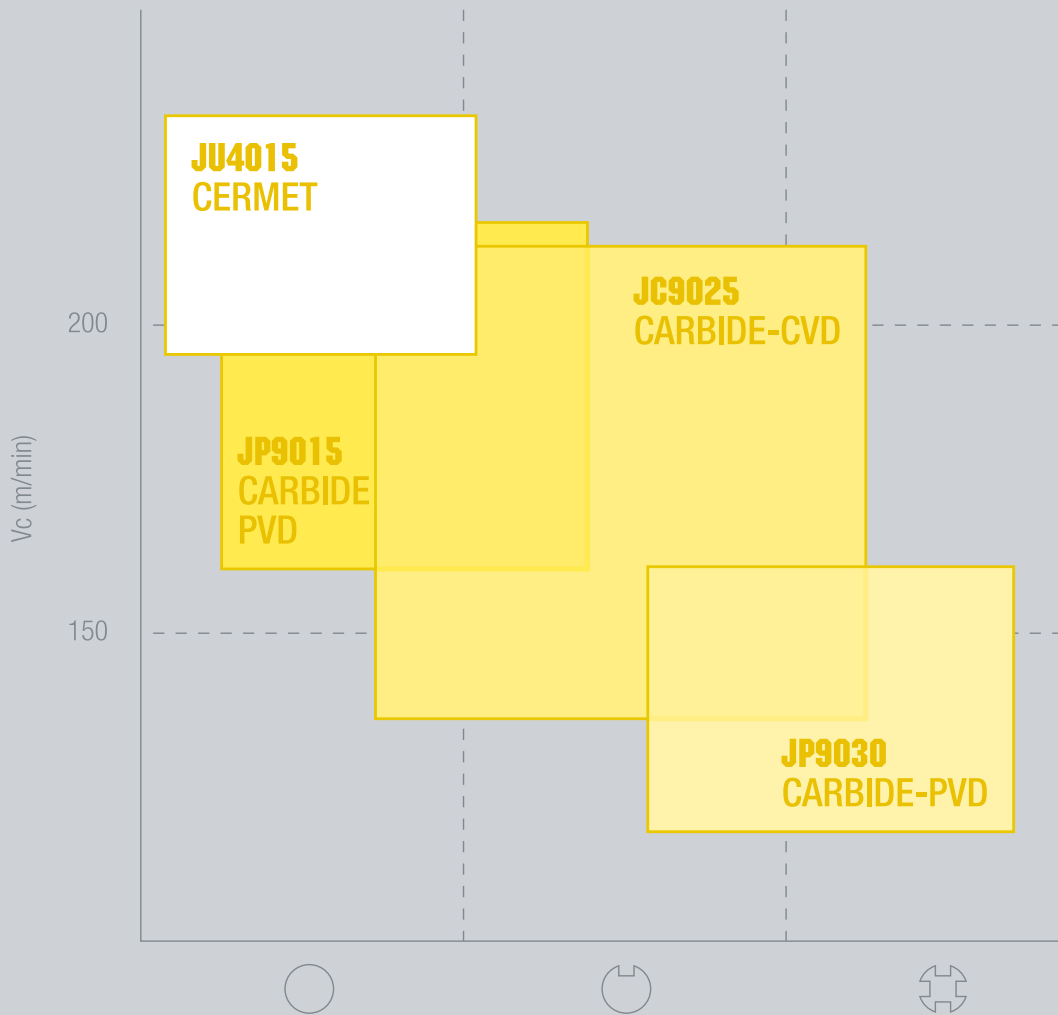


CHIPBREAKERS

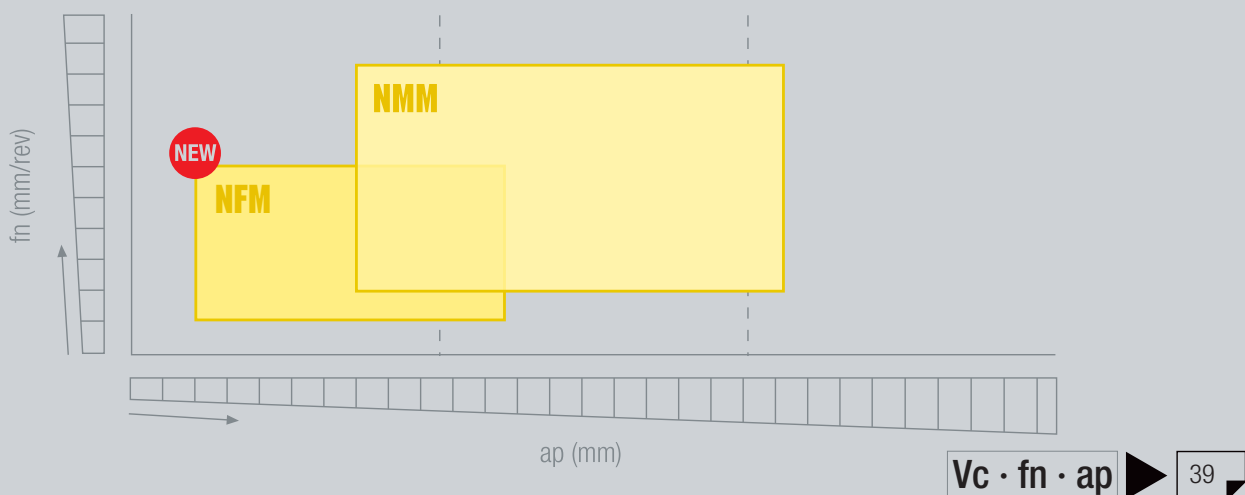


RANGE ISO **M** (NEGATIVE )

GRADES

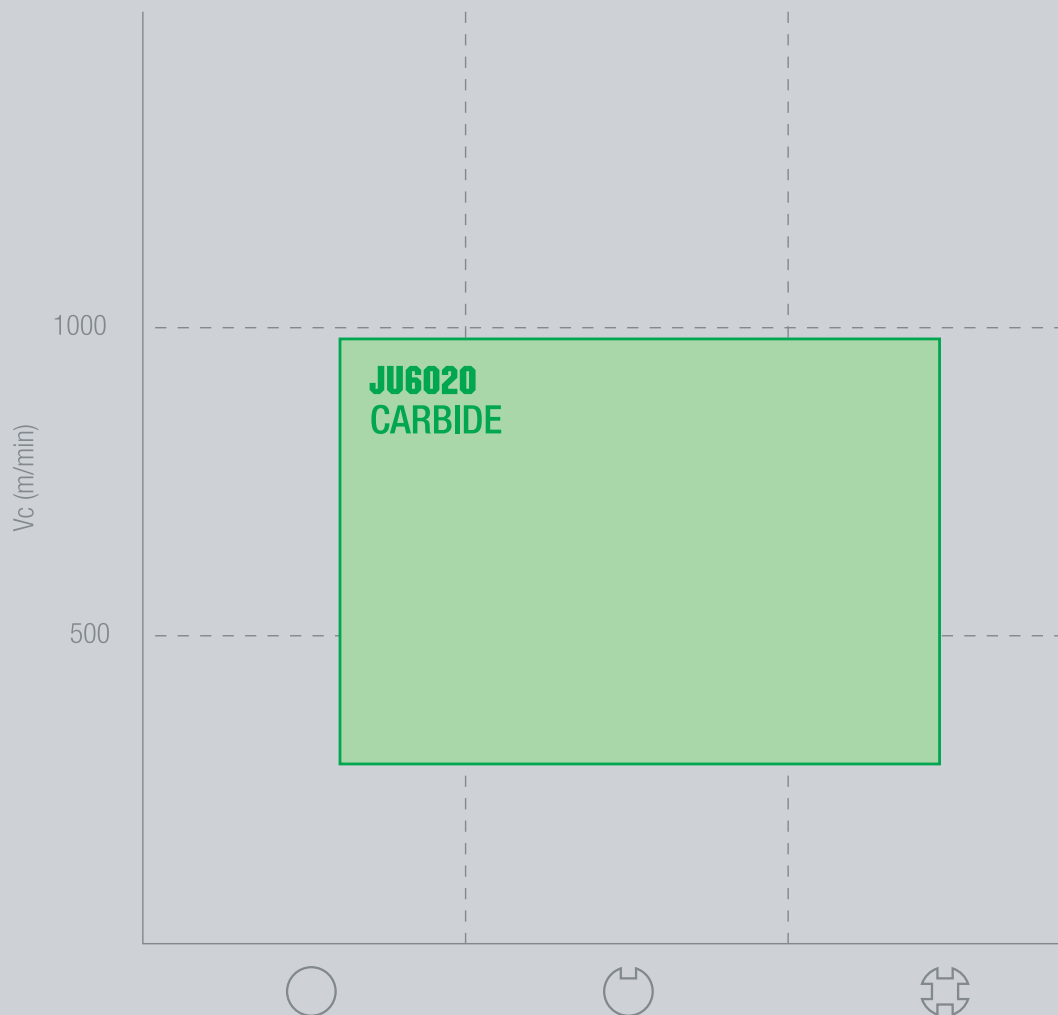


CHIPBREAKERS

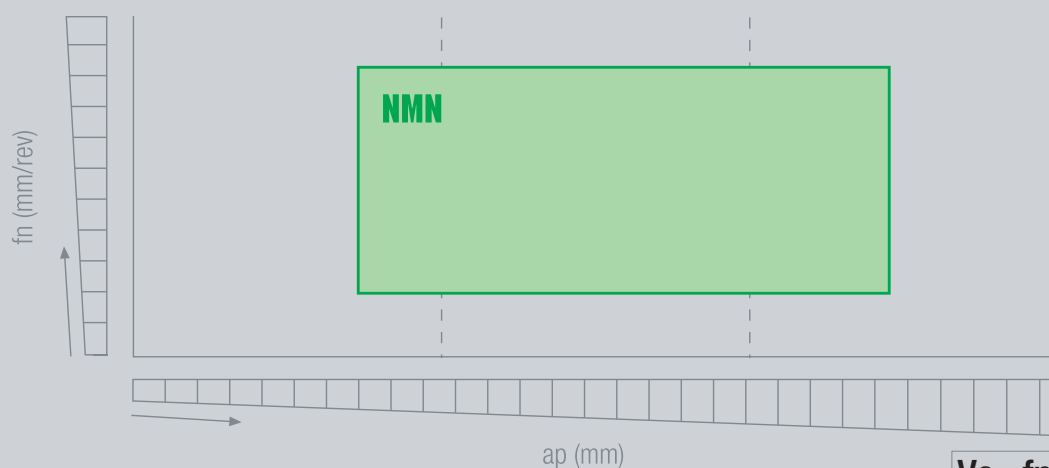


RANGE ISO **N** (NEGATIVE )





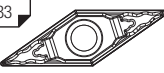
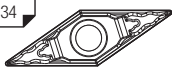

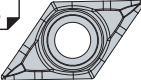



GRADES




CHIPBREAKERS



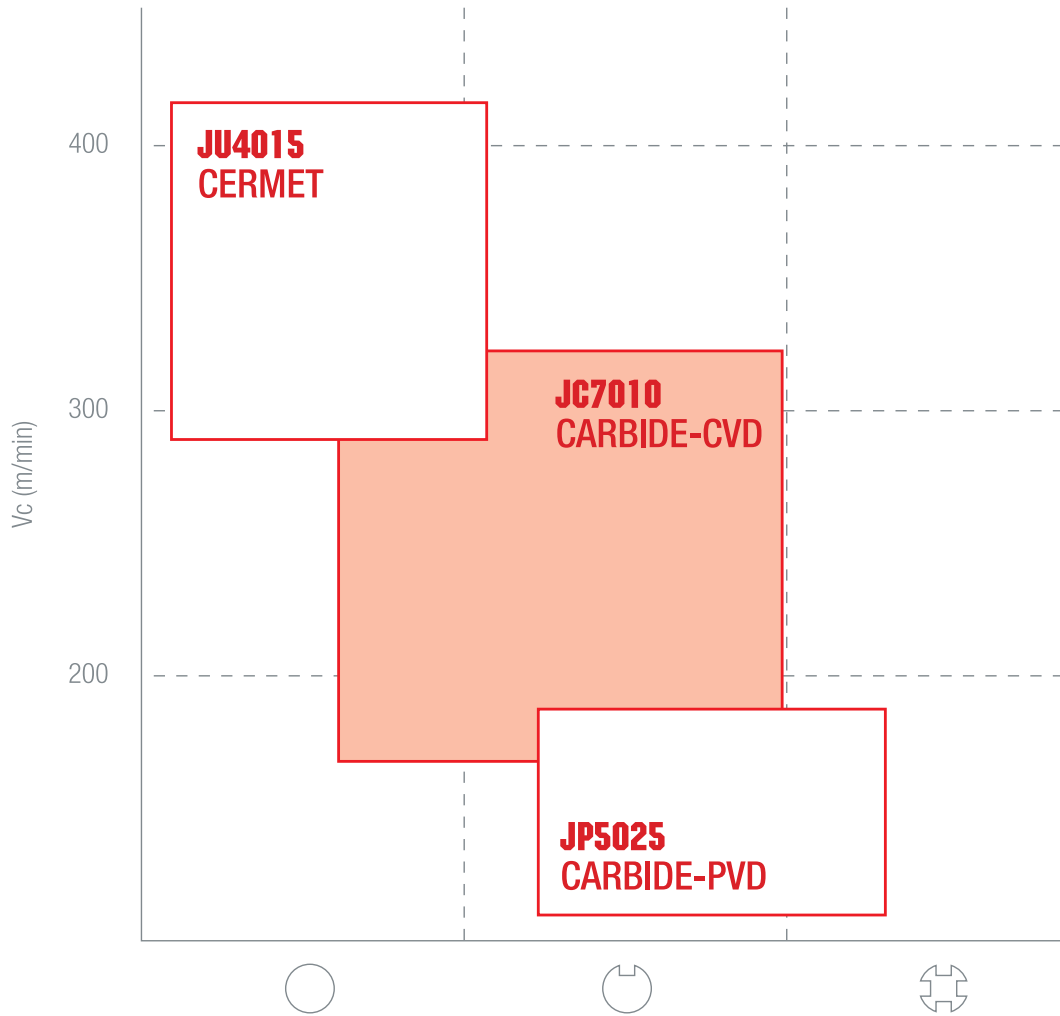
CHIPBREAKERS SELECTION (POSITIVE )

	CC□□	DC□□	SC□□	TC□□	VB□□	VC□□
K P M PMU	19 	23 	27 	30 	33 	34 
Edge Length	06 09 12	07 11 15	09 12	09 11 16 22	16	11 16
N PMN	19 	23 	27 	30 		34 
Edge Length	06 09 12	07 11	09 12	09 11 16		11 16 22

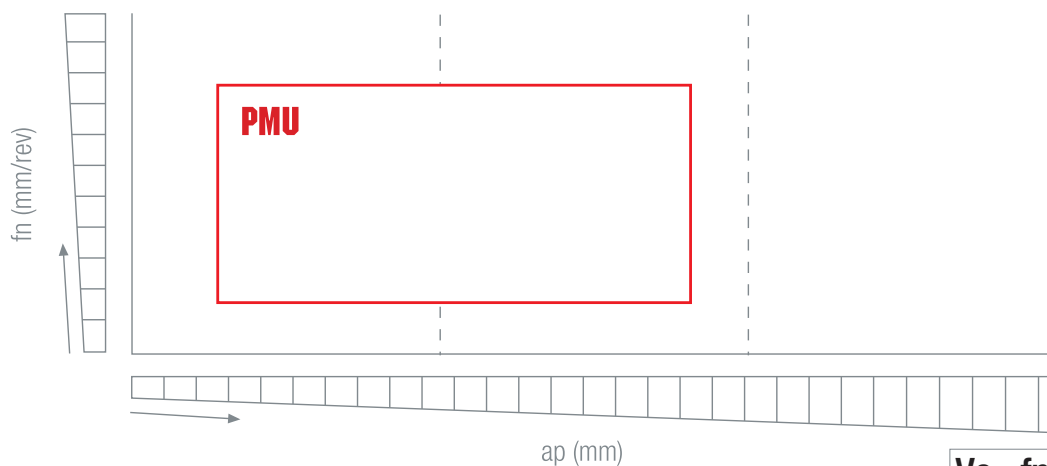
	WC□□				
K P M PMU	36 				
Edge Length	12 (06)				
N PMN					
Edge Length					

RANGE ISO **K** (POSITIVE )

GRADES

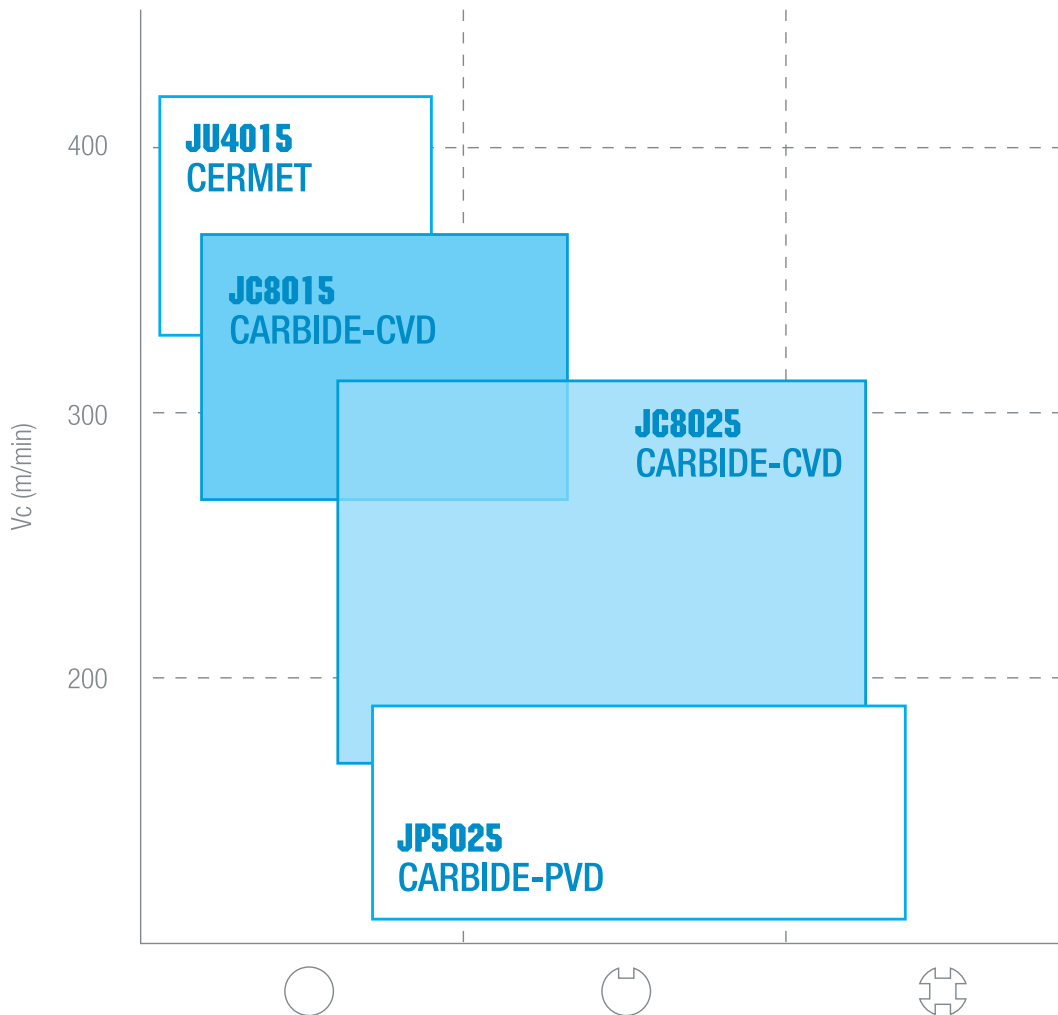


CHIPBREAKERS

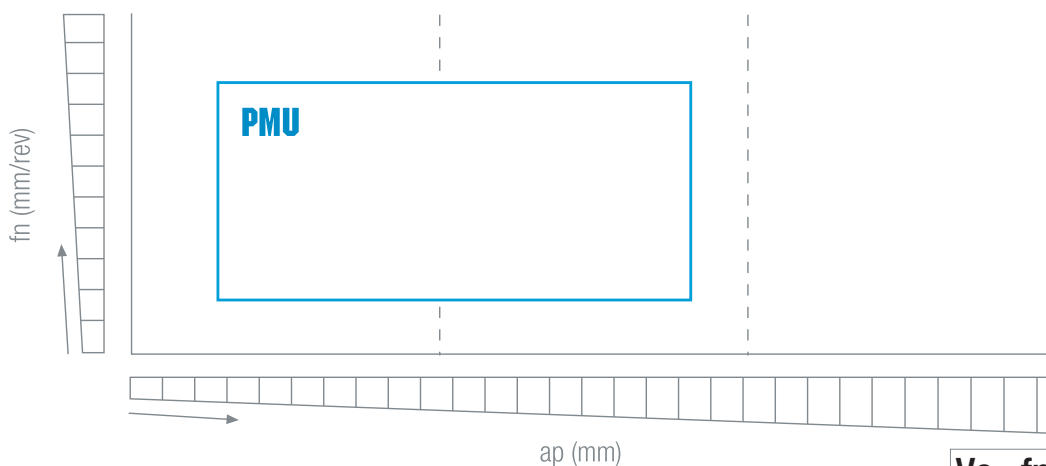


RANGE ISO **P** (POSITIVE )

GRADES

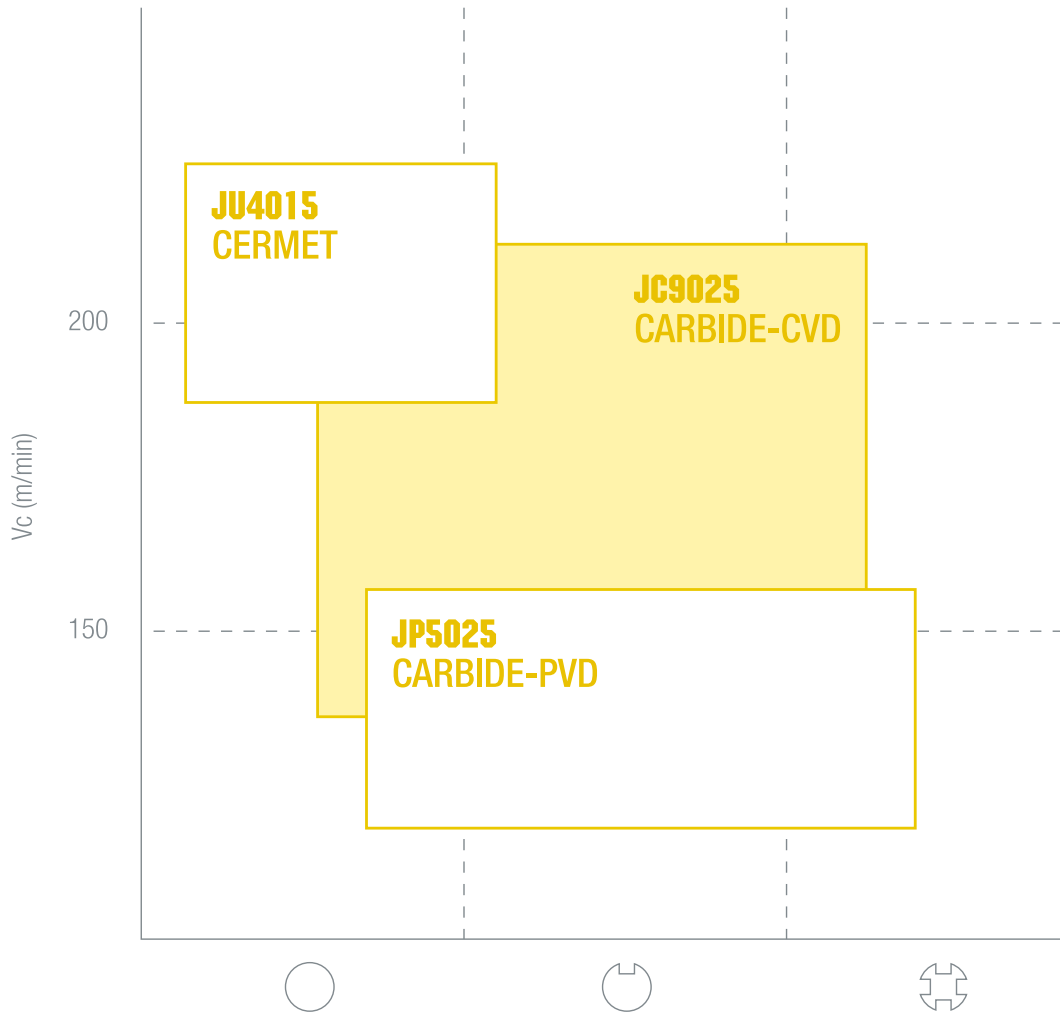


CHIPBREAKERS

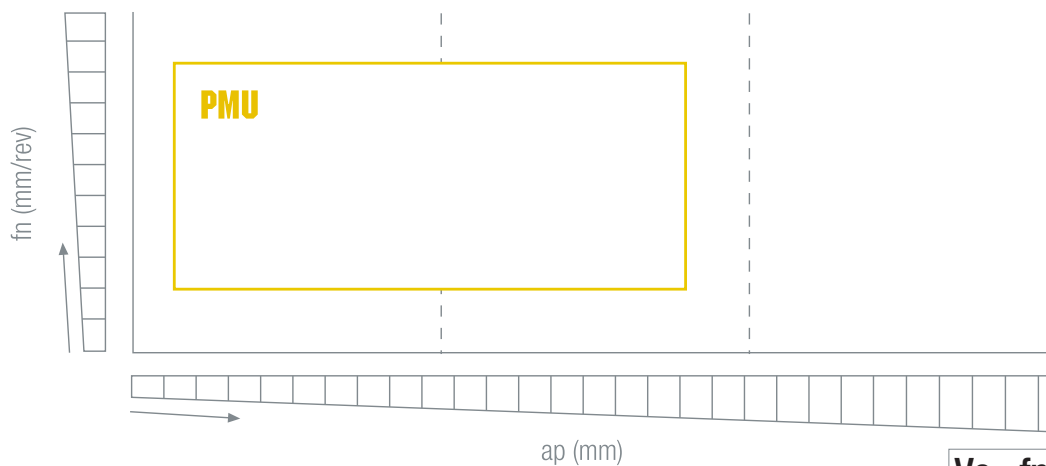


RANGE ISO **M** (POSITIVE )

GRADES

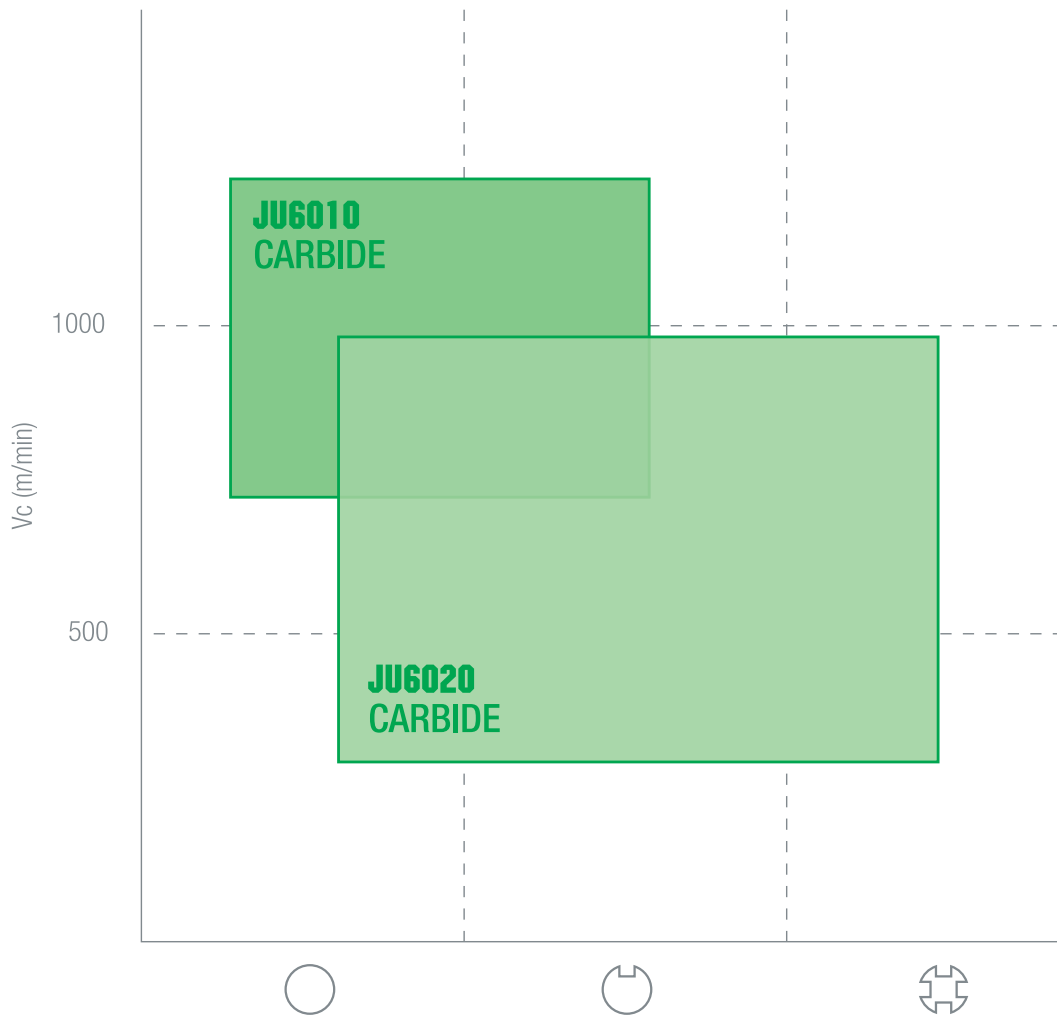


CHIPBREAKERS

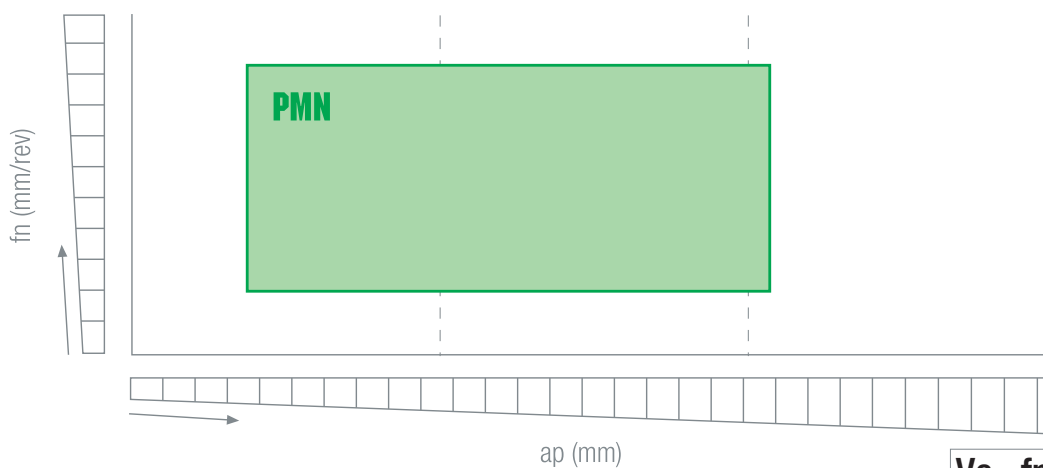


RANGE ISO **N** (POSITIVE )

GRADES

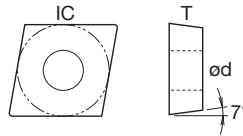


CHIPBREAKERS



POSITIVE 7°
with hole

CC □ □



CC □ □	0602 □ □	09T3 □ □	1204 □ □
IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50
HOLDERS	▶ 127	▶ 127	▶ 127

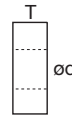
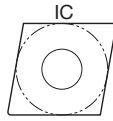
DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET		
		JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015	
PMU		CCMT 060202-PMU		○		○	●				●				●
		060204-PMU		●		●	●				●				●
		060208-PMU		●		●	●				●				●
		CCMT 09T302-PMU		○		●	●				●				●
		09T304-PMU		●		●	●				●				●
		09T308-PMU		●	●	●	●				●				●
		CCMT 120404-PMU		●		●	●				●				○
		120408-PMU		●	●	●	●				●				○
		120412-PMU		●		●	●		●						
PMN		CCGX 060202-PMN										●			
		060204-PMN										●	●		
		060208-PMN										○	●		
		CCGX 09T302-PMN										●			
		09T304-PMN										●	●		
		09T308-PMN										○	●		
		CCGX 120404-PMN										●	●		
		120408-PMN										●	●		
													●	●	

●, ○ = NEW ITEM

finishing
 medium
 roughing

NEGATIVE
with hole

CN□□



CN□□	1204□□	1606□□	1906□□	2509□□
IC	12,70	15,875	19,05	25,40
T	4,76	6,35	6,35	9,52
ød	5,16	6,35	7,93	9,12
HOLDERS	131	131	131	-

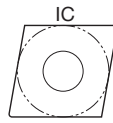
DESCRIPTION	CARBIDE-CVD				CARBIDE-PVD			CARBIDE		CERMET						
	JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015		
 NMK	CNMG 120404-NMK	●	○													
	CNMG 120408-NMK	●	●	●												
	CNMG 120412-NMK	●	●	●												
	CNMG 120416-NMK		●	○												
	CNMG 160608-NMK		●	○												
	CNMG 160612-NMK	●	●	●												
 NRK	CNMG 120408-NRK	●	●	●												
	CNMG 120412-NRK	●	●	●												
	CNMG 120416-NRK		●	●												
	CNMG 160612-NRK		●	●												
	CNMG 160616-NRK		●	●												
	CNMG 190612-NRK		○	○												
 (Flat)	CNMA 120404		○	○												
	CNMA 120408	●	●	●												
	CNMA 120412	●	●	●												
	CNMA 120416		●	○												
	CNMA 160612		●	○												
	CNMA 190612		○	○												
 NSP	CNMG 120404-NSP					●									★	
	CNMG 120408-NSP					●										★
 NFP	CNMG 120404-NFP					●	●									
	CNMG 120408-NFP					●	●									
	CNMG 120412-NFP					●	●									
 NMP	CNMG 120404-NMP					●	●								●	
	CNMG 120408-NMP					●	●								●	
	CNMG 120412-NMP					●	●									
	CNMG 120416-NMP					●	●									
	CNMG 160608-NMP					●	●									
	CNMG 160612-NMP					●	●									
	CNMG 160616-NMP					●	●									
	CNMG 190612-NMP					●	●									
CNMG 190616-NMP					●	●										

●, ○ = NEW ITEM



NEGATIVE
with hole

CN□□



CN□□	1204□□	1606□□	1906□□	2509□□
IC	12,70	15,875	19,05	25,40
T	4,76	6,35	6,35	9,52
Ød	5,16	6,35	7,93	9,12
HOLDERS	131	131	131	-

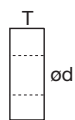
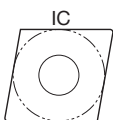
DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE	CERMET			
		JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015
NUP		CNMG 120404-NUP				★	●	●							
		CNMG 120408-NUP				★	●	●		●					
		CNMG 120412-NUP				★	●	●		●					
		CNMG 120416-NUP				★	●	●							
		CNMG 160608-NUP					○	○							
		CNMG 160612-NUP					●	●		○					
NRP		CNMG 120408-NRP					●	●	●						
		CNMG 120412-NRP					●	●	●						
		CNMG 120416-NRP					●	●	●						
		CNMG 160612-NRP					●	●	●						
		CNMG 160616-NRP					●	●	●						
		CNMG 190612-NRP					●	●	●						
NTP		CNMG 120408-NTP					●	●							
		CNMG 120412-NTP					●	●							
		CNMG 160612-NTP					●	●							
		CNMG 160616-NTP					●	●							
		CNMG 190612-NTP					●	●							
		CNMG 190616-NTP					●	●							
MRP		CNMM 190624-MRP						●	●						
		CNMM 250924-MRP						●	●						
		250932-MRP													
NMU		CNMG 120408 ^R /L-NMU						○	★						
NFM		CNMG 120404-NFM								●					
		CNMG 120408-NFM								●					
		CNMG 120412-NFM													
NMM		CNMG 120404-NMM							●	●	●			●	
		CNMG 120408-NMM							●	●	●			●	
		CNMG 120412-NMM							●	●	●				
		CNMG 120416-NMM							○		○				
		CNMG 160608-NMM							●		○				
		CNMG 160612-NMM							●	●	●				
		CNMG 160616-NMM							●	●	●				
		CNMG 190612-NMM							○		○				
CNMG 190616-NMM							○		○						

●, ○ = NEW ITEM

finishing medium roughing

NEGATIVE
with hole

CN □ □

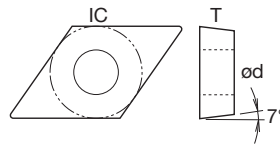


CN □ □	1204 □ □	1606 □ □	1906 □ □	2509 □ □
IC	12,70	15,875	19,05	25,40
T	4,76	6,35	6,35	9,52
Ød	5,16	6,35	7,93	9,12
HOLDERS	131	131	131	-

DESCRIPTION	CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET		
	JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015
MNM POLISHED CNGG	120404-NMN												•	
	120408-NMN												•	
	120412-NMN												•	

POSITIVE 7°
with hole

DC □ □



DC □ □	0702 □ □	11T3 □ □	1504 □ □
IC	6,35	9,525	12,70
T	2,38	3,97	4,76
Ød	2,80	4,40	5,60
HOLDERS	135	135	-

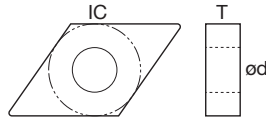
DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET				
		JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015			
PMU		DCMT	070202-PMU	○		●	●		○			●			●		
			070204-PMU		●		●	●		●		●			●		
			070208-PMU		○		○	●		●		●			●		
		DCMT	11T302-PMU		○		●	●		●		●				●	
			11T304-PMU		●		●	●		●		●				●	
			11T308-PMU		●		●	●		●		●				●	
		DCMT	150404-PMU		○		○	●		○							
			150408-PMU		○		○	●		●							
			150412-PMU		○		○	●	●								
PMN		POLISHED	DCGX	070202-PMN								●					
				070204-PMN								○	●				
				070208-PMN										●			
			DCGX	11T302-PMN										●			
				11T304-PMN										●	●		
				11T308-PMN										●	●		

●, ○ = NEW ITEM

finishing medium roughing

NEGATIVE with hole

DN□□



DN□□ 1104□□ 1506□□

IC 9,525 12,70

T 4,76 6,35

Ød 3,81 5,16



141

141

DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET				
		JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JU6010	JU6020	JU4015		
NMK		DNMG 150604-NMK	●	○													
		150608-NMK	●	○													
		150612-NMK	●	○													
NRK		DNMG 150608-NRK	●	○													
		150612-NRK	●	○													
(Flat)		DNMA 150608	●	○													
		150612	●	○													
NSP		DNMG 110404-NSP					●									★	
		110408-NSP					●									★	
		DNMG 150604-NSP					●										★
		150608-NSP					●										★
NFP		DNMG 110404-NFP				●	●										
		110408-NFP				●	●										
		DNMG 150604-NFP				●	●										
NMP		DNMG 110404-NMP				●	●										
		110408-NMP		●		●	●										
		DNMG 150604-NMP				●	●										
		150608-NMP				●	●										
NUP		DNMG 110404-NUP				●	●										
		110408-NUP				●	●										
		DNMG 150604-NUP				★	●	●									
		150608-NUP				★	●	●		●							
NRP		DNMG 150608-NRP				●	●	●									
		150612-NRP				●	●	●									
		150616-NRP				★	●	●									
NTP		DNMG 150608-NTP				●	●										
		150612-NTP				●	●										
NMU		DNMG 150604 ^R /L-NMU				○	●		★								
		150608 ^R /L-NMU				○	●		★								

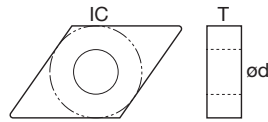
●, ○ = NEW ITEM



Vc · fn · ap

NEGATIVE
with hole

DN



DN 1104 1506

IC	9,525	12,70
T	4,76	6,35
Ød	3,81	5,16

HOLDERS

141

141

DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET			
		JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015	
NFM	 DNMG 110404-NFM 110408-NFM								●							
										●						
	DNMG 150604-NFM 150608-NFM									●						
											●					
NMM	 DNMG 110404-NMM 110408-NMM							●		●						
									●		●					
	DNMG 150604-NMM 150608-NMM 150612-NMM								●		●					
										●		●				
										●		●				
NMM	 DNGG 150604-NMM 150608-NMM												●			
														●		

●, ○ = NEW ITEM

finishing
 medium
 roughing

NEGATIVE
without hole

NEW

KN □ □



KN □ □ 1604 □ □

IC 9,525

T 4,76

Ød -



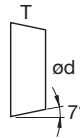
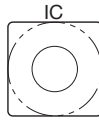
DESCRIPTION	CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET		
	JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JU6010	JU6020	JU4015
11 R TYPE KNUX 160405 ^R /L-11 160410 ^R /L-11						●								
						●								

●, ○ = NEW ITEM

finishing
 medium
 roughing

POSITIVE 7°
with hole

SC □ □



SC □ □ 09T3 □ □ 1204 □ □

IC	9,525	12,70
T	3,97	4,76
Ød	4,40	5,50
HOLDERS	144	144

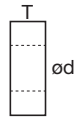
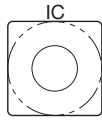
DESCRIPTION		CARBIDE-CVD					CARBIDE-PVD			CARBIDE		CERMET				
		JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015		
PMU		SCMT	09T304-PMU	●			●	●						●		
			09T308-PMU	●			●	●						●		
		SCMT	120404-PMU	○			●	●								
			120408-PMU	●			●	●								
PMN		POLISHED	SCGX	09T304-PMN								○	●			
				09T308-PMN									○	●		
			SCGX	120404-PMN										○	●	
				120408-PMN										○	●	

●, ○ = NEW ITEM

finishing medium roughing

NEGATIVE
with hole

SN □ □



SN □ □	0903 □ □	1204 □ □	1906 □ □	2509 □ □
IC	9,525	12,70	19,05	25,40
T	3,18	4,76	6,35	9,52
ød	3,81	5,16	7,93	8,80
HOLDERS	-	145	145	-

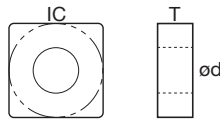
DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET			
		JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015	
MMK		SNMG 120408-NMK	●	○												
		120412-NMK	●	○												
NRK		SNMG 120408-NRK	●	○												
		120412-NRK	●	○												
		120416-NRK	○	○												
		SNMG 190612-NRK	○	○												
(Flat)		SNMA 090308	●	○												
		SNMA 120408	●	○												
		120412	●	○												
		120416	●	○												
NSP		SNMG 120404-NSP				●									★	
		120408-NSP					●								★	
NFP		SNMG 120404-NFP				●	●									
		120408-NFP				●	●									
NMP		SNMG 120404-NMP				●	●									
		120408-NMP				●	●									
		120412-NMP				●	●									
		120416-NMP				○	○									
NUP		SNMG 120404-NUP				○	○									
		120408-NUP				○	○									
		120412-NUP				○	○									
		120416-NUP				○	○									
NRP		SNMG 120408-NRP					●	●								
		120412-NRP					●	●								
		120416-NRP					●	●								
		SNMG 190612-NRP					●	●								
		190616-NRP					●	●								
NTP		SNMG 120408-NTP				●	●									
		120412-NTP					●	●								

●, ○ = NEW ITEM



NEGATIVE
with hole

SN □ □



SN □ □	0903 □ □	1204 □ □	1906 □ □	2509 □ □
IC	9,525	12,70	19,05	25,40
T	3,18	4,76	6,35	9,52
Ød	3,81	5,16	7,93	8,80
HOLDERS	-	145	145	-


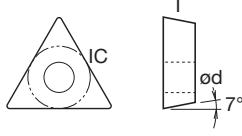
DESCRIPTION			CARBIDE-CVD				CARBIDE-PVD			CARBIDE	CERMET				
			JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020
MRP		SNMM 190624-MRP													
		SNMM 250924-MRP													
		250932-MRP													
NMU		SNMG 120408 ^R /L-NMU													
NFM		SNMG 120404-NFM													
		120408-NFM													
NMM		SNMG 120404-NMM													
		120408-NMM													
		120412-NMM													
		120416-NMM													
		SNMG 190612-NMM													
NMM		190616-NMM													
		SNGG 120404-NMN													
		120408-NMN													
NMM		120412-NMN													

●, ○ = NEW ITEM






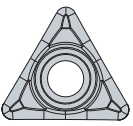
finishing medium roughing

**POSITIVE 7°
with hole**

TC □ □

TC □ □	0902 □ □	1102 □ □	16T3 □ □	2204 □ □
IC	5,56	6,35	9,525	12,70
T	2,38	2,38	3,97	4,76
Ød	2,50	2,80	4,40	5,60
HOLDERS	149	149	149	-

DESCRIPTION	CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET		
	JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015	
  	TCMT 090204-PMU	●		●	●		●			●			●	
	TCMT 110202-PMU		○		○	●	●			●			●	
	110204-PMU		●		●	●	●			●			●	
	110208-PMU		●		●	●	●			●			●	
	TCMT 16T304-PMU		●		●	●	●			●			●	
	16T308-PMU		●	●	●	●	●			●			●	
	16T312-PMU		●		○	●								
	TCMT 220408-PMU		○		○	●		○						
  	POLISHED	TCGX 090202-PMN									○			
		090204-PMN										○	●	
		TCGX 110202-PMN										○	●	
		110204-PMN										○	●	
		110208-PMN										○	●	
		TCGX 16T304-PMN										○	●	
16T308-PMN											●			

●, ○ = NEW ITEM

 finishing
  medium
  roughing

NEGATIVE
with hole

TN□□



TN□□ 1604□□ 2204□□

IC 9,525 12,70

T 4,76 4,76

Ød 3,81 5,16

HOLDERS

153

154

DESCRIPTION	CARBIDE-CVD						CARBIDE-PVD			CARBIDE	CERMET			
	JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015
NMK 	TNMG 160404-NMK	●	○											
	160408-NMK	●	○											
	160412-NMK	●	○											
	160416-NMK		○	○										
	TNMG 220408-NMK	●	○											
	220412-NMK	●	○											
NRK 	TNMG 160408-NRK		○	○										
	160412-NRK		○	○										
	TNMG 220408-NRK		○	○										
	220412-NRK		●	○										
	220416-NRK		○	○										
	(Flat) 	TNMA 160404		●	○									
160408			●	○										
160412			●	○										
160416			●	○										
TNMA 220408			●	○										
220412			●	○										
NSP 	TNMG 160404-NSP					●								★
	160408-NSP					●								★
NFP 	TNMG 160404-NFP					●	●							
	160408-NFP					●	●							
NMP 	TNMG 160404-NMP					●	●							●
	160408-NMP					●	●							●
	160412-NMP					●	●							
	TNMG 220408-NMP					●	●							
NUP 	TNMG 160404-NUP				★	●	●							
	160408-NUP				★	●	●	●						
	160412-NUP				★	●	●	●						
	TNMG 220408-NUP					○	○							
	220412-NUP					○	○							
	220416-NUP					○	○							
NRP 	TNMG 160408-NRP						●	●						
	160412-NRP						●	●						
	TNMG 220412-NRP						●	●						
	220416-NRP						●	●						

●, ○ = NEW ITEM



NEGATIVE with hole

TN □ □

TN □ □	1604 □ □	2204 □ □
IC	9,525	12,70
T	4,76	4,76
Ød	3,81	5,16
HOLDERS	153	154

DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET			
		JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JU6010	JU6020	JU4015	
NMU	 TNMG 160404 ^R /L-NMU R TYPE					○	●		★							
						○	●		★							
NFM	 TNMG 160404-NFM									●						
											●					
MMM	 TNMG 160404-NMM TNMG 160408-NMM TNMG 160412-NMM								●	●	●				●	
										●	●	●				●
										○		○				
										○		○				
										○		○				
NMN	 TNGG 160404-NMN TNGG 160408-NMN TNGG 160412-NMN POLISHED												●			
														●		
														●		

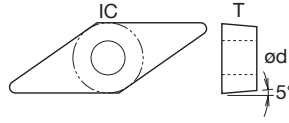
●, ○ = NEW ITEM

finishing
 medium
 roughing

POSITIVE 5°
with hole

VB □ □

NEW



VB □ □ 1604 □ □

IC 9,525

T 4,76

Ød 4,40

HOLDERS 158


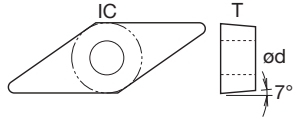
DESCRIPTION	CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET	
	JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015
 VBMT 160404-PMU 160408-PMU		●		●	●		●			●			●
		●		●	●		●			●			●

●, ○ = NEW ITEM

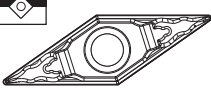
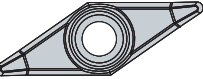
finishing
 medium
 roughing

**POSITIVE 7°
with hole**

VC □ □

VC □ □	1103 □ □	1604 □ □	2205 □ □
IC	6,35	9,525	12,70
T	3,18	4,76	5,56
Ød	2,80	4,40	5,60
HOLDERS	159	159	-

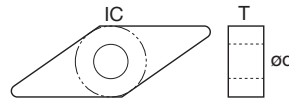
DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET			
		JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015		
PMU	 VCMT 110304-PMU		●		●	●		●			●			★		
	VCMT 160404-PMU		●		●	●		●			●			★		
	160408-PMU		●		●	●		●			●			★		
PMN		POLISHED	VCGX 110302-PMN									●				
			VCGX 110304-PMN									○	●			
			VCGX 110308-PMN											●		
			VCGX 160402-PMN										○			
			VCGX 160404-PMN										●	●		
			VCGX 160408-PMN										○	●		
			VCGX 160412-PMN											●		
			VCGX 220530-PMN										●	●		

●, ○ = NEW ITEM

 finishing  medium  roughing

NEGATIVE
with hole

VN□□



VN□□ 1604□□

IC 9,525

T 4,76

Ød 3,81

HOLDERS 163

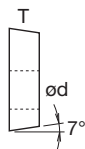
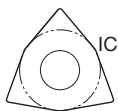
DESCRIPTION			CARBIDE-CVD				CARBIDE-PVD			CARBIDE		CERMET					
			JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015	
NMK		VNMG 160404-NMK		●	○												
		160408-NMK		●	○												
		160412-NMK		●	○												
NRK		VNMG 160408-NRK		○	○												
		160412-NRK		○	○												
NSP		VNMG 160404-NSP														★	
		160408-NSP														★	
NFP		VNMG 160404-NFP					●	●									
		160408-NFP					●	●									
NMP		VNMG 160404-NMP					●	●								●	
		160408-NMP					●	●								●	
		160412-NMP					●	●									
NUP		VNMG 160404-NUP					○	○									
		160408-NUP					○	○									
		160412-NUP					○	○									
NFM		VNMG 160404-NFM								●							
		160408-NFM								●							
NMM		VNMG 160404-NMM						●		○						●	
		160408-NMM						●		○						●	
NMN		VNMG 160404-NMN												●			
		160408-NMN												●			

●, ○ = NEW ITEM

finishing medium roughing

POSITIVE 7°
with hole

WC




WC 12T3

IC 9,525

T 3,97

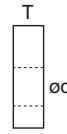
Ød 4,40

HOLDERS 166

DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET	
		JC7005	JC7010	JC7020	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015
PMU		WCMT	12T304-PMU	•	•	•	•	•						•
			12T308-PMU	•	•	•	•	•						•

NEGATIVE
with hole

WN



WN <input type="checkbox"/>	0604 <input type="checkbox"/>	0804 <input type="checkbox"/>
IC	9,525	12,70
T	4,76	4,76
Ød	3,81	5,16
HOLDERS	167	167

DESCRIPTION			CARBIDE-CVD				CARBIDE-PVD			CARBIDE	CERMET						
			JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JUG010	JUG020	JU4015	
NMK		WNMG 080404-NMK		●	○												
		080408-NMK	●	●	●												
		080412-NMK	●	●	●												
NRK		WNMG 060408-NRK		●	●												
		080408-NRK	●	●	●												
		080412-NRK	●	●	●												
(Flat)		WNMA 060404		○	○												
		060408		●	○												
		080408		●	○												
		080412		●	○												
		080416		○	○												
NSP		WNMG 060404-NSP					●									★	
		060408-NSP					●									★	
		080404-NSP					●									★	
		080408-NSP					●									★	
NFP		WNMG 060404-NFP					●	●									
		060408-NFP					●	●									
		080404-NFP					●	●									
NMP		WNMG 060404-NMP					●	●									
		060408-NMP					●	●									
		080404-NMP					●	●								●	
		080408-NMP					●	●								●	
		080412-NMP					●	●									
NUP		WNMG 060404-NUP					●	●									
		060408-NUP					●	●									
		080404-NUP				★	●	●									
		080408-NUP				★	●	●		●							
		080412-NUP				★	●	●		●							
NRP		WNMG 080408-NRP					●	●	●								
		080412-NRP					●	●	●								
		080416-NRP					●	●	●								
NTP		WNMG 080408-NTP					●	●									
		080412-NTP					●	●									


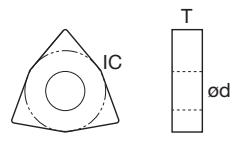
●, ○ = NEW ITEM









Vc · fn · ap

NEGATIVE with hole

WN

WN	0604	0804
IC	9,525	12,70
T	4,76	4,76
Ød	3,81	5,16
HOLDERS	167	167

DESCRIPTION		CARBIDE-CVD						CARBIDE-PVD			CARBIDE		CERMET				
		JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JU6010	JU6020	JU4015		
NFM	 	WNMG 060404-NFM								●							
		WNMG 060408-NFM								●							
		WNMG 080404-NFM								●							
		WNMG 080408-NFM								●							
MMM	 	WNMG 060404-NMM						●		●							
		WNMG 060408-NMM						●		●							
		WNMG 080404-NMM						●	●	●						●	
		WNMG 080408-NMM						●	●	●						●	
NMN	 	POLISHED	WNGG 060404-NMN										●				
			WNGG 060408-NMN										●				
			WNGG 080404-NMN											●			
			WNGG 080408-NMN											●			

●, ○ = NEW ITEM

 finishing  medium  roughing

Vc · fn · ap  39



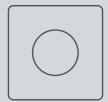



CUTTING PARAMETERS Vc (m/min)

K	KG	GREY CAST IRON	M	MM	MARTENSITIC AND FERRITIC STAINLESS STEEL
		GHISA GRIGIA			ACCIAI INOSSIDABILI MARTENSITICI E FERRITICI
		GRAUGUSS			MARTENSITISCHE UND FERRITISCHE ROSTFREIE STÄHLE
		FONTE GRISE			ACIERS INOXYDABLES MARTENSITIQUES ET FERRITIQUES
		FUNDICIÓN GRIS			ACEROS INOXIDABLES AUSTENITICOS Y FERRITICOS
		ЧУГУН			МАРТЕНСИТНЫЕ И ФЕРРИТНЫЕ НЕРЖАВЕЮЩИЕ СТАЛИ
K	KN	NODULAR CAST IRON	M	MA	AUSTENITIC STAINLESS STEEL
		GHISA SFEROIDALE			ACCIAI INOSSIDABILI AUSTENITICI
		SPHÄROGUSS			AUSTENITISCHE ROSTFREIE STÄHLE
		FONTE NODULAIRE			ACIERS INOXYDABLES AUSTENITIQUES
		FUNDICIÓN NODULAR			ACEROS INOXIDABLES AUSTENITICOS
		ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ			АУСТЕНИТНЫЕ НЕРЖАВЕЮЩИЕ СТАЛИ
P	PL	LOW CARBON AND FREE CUTTING STEEL	N	NA	ALUMINIUM ALLOYS
		ACCIAI A BASSO TENORE DI CARBONIO ED AUTOMATICI			LEGHE DI ALLUMINIO
		KOHLENSTOFFARME STÄHLE			ALUMINIUMLEGIERUNGEN
		ACIERS BAS CARBONE ET POUR DÉCOLLETAGE			ALLIAGES D'ALUMINIUM
		ACEROS DE BAJO CARBONO			ALEACIONES DE ALUMINIO
		НИЗКОУГЛЕРОДИСТАЯ И АВТОМАТНАЯ СТАЛЬ			СПЛАВЫ АЛЮМИНИЯ
P	PM	MEDIUM CARBON STEEL	N	NH	ALUMINIUM ALLOYS AGED AND HARDENED
		ACCIAI A MEDIO TENORE DI CARBONIO			LEGHE DI ALLUMINIO TRATTATE ED INVECCHiate
		MITTELGEKOHLTE FLUSSSTÄHLE			GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN
		ACIERS MOYEN CARBONE			ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES
		ACEROS DE MEDIO CARBONO			ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS
		СРЕДНЕУГЛЕРОДИСТАЯ СТАЛЬ			СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ
P	PH	HIGH CARBON STEEL	N	NB	BRASS
		ACCIAI AD ELEVATO TENORE DI CARBONIO			OTTONE
		KOHLENSTOFFREICHE STÄHLE			MESSING
		ACIERS HAUT CARBONE			LAITON
		ACEROS DE ALTO CARBONO			LATÓN
		ВЫСОКОУГЛЕРОДИСТАЯ СТАЛЬ			ЛАТУНЬ
P	PA	ALLOY STEEL	N	NC	BRONZE AND ELECTOLYTIC COPPER
		ACCIAI LEGATI			BRONZO E RAME ELETTRolitICO
		LEGIERTE STÄHLE			ELEKTROLYTISCHES KUPFER UND BRONZE
		ACIERS ALLIÉS			BRONZE ET CUIVRE ÉLECTROLYTIQUE
		ACEROS ALEADOS			BRONCE Y COBRE ELECTROLÍTICO
		СРЕДНЕЛЕГИРОВАННАЯ СТАЛЬ			БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ

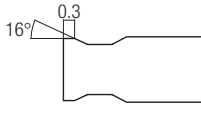
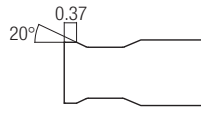
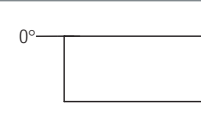
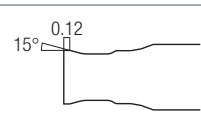
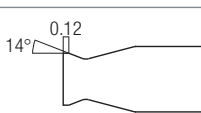
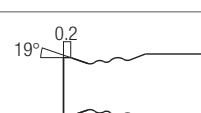
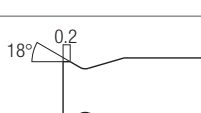
MATERIAL	CARBIDE-CVD							CARBIDE-PVD			CARBIDE		CERMET	
	JC7005	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9025	JP9015	JP9030	JP5025	JU6010	JU6020	JU4015
K	KG	250~400	200~360	160~300							100~170			250~400
	KN	180~300	150~280	120~250							80~150			180~300
P	PL			300~420	250~350	200~320	160~250				100~180			280~380
	PM			260~360	220~300	180~260	140~200				80~160			240~330
	PH			240~340	200~280	160~250	120~180				80~140			220~300
	PA			220~300	180~250	150~220	100~170				60~120			200~280
	MM							150~230	120~220	100~150	80~120			180~250
N	MA							120~180	100~180	80~120	60~100			160~220
	NA											600~2000	500~1500	
	NH											400~900	300~700	
	NB											300~500	250~400	
	NC											200~350	150~250	

CUTTING PARAMETERS a_p (mm) & f_n (mm/rev)

negative 



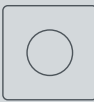



NEGATIVE INSERT SIZE		CN □□	-	1204...	1606...	1906...	2509...
		DN □□	1104...	1506...	-	-	-
		SN □□	0903...	1204...	-	1906...	2509...
		TN □□	-	1604...	2204...	-	-
		VN □□	-	1604...	-	-	-
		WN □□	0604...	0804...	-	-	-



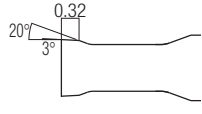
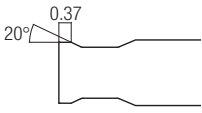
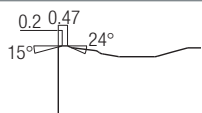
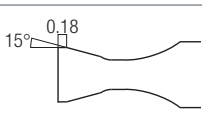
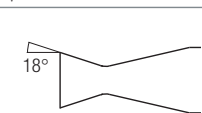
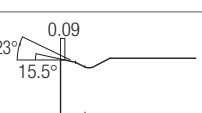

K		NMK	a_p (mm)	1.00~4.00	2.00~7.00	3.00~9.00	
			f_n (mm/rev)	R04: 0.16~0.27	R08: 0.27~0.46		
				R12: 0.26~0.44	R12: 0.32~0.53	R12: 0.34~0.58	
R16: 0.29~0.50	R16: 0.35~0.60	R16: 0.38~0.65					
P		NRK	a_p (mm)	1.00~3.50	2.00~5.00	4.00~8.00	5.00~11.00
			f_n (mm/rev)	R08: 0.23~0.39	R08: 0.28~0.48	R08: 0.34~0.58	
				R12: 0.33~0.56	R12: 0.40~0.68	R12: 0.43~0.73	
R16: 0.37~0.63	R16: 0.45~0.76	R16: 0.49~0.82					
P		(Flat)	a_p (mm)	1.00~4.00	2.00~6.00	4.00~10.00	5.00~13.00
			f_n (mm/rev)	R04: 0.16~0.28	R04: 0.20~0.35		
				R08: 0.23~0.40	R08: 0.28~0.50	R08: 0.34~0.60	
	R12: 0.33~0.58	R12: 0.40~0.70		R12: 0.43~0.76			
P		NSP	a_p (mm)	0.35~1.50	0.50~2.00		
			f_n (mm/rev)	R04: 0.05~0.17	R04: 0.06~0.21		
				R08: 0.07~0.24	R08: 0.08~0.30		
P		NFP		a_p (mm)	0.70~2.00	1.00~2.50	
			f_n (mm/rev)	R04: 0.05~0.15	R04: 0.06~0.18		
				R08: 0.07~0.20	R08: 0.08~0.25		
	R12: 0.10~0.29						
P		NUP	a_p (mm)	0.70~3.50	1.00~4.50	2.00~8.00	3.00~10.00
			f_n (mm/rev)	R04: 0.09~0.20	R04: 0.11~0.25		
				R08: 0.12~0.28	R08: 0.15~0.35	R08: 0.18~0.42	R08: 0.20~0.46
R12: 0.15~0.33	R12: 0.18~0.41	R12: 0.22~0.50		R12: 0.24~0.54			
P		NMP	a_p (mm)	1.00~3.00	1.50~4.00	3.00~7.00	4.00~9.00
			f_n (mm/rev)	R04: 0.11~0.20	R04: 0.13~0.24		
				R08: 0.15~0.27	R08: 0.18~0.33	R08: 0.22~0.40	
	R12: 0.21~0.38	R12: 0.26~0.46		R12: 0.28~0.50			
		R16: 0.24~0.43	R16: 0.29~0.52	R16: 0.32~0.56			

CUTTING PARAMETERS a_p (mm) & f_n (mm/rev)

negative 



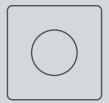



NEGATIVE INSERT SIZE		CN□□	-	1204...	1606...	1906...	2509...
		DN□□	1104...	1506...	-	-	-
		SN□□	0903...	1204...	-	1906...	2509...
		TN□□	-	1604...	2204...	-	-
		VN□□	-	1604...	-	-	-
		WN□□	0604...	0804...	-	-	-



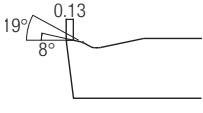
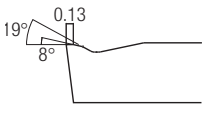
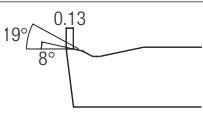

P		NRP	a_p (mm)	2.50~5.50	4.00~9.00	6.00~12.00	
			f_n (mm/rev)	R08: 0.25~0.45	R12: 0.35~0.63	R12: 0.38~0.68	
				R16: 0.29~0.52	R16: 0.40~0.71	R16: 0.43~0.77	R24: 0.49~0.86
P		NTP	a_p (mm)	3.00~6.00	5.00~10.00	7.00~13~00	
			f_n (mm/rev)	R08: 0.28~0.50	R12: 0.40~0.70	R12: 0.43~0.76	
				R12: 0.33~0.58	R16: 0.45~0.78	R16: 0.49~0.85	
P M		MRP	a_p (mm)			6.00~13.00	8.00~18.00
			f_n (mm/rev)			R16: 0.35~0.80	R24: 0.40~0.90
						R24: 0.40~0.90	R24: 0.50~1.10
P M		NMU	a_p (mm)	1.00~4.50			
			f_n (mm/rev)	R04: 0.14~0.28			
				R08: 0.20~0.40			
M		NFM	a_p (mm)	0.35~1.50	0.50~2.00		
			f_n (mm/rev)	R04: 0.05~0.17	R04: 0.06~0.21		
				R08: 0.07~0.24	R08: 0.08~0.30		
M		NMM	a_p (mm)	1.00~3.00	1.50~4.00	3.00~7.00	4.00~9.00
			f_n (mm/rev)	R04: 0.13~0.23	R04: 0.16~0.28	R08: 0.27~0.48	
				R08: 0.18~0.32	R08: 0.22~0.40	R12: 0.32~0.56	R12: 0.34~0.60
N		NMN	a_p (mm)	0.70~2.50	1.00~3.50		
			f_n (mm/rev)	R04: 0.09~0.23	R04: 0.11~0.28		
				R08: 0.12~0.32	R08: 0.15~0.40		
			R12: 0.18~0.46				

CUTTING PARAMETERS a_p (mm) & f_n (mm/rev)

positive 

POSITIVE INSERT SIZE		CC□□	0602...	09T3...	1204...	-	
		DC□□	0702...	11T3...	1504...	-	
		SC□□	-	09T3...	1204...	-	
		TC□□	0902...	1102...	16T3...	2204...	
		VB / VC□□	-	1103...	1604...	2205...	
		WC□□	-	12T3...	-	-	

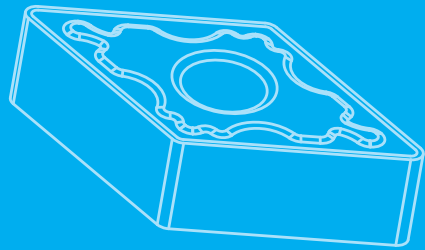


K		PMU	a_p (mm)	0.50~1.50	0.80~2.50	1.50~4.50	2.00~6.00	
			f_n (mm/rev)	R02: 0.06~0.15	R02: 0.07~0.18			
				R04: 0.08~0.20	R04: 0.10~0.25	R04: 0.12~0.30		
				R08: 0.10~0.24	R08: 0.12~0.29	R08: 0.15~0.35	R08: 0.18~0.44	
P		PMU	a_p (mm)	0.50~1.50	0.80~2.50	1.50~4.50	2.00~6.00	
			f_n (mm/rev)	R02: 0.06~0.13	R02: 0.07~0.16			
				R04: 0.08~0.18	R04: 0.10~0.22	R04: 0.12~0.27		
				R08: 0.10~0.21	R08: 0.12~0.26	R08: 0.15~0.32	R08: 0.18~0.39	
M		PMU	a_p (mm)	0.50~1.50	0.80~2.50	1.50~4.50	2.00~6.00	
			f_n (mm/rev)	R02: 0.04~0.12	R02: 0.05~0.14			
				R04: 0.06~0.16	R04: 0.07~0.20	R04: 0.09~0.24		
				R08: 0.08~0.19	R08: 0.09~0.23	R08: 0.11~0.28	R08: 0.14~0.35	
N		PMN	a_p (mm)	0.50~2.00	0.80~3.00	1.50~5.50	2.00~7.00	
			f_n (mm/rev)	R02: 0.05~0.15	R02: 0.06~0.18	R02: 0.07~0.21		
				R04: 0.07~0.20	R04: 0.08~0.25	R04: 0.10~0.30		
				R08: 0.08~0.24	R08: 0.10~0.29	R08: 0.12~0.35	R30: 0.27~0.66	
				R12: 0.14~0.40				

Cermet JU4015 f_n -15%











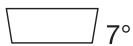
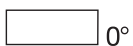

TURNING / PCBN





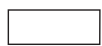
ISO 1832








C	N	G	A	12	04	08	-	4E	V	-	GP	NB	S	9000
1	2	3	4	5	6	7		8	9		10	11	12	13

1	GEOMETRY
C	
D	
R	
S	
T	
V	
W	

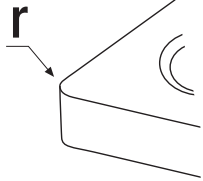

2	CLEARANCE ANGLE
B	
C	
N	
P	

3	TOLERANCE [mm]	
		
G	±0.025	±0.13
M	±0.05 ~ ±0.15	±0.13

4	SHAPE
A	
N	
W	
X	NIKKO NORM

5	EDGE LENGHT [mm]
06 09 12	C 
07 11 15	D 
06 09 12	R 
09 12	S 
08 09 11 16	T 
11 16	V 
08	W 

6	THICKNESS [mm]
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35

7	RADIUS [mm]
...	
00	

C	N	G	A	12	04	08	-	4E	V	-	GP	NB	S	9000
1	2	3	4	5	6	7		8	9		10	11	12	13

8	NR. OF EDGES
2E	
3E	
4E	
6E	
8E	

9	TIP STYLE
V	 vertical
-	 carbide reinforced

10	EDGE PREPARATION
CC	
CS	
GP	
GS	
HI	
WH wiper	

11	
NB	NIKKO PCBN

12	PCBN STYLE
S	 solid
	 vertical
-	 carbide reinforced

13	APPLICATION
0~3 _{□□}	ISO H
4~5 _{□□}	ISO K S
9 _{□□□}	UNIVERSAL

GRADES

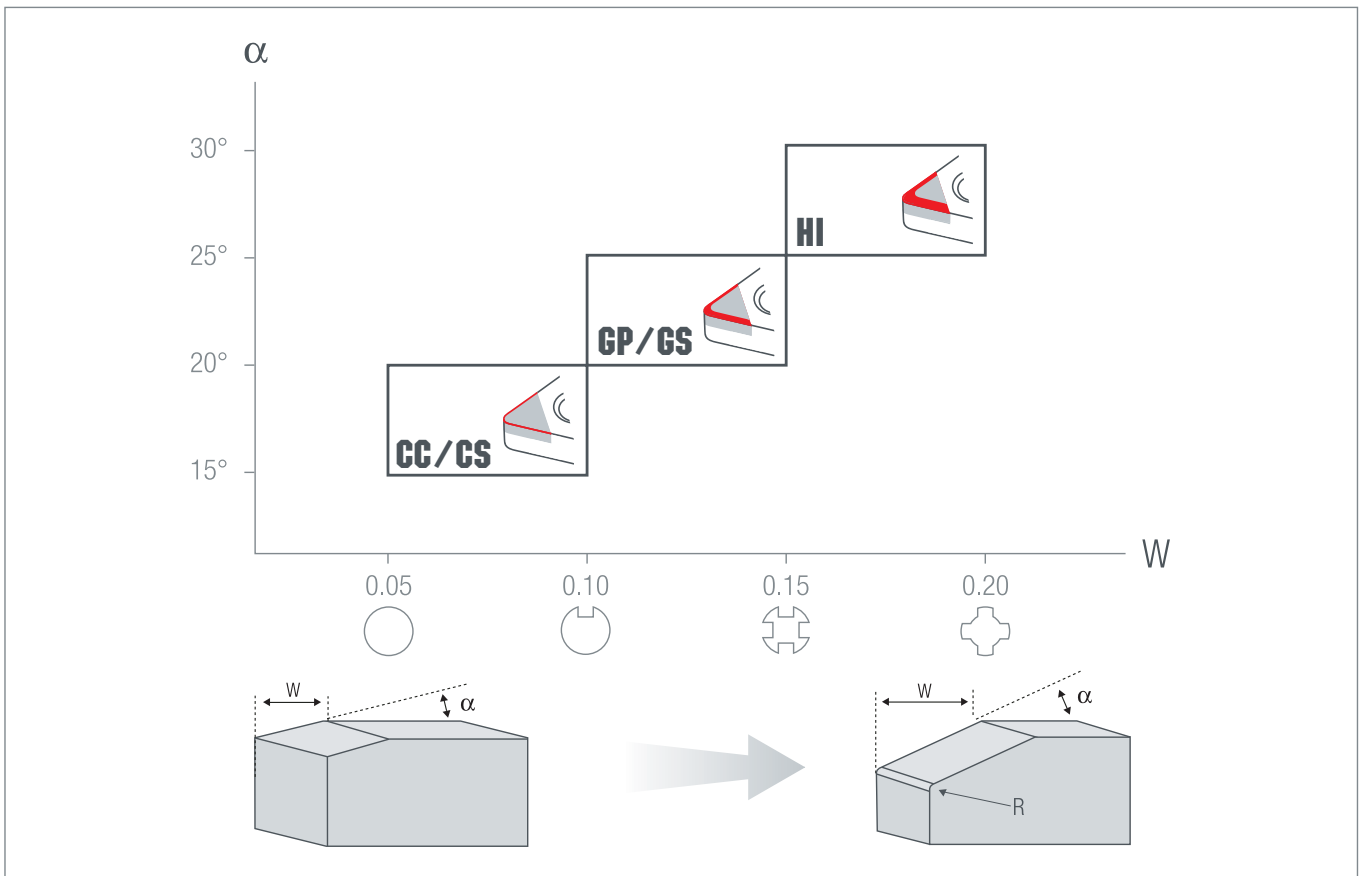
ISO DIN 513	H					K					S				
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40	S01	S10	S20	S30	S40
PCBN-Carbide reinforced	NB050														
	NB150					NB400									
	NB200					NB450					NB440				
	NB250					NB500									
	NB300					NB550									
	NB350														
PCBN-Vertical & Solid (NBS Series)	NBS050														
	NBS150					NBS450									
	NBS200					NBS500									
	NBS250					NBS9000									
	NBS300					NBS9050									
	NBS350					NBS9090									
	NBS9000														
	NBS9050														
	NBS9090														

COATED

INSERT STYLE

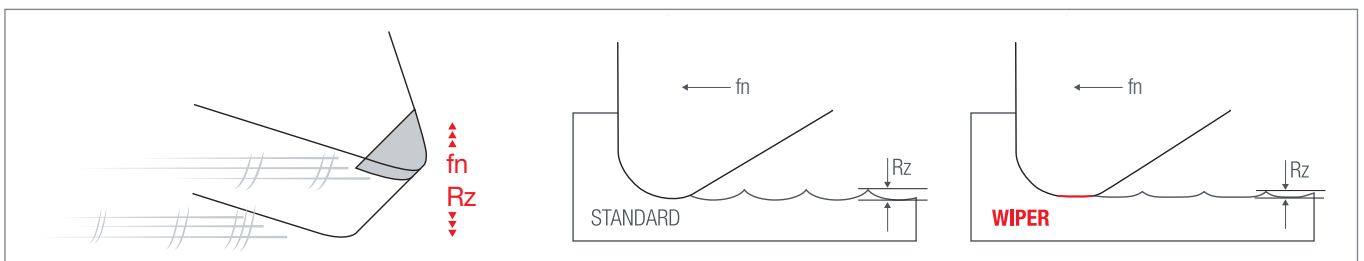


EDGE PREPARATION

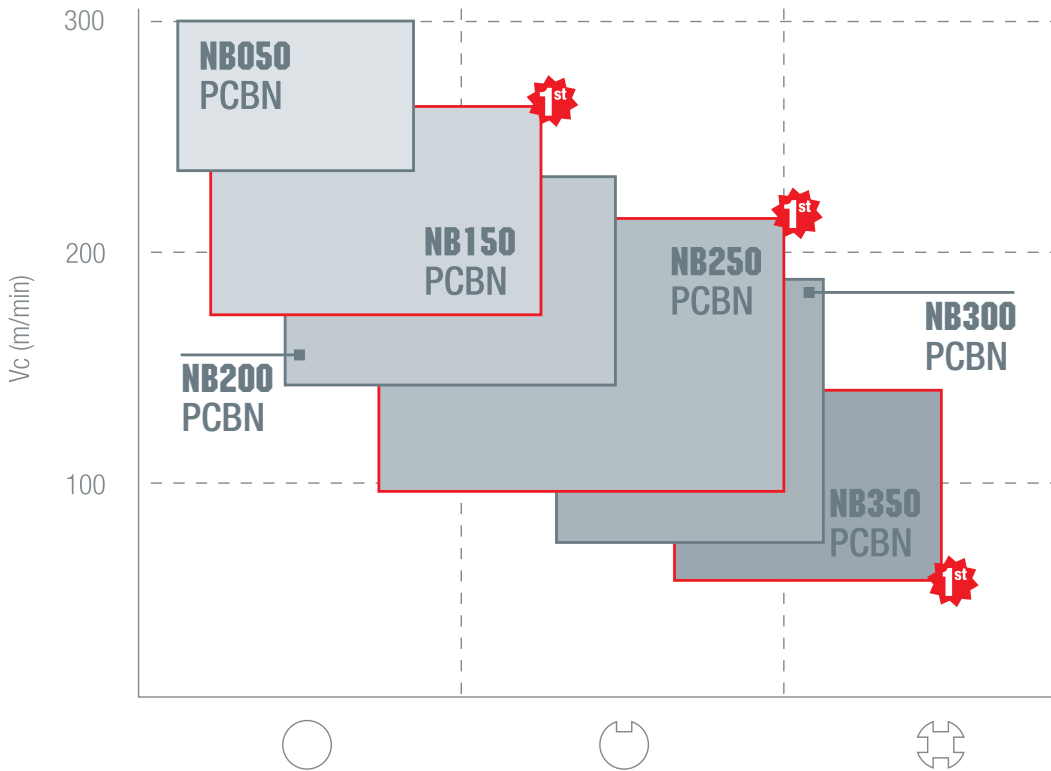


CS, GS available only for positive inserts.

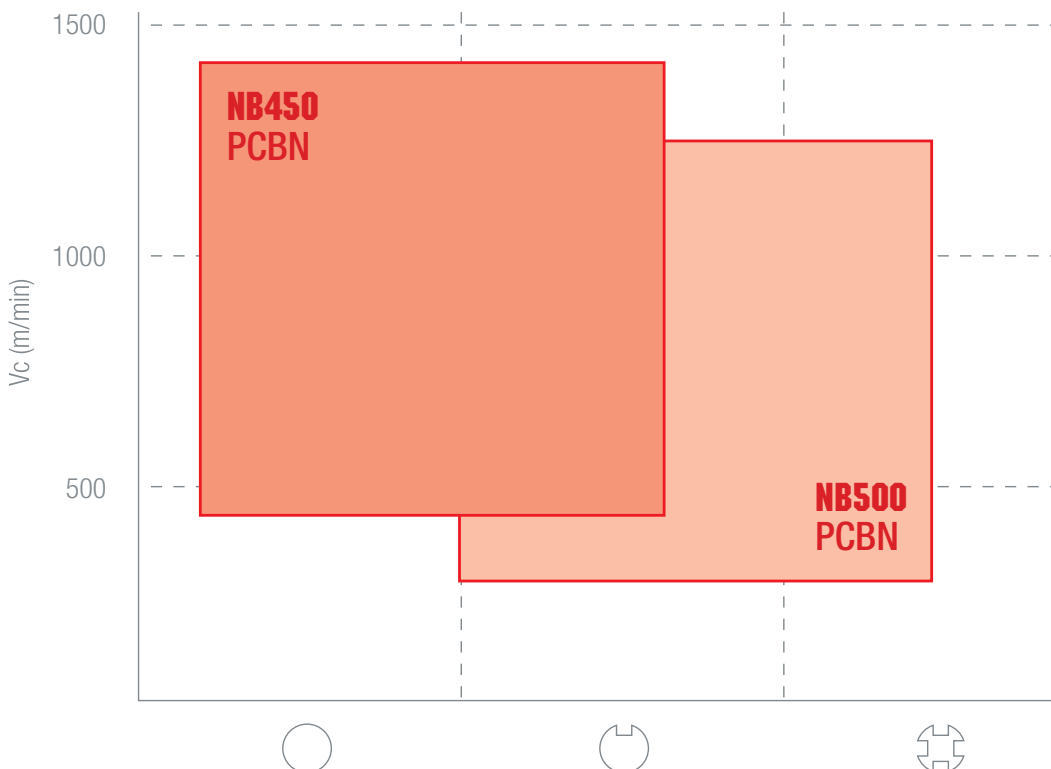
WIPER



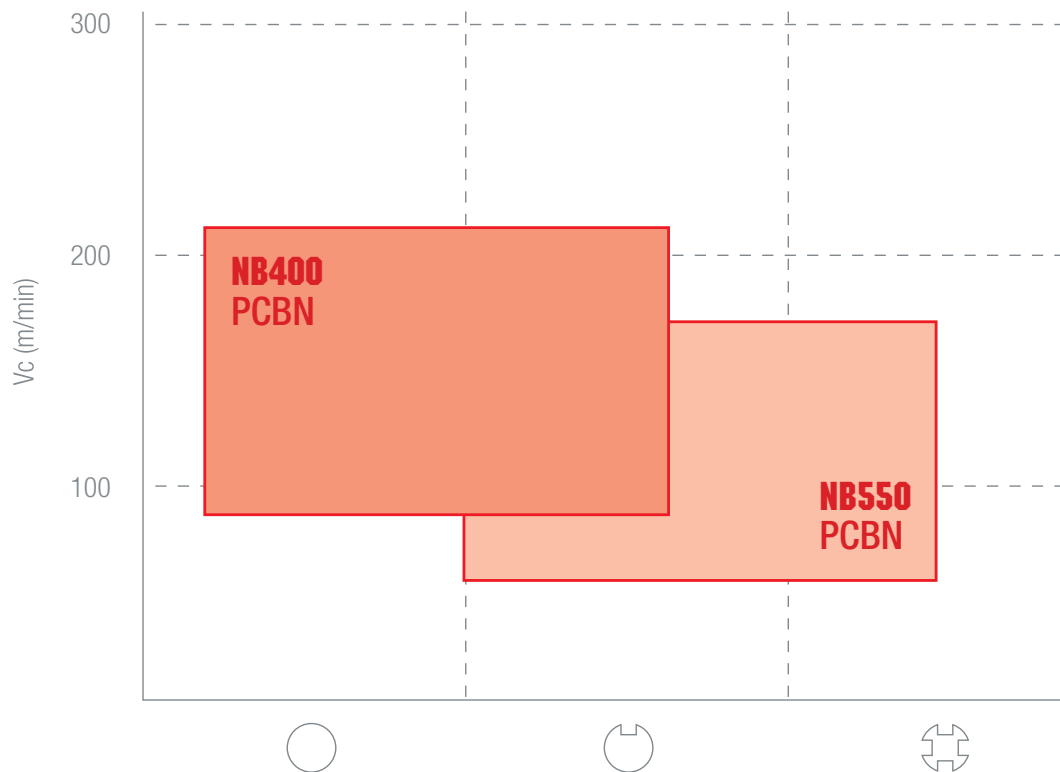
RANGE ISO **H** PCBN-Carbide reinforced



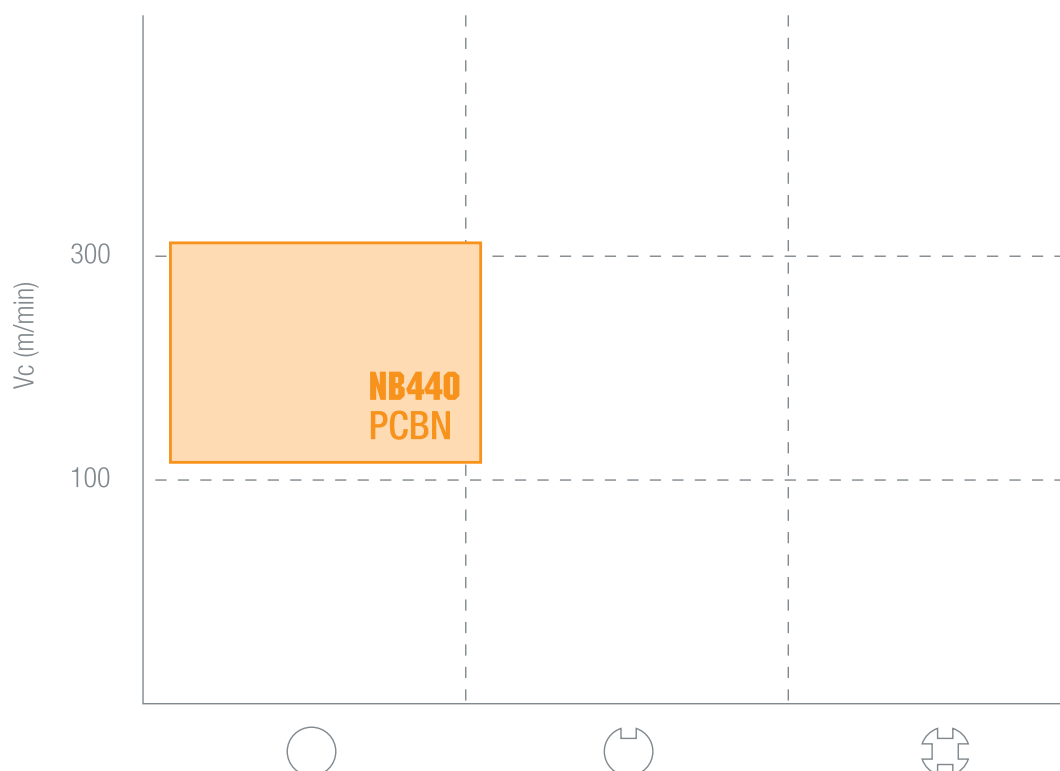
RANGE ISO **K** PCBN-Carbide reinforced



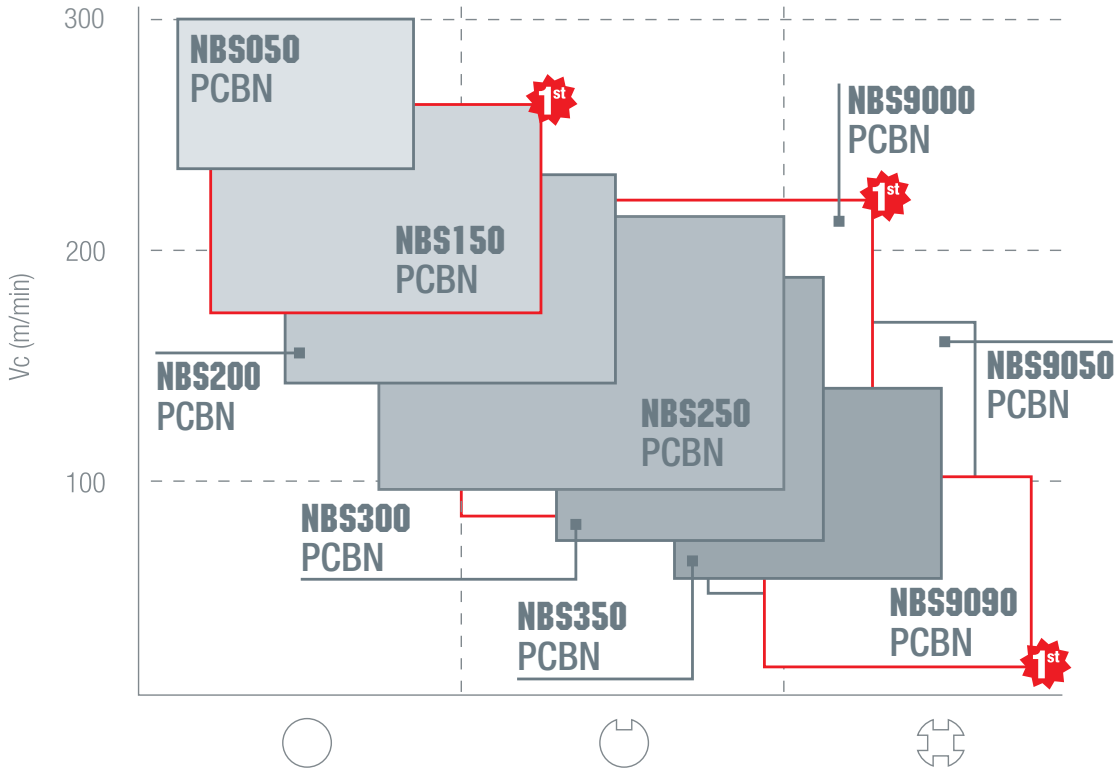
RANGE ISO **K** (Powder Metal) PCBN-Carbide reinforced



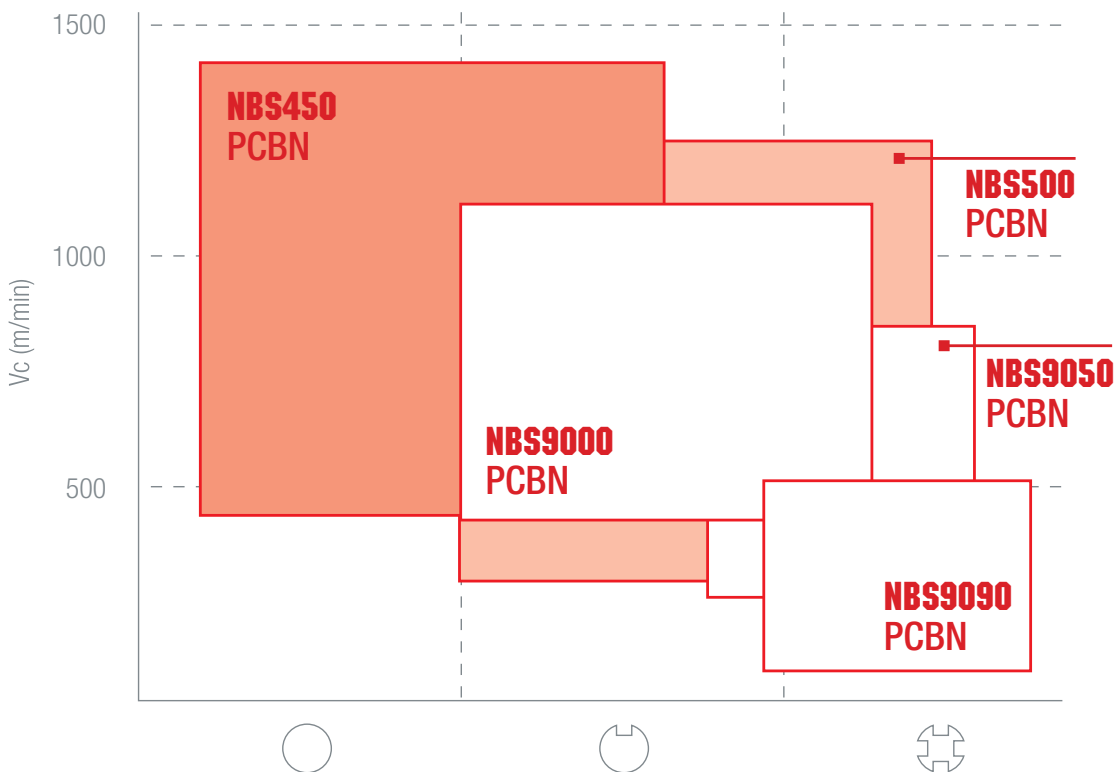
RANGE ISO **S** PCBN-Carbide reinforced



RANGE ISO  PCBN-Vertical & Solid (NBS Series)

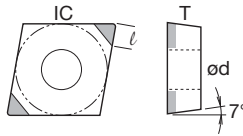


RANGE ISO  PCBN-Vertical & Solid (NBS Series)



POSITIVE 7°
with hole

CC □ □



CC □ □ 0602 □ □ 09T3 □ □ 1204 □ □

IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50

HOLDERS

127

127

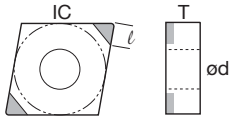
127

DESCRIPTION			l	PCBN-Carbide reinforced														
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440				
CC		CCGW	060202-2E-CC	2.8		●		○										
			060204-2E-CC	2.8	○	●		●					●				■	
			060208-2E-CC	2.7		●		●					●				■	
			09T302-2E-CC	2.8		○												
			09T304-2E-CC	2.8	○	●		●					●				■	
			09T308-2E-CC	2.7		●		●					●				■	
CS		CCGW	060202-2E-CS	2.8		○	○											
			060204-2E-CS	2.8		●	●											
			060208-2E-CS	2.7		○	○											
			09T302-2E-CS	2.8		○	○											
			09T304-2E-CS	2.8		●	●											
			09T308-2E-CS	2.7		○	○											
GP		CCGW	060202-2E-GP	2.8						●								
			060204-2E-GP	2.8	○	●		●		●	●	●				■		
			060208-2E-GP	2.7		○		●		●	●	●						
		CCGW	09T302-2E-GP	2.8				●		●	●	●						
			09T304-2E-GP	2.8	○	●		●		●	●	●	●			■		
			09T308-2E-GP	2.7		●		●		●	●	●						
CCGW	120404-2E-GP	2.8				●												
	120408-2E-GP	2.7				●					●							
GS		CCGW	060204-2E-GS	2.8			●	○	●									
			060208-2E-GS	2.7			○	○	○									
		CCGW	09T304-2E-GS	2.8			●	○	●	●								
			09T308-2E-GS	2.7			●	○	●									
HI		CCGW	060204-2E-HI	2.8						●				○				
			060208-2E-HI	2.7						●				○				
		CCGW	09T304-2E-HI	2.8						●				○				
			09T308-2E-HI	2.7						●				○				
WH WIPER		CCGW	09T304-2E-WH	2.8	●	○				○								
			09T308-2E-WH	2.7	●	○				○								

●, ○ = NEW ITEM

NEGATIVE
with hole

CN□□



CN□□ 1204□□

IC 12,70

T 4,76

ød 5,16

HOLDERS 131

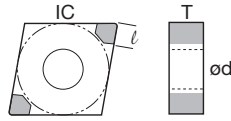
DESCRIPTION		IC	T	PCBN-Carbide reinforced												
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440		
CC		CNGA	120404-2E-CC	2.8	○	●		●					●			
				2.7	○	●		●			○	●				
				2.6	○	●		●			○	●				
GP		CNGA	120404-2E-GP	2.8	○	●		●		●	●	●				
				2.7	○	●		●		●	●	●	●	○	■	
				2.6	○	●		●		●	●	●	●	○		
HI		CNGA	120404-2E-HI	2.8						●						
				2.7				●		●			○			
				2.6				●		●			○			
WH WIPER		CNGA	120404-2E-WH	2.8	●	●				●						
				2.7	●	●				●		○				
				2.6	●	●				●		○				

●, ○ = NEW ITEM

NEGATIVE - VERTICAL
with hole

NEW

CN □ □



CN □ □ 1204 □ □

IC 12,70

T 4,76

Ød 5,16

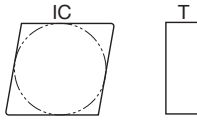
HOLDERS 131

DESCRIPTION				l	PCBN-Vertical														
					NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000						
CC		CNGA 4 EDGES		120404-4EV-CC	2.7		○	○											
				120408-4EV-CC	2.6		○	○											
				120412-4EV-CC	2.5		○	○											
GP		CNGA 4 EDGES		120404-4EV-GP	2.7		●	●	●							●			
				120408-4EV-GP	2.6		●	●	●				○	○	●				
				120412-4EV-GP	2.5		●	●	●				○	○	●				
HI		CNGA 4 EDGES		120404-4EV-HI	2.7					○	○				●				
				120408-4EV-HI	2.6					●	●		○	●					
				120412-4EV-HI	2.5					●	●		○	●					
WH WIPER		CNGA 4 EDGES		120404-4EV-WH	2.7	○	○	○											
				120408-4EV-WH	2.6	○	○	○											
				120412-4EV-WH	2.5	○	○	○											

●, ○ = NEW ITEM

**NEGATIVE - SOLID
without hole**

CN □ □

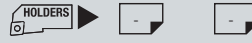


CN □ □ 0903 □ □ 1204 □ □

IC 9,525 12,70

T 3,18 4,76

Ød - -

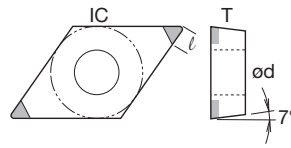


DESCRIPTION				PCBN-Solid													
				NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	NBS9050	NBS9090			
GP		CNGN 090308-GP	S02020											●	●	○	
		CNGN 090312-GP	S02020												●	●	○
		CNGN 090316-GP	S02020												○	○	○
		CNGN 120408-GP	S02020												●	●	○
		CNGN 120412-GP	S02020												●	●	○
		CNGN 120416-GP	S02020												●	○	○

●, ○ = NEW ITEM

POSITIVE 7°
with hole

DC



DC 0702 11T3

IC	6,35	9,525
T	2,38	3,97
Ød	2,80	4,40

HOLDERS

135

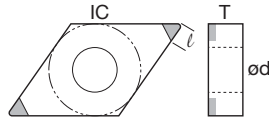
135

DESCRIPTION		IC	l	PCBN-Carbide reinforced												
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440		
CC	DCGW		2.5	070202-2E-CC	●		○									
				070204-2E-CC	●		●					○				
				070208-2E-CC	○		○					○				
	DCGW		2.5	11T302-2E-CC	○		●									
				11T304-2E-CC	●		●				○			■		
				11T308-2E-CC	●		●				●			■		
CS	DCGW		2.5	070202-2E-CS	○	○	○									
				070204-2E-CS	●	●										
				070208-2E-CS	○	○	○									
	DCGW		2.5	11T302-2E-CS	○	○	○									
				11T304-2E-CS	●	●										
				11T308-2E-CS	○	○										
GP	DCGW		2.5	070202-2E-GP	○		●			○						
				070204-2E-GP	●		●		●			○				
				070208-2E-GP	○		●		○			○				
	DCGW		2.5	11T302-2E-GP	○		●			●						
				11T304-2E-GP	●		●		●			●		■		
				11T308-2E-GP	○		●		●			●				
GS	DCGW		2.4	070204-2E-GS		●	○	●								
				070208-2E-GS		○	○	○								
	DCGW		2.4	11T304-2E-GS		●	○	○	○							
				11T308-2E-GS		●	○	○	○							
HI	DCGW		2.4	070204-2E-HI						●						
				070208-2E-HI						●						
	DCGW		2.4	11T304-2E-HI						●						
				11T308-2E-HI				●		●		●*				
				11T312-2E-HI					●		●					
*NB450U = uncoated																

●, ○ = NEW ITEM

NEGATIVE
with hole

DN □ □



DN □ □ 1504 □ □ 1506 □ □

IC 12,70 12,70

T 4,76 6,35

Ød 5,16 5,16



141

141

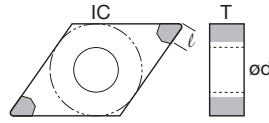
DESCRIPTION		Image	l	PCBN-Carbide reinforced															
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440					
CC			2.4		●														
					●														
					○	●	○	●											
					○	●	○	●											
					○	●	○	●											
GP			2.4					●											
								●											
					●	●	●	○	●			○							
					●	●	●	○	●			●	○						
					●	○	●	○	●			○	○						
HI			2.4						○										
							●		●										
									●										

●, ○ = NEW ITEM

**NEGATIVE - VERTICAL
with hole**

NEW

DN □ □



DN □ □ 1506 □ □

IC 12,70

T 6,35

Ød 5,16


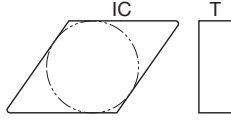
HOLDERS 141


DESCRIPTION			IC	T	PCBN-Vertical													
					NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000					
CC		4 EDGES	DNGA	150604-4EV-CC	3.2													
				150608-4EV-CC	2.9													
				150612-4EV-CC	2.5													
GP		4 EDGES	DNGA	150604-4EV-GP	3.2											●		
				150608-4EV-GP	2.9												●	
				150612-4EV-GP	2.5													●
HI		4 EDGES	DNGA	150604-4EV-HI	3.2											○		
				150608-4EV-HI	2.9												○	
				150612-4EV-HI	2.5													○


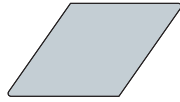
●, ○ = NEW ITEM

NEGATIVE - SOLID
without hole

DN □ □

DN□□	1103□□
IC	9,525
T	3,18
Ød	-
HOLDERS	

DESCRIPTION				PCBN-Solid															
				NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	NBS9050	NBS9090					
GP		DNGN 110308-GP	S02020											○			○		
		110312-GP	S02020												○			○	
		110316-GP	S02020												○			○	

●, ○ = NEW ITEM

NEGATIVE - SOLID
without hole

RN □ □

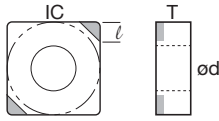
RN □ □	0603 □ □	0903 □ □	0904 □ □	1203 □ □	1204 □ □
IC	6,35	9,525	9,525	12,70	12,70
T	3,18	3,18	4,76	3,18	4,76
Ød	-	-	-	-	-
HOLDERS					

DESCRIPTION			PCBN-Solid												
			NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	NBS9050	NBS9090		
GP		RNGN 060300-GP	S02020								●	●	●	●	●
		RNGN 090300-GP	S02020								●	●	●	●	●
		RNGN 090400-GP	S02020								○	○	○		○
		RNGN 120300-GP	S02020								○	○	●	●	●
		RNGN 120400-GP	S02020								●	●	●	●	●
HI		RNGN 120400-HI	S10020										●	●	●

●, ○ = NEW ITEM

NEGATIVE
with hole

SN □ □



SN □ □ 1204 □ □

IC 12,70

T 4,76

ød 5,16

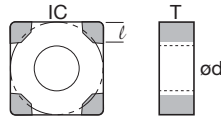
HOLDERS 145

DESCRIPTION		Image	l	PCBN-Carbide reinforced														
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440				
CC		SNGA	120404-2E-CC	2.9	○		○											
			120408-2E-CC	2.9	○		○											
			120412-2E-CC	2.9	○		○											
GP		SNGA	120404-2E-GP	2.9	○		○		○									
			120408-2E-GP	2.9	○		●		○									
			120412-2E-GP	2.9	○		○		○									
HI		SNGA	120404-2E-HI	2.9					○									
			120408-2E-HI	2.9					○									
			120412-2E-HI	2.9					●									

NEGATIVE - VERTICAL
with hole

NEW

SN □ □






SN □ □ 1204 □ □

IC 12,70

T 4,76

Ød 5,16

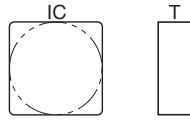
HOLDERS 145

DESCRIPTION		e	PCBN-Vertical											
			NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000			
CC	 8 EDGES SNGA	120404-8EV-CC	2.3	○										
		120408-8EV-CC	2.3	○										
		120412-8EV-CC	2.3	○										
GP	 8 EDGES SNGA	120404-8EV-GP	2.3			○							●	
		120408-8EV-GP	2.3			○			○				●	
		120412-8EV-GP	2.3			○			○				●	
HI	 8 EDGES SNGA	120404-8EV-HI	2.3						○			○		
		120408-8EV-HI	2.3						○		○	○		
		120412-8EV-HI	2.3						○		○	○		

●, ○ = NEW ITEM

NEGATIVE - SOLID
without hole

SN



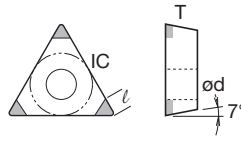
SN <input type="checkbox"/>	0903 <input type="checkbox"/>	0904 <input type="checkbox"/>	1204 <input type="checkbox"/>
IC	9,525	9,525	12,70
T	3,18	4,76	4,76
Ød	-	-	-
HOLDERS			

DESCRIPTION			PCBN-Solid																				
			NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	NBS9050	NBS9090										
GP		SNGN 090308-GP	S02020																				
		SNGN 090312-GP	S02020																				
		SNGN 090316-GP	S02020																				
		SNGN 090408-GP	S02020																				
		SNGN 090412-GP	S02020																				
		SNGN 090416-GP	S02020																				
		SNGN 120408-GP	S02020																				
		SNGN 120412-GP	S02020																				
		SNGN 120416-GP	S02020																				

●, ○ = NEW ITEM

POSITIVE 7°
with hole

TC□□



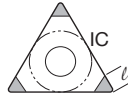
TC□□	0902□□	1102□□	16T3□□
IC	5,56	6,35	9,525
T	2,38	2,38	3,97
Ød	2,50	2,80	4,40
HOLDERS	149	149	149

DESCRIPTION		IC	l	PCBN-Carbide reinforced															
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440					
CC			TCGW	090202-3E-CC	2.6	○		○											
				090204-3E-CC	2.5	●		●											
				110202-3E-CC	2.6	●		○											
				110204-3E-CC	2.5	●		●							●				
				110208-3E-CC	2.2	●		●							●				■
				16T304-3E-CC	2.5	●		○											
CS			TCGW	110202-3E-CS	2.6	○	○												
				110204-3E-CS	2.5	●	●												
				110208-3E-CS	2.2	○	○												
				16T304-3E-CS	2.5	●	●												
				16T308-3E-CS	2.2	○	○												
GP			TCGW	090202-3E-GP	2.6	○		○											
				090204-3E-GP	2.5	○		●						●					
				110202-3E-GP	2.6	○		●											
				110204-3E-GP	2.5	●		●						●	●	●			■
				110208-3E-GP	2.2	●		●					○	●	●	●			■
				16T304-3E-GP	2.5	●		●					○	●	●	●			
GS			TCGW	110204-3E-GS	2.5		●	○	●										
				110208-3E-GS	2.2		○	○	○										
				16T304-3E-GS	2.5		●	○	○	●									
				16T308-3E-GS	2.2		●	○	○	●									
HI			TCGW	110204-3E-HI	2.5			○		●		●*	○						
				110208-3E-HI	2.2					●		●*	○						
				16T304-3E-HI	2.5					○		○*							
				16T308-3E-HI	2.2					○		○*							
*NB450U = uncoated																			

●, ○ = NEW ITEM

NEGATIVE
with hole

TN□□



TN□□ 1604□□

IC 9,525

T 4,76

ød 3,81

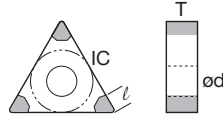
HOLDERS 153

DESCRIPTION			r	PCBN-Carbide reinforced												
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB400		
CC		TNGA	160404-3E-CC	2.5	●		●									
				2.2	●		●									
				1.9	●		○					●				
GP		TNGA	160404-3E-GP	2.5	●		●		●			●				
				2.2	●		●		●		●					
				1.9	●		●		○		○					
HI		TNGA	160404-3E-HI	2.5					●							
				2.2					●							
				1.9					●							

**NEGATIVE - VERTICAL
with hole**

NEW

TN □ □



TN □ □ 1604 □ □

IC 9,525

T 4,76

Ød 3,81

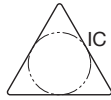


DESCRIPTION		l	PCBN-Vertical										
			NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000		
CC	 6 EDGES TNGA 160404-6EV-CC 160408-6EV-CC 160412-6EV-CC	2.4		●	○								
		2.1		●	○								
		1.9		○	○								
GP	 6 EDGES TNGA 160404-6EV-GP 160408-6EV-GP 160412-6EV-GP	2.4		●	●	●			○	○	●		
		2.1		●	●	●			○	○	●		
		1.9		●	●	●			○	○	●		
HI	 6 EDGES TNGA 160404-6EV-HI 160408-6EV-HI 160412-6EV-HI	2.4					○	○			○		
		2.1					○	○			○		
		1.9					○	○			○		

●, ○ = NEW ITEM

**NEGATIVE - SOLID
without hole**

TN □ □



TN □ □ 1103 □ □ 1604 □ □

IC 6,35 9,525

T 3,18 4,76

Ød - -

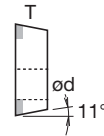
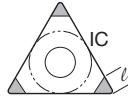


DESCRIPTION				PCBN-Solid													
				NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	NBS9050	NBS9090			
GP		TNGN	110308-GP	S02020											●		○
			110312-GP	S02020											○		○
			110316-GP	S02020											○		○
		TNGN	160408-GP	S02020											○		○
			160412-GP	S02020											○		○
			160416-GP	S02020											○		○

●, ○ = NEW ITEM

POSITIVE 11°
with hole

TP



TP 0802 0902 1103

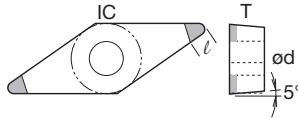
IC	4,76	5,56	6,35
T	2,38	2,38	3,18
Ød	2,30	3,00	3,30



DESCRIPTION		l	PCBN-Carbide reinforced														
			NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440				
CC		TPGW	080202-3E-CC	2.6	○		○										
			080204-3E-CC	2.5	○		○										
			090202-3E-CC	2.6	○		●										
			090204-3E-CC	2.5	●		○										
			110302-3E-CC	2.6	○		○										
			110304-3E-CC	2.5	●		○						●				
GP		TPGW	080202-3E-GP	2.6	○		●										
			080204-3E-GP	2.5	○		○										
			090202-3E-GP	2.6	○		○										
			090204-3E-GP	2.5	○		●						●				
			110302-3E-GP	2.6	○		○										
			110304-3E-GP	2.5	○		○						○				
HI		TPGW	110308-3E-HI	2.2									●*				
*NB450U = uncoated																	

POSITIVE 5°
with hole

VB □ □



VB □ □ 1103 □ □ 1604 □ □

IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40

HOLDERS

158

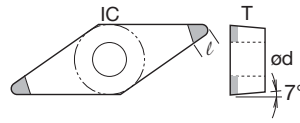
158

DESCRIPTION		IC	T	PCBN-Carbide reinforced																	
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440							
CC		VBGW	110302-2E-CC	3.0	○			○													
			110304-2E-CC	2.6	●			○													
			160402-2E-CC	3.0	○			○													
			160404-2E-CC	2.6	●			●													
			160408-2E-CC	1.7	●			●													
CS		VBGW	110302-2E-CS	3.0	○	○	○														
			110304-2E-CS	2.6	●	●															
			160402-2E-CS	3.0	○	○															
			160404-2E-CS	2.6	●	●															
			160408-2E-CS	1.7	○	○															
GP		VBGW	110302-2E-GP	3.0	○			●													
			110304-2E-GP	2.6	○			●		●											
			160402-2E-GP	3.0	●			●													
			160404-2E-GP	2.6	●			●			●										
			160408-2E-GP	1.7	●			●			●										
GS		VBGW	110304-2E-GS	2.6			●	○	●												
			110308-2E-GS	1.7			○	○	○												
			160404-2E-GS	2.6			●	○	●												
			160408-2E-GS	1.7			●	○	●												
HI		VBGW	110304-2E-HI	2.6						○											
			110308-2E-HI	1.7							○										
			160404-2E-HI	2.6							●		○*		○						
			160408-2E-HI	1.7						●		○*		○							
		*NB450U = uncoated																			

●, ○ = NEW ITEM

POSITIVE 7°
with hole

VC □ □



VC □ □ 1103 □ □ 1604 □ □

IC 6,35 9,525

T 3,18 4,76

Ød 2,80 4,40



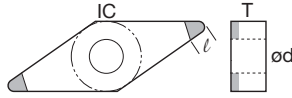
159

159

DESCRIPTION			l	PCBN-Carbide reinforced															
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440					
CC			3.0		○		○												
				VCGW 110302-2E-CC															
				VCGW 110304-2E-CC		●		○											
				VCGW 160404-2E-CC		○		●											
GP			3.0				○												
				VCGW 110302-2E-GP															
				VCGW 110304-2E-GP				○											
				VCGW 160404-2E-GP				○			○								
			1.7				○												
			1.7				○												

NEGATIVE
with hole

VN □ □



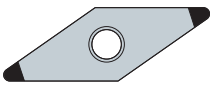

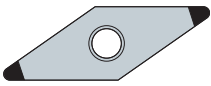

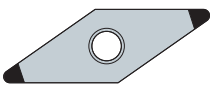

VN □ □ 1604 □ □

IC 9,525

T 4,76

ød 3,81

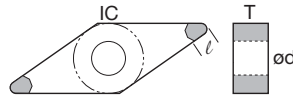
HOLDERS 163

DESCRIPTION		IC	l	PCBN-Carbide reinforced													
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB500	NB440			
CC	 VNGA 160404-2E-CC 160408-2E-CC		2.5	●			●										
			1.7	●			○										
GP	 VNGA 160404-2E-GP 160408-2E-GP		2.5		○		●		○								
			1.7		○		●		●								
HI	 VNGA 160404-2E-HI 160408-2E-HI		2.5						○								
			1.7						○								

**NEGATIVE - VERTICAL
with hole**

NEW

VN □ □



VN □ □ 1604 □ □

IC 9,525

T 4,76

Ød 3,81

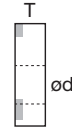
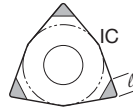
HOLDERS 163

DESCRIPTION			IC	PCBN-Vertical												
				NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000				
CC	4 EDGES	VNGA 160404-4EV-CC	2.3		○											
		160408-4EV-CC	2.2		○											
GP	4 EDGES	VNGA 160404-4EV-GP	2.3				○				○			●		
		160408-4EV-GP	2.2				○				○			●		
HI	4 EDGES	VNGA 160404-4EV-HI	2.3							○		○		○		
		160408-4EV-HI	2.2							○		○		○		

●, ○ = NEW ITEM

NEGATIVE
with hole

WN □ □



WN □ □ 0804 □ □

IC 12,70

T 4,76

Ød 5,16

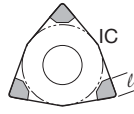
HOLDERS 167

DESCRIPTION		Image	r	PCBN-Carbide reinforced													
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440			
CC		WNGA	080404-3E-CC	2.8	●		○										
			080408-3E-CC	2.7	●		○										
			080412-3E-CC	2.6	○		○										
GP		WNGA	080404-3E-GP	2.8	○		○		○								
			080408-3E-GP	2.7	○		●		○		●						
			080412-3E-GP	2.6	○		○		○		○						
HI		WNGA	080404-3E-HI	2.8						●							
			080408-3E-HI	2.7						●							
			080412-3E-HI	2.6						●							

**NEGATIVE - VERTICAL
with hole**

NEW

WN □ □



WN □ □ 0804 □ □

IC 12,70

T 4,76

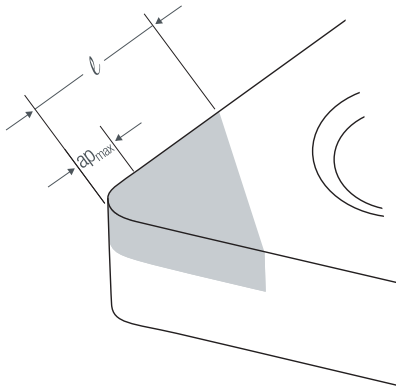
Ød 5,16

HOLDERS 167

DESCRIPTION		l	PCBN-Vertical									
			NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	
CC	 6 EDGES WNGA 080404-6EV-CC 080408-6EV-CC 080412-6EV-CC	2.7		○								
		2.6		○								
		2.5		○								
GP	 6 EDGES WNGA 080404-6EV-GP 080408-6EV-GP 080412-6EV-GP	2.7				○					●	
		2.6				○			○		●	
		2.5				○			○		●	
HI	 6 EDGES WNGA 080404-6EV-HI 080408-6EV-HI 080412-6EV-HI	2.7						○			●	
		2.6						○		○	●	
		2.5						○		○	●	

●, ○ = NEW ITEM

CUTTING PARAMETERS



$$ap_{\max} < 20 \sim 30\% r$$

H **HH**

HARDENED STEEL
 ACCIAIO TEMPRATO
 GEHÄRTETER STAHL
 ACIER TREMPÉ
 ACERO TEMPLADO
 ЗАКАЛЁННАЯ СТАЛЬ

H **HC**

CASEHARDENED STEEL
 ACCIAIO CEMENTATO
 EINGESETZTER STAHL
 ACIER CEMENTÉ
 ACERO CEMENTADO
 ЦЕМЕНТИРОВАННАЯ СТАЛЬ

H **HB**

BEARING STEEL
 ACCIAIO PER CUSCINETTI
 STAHL FÜR LAGER
 ACIER POUR ROULEMENTS
 ACERO PARA RODAMIENTOS
 СТАЛЬ ДЛЯ ПОДШИПНИКОВ

H **HM**

HARD METAL (**Co**≥17%)
 METALLO DURO (**Co**≥17%)
 VHM (**Co**≥17%)
 CARBURE (**Co**≥17%)
 METAL DURO (**Co**≥17%)
 ТВЁРДЫЙ СПЛАВ (**Co**≥17%)

K **KG**

GREY CAST IRON
 GHISA GRIGIA
 GRAUGUSS
 FONTE GRISE
 FUNDICIÓN GRIS
 ЧУГУН

K **KN**

NODULAR CAST IRON
 GHISA SFEROIDALE
 SPHÄROGUSS
 FONTE NODULAIRE
 FUNDICIÓN NODULAR
 ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ

K **KW**

WHITE CAST IRON
 GHISA BIANCA
 WEISSGUSS
 FONTE BLANCHE
 FUNDICIÓN BLANCA
 БЕЛЫЙ ЧУГУН

K **KS**

SINTERED MATERIAL (FERROUS)
 MATERIALI SINTERIZZATI (FERROSI)
 SINTERMATERIALIEN (EISERNE)
 MATÉRIAUX FRITTÉS (FERREUX)
 MATERIALES SINTERIZADOS (BASE HIERRO)
 СПЕЧЁННЫЕ МАТЕРИАЛЫ (МЕТАЛЛ)

S **SA**

SUPER ALLOYS (Ni BASED)
 SUPERLEGHE (BASE Ni)
 SONDERLEGIERUNGEN (Ni BASIS)
 SUPERALLIAGES (BASE Ni)
 SUPERALEACIONES (BASE Ni)
 СУПЕРСПЛАВЫ (НА ОСНОВЕ Ni)

CUTTING PARAMETERS PCBN-Carbide reinforced

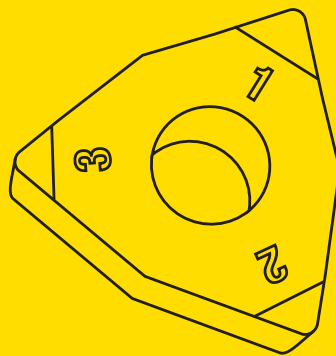
MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS	PCBN-Carbide reinforced														
				NB050	NB150	NB200	NB250	NB300	NB350	NB400	NB450	NB500	NB550	NB440				
H	HH	0.05~0.25	0.05~0.20	○	☹	☹	120~250	★ 120~250	100~230	100~200								
				⊕	☹			80~180	80~180	★ 60~160								
	HC	0.05~0.25	0.08~0.25	○	☹	☹				★ 100~180	100~180	100~160						
				⊕	☹			80~160	80~160	★ 60~140								
	HB	0.05~0.25	0.05~0.20	○	☹	☹	120~220	★ 120~220	100~200	100~180								
				⊕	☹			80~150	80~150	★ 60~120								
K	KG	0.10~0.50	0.10~0.30	○	☹	☹							★ 400~1000	400~1000				
				⊕	☹								★ 400~800	400~800				
	KN	0.10~0.30	0.05~0.20	○	☹							★ 250~400				250~400		
				⊕	☹							★ 150~300			★ 150~300			
	KW	0.10~0.30	0.10~0.30	○	☹								★ 60~100	60~100				
				⊕	☹								★ 50~80	50~80				
	KS	0.05~0.20	0.05~0.25	○	☹		100~220					★ 160~250	160~250					
				⊕	☹					60~180					★ 120~200	120~200		
	S	SA	0.05~0.20	0.05~0.20	○	☹										★ 120~300	★ 120~300	

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

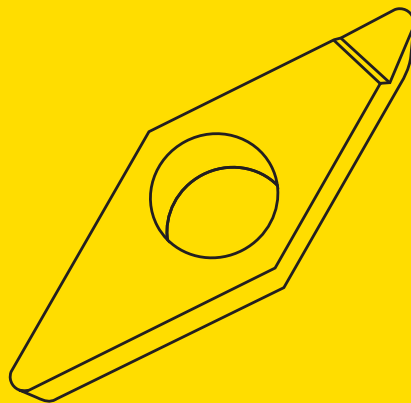
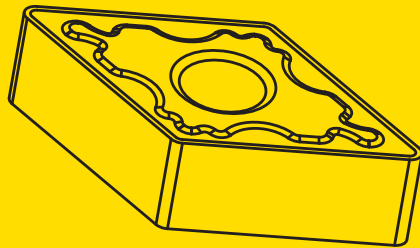
CUTTING PARAMETERS PCBN-Vertical & Solid (NBS Series)

MATERIAL		ap (mm)	fn (mm/rev)	CUTTING CONDITIONS		PCBN-Vertical & Solid													
						NBS050	NBS150	NBS200	NBS250	NBS300	NBS350	NBS450	NBS500	NBS9000	NBS9050	NBS9090			
H	HH	VERTICAL	0.05~0.25	0.05~0.20	○	☹	120~280	★ 120~280	100~250	100~220									
					⊕	☹			80~200	80~200	★ 60~180			80~180					
		SOLID	0.30~3.00	0.10~0.30	○	☹					100~200	100~180			★				
					⊕	☹								★ 100~220	★ 80~180	60~180	50~150		
	HC	VERTICAL	0.05~0.25	0.08~0.25	○	☹				★ 100~200	100~200	100~180							
					⊕	☹			80~180	80~180	★ 60~150			80~160					
		SOLID	0.30~3.00	0.10~0.30	○	☹					80~200	80~180			★				
					⊕	☹								★ 100~200	★ 80~160	60~150	50~120		
	HB	VERTICAL	0.05~0.25	0.05~0.20	○	☹	120~240	★ 120~240	100~220	100~200									
					⊕	☹				80~170	80~170	★ 60~140			90~150				
		SOLID	0.30~2.00	0.20~0.40	○	☹					80~160	80~150			★				
					⊕	☹									★ 100~200	★ 90~150	80~150	60~140	
HM	VERT.	0.05~0.25	0.05~0.15	○	☹									★			10~40		
	SOLID	0.30~2.00	0.10~0.25	⊕	☹									★			20~35		
K	KG	VERTICAL	0.10~0.50	0.10~0.30	○	☹							★ 400~1200	400~1200	400~1200				
					⊕	☹									★ 400~1000	★ 400~1000	400~1000		
		SOLID	0.50~3.00	0.20~0.60	○	☹								★ 500~1500	500~1500	★ 500~1500			
					⊕	☹									★ 400~1000	★ 400~1000	400~1000		
	KN	VERTICAL	0.10~0.30	0.05~0.20	○	☹							★ 250~500	250~500	★ 250~500				
					⊕	☹									★ 200~400	★ 200~400	200~400		
	KW	VERTICAL	0.10~0.30	0.10~0.30	○	☹							★ 60~120	60~120	★ 60~120				
					⊕	☹									★ 50~100	★ 50~100	50~100		
		SOLID	0.40~3.00	0.20~0.60	○	☹								★ 60~120	60~120	★ 60~120			
					⊕	☹									★ 50~100	★ 50~100	50~100		
	KS	VERTICAL	0.10~0.40	0.05~0.25	○	☹									★			160~280	
					⊕	☹						60~200				★		120~220	
SOLID	0.40~3.00	0.10~0.30	○	☹										★			160~280		
			⊕	☹						60~200				★		120~220			

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор










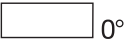

TURNING / diamond









ISO 1832






C	N	G	A	12	04	08	-	LRG	ND	100
1	2	3	4	5	6	7		8	9	10

1	GEOMETRY
C	
D	
T	
V	
W	

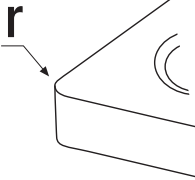
2	CLEARANCE ANGLE
B	
C	
N	
P	

3	TOLERANCE [mm]	
		
G	±0.025	±0.13





4	SHAPE
A	
M	
T	
W	
X	NIKKO NORM

5	EDGE LENGTH [mm]
06 09 12	C 
07 11 15	D 
08 09 11 16	T 
11 16	V 
08	W 

6	THICKNESS [mm]
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35

7	RADIUS [mm]
...	

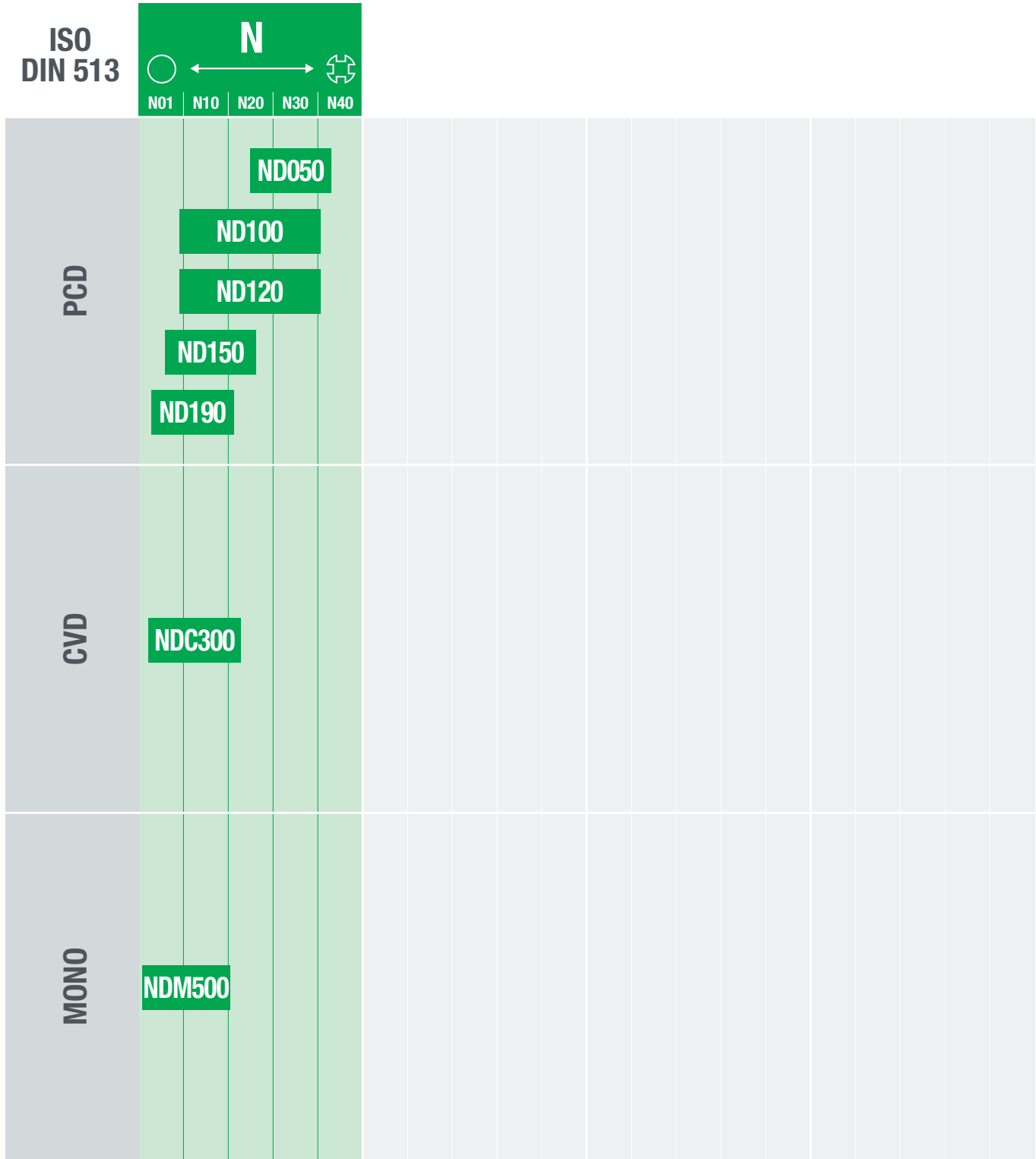
C	N	G	A	12	04	08	-	LRG	ND	100
1	2	3	4	5	6	7		8	9	10

8	
CBF	 finishing chipbreaker
CBG	 roughing chipbreaker
LRG	 large tip
-	 standard tip

9	
ND	PCD diamond
NDC	CVD diamond
NDM	MONOcrystalline

10	
050	PCD fine grit
100	PCD medium grit
120	PCD medium grit
150	PCD mixed grit
190	PCD coarse grit
300	CVD diamond
500	MONOcrystalline

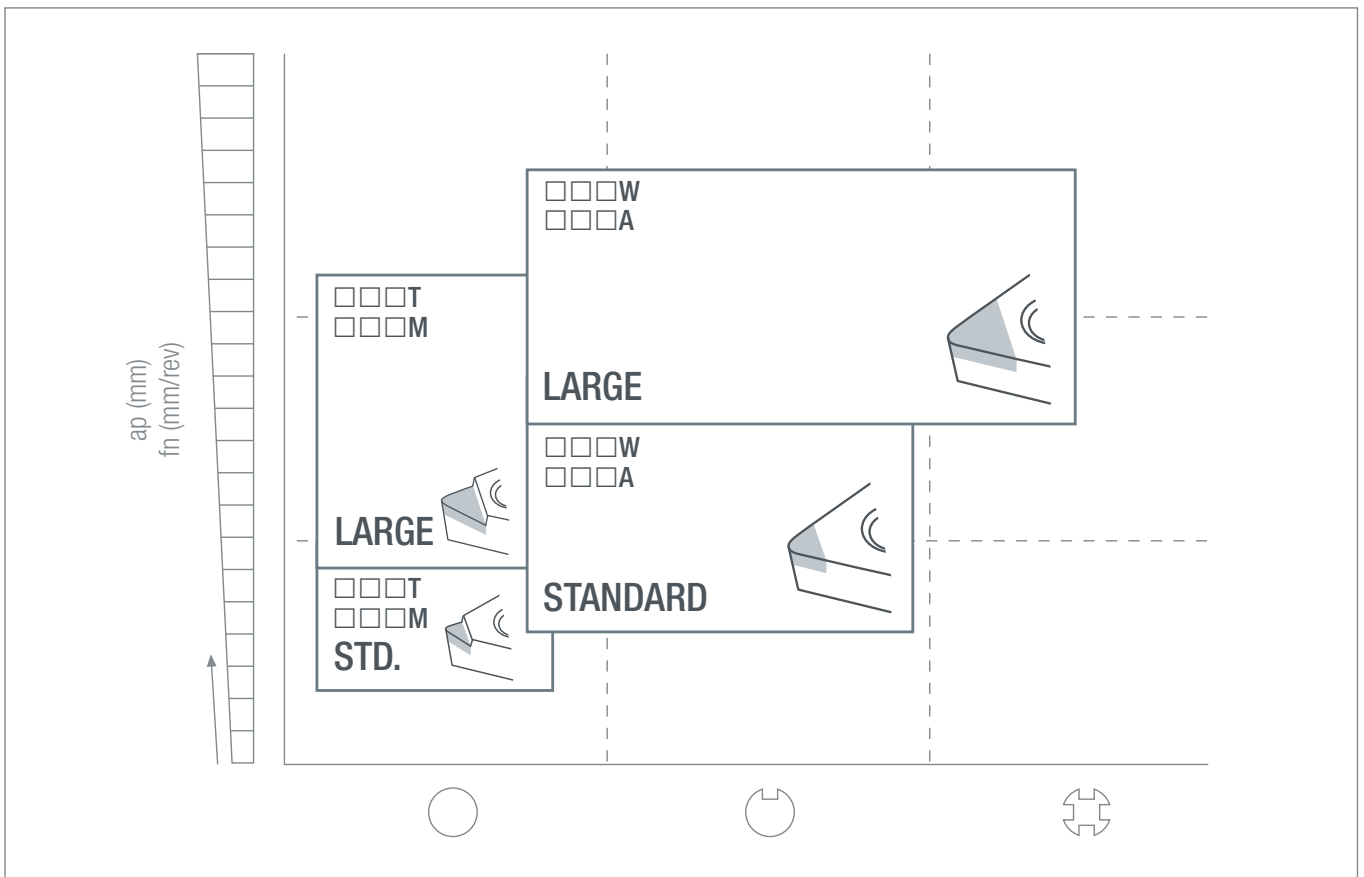
GRADES



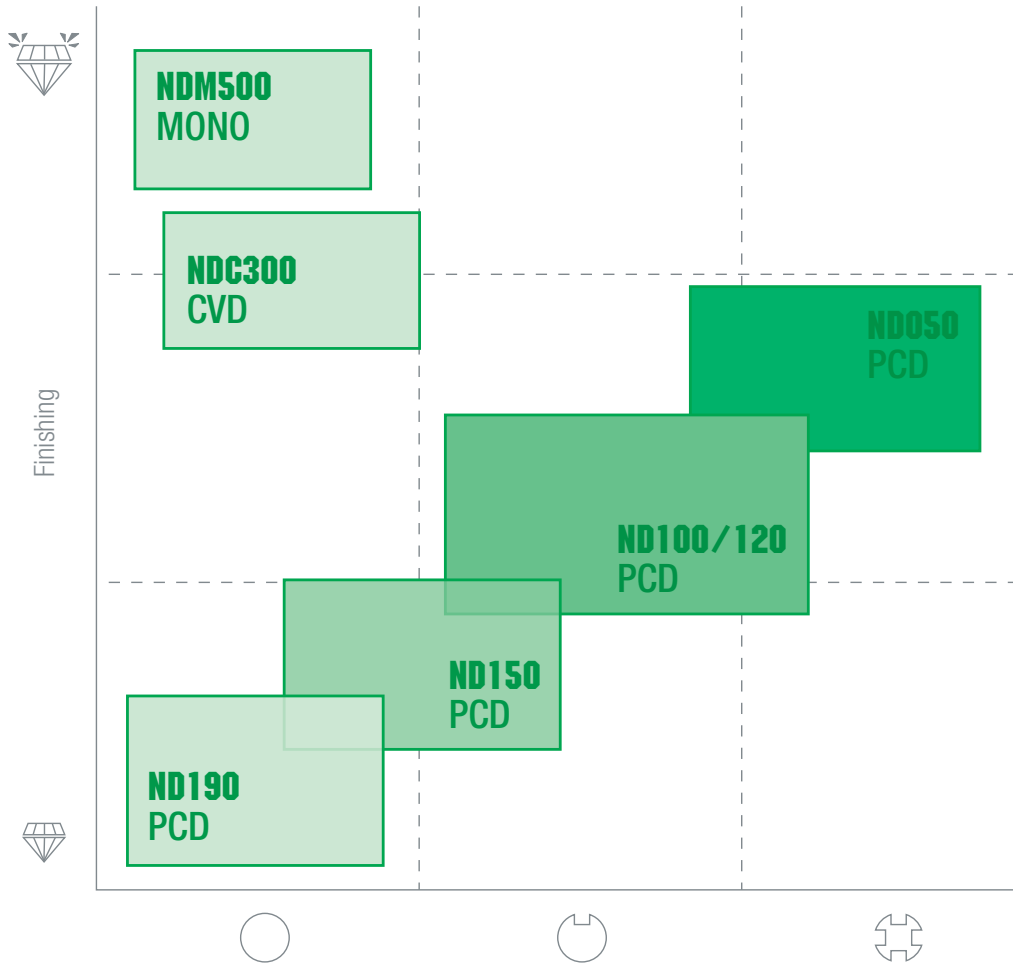
CUTTING EDGE STYLE

	STANDARD	LARGE	CHIPBREAKER
	STANDARD		LARGE

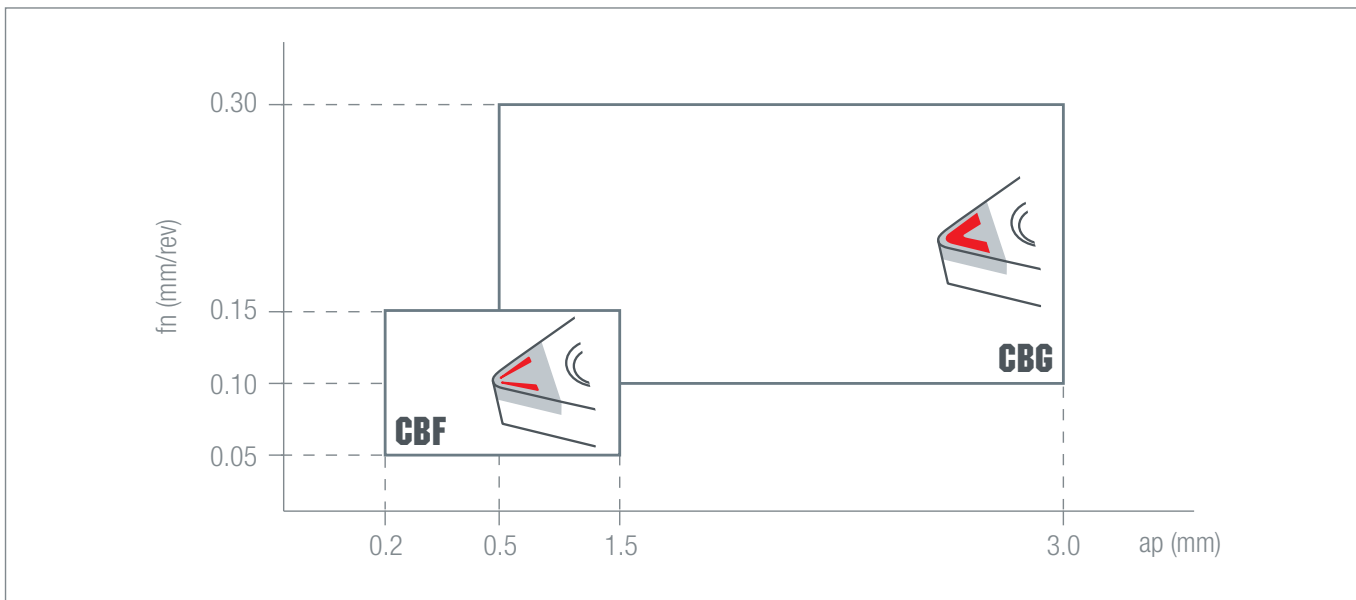
CUTTING EDGE APPLICATION



RANGE ISO **N** DIAMOND

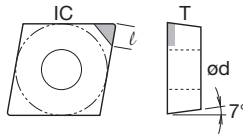


CHIPBREAKER APPLICATION



POSITIVE 7°
with hole

CC □ □




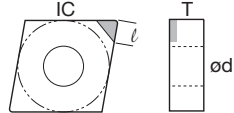
CC □ □	0602 □ □	09T3 □ □	1204 □ □
IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50
HOLDERS	127	127	127

	DESCRIPTION	l	PCD					CVD	MONO											
			ND050	ND100	ND120	ND150	ND190	NDC300	NDM500											
STANDARD			CCGT 060202	2.8	●															
			060204	2.8	○	●		●												
			060208	2.7		●														
			CCGT 09T302	2.8		●														
			09T304	2.8	●	●		●	○	○										
			09T308	2.7	●	●		●	○	○										
			CCGT 120404	2.8		●														
			120408	2.7		●														
LARGE			CCGT 060204-LRG	4.3		○														
			CCGT 09T304-LRG	4.3		●														
			09T308-LRG	4.2		●														
			CCGT 120404-LRG	4.3		●														
			120408-LRG	4.2		○														
STANDARD			CCGW 060202	2.8	○	●		○												
			060204	2.8	●	●		●												
			060208	2.7	●	●		○												
			CCGW 09T302	2.8		●														
			09T304	2.8	●	●		●	●	○	○									
			09T308	2.7	●	●		●	●	○	○									
			CCGW 120404	2.8	○	●		○												
			120408	2.7	○	●		○												
LARGE			CCGW 060204-LRG	4.3		●														
			CCGW 09T304-LRG	4.3	○	●		○												
			09T308-LRG	4.2	○	●		○												
			CCGW 120404-LRG	4.3		●														
			120408-LRG	4.2		●														
CHIPBREAKER			CCGX 060202-CBF	4.3			●													
			060204-CBF	4.3			●													
			CCGX 09T302-CBF	4.3			●													
			09T304-CBF	4.3			●													
			CCGX 060204-CBG	4.3			●													
			CCGX 09T304-CBG	4.3			●													
			09T308-CBG	4.2			●													
FULL EDGE			CCGX 060204 ^R /L-1S	-		○														
			CCGX 09T304 ^R /L-1S	-		○														






●, ○ = NEW ITEM

NEGATIVE with hole

CN □ □

CN □ □	1204 □ □
IC	12,70
T	4,76
Ød	5,16
HOLDERS	131

	DESCRIPTION		l	PCD					CVD	MONO					
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500					
STANDARD		CNGA	120404	2.8	●			○							
			120408	2.7	●			○							
LARGE		CNGA	120404-LRG	4.3	○										
			120408-LRG	4.2	●										
STANDARD		CNGM	120404	2.8	○	●		●							
			120408	2.7	○	●		○							
LARGE		CNGM	120404-LRG	4.3		○									
			120408-LRG	4.2		○									

**POSITIVE 7°
with hole**

DC □ □

DC □ □	0702 □ □	11T3 □ □
IC	6,35	9,525
T	2,38	3,97
Ød	2,80	4,40
HOLDERS	135	135

DESCRIPTION			l	PCD					CVD	MONO											
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500											
STANDARD		DCGT	070202	2.3		○															
			070204	2.1		●															
			070208	1.7		●															
	DCGT	11T302	2.3		●																
		11T304	2.1	●	●		●	○	○												
		11T308	1.7	●	●		●	○	○												
LARGE		DCGT	070204-LRG	3.9		●															
			11T304-LRG	3.9		●															
			11T308-LRG	3.5		●															
STANDARD		DCGW	070202	2.3	●	●		●													
			070204	2.1	○	●		●													
			070208	1.7	○	○		○													
	DCGW	11T302	2.3	○	●		○			○											
		11T304	2.1	●	●		●	●	○	○											
		11T308	1.7	●	●		●	●	○	○											
LARGE		DCGW	070204-LRG	3.9		●															
			11T304-LRG	3.9		●															
			11T308-LRG	3.5		○															
CHIPBREAKER		DCGX	070202-CBF	4.0			●														
			070204-CBF	3.9			●														
		DCGX	11T302-CBF	4.0			●														
			11T304-CBF	3.9			●														
		DCGX	070204-CBG	4.0			●														
			11T304-CBG	3.9			●														
FULL EDGE		DCGX	070204 ^R /L-1S	-		○															
			11T304 ^R /L-1S	-		○															

●, ○ = NEW ITEM

**NEGATIVE
with hole**

DN □ □

DN □ □ 1506 □ □

IC 12,70

T 6,35

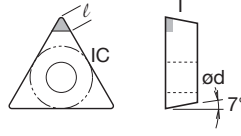
Ød 5,16

HOLDERS 141

DESCRIPTION			l	PCD					CVD	MONO							
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500							
STANDARD		DNGA	150604		2.4	○											
					150608	2.0	●										
LARGE		DNGA	150604-LRG		3.9	○											
					150608-LRG	3.8	○										
STANDARD		DNGM	150604		2.4	○											
					150608	2.0	○										
LARGE		DNGM	150604-LRG		3.9	○											
					150608-LRG	3.8	○										

POSITIVE 7°
with hole

TC□□




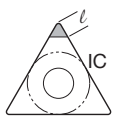

TC□□	0902□□	1102□□	16T3□□
IC	5,56	6,35	9,525
T	2,38	2,38	3,97
Ød	2,50	2,80	4,40
HOLDERS	149	149	149

	DESCRIPTION	Image	l	PCD					CVD	MONO			
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500			
STANDARD		TCGT	090202	2.6	○								
			090204	2.5	○								
			110202	2.6	○								
				110204	2.5	●							
				110208	2.2	○							
			16T304	2.5	●								
16T308	2.2	●											
LARGE		TCGT	110204-LRG	4.0	○								
			110208-LRG	3.7	○								
			16T304-LRG	4.0	○								
				16T308-LRG	3.7	○							
			STANDARD		TCGW	090202	2.6	○					
090204	2.5	●											
110202	2.6	●											
	110204	2.5				●		●					
	110208	2.2				●	○						
16T304	2.5	●											
	16T308	2.2	●		○								
LARGE		TCGW	110204-LRG	4.0	○								
			110208-LRG	3.7	●								
			16T304-LRG	4.0	○								
				16T308-LRG	3.7	○							
			CHIPBREAKER		TCGX	090202-CBF	4.1		●				
090204-CBF	4.0					●							
110202-CBF	4.1					●							
	110204-CBF	4.0					●						
	16T304-CBF	4.0					●						
090204-CBG	4.0					●							
	110204-CBG	4.0					●						
	110208-CBG	3.7					●						
16T304-CBG	4.0					●							
	16T308-CBG	3.7					●						
FULL EDGE		TCGX				090204-1S	-	○					
						110204-1S	-	●					
			16T304-1S	-	●								

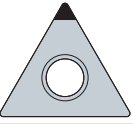

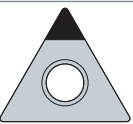

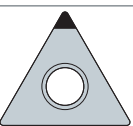

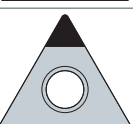

fn · ap 82


●, ○ = NEW ITEM

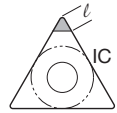
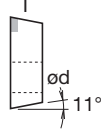
NEGATIVE with hole
TN □ □


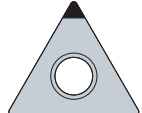

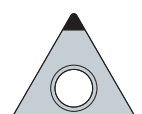

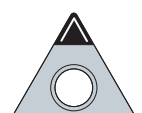

TN □ □	1604 □ □
IC	9,525
T	4,76
Ød	3,81
HOLDERS	153

STANDARD	LARGE	DESCRIPTION	IC	l	PCD					CVD	MONO		
					ND050	ND100	ND120	ND150	ND190	NDC300	NDM500		
STANDARD		TNGA 160404		2.5	○								
		160408		2.0	○								
LARGE		TNGA 160404-LRG		4.0	○								
		160408-LRG		3.7	○								
STANDARD		TNGM 160404		2.5	●								
		160408		2.0	●								
LARGE		TNGM 160404-LRG		4.0	○								
		160408-LRG		3.7	○								

POSITIVE 11° with hole
TP □ □ 

TP □ □	0802 □ □	0902 □ □	1103 □ □
IC	4,76	5,56	6,35
T	2,38	2,38	3,18
Ød	2,30	3,00	3,30
HOLDERS	-	156	156

	DESCRIPTION		l	PCD					CVD	MONO					
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500					
STANDARD			2.6	TPGT 080202	●	○									
				080204		●									
				TPGT 090202		○									
				090204		●									
				TPGT 110302		●									
				110304		●									
STANDARD			2.6	TPGW 080202		○									
				080204		○									
				TPGW 090202		○									
				090204		●									
				TPGW 110302		○									
				110304		●									
CHIPBREAKER			4.1	TPGX 090202-CBF			●								
				090204-CBF			●								
				TPGX 110302-CBF			●								
				110304-CBF			●								
				TPGX 090204-CBG			●								
				TPGX 110304-CBG			●								

fn · ap  82

**POSITIVE 5°
with hole**

VB □ □

VB □ □	1103 □ □	1604 □ □
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
HOLDERS	158	158

DESCRIPTION		IC	l	PCD					CVD	MONO										
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500										
STANDARD		VBGT	110302	3.0	●			●												
			110304	2.5		●														
		VBGT	160404	2.5	●	●			○	○	○									
			160408	1.7	●	●			●	○	○									
LARGE		VBGT	160404-LRG	4.6		●														
			160408-LRG	3.7		●														
STANDARD		VBGW	110302	3.0	●	●			○											
			110304	2.5	○	●			○											
		VBGW	160404	2.5	○	●			●	○	○	○	○							
			160408	1.7	○	●			○	○	○	○	○							
LARGE		VBGW	160404-LRG	4.6		●														
			160408-LRG	3.7		●														
CHIPBREAKER		VBGX	110302-CBF	5.0			●													
			110304-CBF	4.6			●													
		VBGX	160404-CBF	4.6			●													
			110304-CBG	4.6			●													
		VBGX	160404-CBG	4.6			●													
			160408-CBG	3.7			●													

fn · ap 82

**POSITIVE 7°
with hole**

VC □ □

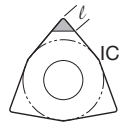
VC □ □	1103 □ □	1604 □ □
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
HOLDERS	159	159

	DESCRIPTION	IC	l	PCD					CVD	MONO										
				ND050	ND100	ND120	ND150	ND190	NDC300	NDIM500										
STANDARD		VCGT	110302	3.0	●	●														
			110304	2.5		●														
			160402	3.0		●					○									
			160404	2.5	●	●		●	○	○										
			160408	1.7	●	●		●	○	○										
LARGE		VCGT	160404-LRG	4.6		●														
			160408-LRG	3.7		●														
STANDARD		VCGW	110302	3.0	●	●														
			110304	2.5		●														
		160404	2.5	●	●		●	○	○	○										
		160408	1.7	●	●		○	○	○	○										
LARGE		VCGW	110304-LRG	4.6		●														
			160404-LRG	4.6		●														
			160408-LRG	3.7		●														
CHIPBREAKER		VCGX	110302-CBF	5.0			●													
			110304-CBF	4.6			●													
		VCGX	160404-CBF	4.6			●													
		VCGX	110304-CBG	4.6			●													
		VCGX	160404-CBG	4.6			●													
		VCGX	160408-CBG	3.7			●													
FULL EDGE		VCGX	110304 ^R /L-1S	-		○														
			160404 ^R /L-1S	-		○														

●, ○ = NEW ITEM

NEGATIVE
with hole

WN □ □



WN□□ 0804□□

IC 12,70

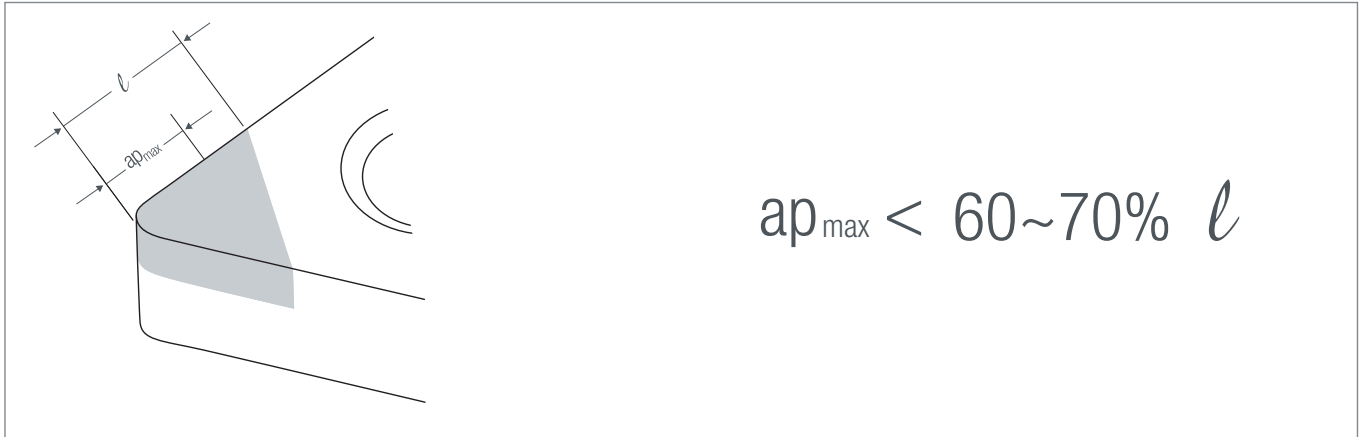
T 4,76

Ød 5,16

HOLDERS 167

DESCRIPTION		Image	r	PCD					CVD	MONO							
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500							
STANDARD		WNGA 080404		2.8	●												
					○												
LARGE		WNGA 080404-LRG		4.3	○												
					●												
STANDARD		WNGM 080404		2.8	●												
					●												
LARGE		WNGM 080404-LRG		4.3	○												
					○												

CUTTING PARAMETERS



$$ap_{max} < 60 \sim 70\% r$$

N	NA	ALUMINUM ALLOYS
		LEGHE DI ALLUMINIO
		ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM
		ALEACIONES DE ALUMINIO
		СПЛАВЫ АЛЮМИНИЯ
N	NS	ALUMINUM ALLOYS (Si >15%)
		LEGHE DI ALLUMINIO (Si >15%)
		ALUMINIUMLEGIERUNGEN (Si >15%)
		ALLIAGES D'ALUMINIUM (Si >15%)
		ALEACIONES DE ALUMINIO (Si >15%)
		СПЛАВЫ АЛЮМИНИЯ (Si >15%)
N	NH	ALUMINUM ALLOYS AGED AND HARDENED
		LEGHE DI ALLUMINIO TRATTATE ED INVECCHIATE
		GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES
		ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS
		СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ
N	NB	BRASS
		OTTONE
		MESSING
		LAITON
		LATÓN
		ЛАТУНЬ

N	NC	BRONZE AND ELECTOLYTIC COPPER
		BRONZO E RAME ELETTROLITICO
		ELEKTROLYTISCHES KUPFER UND BRONZE
		BRONZE ET CUIVRE ÉLECTROLYTIQUE
		BRONCE Y COBRE ELECTROLÍTICO
		БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ
N	NG	GRAPHITE
		GRAFITE
		GRAPHIT
		GRAPHITE
		GRAFITO
		ГРАФИТ
H	HM	HARD METAL (Co≤16%)
		METALLO DURO (Co≤16%)
		VHM (Co≤16%)
		CARBURE (Co≤16%)
		METAL DURO (Co≤16%)
		ТВЕРДЫЙ СПЛАВ (Co≤16%)
S	ST	TITANIUM ALLOYS
		LEGHE DI TITANIO
		TITAN LEGIERUNGEN
		ALLIAGES DE TITANE
		ALEACIONES DE TITANIO
		СПЛАВЫ ТИТАНА

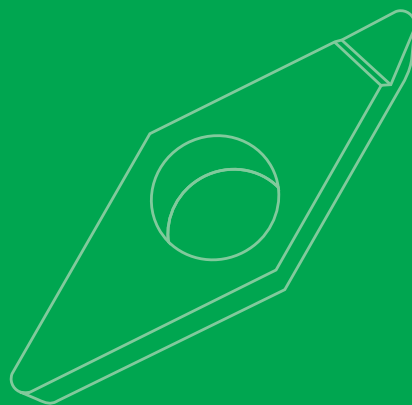
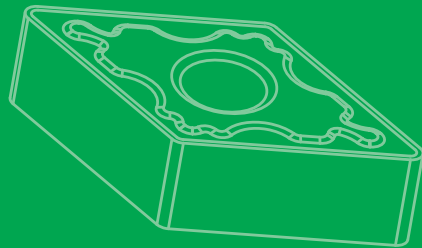
CUTTING PARAMETERS

MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS	PCD					CVD	MONO				
				ND050	ND100	ND120	ND150	ND190	NDC300	NDM500				
N	NA	0.10~1.00	0.08~0.25	○ ☒	☾									
		1.00~2.50	0.15~0.50	○ ☒	☾	★	600~2500	600~2500						1000~3000
	NS	0.10~1.00	0.05~0.20	○ ☒	☾									
		1.00~2.50	0.08~0.35	○ ☒	☾									
	NH	0.10~1.00	0.05~0.20	○ ☒	☾									
		1.00~2.50	0.08~0.35	○ ☒	☾									
	NB	0.10~1.00	0.10~0.30	○ ☒	☾									
		1.00~2.50	0.15~0.25	○ ☒	☾	★	400~1200							800~2000
	NC	0.10~1.00	0.10~0.30	○ ☒	☾									
		1.00~2.50	0.15~0.25	○ ☒	☾	★	400~1000							800~2000
	NG	0.10~1.00	0.08~0.25	○ ☒	☾									
		1.00~2.50	0.15~0.50	○ ☒	☾									
	H	HM	0.10~0.50	0.08~0.25	○	☾								
			1.00~2.50	0.15~0.50	○	☾								
S	ST	0.10~1.00	0.05~0.20	○ ☒	☾									
		1.00~2.50	0.08~0.20	○ ☒	☾	★	100~200							

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор













TURNING / ceramic








ISO 1832






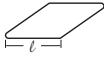

C	N	G	A	12	04	08	-GP	NAC	200
1	2	3	4	5	6	7	8	9	10

1	GEOMETRY
C	
D	
R	
S	
T	
V	
W	

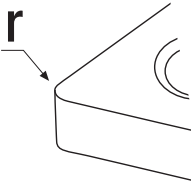

2	CLEARANCE ANGLE
C	
N	
P	

3	TOLERANCE [mm]	
		
G	±0.025	±0.13
M	±0.05 ~ ±0.15	±0.13

4	SHAPE
A	
N	
W	
X	NIKKO NORM

5	EDGE LENGHT [mm]
09 12 16	C 
15	D 
06 09 12 15 19	R 
09 12	S 
11 16	T 
16	V 
08	W 

6	THICKNESS [mm]
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
10	10.00

7	RADIUS [mm]
...	
00	 inch

C	N	G	A	12	04	08	-GP	NAC	200
1	2	3	4	5	6	7	8	9	10

8	EDGE PREPARATION
CC	
GP	
GS	
HI	
WH wiper WK	

9	
NAC	Al ₂ O ₃ + TiCN
NAZ	Al ₂ O ₃ + ZrO ₂
NSA	SiAlON
NSN	Si ₃ N ₄
NWR	Whisker

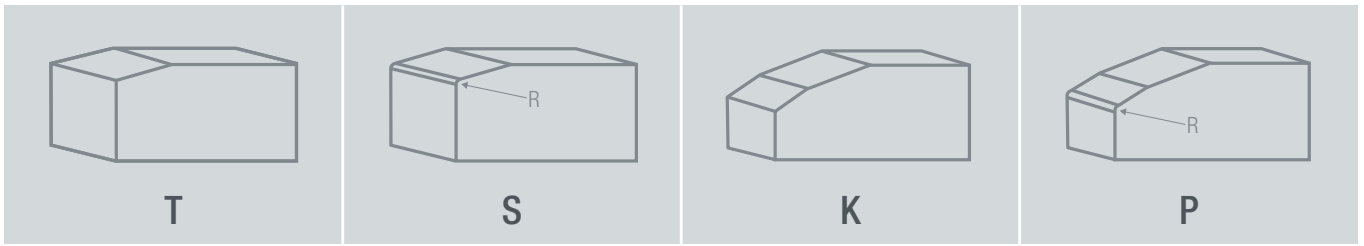
10	APPLICATION
1~2₀₀	ISO H
3~4₀₀	ISO K
6₀₀	ISO S K
7₀₀	ISO S

GRADES

ISO DIN 513	H					K					S				
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40	S01	S10	S20	S30	S40
Al ₂ O ₃	NAC200		NAC250												
Al ₂ O ₃ PVD	NAC150														
ZrO ₂						NAZ300									
Si ₃ N ₄						NSN350		NSN400			NSN450				
SiAlON											NSA600		NSA650		
Whisker											NWR700		NWR750		

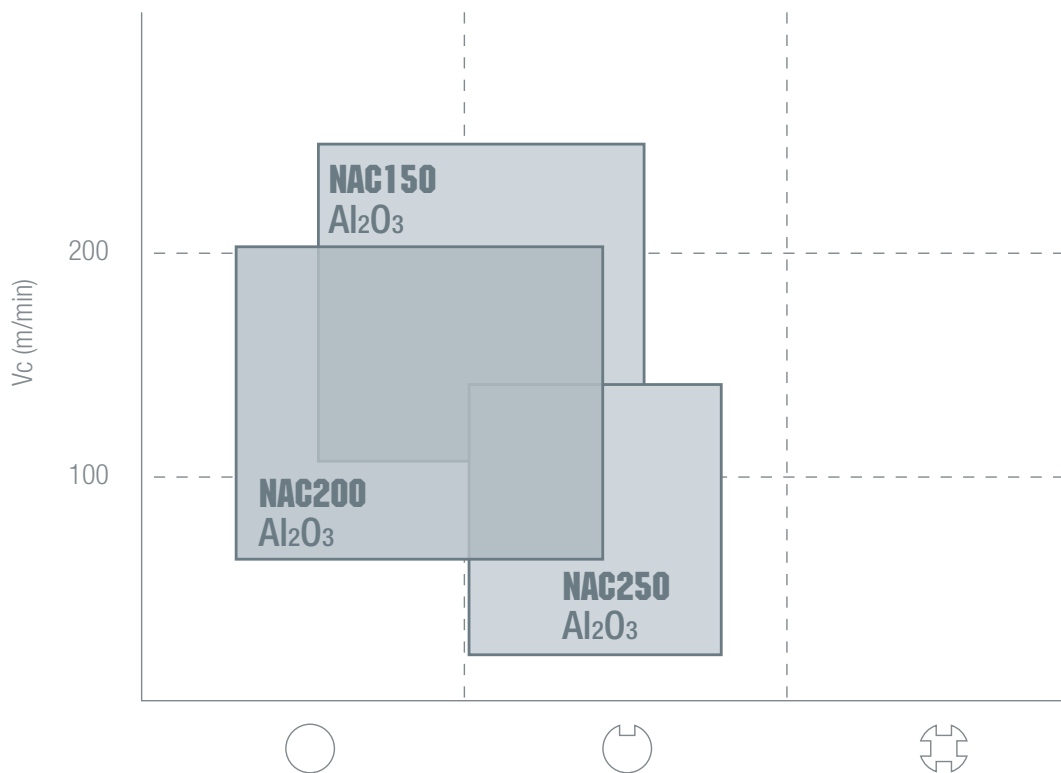
COATED

EDGE PREPARATION STYLE

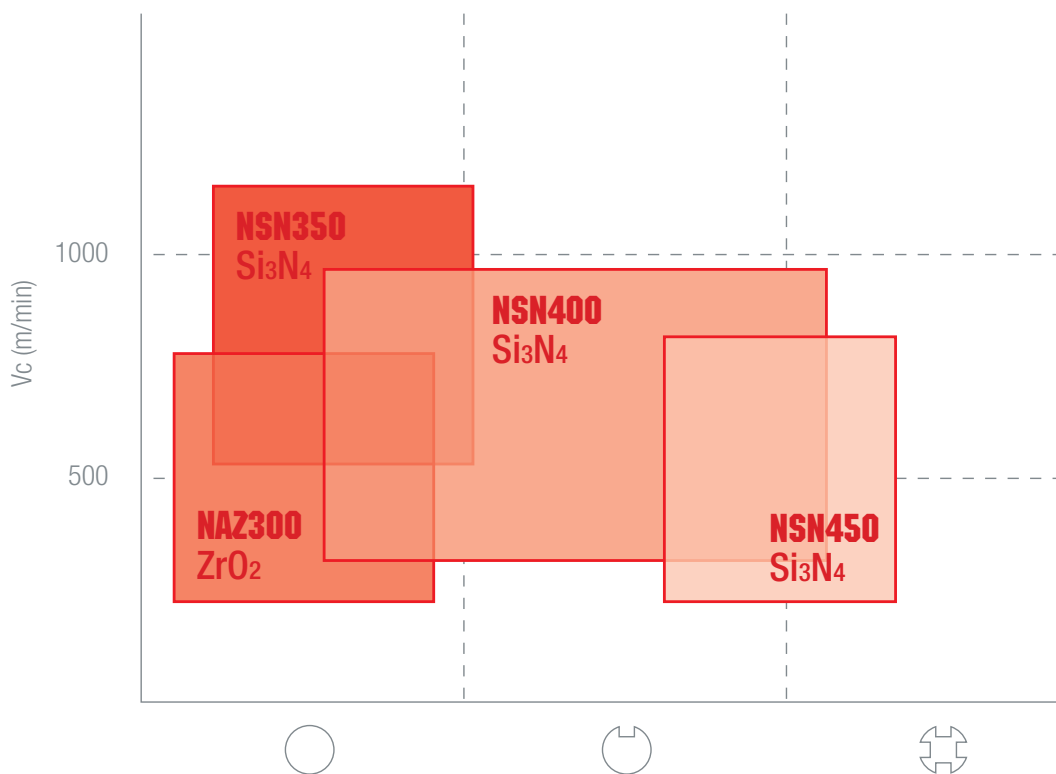


				H	K	S
CC	T	T00520 T01020	○	✓	✓	✓
GP	T	T01520 T02020 T02025	↓	✓ ✓	✓	✓ ✓
GS	S	S01525 S02020 S02025	↓	✓ ✓ ✓		
HT	K	K20015	↓	✓	✓	
HI	P	P15015 P20015	⊕	✓ ✓		

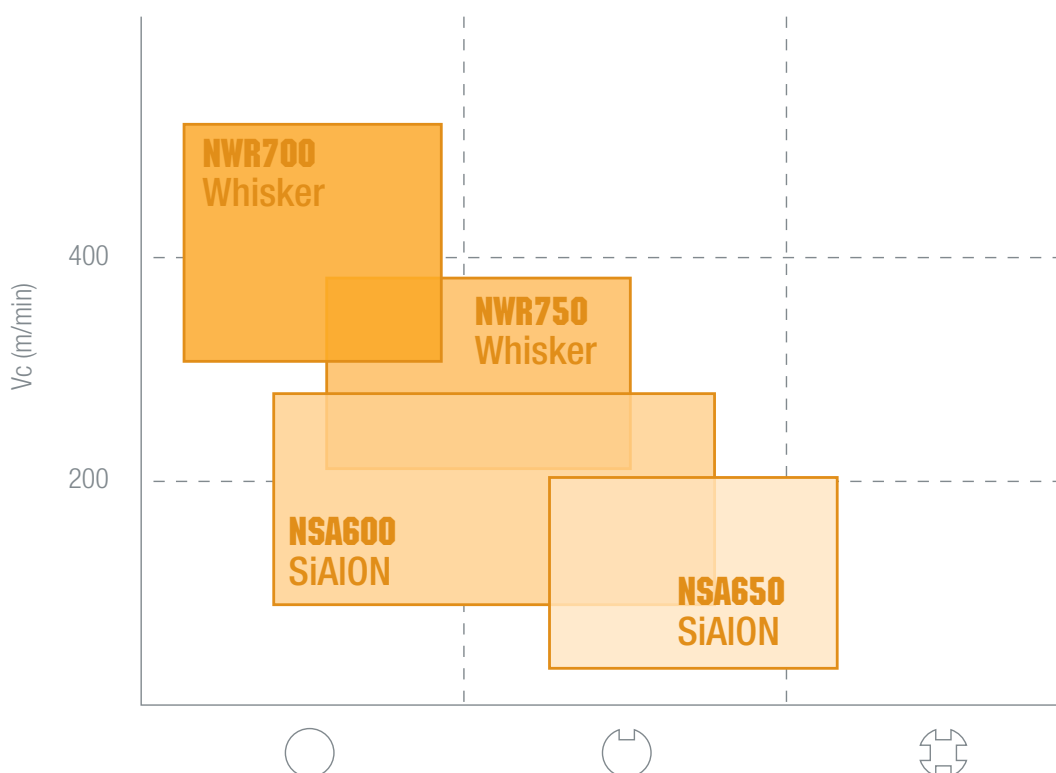
RANGE ISO **H** CERAMIC



RANGE ISO **K** CERAMIC

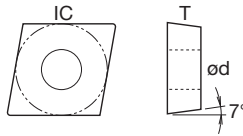


RANGE ISO **S** CERAMIC



POSITIVE 7°
with hole

CC □ □



CC □ □ 09T3 □ □ 1204 □ □

IC	9,525	12,7
T	3,97	4,76
Ød	4,40	5,50

HOLDERS

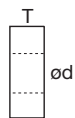
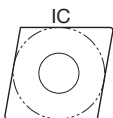
127

127

DESCRIPTION	T02020	Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker		
		NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
GP	CCGW 09T308-GP						●					
	09T312-GP						●					
	CCGW 120408-GP						●					
	120412-GP						●					

NEGATIVE
with hole

CN□□



CN□□	1204□□	1606□□	1906□□
IC	12,70	15,875	19,05
T	4,76	6,35	6,35
ød	5,16	6,35	7,93
HOLDERS	131	131	131

DESCRIPTION	IC	Al ₂ O ₃			ZrO ₂	Si ₃ N ₄			SiAlON		Whisker	
		NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC		CNGA 120404-CC	T01020	●	●		○					
		120408-CC	T01020	●	●		●					
		120412-CC	T01020	●	●		○					
GP		CNGA 120404-GP	T02020					○		○		
		120404-GP	T02025		●							
		120408-GP	T02020			●		○		●	○	
		120408-GP	T02025		●							
		120412-GP	T02020			●		○		●	○	
		120412-GP	T02025		●							
		120416-GP	T02020			○		○		○		
		120416-GP	T02025		○							
		CNGA 160612-GP	T02020					○				
		160612-GP	T02025		●							
		160616-GP	T02020			○		○				
		160616-GP	T02025		○							
		CNGA 190616-GP	T02020					○				
		190616-GP	T02025		○							
		CNMA 120408-GP	T02020					○	●	○		
120412-GP	T02020					●	●	○				
120416-GP	T02020					○	●	○				
CNMA 160612-GP	T02020						●					
160616-GP	T02020						●					
GS		CNGA 120404-GS	S01525	●								
		120404-GS	S02025		●							
		120408-GS	S01525	●								
		120408-GS	S02025		●							
		120412-GS	S01525	●								
		120412-GS	S02025		●							
WH WIPER		CNGA 120410-WH	T02020		●							
WK WIPER		CNGA 120410-WK	T02020					●				

●, ○ = NEW ITEM

**NEGATIVE
without hole**

CN

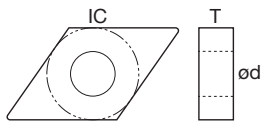
CN 	1204 	1207
IC	12,70	12,70
T	4,76	7,94
Ød	-	-
HOLDERS		

	DESCRIPTION		Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker			
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750	
CC		CNGN	120408-CC	T00520								○		
			120412-CC	T00520								○		
		CNGN	120708-CC	T00520									○	
			120712-CC	T00520									○	
GP		CNGN	120408-GP	T01520								○		
			120408-GP	T02020	○				○		○		○	
			120412-GP	T01520						○				○
			120412-GP	T02020	○					○				○
			120416-GP	T01520										○
			120416-GP	T02020	○					○				○
		CNGN	120708-GP	T01520										○
			120708-GP	T02020	○				○	●		●	○	○
			120712-GP	T01520							○			○
			120712-GP	T02020	○				○	●		●	○	○
			120716-GP	T01520										○
			120716-GP	T02020	○				○	○		○	○	○
		CNMN	120412-GP	T02020						○				
			120416-GP	T02020						○				
		CNGX	120708-GP	T02020	●									
				T02020	●									
CNMX	120712-GP		T02020					○	●	○		○		
	120716-GP		T02020					●	●	○	○			

●, ○ = NEW ITEM

NEGATIVE
with hole

DN □ □



DN □ □ 1506 □ □

IC 12,70

T 6,35

Ød 5,16

HOLDERS 141

DESCRIPTION	IC	Al ₂ O ₃			ZrO ₂	Si ₃ N ₄			SiAlON		Whisker	
		NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC 	DNGA	150604-CC	T01020	●	●		○					
		150608-CC	T01020	●	●		○					
		150612-CC	T01020	○	●		○					
GP 	DNGA	150604-GP	T02020			○						
		150604-GP	T02025		●							
		150608-GP	T02020			●		●				
		150608-GP	T02025		●							
		150612-GP	T02020			○						
		150612-GP	T02025		●							
GS 	DNGA	150604-GS	S01525	●								
		150604-GS	S02025		●							
		150608-GS	S01525	●								
		150608-GS	S02025		●							
		150612-GS	S01525	○								
		150612-GS	S02025		○							

●, ○ = NEW ITEM

**NEGATIVE
without hole**

DN

DN 1507

IC 12,70
T 7,94
Ød -

HOLDERS

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄			SiAlON		Whisker	
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
GP		DNGN	150708-GP	T02020		○				○			
		150712-GP	T02020		○				○				
		150716-GP	T02020		●				○				

POSITIVE 7°
without hole

RC □ □



RC □ □	0606 □ □	0607 □ □	0907 □ □	1207 □ □	1510 □ □	1910 □ □
IC	6,35	6,35	9,525	12,70	15,87	19,05
T	6,35	7,94	7,94	7,94	10,00	10,00
Ød	-	-	-	-	-	-
HOLDERS						

DESCRIPTION			Al ₂ O ₃		ZrO ₂	Si ₃ N ₄			SiAlON		Whisker		
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
GP	RCGX 090700-GP	T01520										○	○
		T02020	○	○	○					○	○		
	RCGX 120700-GP	T01520										○	○
		T02020	○	○	○					○	○		
GS	RCGX 060600-GS	S02020		●									
		S02020		●									
HI	RCGX 090700-HI	P15015	●	●	●								
		P15015	●	●	●								
	RCGX 151000-HI	P20015		○	○								
		P20015		○	○								

●, ○ = NEW ITEM

**NEGATIVE
without hole**

RN □ □

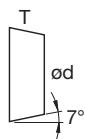
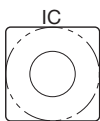
RN □ □	1204 □ □	1207 □ □	1907 □ □
IC	12,70	12,70	19,05
T	4,76	7,94	7,94
Ød	-	-	-
HOLDERS			

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker		
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC	RNGN 120400-CC	T00520										○	○
	RNGN 120700-CC	T00520										○	○
	RNGN 190700-CC	T00520										○	○
GP	RNGN 120400-GP	T01520										●	●
	RNGN 120400-GP	T02020	○	●	○				●	●			
	RNGN 120700-GP	T01520										●	●
	RNGN 120700-GP	T02020	○	●	○				●	●			
	RNGN 190700-GP	T01520										○	○
	RNGN 190700-GP	T02020							○	○			
HI	RNGN 120700-HI	P15015	●	●	●								
	RNGN 190700-HI	P15015			○								
HT	RNGN 120700-HT	K20015	●		●								

●, ○ = NEW ITEM

POSITIVE 7°
with hole

SC □ □



SC □ □ 09T3 □ □ 1204 □ □

IC 9,525 12,70

T 3,97 4,76

Ød 4,40 5,50



144

144

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄			SiAlON		Whisker	
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
GP		SCGW 09T308-GP	T02020					•					
		SCGW 120408-GP	T02020					•					

**NEGATIVE
with hole**

SN

SN 1204

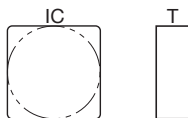
IC 12,70
T 4,76
Ød 5,16

HOLDERS 145

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker		
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC		SNGA	120404-CC	T01020		●		○					
			120408-CC	T01020		●		○					
			120412-CC	T01020		●		○					
GP		SNGA	120404-GP	T02020					○				
			120404-GP	T02025		●							
			120408-GP	T02020						○			
			120408-GP	T02025		●							
			120412-GP	T02020						○			
			120412-GP	T02025		●							
		SNMA	120408-GP	T02020						●			
			120412-GP	T02020						●			
			120416-GP	T02020						●			

NEGATIVE
without hole

SN □ □



SN □ □	0904 □ □	1204 □ □	1207 □ □
IC	9,525	12,70	12,70
T	4,76	4,76	7,94
Ød	-	-	-
HOLDERS			

DESCRIPTION	IC	Al ₂ O ₃		ZrO ₂	Si ₃ N ₄			SiAlON		Whisker				
		NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750		
CC 		SNGN 120408-CC	T00520									○		
			T01020				○							
		120412-CC	T00520											○
			T01020				○							
		SNGN 120708-CC	T00520											○
			T01020				○							
			T00520											○
T01020					○									
GP 		SNGN 090408-GP	T02020											
			T02020				●		●					
		SNGN 120408-GP	T01520										○	○
			T02020		○				●		○	○		
			T01520						●				○	○
			T02020		○				●	●	○	○		
			T01520						○	○	○	○		○
			T02020		○				○	○	○	○		
		SNGN 120708-GP	T01520										○	○
			T02020	●	●		●		○		○	○		○
			T01520						○				○	○
			T02020		●				○		○	○		○
			T01520						○				○	○
			T02020		○				○		○	○		
		SNMN 120416-GP	T02020						●					
		SNGX 120708-GP	T02020		●									
			T02020		●									
		SNMX 120712-GP	T02020					○	●	○	○			
			T02020					○	●	○	○			

●, ○ = NEW ITEM


NEGATIVE with hole



TN □ □



TN □ □	1604 □ □
IC	9,525
T	4,76
Ød	3,81
HOLDERS	153




DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker		
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC		TNGA	160404-CC	T01020	●	●		○					
			160408-CC	T01020	●	●		○					
			160412-CC	T01020	○	●		○					
GP		TNGA	160404-GP	T02020			○						
			160408-GP	T02020		●							
			160408-GP	T02020		●	●						
			160408-GP	T02025		●							
			160412-GP	T02020		●	●						
			160412-GP	T02025		●							
GS		TNGA	160404-GS	S01525	●								
			160404-GS	S02025		●							
			160408-GS	S01525	●								
			160408-GS	S02025		●							
			160412-GS	S01525	○								
			160412-GS	S02025		○							

●, ○ = NEW ITEM

NEGATIVE without hole
TN □ □ 

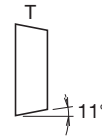



TN □ □	1604 □ □	1607 □ □
IC	9,525	9,525
T	4,76	7,94
Ød	-	-
HOLDERS		

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄			SiAlON		Whisker	
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC		TNGN 160408-CC	T01020				○						
		160412-CC	T01020				○						
GP		TNGN 160408-GP	T02020		○				●				
		160412-GP	T02020		○				○				
		TNGN 160708-GP	T02020		○				○				
		160712-GP	T02020		○				○				

POSITIVE 11°
without hole

TP



TP 1103 1603

IC 6,35 9,525

T 3,18 3,18

Ød - -

HOLDERS

157

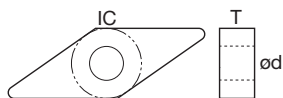
157

DESCRIPTION	IC	T	Ød	Al ₂ O ₃		ZrO ₂	Si ₃ N ₄		SiAlON		Whisker		
				NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700
CC 	TPGN	110302-CC	T01020	●	●								
		110304-CC	T01020	●	●								
		110308-CC	T01020	●	●								
	TPGN	160304-CC	T01020	●	●								
		160308-CC	T01020	●	●								
GP 	TPGN	110302-GP	T02025		●								
		110304-GP	T02020					○					
		110304-GP	T02025		●								
		110308-GP	T02020					●					
		110308-GP	T02025		●								
	TPGN	160304-GP	T02020						○				
		160304-GP	T02025		●								
		160308-GP	T02020					●					
		160308-GP	T02025		●								
		160312-GP	T02020					●					
		160312-GP	T02025										
		GS 	TPGN	110302-GS	S02020	○							
				110304-GS	S02020	○							
110308-GS	S02020			○									
TPGN	160304-GS		S02020	○									
	160308-GS		S02020	○									

●, ○ = NEW ITEM

NEGATIVE
with hole

VN



VN 1604

IC 9,525

T 4,76

Ød 3,81

HOLDERS 163

DESCRIPTION	IC	Al ₂ O ₃		ZrO ₂	Si ₃ N ₄			SiAlON		Whisker		
		NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC 	VNGA	160404-CC	T01020	●	●		○					
		160408-CC	T01020	●	●		○					
		160412-CC	T01020	○	○		○					
GP 	VNGA	160404-GP	T02020			○						
		160404-GP	T02025		●							
		160408-GP	T02020		○		●					
		160408-GP	T02025		●							
		160412-GP	T02020		○			○				
		160412-GP	T02025		○							
GS 	VNGA	160404-GS	S01525	●								
		160404-GS	S02025		●							
		160408-GS	S01525	●								
		160408-GS	S02025		●							
		160412-GS	S01525	○								
		160412-GS	S02025		○							

●, ○ = NEW ITEM

**NEGATIVE
with hole**

WN

WN 	0804
IC	12,70
T	4,76
Ød	5,16
HOLDERS	167

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker		
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
CC		WNGA	080404-CC	T01020	●								
			080408-CC	T01020	●								
			080412-CC	T01020	●								
GP		WNGA	080404-GP	T02020				○					
			080408-GP	T02025	●								
			080408-GP	T02020	●				●				
			080408-GP	T02025	●								
			080412-GP	T02020					●				
			080412-GP	T02025	●								

CUTTING PARAMETERS

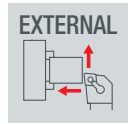
H	HH	HARDENED STEEL
		ACCIAIO TEMPRATO
		GEHÄRTETER STAHL
		ACIER TREMPÉ
		ACERO TEMPLADO
		ЗАКАЛЁННАЯ СТАЛЬ
H	HC	CASEHARDENED STEEL
		ACCIAIO CEMENTATO
		EINGESETZTER STAHL
		ACIER CEMENTÉ
		ACERO CEMENTADO
		ЦЕМЕНТИРОВАННАЯ СТАЛЬ
H	HB	BEARING STEEL
		ACCIAIO PER CUSCINETTI
		STAHL FÜR LAGER
		ACIER POUR ROULEMENTS
		ACERO PARA RODAMIENTOS
		СТАЛЬ ДЛЯ ПОДШИПНИКОВ

K	KG	GREY CAST IRON
		GHISA GRIGIA
		GRAUGUSS
		FONTE GRISE
		FUNDICIÓN GRIS
		ЧУГУН
K	KN	NODULAR CAST IRON
		GHISA SFEROIDALE
		SPHÄROGUSS
		FONTE NODULAIRE
		FUNDICIÓN NODULAR
		ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ
S	SA	SUPER ALLOYS (Ni BASED)
		SUPERLEGHE (BASE Ni)
		SONDERLEGIERUNGEN (Ni BASIS)
		SUPERALLIAGES (BASE Ni)
		SUPERALEACIONES (BASE Ni)
		СУПЕРСПЛАВЫ (НА ОСНОВЕ Ni)

MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS	Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker	
				NAC150	NAC200	NAC250	NAZ300	NSN350	NSM400	NSM450	NSA600	NSA650	NWR700
H	HH	0.10~0.50	0.05~0.20	○ ⊕	120~240	* 100~220	60~160						
		0.50~2.00	0.10~0.30	○ ⊕	100~180	* 80~150	40~100						
	HC	0.10~0.50	0.05~0.20	○ ⊕	100~200	* 80~180	50~160						
		0.50~2.00	0.10~0.30	○ ⊕	80~140	* 60~120	40~80						
	HB	0.10~0.50	0.05~0.20	○ ⊕	100~220	* 80~200	40~140						
		0.50~2.00	0.10~0.30	○ ⊕	80~160	* 60~140	30~100						
K	KG	0.20~0.50	0.10~0.30	○ ⊕ ⊕			* 400~800	600~1200	500~1000				
				⊕ ⊕ ⊕				500~1000	* 450~800				
		1.00~4.00	0.25~0.50	○ ⊕ ⊕				600~1200	* 500~1000	450~800			
	KN			⊕ ⊕ ⊕				500~1000	* 450~800	400~600			
		0.20~0.50	0.10~0.30	○ ⊕ ⊕		* 300~600		400~800	350~700				
				⊕ ⊕ ⊕				300~600	250~500	* 250~500			
S	SA	0.50~1.00	0.10~0.30	○ ⊕ ⊕						200~350		* 250~500	
				⊕ ⊕ ⊕						180~300	150~280	* 200~350	200~350
		1.00~4.00	0.15~0.40	○ ⊕ ⊕						* 150~250		200~400	
		⊕ ⊕ ⊕						140~240	* 120~220				

* = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^a elección / 1-й выбор

ISO 1832



NT	-	P	C	L	N	R	25	25	M	12
		1	2	3	4	5	6	7	8	9

1	CLAMPING SYSTEM
D	
M	
P	
S	

2	GEOMETRY
C	
D	
S	
T	
V	
W	

3	LEAD ANGLE
A	
B	
D	
F	
G	
J	
K	
L	
N	

4	CLEARANCE ANGLE
B	
C	
N	

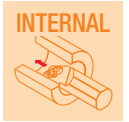
5	DIRECTION
L	
N	
R	

6	SHANK	7

8	TOTAL LENGTH [mm]
H	100
K	125
M	150
P	170
S	250

9	EDGE LENGTH [mm]
06 09 12 16 19	C
07 11 15	D
09 12 19	S
09 11 16 22	T
11 16	V
06 08	W

ISO 1832



NT - A 10 K - S C L C R 06

1 2 3 4 5 6 7 8 9

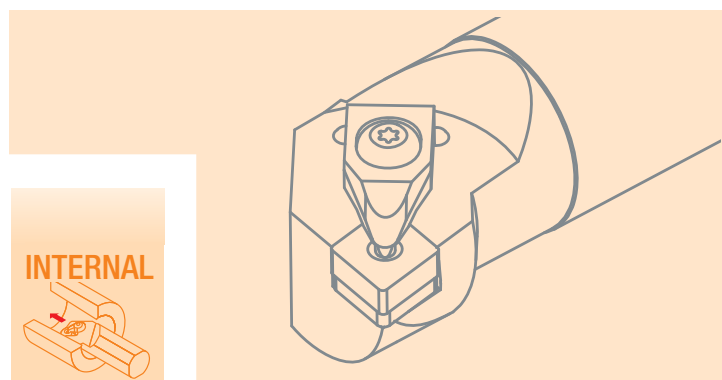
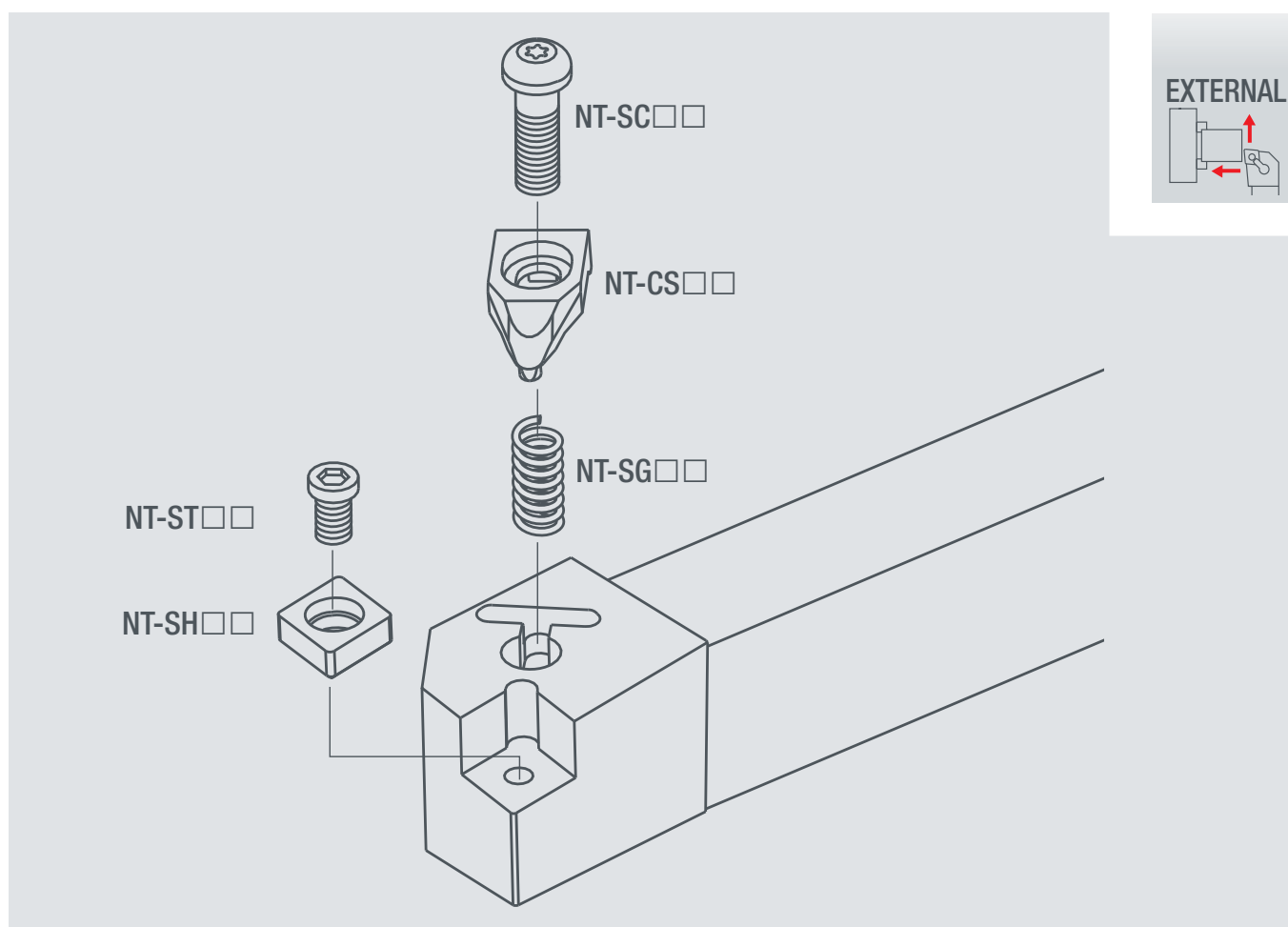
1	2 SHANK DIAMETER [mm]	3 TOTAL LENGTH [mm]	4 CLAMPING SYSTEM
A STEEL + Coolant			D
E CARBIDE + Coolant		H 100	M
S STEEL		K 125	P
V VORTEX BAR		M 150	S
		Q 180	
		R 200	
		S 250	
		T 300	
		U 350	

5	9	6 LEAD ANGLE	7 CLEARANCE ANGLE	8 DIRECTION
C 06 09 12 16 19		A 90°	B 5°	L
D 07 11 15		F 90°	C 7°	
S 09 12 19		J 93°	N 0°	R
T 06 09 11 22		K 75°	P 11°	
V 11 16		L 95° 95°		
W 06 08 12(06)		Q 107.5°		
		U 93°		
		Z 93°		

CLAMPING SYSTEM (NEGATIVE)







D

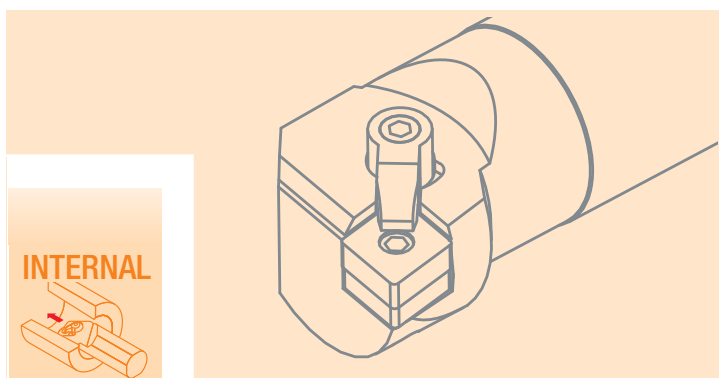
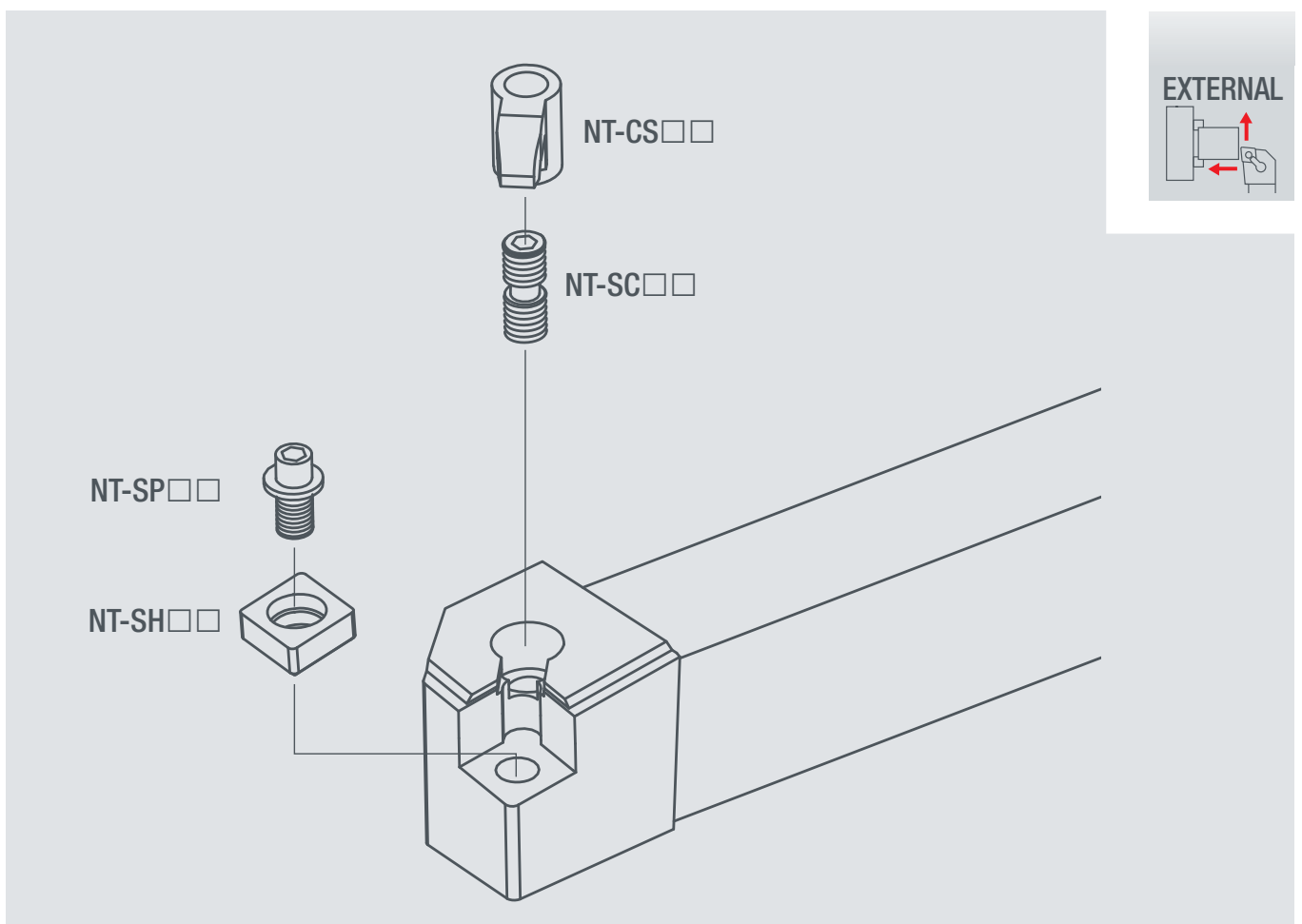
-  **FAST CLAMPING - IDEAL FOR SHORT CHIP MATERIALS**
-  **SERRAGGIO RAPIDO - IDEALE PER MATERIALI A TRUCIOLO CORTO**
-  **SCHNELLVERSCHLUSS - BESONDERS GEEIGNET BEI KURZSPANENDEN MATERIALIEN**
-  **SERRAGE RAPIDE - PARFAIT POUR MATIÈRES À COPEAUX COURTS**
-  **AMARRE RAPIDO - IDEAL PARA MATERIALES DE VIRUTA CORTA**
-  **БЫСТРОЕ КРЕПЛЕНИЕ - ИДЕАЛЬНО ПОДХОДИТ ДЛЯ КОРОТКОСТРУЖЕЧНЫХ МАТЕРИАЛОВ**



CLAMPING SYSTEM (NEGATIVE)


M

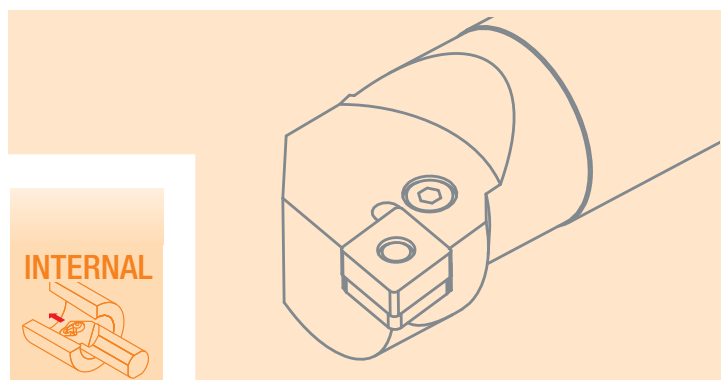
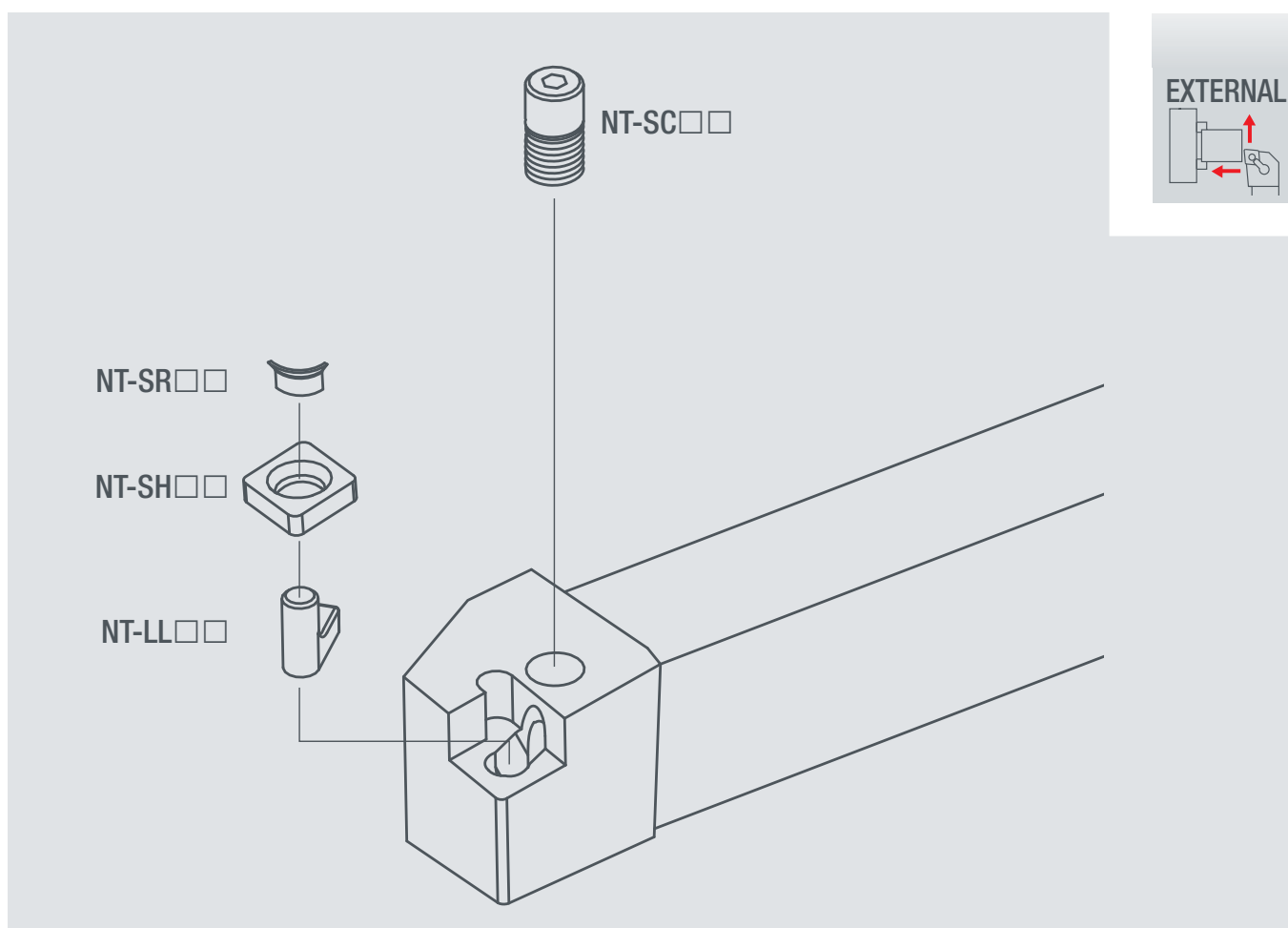
-  HIGH CLAMPING STRENGTH - FIRST CHOICE FOR CERAMIC INSERTS
-  ELEVATA FORZA DI SERRAGGIO - PRIMA SCELTA PER INSERTI CERAMICI
-  HOHE VERSCHLUSSKRAFT - ERSTE WAHL BEI KERAMIK WENDEPLATTEN
-  HAUTE FORCE DE SERRAGE - PREMIER CHOIX POUR PLAQUETTES EN CÉRAMIQUE
-  ALTA FUERZA DE APRIETE - PRIMERA ELECCIÓN PARA PLACAS EN CERAMICO
-  ПОВЫШЕННАЯ ЖЁСТКОСТЬ КРЕПЛЕНИЯ - ПЕРВЫЙ ВЫБОР ДЛЯ КЕРАМИЧЕСКИХ ПЛАСТИН



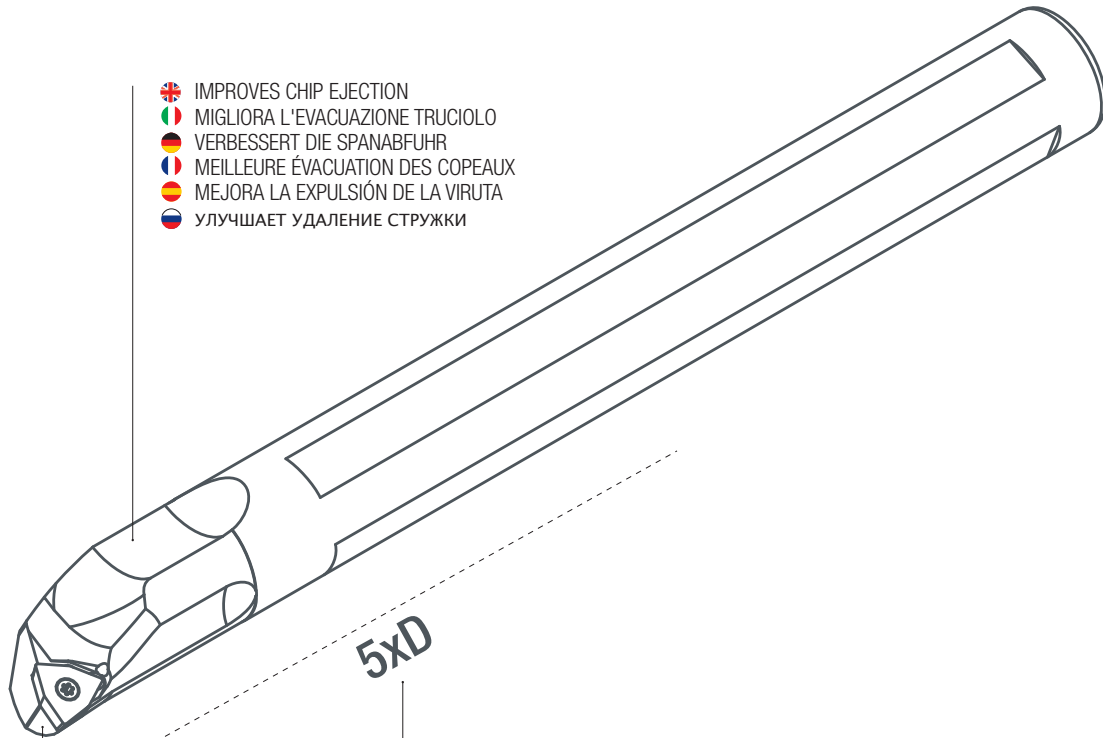
CLAMPING SYSTEM (NEGATIVE)







P

-  EASY TO USE - EXCELLENT CHIP EJECTION
-  FACILITÀ DI UTILIZZO - OTTIMA EVACUAZIONE TRUCIOLO
-  EINFACHE EINSATZMÖGLICHKEIT - OPTIMALE SPANABFUHR
-  GRANDE FACILITÉ D'EMPLOI - EXCELLENTE ÉVACUATION DES COPEAUX
-  DE FÁCIL EMPLEO - EXCELENTE EXPULSIÓN DE VIRUTA
-  ЛЕГКОСТЬ В ИСПОЛЬЗОВАНИИ - ОТЛИЧНОЕ УДАЛЕНИЕ СТРУЖКИ















VORTEX BAR CONCEPT

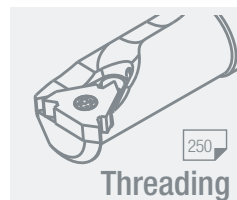
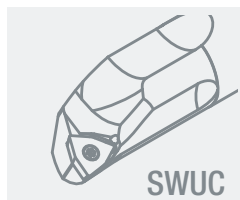
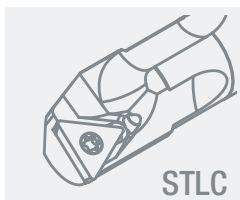
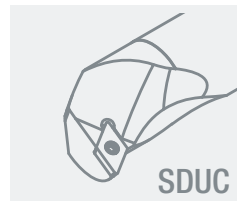


-  IMPROVES CHIP EJECTION
-  MIGLIORA L'EVACUAZIONE TRUCIOLO
-  VERBESSERT DIE SPANABFUHR
-  MEILLEURE ÉVACUATION DES COPEAUX
-  MEJORA LA EXPULSIÓN DE LA VIRUTA
-  УЛУЧШАЕТ УДАЛЕНИЕ СТРУЖКИ

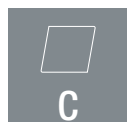
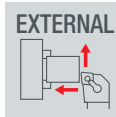
5xD

-  REDUCES VIBRATIONS EVEN WITH SIGNIFICANT OVERHANG (MAX 5xD)
-  RIDUCE LE VIBRAZIONI ANCHE AD ELEVATE SPORGENZE (MAX 5xD)
-  REDUZIERT DIE SCHWINGUNG AUCH BEI GROSSEN AUSKRAGUNGSLÄNGEN (MAX 5xD)
-  RÉDUCTION DES VIBRATIONS, AUSSI AVEC DES PORTE-FEUX IMPORTANTS (5xD MAXI)
-  REDUCCIÓN DE LAS VIBRACIONES, TAMBIÉN EN CASO DE GRAN VOLADIZO (HASTA 5xD)
-  СОКРАЩАЕТ ВИБРАЦИИ, ДАЖЕ ПОВЫШЕННОЙ ДЛИНЕ ВЫСТУПАЮЩЕЙ ЧАСТИ(МАКСИМУМ 5xD)

-  BROAD RANGE OF GEOMETRIES FOR BOTH TURNING AND THREADING
-  AMPIA GAMMA DI GEOMETRIE PER TORNITURA E FILETTATURA
-  BREITE PRODUKTPALETTE FÜR DREH- UND GEWINDEVORGÄNGE
-  GRANDE GAMME DE GÉOMÉTRIES POUR LE TOURNAGE ET LE FILETAGE
-  GAMA MUY RICA DE GEOMETRÍAS PARA TORNEADO Y ROSCADO
-  ШИРОКАЯ ГАММА ГЕОМЕТРИЙ ДЛЯ ТОЧЕНИЯ И НАРЕЗАНИЯ РЕЗЬБЫ

INTERNAL
COOLANT

SELECTION GUIDE



SCAC



CC□□ 127

SCLC



CC□□ 127

SCLC-N



CC□□ 128

DCLN



CN□□ 131

MCLN



CN□□ 131

MCKN



CN□□ 132

MCRN



CN□□ 132

PCLN



CN□□ 133



SDAC



DC□□ 135

SDJC



DC□□ 135

SDJC-N



DC□□ 136

SDNCN



DC□□ 136

DDJN



DN□□ 141

MDJN

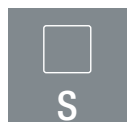


DN□□ 141

PDJN



DN□□ 142



SSDCN



SC□□ 144

MSBN



SN□□ 145

MSDNN



SN□□ 145

MSKN



SN□□ 146

MSSN



SN□□ 146



STAC



TC□□ 149

STFC



TC□□ 149

STGC



TC□□ 150

DTGN



TN□□ 153

DTJN



TN□□ 153

MTJN



TN□□ 154



SVJB



VB□□ 158

SVVBN



VB□□ 158

SVJC



VC□□ 159

SVPC



VC□□ 159

SVVCN



VC□□ 160

DVJN



VN□□ 163

DVVNN



VN□□ 163

MVJN



VN□□ 164

MVVNN



VN□□ 164



DWLN



WN□□ 167

MWLN



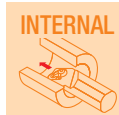
WN□□ 167

PWLN



WN□□ 168

SELECTION GUIDE



<p>C</p>	<p>^ASCLC</p> <p>CC□□ 128</p>	<p>^SSCLC</p> <p>CC□□ 129</p>	<p>^VSCLC</p> <p>CC□□ 129</p>	<p>^ESCLC</p> <p>CC□□ 130</p>	<p>^SSCZC</p> <p>CC□□ 130</p>	<p>^ADCLN</p> <p>CN□□ 133</p>	<p>^SMCLN</p> <p>CN□□ 134</p>	<p>^APCLN</p> <p>CN□□ 134</p>	
	<p>^SSDQC</p> <p>DC□□ 137</p>	<p>^VSDQC</p> <p>DC□□ 137</p>	<p>^ASDUC</p> <p>DC□□ 138</p>	<p>^SSDUC</p> <p>DC□□ 138</p>	<p>^VSDUC</p> <p>DC□□ 139</p>	<p>^ESDUC</p> <p>DC□□ 139</p>	<p>^SSDZC</p> <p>DC□□ 140</p>	<p>^ADDUN</p> <p>DN□□ 142</p>	<p>^SMDUN</p> <p>DN□□ 143</p>
	<p>^SSSKC</p> <p>SC□□ 144</p>	<p>^SMSKN</p> <p>SN□□ 147</p>							
	<p>^SSTUB</p> <p>TB□□ 148</p>	<p>^ASTFC</p> <p>TC□□ 150</p>	<p>^SSTFC</p> <p>TC□□ 151</p>	<p>^ESTFC</p> <p>TC□□ 151</p>	<p>^VSTLC</p> <p>TC□□ 152</p>	<p>^ADTFN</p> <p>TN□□ 154</p>	<p>^SMTUN</p> <p>TN□□ 155</p>	<p>^SSTUP</p> <p>TP□□ 156</p>	<p>^SCTUP</p> <p>TP□□ 157</p>
	<p>^SSVJC</p> <p>VC□□ 160</p>	<p>^SSVQC</p> <p>VC□□ 161</p>	<p>^SSVUC</p> <p>VC□□ 161</p>	<p>^SSVZC</p> <p>VC□□ 162</p>	<p>^SMVQN</p> <p>VN□□ 165</p>	<p>^SMVUN</p> <p>VN□□ 165</p>			
	<p>^SSWUC</p> <p>WC□□ 166</p>	<p>^ADWLN</p> <p>WN□□ 168</p>	<p>^SMWLN</p> <p>WN□□ 169</p>	<p>^APWLN</p> <p>WN□□ 169</p>					

CAPTION LEGENDA / LEGENDE / LÉGENDE / CLAVE / УСЛОВНЫЕ ОБОЗНАЧЕНИЯ

	<ul style="list-style-type: none"> EXTERNAL HOLDERS UTENSILI PER LAVORAZIONE ESTERNA WERKZEUG FÜR AUSSENBEARBEITUNGEN OUTILS POUR USINAGE EXTÉRIEUR HERRAMIENTAS PARA MECANIZADO EXTERIOR ИНСТРУМЕНТ ДЛЯ ВНЕШНЕЙ ОБРАБОТКИ
	<ul style="list-style-type: none"> DOUBLE CLAMPING DOPPIO BLOCCAGGIO DOPPELKLEMME FERMETURE DOUBLE SUJECIÓN RÍGIDA ДВОЙНОЕ КРЕПЛЕНИЕ
	<ul style="list-style-type: none"> DOUBLE CLAMPING (CLAMP AND LOCK PIN) DOPPIO BLOCCAGGIO (STAFFA + PERNO ECCENTRICO) KLEMME UND SICHERUNGSSTIFT FIXATION PAR BRIDE-COIN BRIDA CUÑA ДВОЙНОЕ КРЕПЛЕНИЕ(КРОНШТЕЙН И ЭКСЦЕНТРИК)
	<ul style="list-style-type: none"> LEVER LOCKING BLOCCAGGIO A LEVA HEBELVERSCHLUSS FIXATION PAR LEVIER SUJECIÓN POR EL AGUJERO КРЕПЛЕНИЕ РЫЧАЖКОМ
	<ul style="list-style-type: none"> SCREW CLAMPING BLOCCAGGIO A VITE SCHRAUBSPANNUNG FIXATION PAR VIS AMARRE POR TORNILLO КРЕПЛЕНИЕ ВИНТОМ

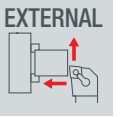
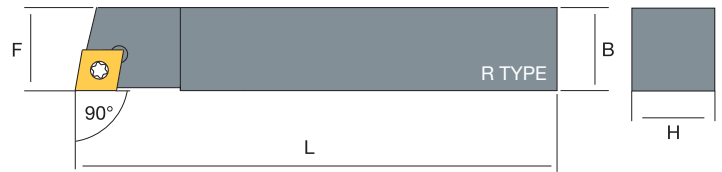
	<ul style="list-style-type: none"> INTERNAL HOLDERS UTENSILI PER LAVORAZIONE INTERNA WERKZEUG FÜR INNENBEARBEITUNGEN OUTILS POUR USINAGE INTÉRIEUR HERRAMIENTAS PARA MECANIZADO INTERIOR ИНСТРУМЕНТ ДЛЯ ВНУТРЕННЕЙ ОБРАБОТКИ
	<ul style="list-style-type: none"> CLAMP-ON BLOCCAGGIO A STAFFA SPANNUNG DURCH KLEMME FIXATION PAR BRIDE SUJECIÓN POR CARA SUPERIOR КРЕПЛЕНИЕ КРОНШТЕЙНОМ
	<ul style="list-style-type: none"> DOUBLE CLAMPING DOPPIO BLOCCAGGIO DOPPELKLEMME FERMETURE DOUBLE SUJECIÓN RÍGIDA ДВОЙНОЕ КРЕПЛЕНИЕ
	<ul style="list-style-type: none"> DOUBLE CLAMPING (CLAMP AND LOCK PIN) DOPPIO BLOCCAGGIO (STAFFA + PERNO ECCENTRICO) KLEMME UND SICHERUNGSSTIFT FIXATION PAR BRIDE-COIN BRIDA CUÑA ДВОЙНОЕ КРЕПЛЕНИЕ(КРОНШТЕЙН И ЭКСЦЕНТРИК)

	<ul style="list-style-type: none"> LEVER LOCKING BLOCCAGGIO A LEVA HEBELVERSCHLUSS FIXATION PAR LEVIER SUJECIÓN POR EL AGUJERO КРЕПЛЕНИЕ РЫЧАЖКОМ
	<ul style="list-style-type: none"> SCREW CLAMPING BLOCCAGGIO A VITE SCHRAUBSPANNUNG FIXATION PAR VIS AMARRE POR TORNILLO КРЕПЛЕНИЕ ВИНТОМ
	<ul style="list-style-type: none"> OVERHANG SPORGENZA UEBERSTAND PORTE-À-FLEX VOLADIZO ВЫСТУП
	<ul style="list-style-type: none"> OVERHANG SPORGENZA UEBERSTAND PORTE-À-FLEX VOLADIZO ВЫСТУП
	<ul style="list-style-type: none"> OVERHANG SPORGENZA UEBERSTAND PORTE-À-FLEX VOLADIZO ВЫСТУП
	<ul style="list-style-type: none"> INSIDE COOLANT TOOL UTENSILE CON REFRIGERAZIONE INTERNA WERKZEUG MIT IK OUTIL AVEC TROUS D'HUILE HERRAMIENTA CON SUMINISTRO INTERNO DE REFRIGERANTE ИНСТРУМЕНТ С ВНУТРЕННИМ ОХЛАЖДЕНИЕМ
	<ul style="list-style-type: none"> CARBIDE BODY WITH BRAZED STEEL HEAD CORPO IN METALLO DURO CON TESTA IN ACCIAIO (BRASATA) KÖRPER AUS VHM UND KOPF AUS STAHL (GELÖTET) CORPS EN CARBURE ET TÊTE EN ACIER (SOUDÉ) HERRAMIENTA EN METAL DURO CON CABEZA EN ACERO (SOLDADA) КОРПУС ИЗ ТВЕРДОГО СПЛАВА СО СТАЛЬНОЙ ГОЛОВКОЙ
	<ul style="list-style-type: none"> SPECIAL HEAD DESIGN TO IMPROVE CHIP EJECTION SPECIALE GEOMETRIA DELLA TESTA PER MIGLIORARE L'EVACUAZIONE TRUCIOLO SPEZIALGEOMETRIE DES KOPFES UM DIE SPANABFUHR ZU VERBESSERN GEOMETRIE PARTICULIÈRE DE LA TÊTE POUR AMÉLIORER L'ÉVACUATION DES COPEAUX GEOMETRIA ESPECIAL DE LA CABEZA PARA FAVORECER LA EXPULSIÓN DE VIRUTA СПЕЦИАЛЬНАЯ ФОРМА ГОЛОВКИ ДЛЯ БОЛЕЕ ЭФФЕКТИВНОГО УДАЛЕНИЯ СТРУЖКИ

SCAC

POSITIVE 7°
with hole

CC□□



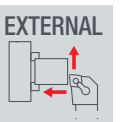
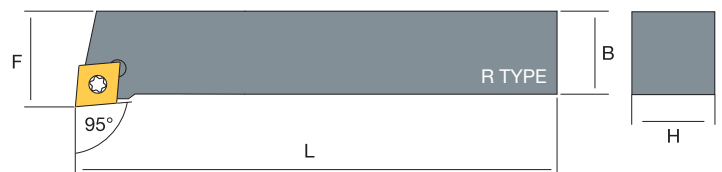
CC□□	DESCRIPTION	STOCK		DIMENSIONS						S	T	W	H	L	
		R	L	H	B	L	F	ℓ							
CC□□0602	NT-SCAC ^{R/L} 0808K 06	○	○	8	8	125	8.5	-	NT-ST010	NT-FT07					
	1010K 06	●	●	10	10	125	10.5	-	NT-ST010	NT-FT07					
	1212K 06	●	●	12	12	125	12.5	-	NT-ST010	NT-FT07					
CC□□09T3	NT-SCAC ^{R/L} 1212K 09	●	●	12	12	125	12.5	-	NT-ST030	NT-FT15					
	1616K 09	●	●	16	16	125	16.5	-	NT-ST030	NT-FT15					

SCLC

NEW

POSITIVE 7°
with hole

CC□□



CC□□	DESCRIPTION	STOCK		DIMENSIONS						S			T		W		H	L	
		R	L	H	B	L	F	ℓ	W	H	L	W	H						
CC□□09T3	NT-SCLC ^{R/L} 2020K 09S	●	●	20	20	125	25	-	NT-SH011	NT-SR010	NT-WR035	NT-ST007	NT-FT15						
	2525M 09S	○	○	25	25	150	32	-	NT-SH011	NT-SR010	NT-WR035	NT-ST007	NT-FT15						
CC□□1204	NT-SCLC ^{R/L} 2020K 12S	●	●	20	20	125	25	-	NT-SH001	NT-SR001	NT-WR040	NT-ST007	NT-FT15						
	2525M 12S	●	●	25	25	150	32	-	NT-SH001	NT-SR001	NT-WR040	NT-ST007	NT-FT15						

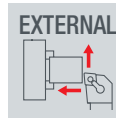
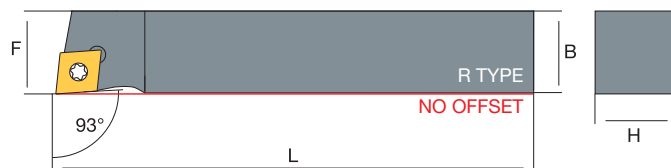
carbide 19 PCBN 51 diamond 83 ceramic 101

●, ○ = NEW ITEM

SCLC-N

POSITIVE 7°
with hole

CC□□

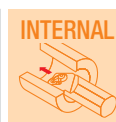
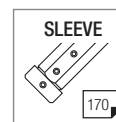
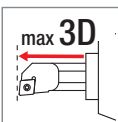
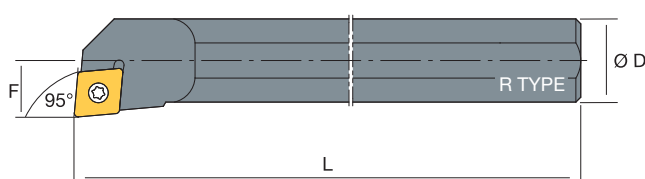
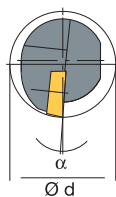


CC□□	DESCRIPTION	STOCK		DIMENSIONS												
		R	L	H	B	L	F	α								
CC□□0602	NT-SCLC ^{R/L} 0808K 06N	○	○	8	8	125	8	-	NT-ST010	NT-FT07						
	1010K 06N	●	●	10	10	125	10	-	NT-ST010	NT-FT07						
CC□□09T3	NT-SCLC ^{R/L} 1212K 09N	●	●	12	12	125	12	-	NT-ST030	NT-FT15						
	1616K 09N	●	●	16	16	125	16	-	NT-ST030	NT-FT15						

A⁺SCLC

POSITIVE 7°
with hole

CC□□



CC□□	DESCRIPTION	STOCK		DIMENSIONS												
		R	L	ØD	Ød	L	F	α								
CC□□0602	NT-A08H-SCLC ^{R/L} 06	●	●	8	10	100	5	13°	NT-ST006	NT-FT07						
	NT-A10K-SCLC ^{R/L} 06	●	●	10	12	125	6	12°	NT-ST010	NT-FT07						
	NT-A12M-SCLC ^{R/L} 06	●	●	12	14	150	7	9°	NT-ST010	NT-FT07						
	NT-A16Q-SCLC ^{R/L} 06	●	●	16	18	180	9	7°	NT-ST010	NT-FT07						
CC□□09T3	NT-A12M-SCLC ^{R/L} 09	●	●	12	14	150	7	13°	NT-ST025	NT-FT15						
	NT-A16Q-SCLC ^{R/L} 09	●	●	16	18	180	9	9°	NT-ST030	NT-FT15						
	NT-A20R-SCLC ^{R/L} 09	●	●	20	22	200	11	5°	NT-ST030	NT-FT15						

carbide

19

PCBN

51

diamond

83

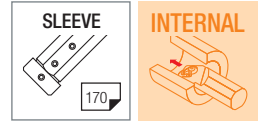
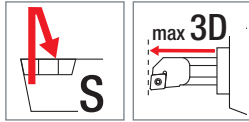
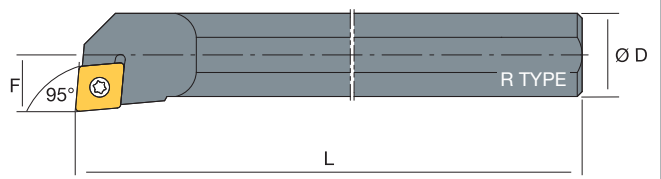
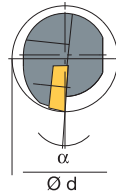
ceramic

101

S^SSCLC

POSITIVE 7° with hole

CC□□

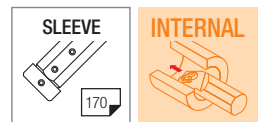
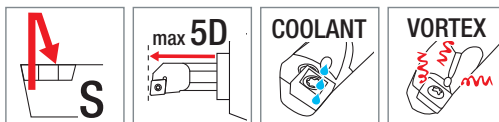
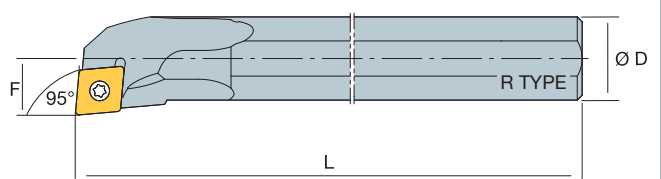
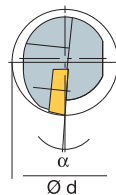


CC□□	DESCRIPTION	STOCK		DIMENSIONS					SLEEVE			INTERNAL	
		R	L	ØD	Ød	L	F	α	170	170	170	170	
CC□□0602	NT-S08H-SCLC ^{R/L} 06	●	●	8	10	100	5	13°	-	-	-	NT-ST006	NT-FT07
	NT-S10K-SCLC ^{R/L} 06	●	●	10	12	125	6	12°	-	-	-	NT-ST010	NT-FT07
	NT-S12M-SCLC ^{R/L} 06	●	●	12	14	150	7	9°	-	-	-	NT-ST010	NT-FT07
	NT-S16Q-SCLC ^{R/L} 06	●	●	16	18	180	9	7°	-	-	-	NT-ST010	NT-FT07
CC□□09T3	NT-S12M-SCLC ^{R/L} 09	●	●	12	14	150	7	13°	-	-	-	NT-ST025	NT-FT15
	NT-S16Q-SCLC ^{R/L} 09	●	●	16	18	180	9	9°	-	-	-	NT-ST030	NT-FT15
	NT-S20R-SCLC ^{R/L} 09	●	●	20	22	200	11	5°	-	-	-	NT-ST030	NT-FT15
CC□□1204	NT-S20R-SCLC ^{R/L} 12	●	●	20	25	200	13	8°	-	-	-	NT-ST050	NT-FT15
	NT-S25R-SCLC ^{R/L} 12	●	●	25	32	200	17	8°	-	-	-	NT-ST050	NT-FT15
	NT-S32S-SCLC ^{R/L} 12S	●	●	32	39	250	22	6°	NT-SH001	NT-SR001	NT-WR040	NT-ST050	NT-FT15
	NT-S40T-SCLC ^{R/L} 12S	●	●	40	50	300	27	4°	NT-SH001	NT-SR001	NT-WR040	NT-ST050	NT-FT15

V^VSCLC

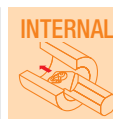
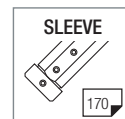
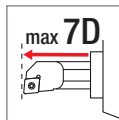
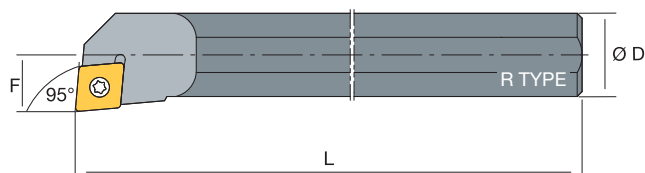
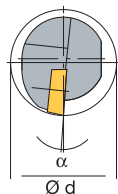
POSITIVE 7° with hole

CC□□



CC□□	DESCRIPTION	STOCK		DIMENSIONS					SLEEVE	INTERNAL
		R	L	ØD	Ød	L	F	α		
CC□□0602	NT-V08H-SCLC ^{R/L} 06-10	●	●	8	10	100	5	13°	NT-ST006	NT-FT07
	NT-V10K-SCLC ^{R/L} 06-12	●	●	10	12	125	6	12°	NT-ST010	NT-FT07
	NT-V12M-SCLC ^{R/L} 06-14	●	●	12	14	150	7	9°	NT-ST010	NT-FT07
CC□□09T3	NT-V12M-SCLC ^{R/L} 09-14	●	●	12	14	150	7	13°	NT-ST025	NT-FT15
	NT-V16Q-SCLC ^{R/L} 09-18	●	●	16	18	180	9	9°	NT-ST030	NT-FT15
	NT-V20R-SCLC ^{R/L} 09-22	●	●	20	22	200	11	5°	NT-ST030	NT-FT15
	NT-V25S-SCLC ^{R/L} 09-27	●	●	25	27	250	14.5	5°	NT-ST030	NT-FT15
CC□□1204	NT-V20R-SCLC ^{R/L} 12-25	●	●	20	25	200	13	8°	NT-ST050	NT-FT15
	NT-V25S-SCLC ^{R/L} 12-32	●	●	25	32	250	17	8°	NT-ST050	NT-FT15

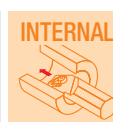
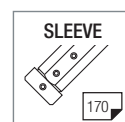
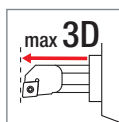
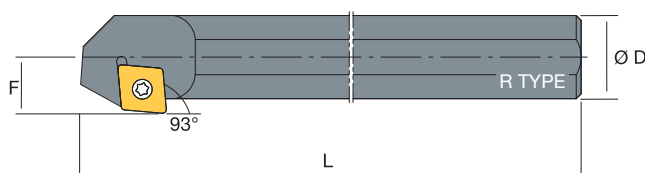
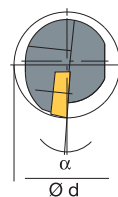
●, ○ = NEW ITEM

ESCLCPOSITIVE 7°
with holeCC 

CC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
CC <input type="checkbox"/> <input type="checkbox"/> 0602	NT-E08K-SCLC ^{R/L} 06	●	●	8	10	125	5	13°	NT-ST006	NT-FT07				
	NT-E10K-SCLC ^{R/L} 06	●	●	10	12	125	6	12°	NT-ST010	NT-FT07				
	NT-E12M-SCLC ^{R/L} 06	●	●	12	14	150	7	9°	NT-ST010	NT-FT07				
CC <input type="checkbox"/> <input type="checkbox"/> 09T3	NT-E12M-SCLC ^{R/L} 09	●	●	12	14	150	7	13°	NT-ST025	NT-FT15				
	NT-E16R-SCLC ^{R/L} 09	●	●	16	18	200	9	9°	NT-ST030	NT-FT15				
	NT-E20R-SCLC ^{R/L} 09	●	●	20	25	200	12.5	5°	NT-ST030	NT-FT15				

SSCZC

NEW

POSITIVE 7°
with holeCC 

CC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
CC <input type="checkbox"/> <input type="checkbox"/> 0602	NT-S08H-SCZC ^{R/L} 06	●	●	8	12	100	6.5	13°	NT-ST006	NT-FT07				
	NT-S10K-SCZC ^{R/L} 06	●	●	10	14	125	7.5	12°	NT-ST010	NT-FT07				
	NT-S12M-SCZC ^{R/L} 06	●	●	12	16	150	8.5	10°	NT-ST010	NT-FT07				
CC <input type="checkbox"/> <input type="checkbox"/> 09T3	NT-S16Q-SCZC ^{R/L} 09	●	●	16	21	180	11.5	10°	NT-ST030	NT-FT15				
	NT-S20R-SCZC ^{R/L} 09	●	●	20	25	200	13.5	8°	NT-ST030	NT-FT15				
	NT-S25R-SCZC ^{R/L} 09	●	●	25	32	200	16	8°	NT-ST030	NT-FT15				

carbide

19

PCBN

51

diamond

83

ceramic

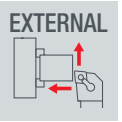
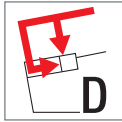
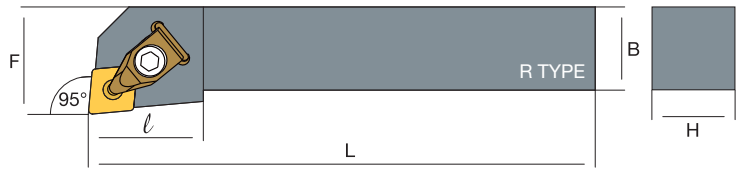
101

●, ○ = NEW ITEM

DCLN

NEGATIVE
with hole

CN□□

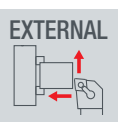
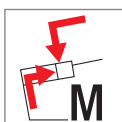


CN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
CN□□1204	NT-DCLN ^{R/L} 2020K 12	●	●	20	20	125	25	37	NT-SH030	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	2525M 12	●	●	25	25	150	32	37	NT-SH030	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	3225P 12	●	●	32	25	170	32	37	NT-SH030	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	*NT-ST200 → NT-WR025													

MCLN

NEGATIVE
with hole

CN□□

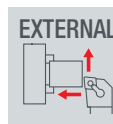
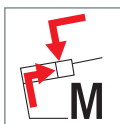
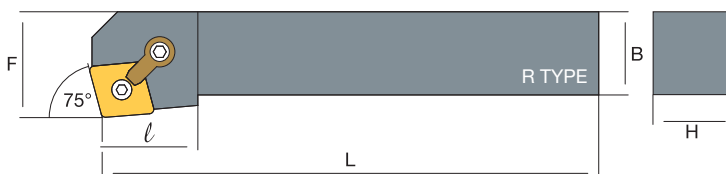


CN□□	DESCRIPTION	STOCK		DIMENSIONS									
		R	L	H	B	L	F	l					
CN□□1204	NT-MCLN ^{R/L} 2020K 12	●	●	20	20	125	25	34	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030
	2525M 12	●	●	25	25	150	32	34	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030
	3232P 12	●	●	32	32	170	40	43	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030
CN□□1606	NT-MCLN ^{R/L} 2525M 16	●	●	25	25	150	32	34	NT-SH055	NT-SP040	NT-CS010	NT-SC010	NT-WR030
	3232P 16	●	●	32	32	170	40	43	NT-SH055	NT-SP040	NT-CS010	NT-SC010	NT-WR030
CN□□1906	NT-MCLN ^{R/L} 3232P 19	○	○	32	32	170	40	43	NT-SH080	NT-SP050	NT-CS015	NT-SC070	NT-WR040
	4040S 19	○	○	40	40	250	50	40	NT-SH080	NT-SP050	NT-CS015	NT-SC070	NT-WR040

MCKN

NEGATIVE with hole

CN□□

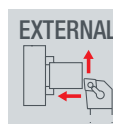
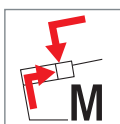


CN□□	DESCRIPTION	STOCK		DIMENSIONS					←		←			
		R	L	H	B	L	F	ℓ						
CN□□1204	NT-MCKN ^{R/L} 2020K 12	●	●	20	20	125	25	32	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	2525M 12	●	●	25	25	150	32	32	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	3232P 12	●	●	32	32	170	40	37	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030	

MCRN

NEGATIVE with hole

CN□□



CN□□	DESCRIPTION	STOCK		DIMENSIONS					←		←			
		R	L	H	B	L	F	ℓ						
CN□□1204	NT-MCRN ^{R/L} 2020K 12	●	●	20	20	125	25	34	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	2525M 12	●	●	25	25	150	32	34	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	3232P 12	●	●	32	32	170	40	43	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030	

carbide

20

PCBN

52

diamond

84

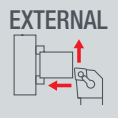
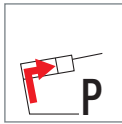
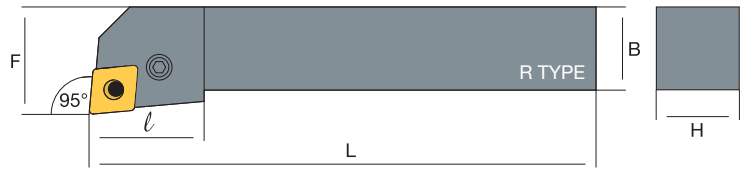
ceramic

102

PCLN

NEGATIVE
with hole

CN□□

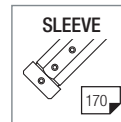
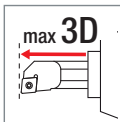
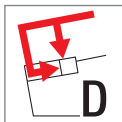
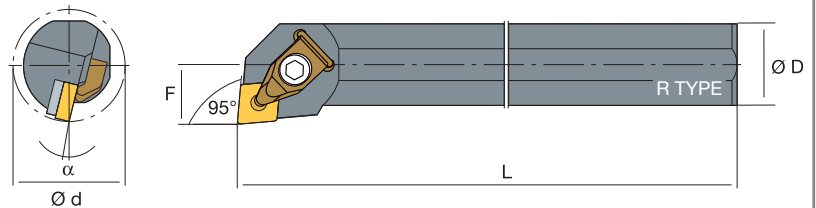


CN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
CN□□1204	NT-PCLN ^{R/L} 2020K 12	●	●	20	20	125	25	26	NT-SH035	NT-SR020	NT-LL020	NT-SC025	NT-WR030	
	2525M 12	●	●	25	25	150	32	26	NT-SH035	NT-SR020	NT-LL020	NT-SC025	NT-WR030	

A^DDCLN

NEGATIVE
with hole

CN□□



CN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
CN□□1204	NT-A25R-DCLN ^{R/L} 12	●	●	25	32	200	17	14°	NT-SH035	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	NT-A32S-DCLN ^{R/L} 12	●	●	32	40	250	22	14°	NT-SH035	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	NT-A40T-DCLN ^{R/L} 12	●	●	40	50	300	27	12°	NT-SH035	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	*NT-ST200 → NT-WR025													

carbide 20

PCBN 52

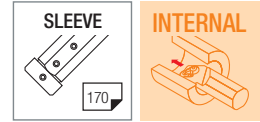
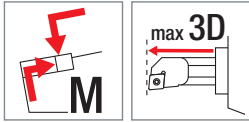
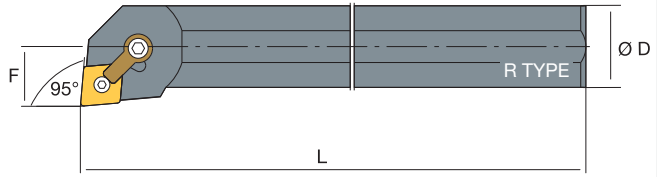
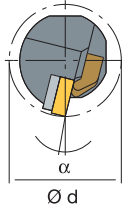
diamond 84

ceramic 102

S MCLN

NEGATIVE with hole

CN□□



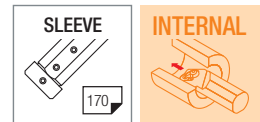
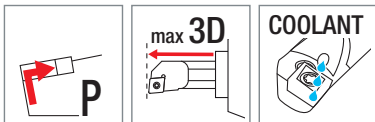
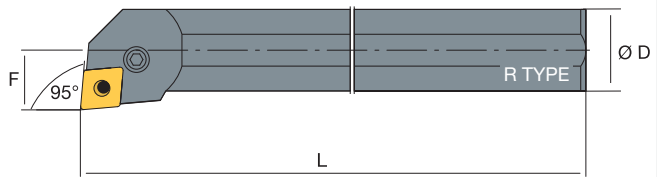
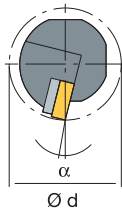
CN□□	DESCRIPTION	STOCK		DIMENSIONS					SLEEVE			INTERNAL		
		R	L	ØD	Ød	L	F	α	□	□	□	□	□	□
CN□□1204	NT-S20R-MCLN ^{R/L} 12	●	●	20	25	200	13	17°	-	NT-SP035	NT-WR025	NT-CS030	NT-SC030	NT-WR025
	NT-S25R-MCLN ^{R/L} 12	●	●	25	32	200	17	14°	-	NT-SP035	NT-WR025	NT-CS010	NT-SC008	NT-WR030
	NT-S32S-MCLN ^{R/L} 12	●	●	32	40	250	22	14°	NT-SH030	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S40T-MCLN ^{R/L} 12	●	●	40	50	300	27	12°	NT-SH030	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MCLN ^{R/L} 12	●	●	50	63	350	35	12°	NT-SH030	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
CN□□1606	NT-S40T-MCLN ^{R/L} 16	●	●	40	50	300	27	11°	NT-SH055	NT-SP040	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MCLN ^{R/L} 16	●	●	50	63	350	35	12°	NT-SH055	NT-SP040	NT-WR030	NT-CS010	NT-SC010	NT-WR030
CN□□1906	NT-S50U-MCLN ^{R/L} 19	○	○	50	63	350	35	12°	NT-SH080	NT-SP050	NT-WR030	NT-CS015	NT-SC070	NT-WR030

A PCLN

NEW

NEGATIVE with hole

CN□□



CN□□	DESCRIPTION	STOCK		DIMENSIONS					□	□	□	□	□	
		R	L	ØD	Ød	L	F	α	□	□	□	□	□	
CN□□1204	NT-A25R-PCLN ^{R/L} 12	●	●	25	32	200	17	11°	-	NT-SR015	NT-LL015	NT-SC015	NT-WR025	
	NT-A32S-PCLN ^{R/L} 12	●	●	32	40	250	22	11°	NT-SH035	NT-SR020	NT-LL020	NT-SC025	NT-WR030	
	NT-A40T-PCLN ^{R/L} 12	●	●	40	50	300	27	10°	NT-SH035	NT-SR020	NT-LL020	NT-SC025	NT-WR030	

carbide 20

PCBN 52


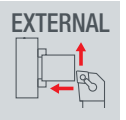
diamond 84

ceramic 102

●, ○ = NEW ITEM

SDAC


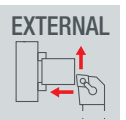
POSITIVE 7° with hole **DC**□□

DC□□	DESCRIPTION	STOCK		DIMENSIONS						ℓ							
		R	L	H	B	L	F										
DC□□0702	NT-SDAC ^{R/L} 0808K 07	○	○	8	8	125	8.5	-	NT-ST010	NT-FT07							
	1010K 07	●	●	10	10	125	10.5	-	NT-ST010	NT-FT07							
	1212K 07	●	●	12	12	125	12.5	-	NT-ST010	NT-FT07							
DC□□11T3	NT-SDAC ^{R/L} 1212K 11	●	●	12	12	125	12.5	-	NT-ST035	NT-FT15							
	1616K 11	●	●	16	16	125	16.5	-	NT-ST035	NT-FT15							

SDJC

POSITIVE 7° with hole **DC**□□

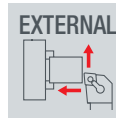
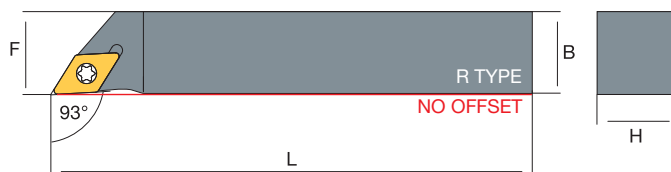



DC□□	DESCRIPTION	STOCK		DIMENSIONS						ℓ							
		R	L	H	B	L	F										
DC□□11T3	NT-SDJC ^{R/L} 1616H 11	●	●	16	16	100	20	-	-	-	-	NT-ST035	NT-FT15				
	2020K 11	●	●	20	20	125	25	-	-	-	-	NT-ST035	NT-FT15				
	2525M 11	●	●	25	25	150	32	-	-	-	-	NT-ST035	NT-FT15				
	NT-SDJC ^{R/L} 2020K 11S	●	●	20	20	125	25	-	NT-SH007	NT-SR010	NT-WR035	NT-ST040	NT-FT15				
	2525M 11S	●	●	25	25	150	32	-	NT-SH007	NT-SR010	NT-WR035	NT-ST040	NT-FT15				

SDJC-N

POSITIVE 7°
with hole

DC□□

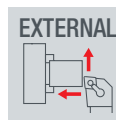
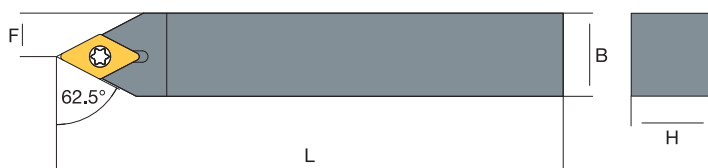


DC□□	DESCRIPTION	STOCK		DIMENSIONS													
		R	L	H	B	L	F	ℓ									
DC□□0702	NT-SDJC%/L 0808K 07N	○	○	8	8	125	8	-	NT-ST010	NT-FT07							
		●	●	10	10	125	10	-	NT-ST010	NT-FT07							
		●	●	12	12	125	12	-	NT-ST010	NT-FT07							
DC□□11T3	NT-SDJC%/L 1212K 11N	●	●	12	12	125	12	-	NT-ST035	NT-FT15							
		●	●	16	16	125	16	-	NT-ST035	NT-FT15							

SDNCN

POSITIVE 7°
with hole

DC□□



DC□□	DESCRIPTION	STOCK		DIMENSIONS													
		R	L	H	B	L	F	ℓ									
DC□□0702	NT-SDNCN 0808H 07	○	○	8	8	100	4	-	-	-	-	NT-ST010	NT-FT07				
		○	○	10	10	100	5	-	-	-	-	NT-ST010	NT-FT07				
		●	●	12	12	100	6	-	-	-	-	NT-ST035	NT-FT15				
DC□□11T3	NT-SDNCN 1616H 11	●	●	16	16	100	8	-	-	-	-	NT-ST035	NT-FT15				
		●	●	20	20	125	10	-	-	-	-	NT-ST035	NT-FT15				
		●	●	25	25	150	12.5	-	-	-	-	NT-ST035	NT-FT15				
	NT-SDNCN 2020K 11S	○	○	20	20	125	10	-	NT-SH007	NT-SR010	NT-WR035	NT-ST040	NT-FT15				
		○	○	25	25	150	12.5	-	NT-SH007	NT-SR010	NT-WR035	NT-ST040	NT-FT15				

carbide

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PCBN

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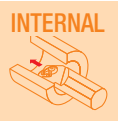
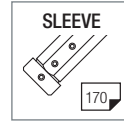
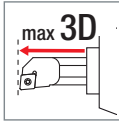
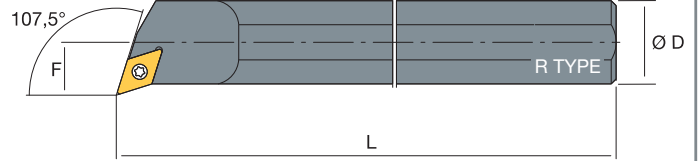
diamond

85

S^SSDQC

POSITIVE 7°
with hole

DC□□

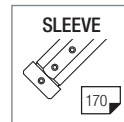
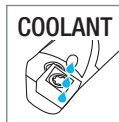
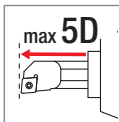
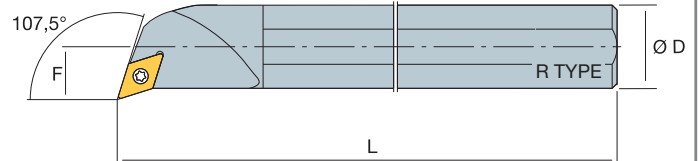


DC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
DC□□0702	NT-S10M-SDQC ^{R/L} 07	●	●	10	13	150	7	10°	NT-ST010	NT-FT07					
	NT-S12M-SDQC ^{R/L} 07	●	●	12	16	150	9	8°	NT-ST010	NT-FT07					
	NT-S16Q-SDQC ^{R/L} 07	●	●	16	20	180	11	6°	NT-ST010	NT-FT07					
	NT-S20R-SDQC ^{R/L} 07	●	●	20	25	200	13	6°	NT-ST010	NT-FT07					
DC□□11T3	NT-S16Q-SDQC ^{R/L} 11	●	●	16	20	180	11	6°	NT-ST035	NT-FT15					
	NT-S20R-SDQC ^{R/L} 11	●	●	20	25	200	13	8°	NT-ST035	NT-FT15					
	NT-S25R-SDQC ^{R/L} 11	●	●	25	30	200	17	4°	NT-ST035	NT-FT15					
	NT-S32S-SDQC ^{R/L} 11	●	●	32	39	250	20	4°	NT-ST035	NT-FT15					

V^VSDQC

POSITIVE 7°
with hole

DC□□



DC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
DC□□0702	NT-V10K-SDQC ^{R/L} 07-13	●	●	10	13	125	7	10°	NT-ST010	NT-FT07					
	NT-V12M-SDQC ^{R/L} 07-16	●	●	12	16	150	9	8°	NT-ST010	NT-FT07					
	NT-V16Q-SDQC ^{R/L} 07-20	●	●	16	20	180	11	6°	NT-ST010	NT-FT07					
	NT-V20R-SDQC ^{R/L} 07-25	●	●	20	25	200	13	5°	NT-ST010	NT-FT07					
DC□□11T3	NT-V16Q-SDQC ^{R/L} 11-20	●	●	16	20	180	11	7°	NT-ST035	NT-FT15					
	NT-V20R-SDQC ^{R/L} 11-25	●	●	20	25	200	13	8°	NT-ST035	NT-FT15					
	NT-V25S-SDQC ^{R/L} 11-30	●	●	25	30	250	17	4°	NT-ST035	NT-FT15					

carbide

23

PCBN

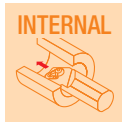
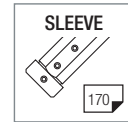
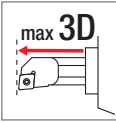
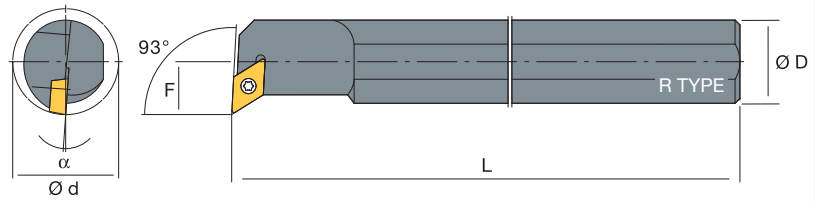
55

diamond

85

ASDUCPOSITIVE 7°
with hole

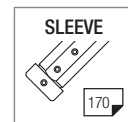
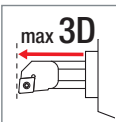
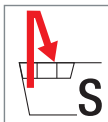
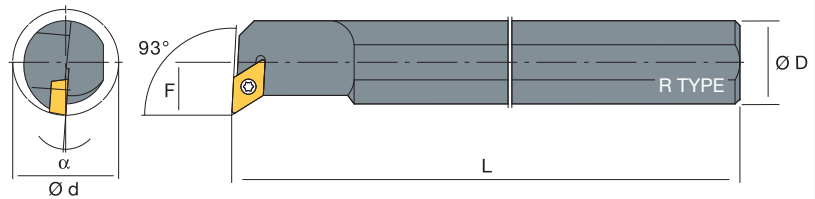
DC□□



DC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
DC□□0702	NT-A10M-SDUC ^{R/L} 07	●	●	10	14	150	7	10°	NT-ST010	NT-FT07					
	NT-A12M-SDUC ^{R/L} 07	●	●	12	16	150	9	8°	NT-ST010	NT-FT07					
	NT-A16Q-SDUC ^{R/L} 07	●	●	16	20	180	11	6°	NT-ST010	NT-FT07					
	NT-A20R-SDUC ^{R/L} 07	●	●	20	25	200	13	5°	NT-ST010	NT-FT07					
DC□□11T3	NT-A16Q-SDUC ^{R/L} 11	●	●	16	23	180	11	7°	NT-ST035	NT-FT15					
	NT-A20R-SDUC ^{R/L} 11	●	●	20	27	200	13	8°	NT-ST035	NT-FT15					

SSDUCPOSITIVE 7°
with hole

DC□□



DC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
DC□□0702	NT-S10M-SDUC ^{R/L} 07	●	●	10	14	150	7	10°	NT-ST010	NT-FT07					
	NT-S12M-SDUC ^{R/L} 07	●	●	12	16	150	9	8°	NT-ST010	NT-FT07					
	NT-S16Q-SDUC ^{R/L} 07	●	●	16	20	180	11	6°	NT-ST010	NT-FT07					
	NT-S20R-SDUC ^{R/L} 07	●	●	20	25	200	13	5°	NT-ST010	NT-FT07					
DC□□11T3	NT-S16Q-SDUC ^{R/L} 11	●	●	16	23	180	11	7°	NT-ST035	NT-FT15					
	NT-S20R-SDUC ^{R/L} 11	●	●	20	27	200	13	8°	NT-ST035	NT-FT15					
	NT-S25R-SDUC ^{R/L} 11	●	●	25	32	200	17	4°	NT-ST035	NT-FT15					
	NT-S32S-SDUC ^{R/L} 11	●	●	32	39	250	22	4°	NT-ST035	NT-FT15					
	NT-S40T-SDUC ^{R/L} 11	●	●	40	50	300	24	2°	NT-ST040	NT-FT15					

carbide

23

PCBN

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diamond

85

VSDUC

POSITIVE 7° with hole **DC** □ □

DC □ □	DESCRIPTION	STOCK		DIMENSIONS					Screw	Holder					
		R	L	ØD	Ød	L	F	α							
DC □ □ 0702	NT-V10K-SDUC ^{R/L} 07-14	●	●	10	14	125	7	10°	NT-ST010	NT-FT07					
	NT-V12M-SDUC ^{R/L} 07-16	●	●	12	16	150	9	8°	NT-ST010	NT-FT07					
	NT-V16Q-SDUC ^{R/L} 07-20	●	●	16	20	180	11	6°	NT-ST010	NT-FT07					
	NT-V20R-SDUC ^{R/L} 07-25	●	●	20	25	200	13	5°	NT-ST010	NT-FT07					
DC □ □ 11T3	NT-V16Q-SDUC ^{R/L} 11-23	●	●	16	23	180	11	7°	NT-ST035	NT-FT15					
	NT-V20R-SDUC ^{R/L} 11-27	●	●	20	27	200	13	8°	NT-ST035	NT-FT15					
	NT-V25S-SDUC ^{R/L} 11-32	●	●	25	32	250	17	4°	NT-ST035	NT-FT15					

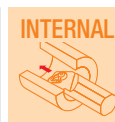
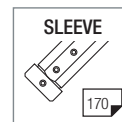
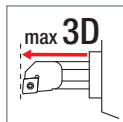
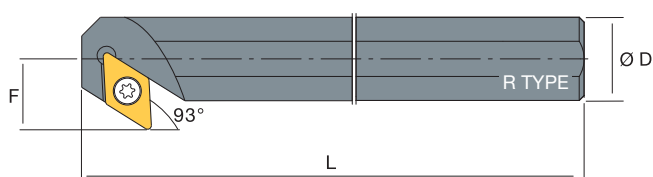
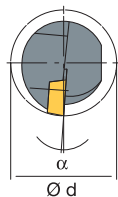
ESDUC

POSITIVE 7° with hole **DC** □ □

DC □ □	DESCRIPTION	STOCK		DIMENSIONS					Screw	Holder					
		R	L	ØD	Ød	L	F	α							
DC □ □ 0702	NT-E10K-SDUC ^{R/L} 07	●	●	10	14	125	7	10°	NT-ST010	NT-FT07					
	NT-E12M-SDUC ^{R/L} 07	●	●	12	16	150	9	8°	NT-ST010	NT-FT07					
DC □ □ 11T3	NT-E16R-SDUC ^{R/L} 11	●	●	16	23	200	11	6°	NT-ST035	NT-FT15					
	NT-E20R-SDUC ^{R/L} 11	●	●	20	27	200	13	5°	NT-ST035	NT-FT15					

S^SSDZCPOSITIVE 7°
with hole

DC□□



DC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
DC□□0702	NT-S10M-SDZC ^{R/L} 07	●	●	10	14	150	8.5	10°	NT-ST010	NT-FT07					
	NT-S12M-SDZC ^{R/L} 07	●	●	12	17	150	10.5	9°	NT-ST010	NT-FT07					
	NT-S16Q-SDZC ^{R/L} 07	●	●	16	21	180	12.5	8°	NT-ST010	NT-FT07					
DC□□11T3	NT-S20R-SDZC ^{R/L} 11	●	●	20	27	200	15.5	8°	NT-ST035	NT-FT15					
	NT-S25R-SDZC ^{R/L} 11	○	○	25	33	200	18	6°	NT-ST035	NT-FT15					
	NT-S32S-SDZC ^{R/L} 11	○	○	32	39	250	21.5	4°	NT-ST035	NT-FT15					

carbide

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PCBN

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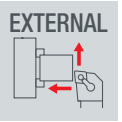
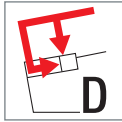
diamond

85

DDJN

NEGATIVE
with hole

DN□□

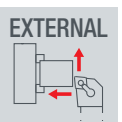
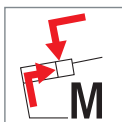


DN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
DN□□1104	NT-DDJN ^{R/L} 1616H 11	○	○	16	16	100	20	34	NT-SH007	NT-ST008*	NT-CS250	NT-SG250	NT-SC250	NT-TX15
	2020K 11	●	●	20	20	125	25	34	NT-SH007	NT-ST008*	NT-CS250	NT-SG250	NT-SC250	NT-TX15
	2525M 11	●	●	25	25	150	32	34	NT-SH007	NT-ST008*	NT-CS250	NT-SG250	NT-SC250	NT-TX15
DN□□1506*	NT-DDJN ^{R/L} 2020K 1506	●	●	20	20	125	25	42	NT-SH045	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	2525M 1506	●	●	25	25	150	32	40	NT-SH045	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	3225P 1506	●	●	32	25	170	32	40	NT-SH045	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	DN□□1504 → NT-SH025													
	*NT-ST008 → NT-WR020													
	*NT-ST200 → NT-WR025													

MDJN

NEGATIVE
with hole

DN□□

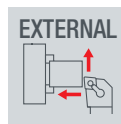
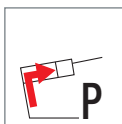
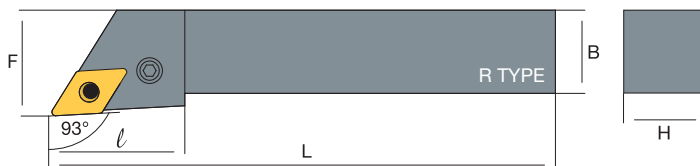


DN□□	DESCRIPTION	STOCK		DIMENSIONS									
		R	L	H	B	L	F	l					
DN□□1506*	NT-MDJN ^{R/L} 2020K 1506	●	●	20	20	125	25	34	NT-SH045	NT-SP025	NT-CS025	NT-SC010	NT-WR030
	2525M 1506	●	●	25	25	150	32	34	NT-SH045	NT-SP025	NT-CS025	NT-SC010	NT-WR030
	3232P 1506	●	●	32	32	170	40	43	NT-SH045	NT-SP025	NT-CS025	NT-SC010	NT-WR030
	DN□□1504 → NT-SH025												

PDJN

NEGATIVE with hole

DN

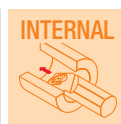
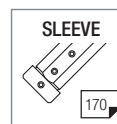
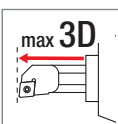
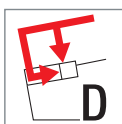
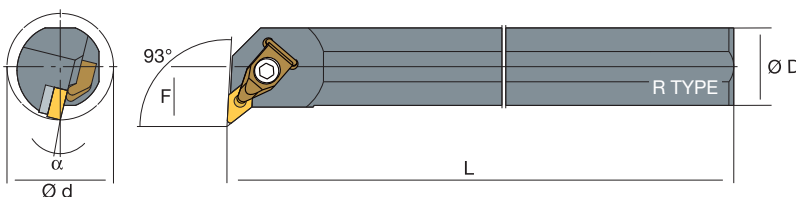


DN <input type="text"/> <input type="text"/>	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	l							
DN <input type="text"/> 1506	NT-PDJN ^{R/L} 2525M 1506	●	●	25	25	150	32	36		NT-SH020	NT-SR020	NT-LL020	NT-SC020	NT-WR030	

^ADDUN

NEGATIVE with hole

DN



DN <input type="text"/> <input type="text"/>	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
DN <input type="text"/> 1506	NT-A25R-DDUN ^{R/L} 1506	●	●	25	32	200	17	16°	NT-SH020	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	NT-A32S-DDUN ^{R/L} 1506	●	●	32	40	250	22	12°	NT-SH020	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	NT-A40T-DDUN ^{R/L} 1506	●	●	40	50	300	27	10°	NT-SH020	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	*NT-ST200 → NT-WR025													

carbide 24

PCBN 56

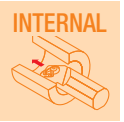
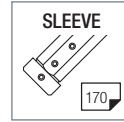
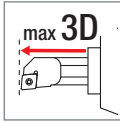
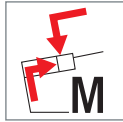
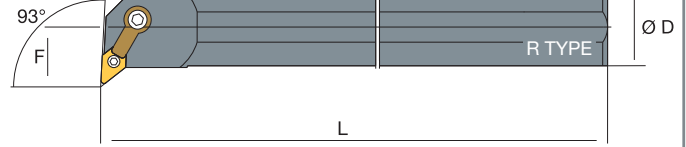
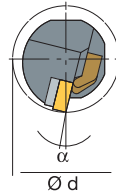
diamond 86






ceramic 104

SMDUN

NEGATIVE
with hole

DN□□



DN□□	DESCRIPTION	STOCK		DIMENSIONS					 ← 		 ← 			
		R	L	ØD	Ød	L	F	α						
DN□□1506	NT-S32S-MDUN ^{R/L} 1506	●	●	32	40	250	22	17°	NT-SH045	NT-SP025	NT-CS025	NT-SC008	NT-WR030	
	NT-S40T-MDUN ^{R/L} 1506	●	●	40	50	300	27	15°	NT-SH045	NT-SP025	NT-CS025	NT-SC010	NT-WR030	
	NT-S50U-MDUN ^{R/L} 1506	●	●	50	63	350	35	12°	NT-SH045	NT-SP025	NT-CS025	NT-SC010	NT-WR030	

carbide ▶ 24

PCBN ▶ 56

diamond ▶ 86

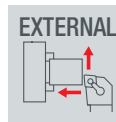
ceramic ▶ 104

SSSDCN

NEW

POSITIVE 7°
with hole

SC



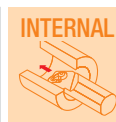
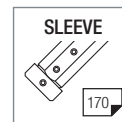
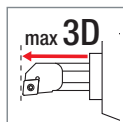
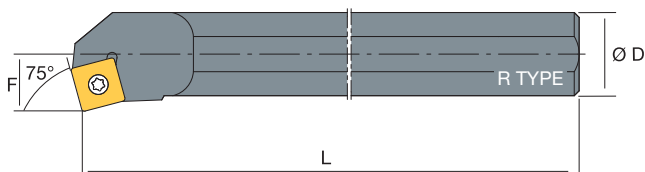
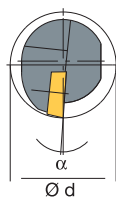
SC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS											
			H	B	L	F	α							
SC <input type="checkbox"/> <input type="checkbox"/> 09T3	NT-SSDCN 2020K 09	●	20	20	125	10	-	NT-ST020	NT-FT15					
	2525M 09	●	25	25	150	12.5	-	NT-ST020	NT-FT15					
SC <input type="checkbox"/> <input type="checkbox"/> 1204	NT-SSDCN 2020K 12	●	20	20	125	10	-	NT-ST050	NT-FT15					
	2525M 12	●	25	25	150	12.5	-	NT-ST050	NT-FT15					

SSSKC

NEW

POSITIVE 7°
with hole

SC



SC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
SC <input type="checkbox"/> <input type="checkbox"/> 09T3	NT-S12M-SSKC ^{R/L} 09	●	●	12	16	150	8.5	12°	NT-ST020	NT-FT15					
	NT-S16Q-SSKC ^{R/L} 09	●	●	16	20	180	11	11°	NT-ST020	NT-FT15					
	NT-S20R-SSKC ^{R/L} 09	●	●	20	25	200	13	6°	NT-ST020	NT-FT15					
	NT-S25R-SSKC ^{R/L} 09	●	●	25	31	200	15	6°	NT-ST020	NT-FT15					
SC <input type="checkbox"/> <input type="checkbox"/> 1204	NT-S25R-SSKC ^{R/L} 12	●	●	25	32	200	17	7°	NT-ST020	NT-FT15					
	NT-S32S-SSKC ^{R/L} 12	●	●	32	40	250	22	7°	NT-ST020	NT-FT15					

carbide

27

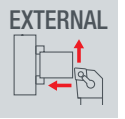
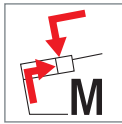
ceramic

108

MSBN

NEGATIVE
with hole

SN□□

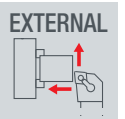
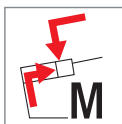


SN□□	DESCRIPTION	STOCK		DIMENSIONS						←		←			
		R	L	H	B	L	F	l							
SN□□1204	NT-MSBN [®] /L 2020K 12	●	●	20	20	125	17	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030		
	2525M 12	●	●	25	25	150	22	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030		
	3232P 12	○	○	32	32	170	27	42	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030		
SN□□1906	NT-MSBN [®] /L 3232P 19	○	○	32	32	170	27	42	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040		
	4040R 19	○	○	40	40	200	35	42	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040		

MSDNN

NEGATIVE
with hole

SN□□

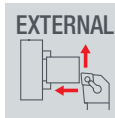
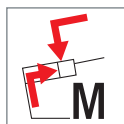







SN□□	DESCRIPTION	STOCK		DIMENSIONS						←		←			
		R	L	H	B	L	F	l							
SN□□1204	NT-MSDNN 2020K 12	●		20	20	125	10	35	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030		
	2525M 12	●		25	25	150	12.5	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030		
	3232P 12	○		32	32	170	16	43	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030		

MSKN

NEGATIVE
with hole

SN□□

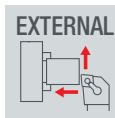
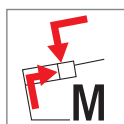







SN□□	DESCRIPTION	STOCK		DIMENSIONS					 ← 		 ← 			
		R	L	H	B	L	F	l	NT-SH070	NT-SP010	NT-CS010	NT-SC010		
SN□□1204	NT-MSKN ^{R/L} 2020K 12	●	●	20	20	125	25	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	2525M 12	●	●	25	25	150	32	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	3232P 12	○	○	32	32	170	40	42	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
SN□□1906	NT-MSKN ^{R/L} 4040R 19	○	○	40	40	200	50	42	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040	

MSSN

NEGATIVE
with hole

SN□□



SN□□	DESCRIPTION	STOCK		DIMENSIONS					 ← 		 ← 			
		R	L	H	B	L	F	l	NT-SH070	NT-SP010	NT-CS010	NT-SC010		
SN□□1204	NT-MSSN ^{R/L} 2020K 12	●	●	20	20	125	25	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	2525M 12	●	●	25	25	150	32	37	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
	3232P 12	○	○	32	32	170	40	42	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030	
SN□□1906	NT-MSSN ^{R/L} 3232P 19	○	○	32	32	170	40	42	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040	
	4040R 19	○	○	40	40	200	40	42	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040	

carbide

28

PCBN

60

ceramic

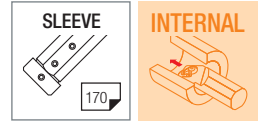
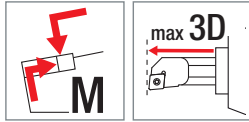
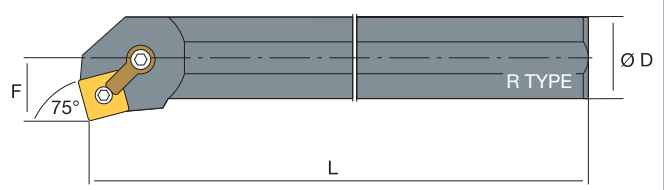
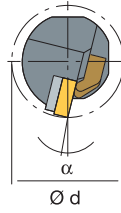
109

SMSKN

NEW

NEGATIVE
with hole

SN□□



SN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
SN□1204	NT-S20R-MSKN ^{R/L} 12	●	●	20	25	200	13	17°	-	NT-SP035	NT-WR025	NT-CS030	NT-SC030	NT-WR025
	NT-S25R-MSKN ^{R/L} 12	●	●	25	32	200	17	14°	-	NT-SP035	NT-WR025	NT-CS010	NT-SC008	NT-WR030
	NT-S32S-MSKN ^{R/L} 12	●	●	32	40	250	22	14°	NT-SH070	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S40T-MSKN ^{R/L} 12	●	●	40	50	300	27	15°	NT-SH070	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MSKN ^{R/L} 12	●	●	50	63	350	35	12°	NT-SH070	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
SN□1906	NT-S50U-MSKN ^{R/L} 19	○	○	50	63	350	35	8°	NT-SH090	NT-SP050	NT-WR040	NT-CS015	NT-SC070	NT-WR040

carbide 28

PCBN 60

ceramic 109


●, ○ = NEW ITEM


STAC

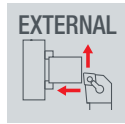
NEW

POSITIVE 7° with hole

TC□□








TC□□	DESCRIPTION	STOCK		DIMENSIONS						Screw	Tool					
		R	L	H	B	L	F	ℓ								
TC□□0902	NT-STAC ^{R/L} 0808H 09	○	○	8	8	100	8.5	-	NT-ST004	NT-FT7						
	1010H 09	○	○	10	10	100	10.5	-	NT-ST004	NT-FT7						
TC□□1102	NT-STAC ^{R/L} 1212H 11	●	●	12	12	100	12.5	-	NT-ST010	NT-FT7						
	1616H 11	●	●	16	16	100	16.5	-	NT-ST010	NT-FT7						

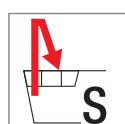
STFC

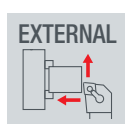
NEW

POSITIVE 7° with hole

TC□□







TC□□	DESCRIPTION	STOCK		DIMENSIONS						Screw	Tool					
		R	L	H	B	L	F	ℓ								
TC□□0902	NT-STFC ^{R/L} 0808H 09	○	○	8	8	100	10	-	NT-ST004	NT-FT7						
	1010H 09	○	○	10	10	100	12	-	NT-ST004	NT-FT7						
TC□□1102	NT-STFC ^{R/L} 1212H 11	●	●	12	12	100	16	-	NT-ST010	NT-FT7						
	1616H 11	●	●	16	16	100	20	-	NT-ST010	NT-FT7						
TC□□16T3	NT-STFC ^{R/L} 2020K 16	●	●	20	20	125	25	-	NT-ST020	NT-FT15						
	2525M 16	●	●	25	25	150	32	-	NT-ST020	NT-FT15						

carbide

30

PCBN

63

diamond

87

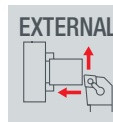
●, ○ = NEW ITEM

STGC

NEW

POSITIVE 7°
with hole

TC□□

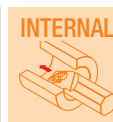
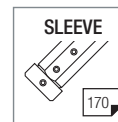
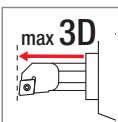
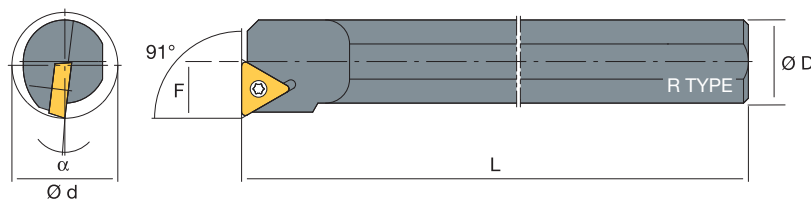


TC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	ℓ							
TC□□0902	NT-STGC ^{R/L} 1212H 11	○	○	12	12	100	16	17	NT-ST010	NT-FT7					
	1616H 11	○	○	16	16	100	20	18	NT-ST010	NT-FT7					
TC□□1102	NT-STGC ^{R/L} 2020K 16	●	●	20	20	125	25	22	NT-ST020	NT-FT15					
	2525M 16	●	●	25	25	150	32	25	NT-ST020	NT-FT15					

A^ASTFC

POSITIVE 7°
with hole

TC□□



TC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
TC□□1102	NT-A10K-STFC ^{R/L} 11	●	●	10	14	125	7	15°	NT-ST010	NT-FT07					
	NT-A12M-STFC ^{R/L} 11	●	●	12	14	150	7	10°	NT-ST010	NT-FT07					
	NT-A16Q-STFC ^{R/L} 11	●	●	16	18	180	9	8°	NT-ST010	NT-FT07					
	NT-A20R-STFC ^{R/L} 11	●	●	20	25	200	13	3°	NT-ST010	NT-FT07					

carbide 30

PCBN 63

diamond 87

S³STFC

POSITIVE 7° with hole **TC□□**

TC□□	DESCRIPTION	STOCK		DIMENSIONS					Screw	Tool					
		R	L	ØD	Ød	L	F	α							
TC□□0902	NT-S08H-STFC ^{R/L} 09	●	●	8	12	100	6	12°	NT-ST004	NT-FT07					
	NT-S10K-STFC ^{R/L} 09	●	●	10	14	125	7	15°	NT-ST004	NT-FT07					
	NT-S12M-STFC ^{R/L} 09	●	●	12	16	150	9	10°	NT-ST004	NT-FT07					
TC□□1102	NT-S10K-STFC ^{R/L} 11	●	●	10	14	125	7	15°	NT-ST010	NT-FT07					
	NT-S12M-STFC ^{R/L} 11	●	●	12	14	150	7	10°	NT-ST010	NT-FT07					
	NT-S16Q-STFC ^{R/L} 11	●	●	16	18	180	9	8°	NT-ST010	NT-FT07					
	NT-S20R-STFC ^{R/L} 11	●	●	20	25	200	13	3°	NT-ST010	NT-FT07					
TC□□16T3	NT-S20R-STFC ^{R/L} 16	●	●	20	25	200	11.5	8°	NT-ST030	NT-FT15					
	NT-S25R-STFC ^{R/L} 16	●	●	25	32	200	17	6°	NT-ST030	NT-FT15					
	NT-S32S-STFC ^{R/L} 16	●	●	32	39	250	17.5	4°	NT-ST030	NT-FT15					

E³STFC

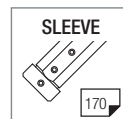
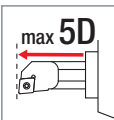
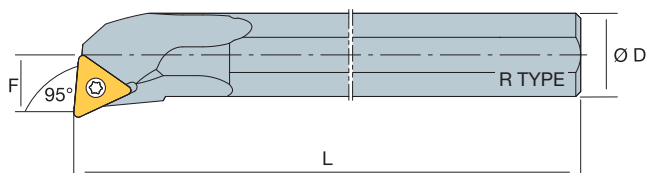
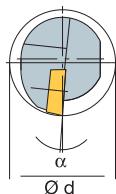
POSITIVE 7° with hole **TC□□**

TC□□	DESCRIPTION	STOCK		DIMENSIONS					Screw	Tool					
		R	L	ØD	Ød	L	F	α							
TC□□1102	NT-E10K-STFC ^{R/L} 11	●	●	10	12	125	6	15°	NT-ST010	NT-FT07					
	NT-E12M-STFC ^{R/L} 11	●	●	12	14	150	7.5	10°	NT-ST010	NT-FT07					
	NT-E16R-STFC ^{R/L} 11	●	●	16	18	200	9.5	8°	NT-ST010	NT-FT07					
	NT-E20R-STFC ^{R/L} 11	●	●	20	22	200	11.5	3°	NT-ST010	NT-FT07					

VSTLC

POSITIVE 7°
with hole

TC□□



TC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
TC□□0902	NT-V08H-STLC ^{R/L} 09-10	●	●	8	10	100	6	12°	NT-ST004	NT-FT07					
	NT-V10K-STLC ^{R/L} 09-12	●	●	10	12	125	7	15°	NT-ST004	NT-FT07					
	NT-V12M-STLC ^{R/L} 09-14	●	●	12	14	150	7	10°	NT-ST004	NT-FT07					
TC□□1102	NT-V10K-STLC ^{R/L} 11-12	●	●	10	12	125	7	15°	NT-ST010	NT-FT07					
	NT-V12M-STLC ^{R/L} 11-14	●	●	12	14	150	7	10°	NT-ST010	NT-FT07					
	NT-V16Q-STLC ^{R/L} 11-18	●	●	16	18	180	9	8°	NT-ST010	NT-FT07					
	NT-V20R-STLC ^{R/L} 11-22	●	●	20	22	200	13	3°	NT-ST010	NT-FT07					
TC□□16T3	NT-V20R-STLC ^{R/L} 16-25	●	●	20	25	200	11.5	8°	NT-ST030	NT-FT15					
	NT-V25S-STFC ^{R/L} 16-32	●	●	25	32	250	17	6°	NT-ST030	NT-FT15					

carbide

30

PCBN

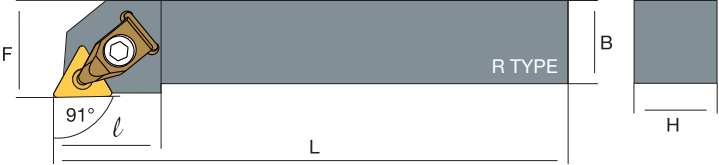
63

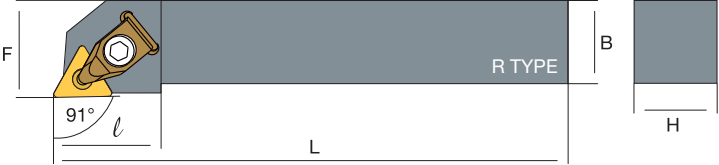
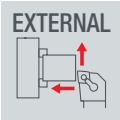
diamond

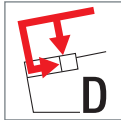
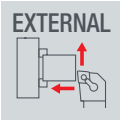
87




DTGN

NEGATIVE with hole **TN□□**








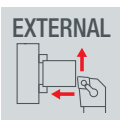



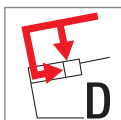
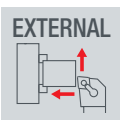
TN□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	ℓ							
TN□□1604	NT-DTGN ^{R/L} 2020K 16	●	●	20	20	125	25	32		NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15
	2525M 16	●	●	25	25	150	32	32		NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15




DTJN

NEGATIVE with hole **TN□□**



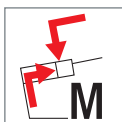
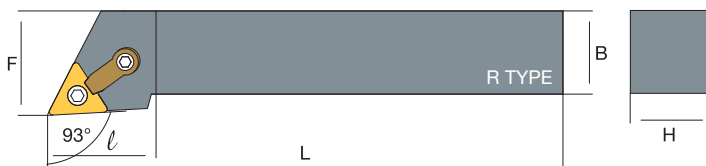



TN□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	ℓ							
TN□□1604	NT-DTJN ^{R/L} 2020K 16	●	●	20	20	125	25	32		NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15
	2525M 16	●	●	25	25	150	32	32		NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15

MTJN

NEGATIVE with hole

TN□□

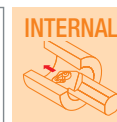
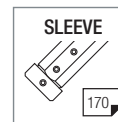
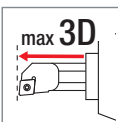
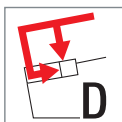
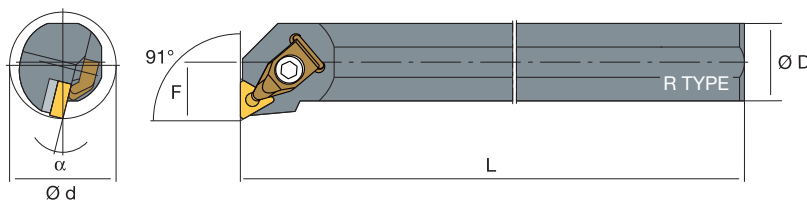


TN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
TN□□1604	NT-MTJN ^{R/L} 2020K 16	●	●	20	20	125	25	32	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
	2525M 16	●	●	25	25	150	32	32	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
	3232P 16	●	●	32	32	170	40	40	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
TN□□2204	NT-MTJN ^{R/L} 2525M 22	●	●	25	25	150	32	43	NT-SH008	NT-SP010	NT-WR030	NT-CS070	NT-SC070	NT-WR040
	3225P 22	●	●	32	25	170	40	43	NT-SH008	NT-SP010	NT-WR030	NT-CS070	NT-SC070	NT-WR040

A^DDTFN

NEGATIVE with hole

TN□□



TN□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
TN□□1604	NT-A25R-DTFN ^{R/L} 16	●	●	25	32	200	17	13°	NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15	
	NT-A32S-DTFN ^{R/L} 16	●	●	32	40	250	22	13°	NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15	

carbide 31

PCBN 64

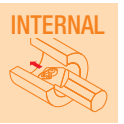
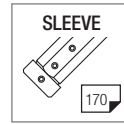
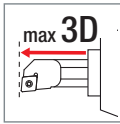
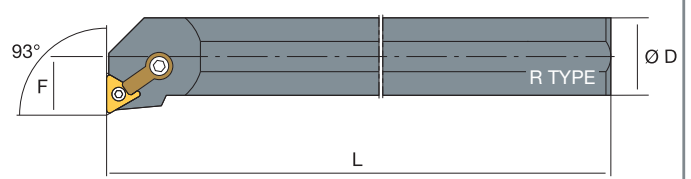
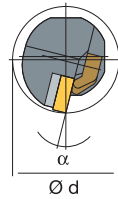
diamond 88

ceramic 111

SMTUN

NEGATIVE
with hole

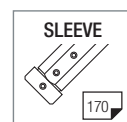
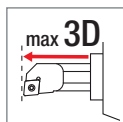
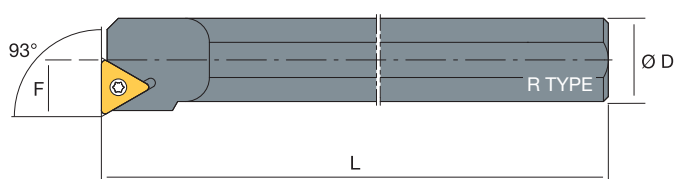
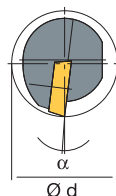
TN□□



TN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
TN□1604	NT-S20R-MTUN ^R /L 16	●	●	20	25	200	13	17°	-	NT-SP030	NT-WR020	NT-CS030	NT-SC030	NT-WR030
	NT-S25R-MTUN ^R /L 16	●	●	25	32	200	17	12°	-	NT-SP030	NT-WR020	NT-CS010	NT-SC008	NT-WR030
	NT-S32S-MTUN ^R /L 16	●	●	32	40	250	22	10°	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
	NT-S40T-MTUN ^R /L 16	●	●	40	50	300	27	10°	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MTUN ^R /L 16	●	●	50	63	350	31	8°	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
TN□2204	NT-S40T-MTUN ^R /L 22	○	○	40	50	300	27	15°	NT-SH008	NT-SP010	NT-WR030	NT-CS070	NT-SC070	NT-WR040
	NT-S50U-MTUN ^R /L 22	○	○	50	63	350	31	12°	NT-SH008	NT-SP010	NT-WR030	NT-CS070	NT-SC070	NT-WR040

S³STUPPOSITIVE 11°
with hole

TP□□

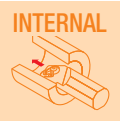
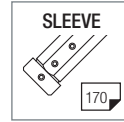
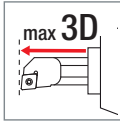
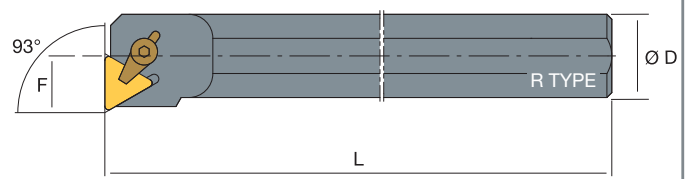
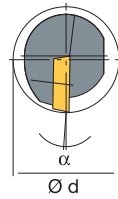




TP□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
TP□□0902	NT-S10K-STUP ^{R/L} 09	●	●	10	12	125	6	8°	NT-ST010	NT-FT07					
	NT-S12M-STUP ^{R/L} 09	●	●	12	14	150	7	5°	NT-ST010	NT-FT07					
TP□□1103	NT-S10K-STUP ^{R/L} 11	●	●	10	12	125	6	8°	NT-ST014	NT-FT10					
	NT-S12M-STUP ^{R/L} 11	●	●	12	14	150	7	7°	NT-ST014	NT-FT10					
	NT-S16Q-STUP ^{R/L} 11	●	●	16	18	180	9	4°	NT-ST015	NT-FT10					
	NT-S20R-STUP ^{R/L} 11	●	●	20	22	200	12.5	2°	NT-ST015	NT-FT10					

SCTUP

POSITIVE 11°
without hole

TP□□

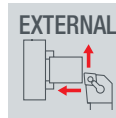




TP□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
TP□□1103	NT-S12M-CTUP ^{R/L} 11	●	●	12	16	150	9	0°	-	-	-	NT-CS003			NT-WR025
	NT-S16Q-CTUP ^{R/L} 11	●	●	16	20	180	11	3°	-	-	-	NT-CS005	NT-SC005	NT-WR025	
	NT-S20R-CTUP ^{R/L} 11	●	●	20	25	200	13	3°	-	-	-	NT-CS005	NT-SC005	NT-WR025	
TP□□1603	NT-S25R-CTUP ^{R/L} 16	●	●	25	32	200	17	3°	NT-SH002	NT-ST022	NT-FT06	NT-CS010	NT-SC008	NT-WR030	
	NT-S32S-CTUP ^{R/L} 16	●	●	32	40	250	22	3°	NT-SH002	NT-ST022	NT-FT06	NT-CS010	NT-SC008	NT-WR030	

SVJB

POSITIVE 5°
with hole

VB□□

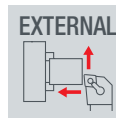




VB□□	DESCRIPTION	STOCK		DIMENSIONS									
		R	L	H	B	L	F	ℓ					
VB□□1103	NT-SVJB ^R /L 1212K 11	●	●	12	12	125	12.5	22	-	-	-	NT-ST010	NT-FT07
	1616K 11	●	●	16	16	125	16.5	22	-	-	-	NT-ST010	NT-FT07
	2020K 11	●	●	20	20	125	25	26	-	-	-	NT-ST010	NT-FT07
VB□□1604	NT-SVJB ^R /L 1616H 16	●	●	16	16	100	16.5	35	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
	2020K 16	●	●	20	20	125	25	35	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
	2525M 16	●	●	25	25	150	32	35	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15

SVVBN

POSITIVE 5°
with hole

VB□□



VB□□	DESCRIPTION	STOCK		DIMENSIONS									
		R	L	H	B	L	F	ℓ					
VB□□1103	NT-SVVBN 2020K 11	●		20	20	125	10	-	-	-	-	NT-ST010	NT-FT07
	2525M 11	●		25	25	150	12.5	-	-	-	-	NT-ST010	NT-FT07
VB□□1604	NT-SVVBN 2020K 16	●		20	20	125	10	-	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
	2525M 16	●		25	25	150	12.5	-	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15

carbide

33

PCBN

68

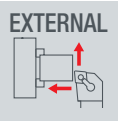
diamond

90

SVJC

POSITIVE 7°
with hole

VC□□

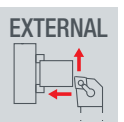
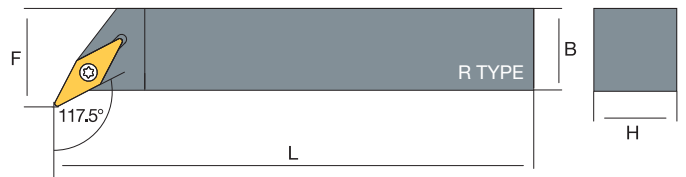


VC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	ℓ							
VC□□1103	NT-SVJC ^{R/L}	1010K	11	○	○	10	10	125	10.5	22	-	-	-	NT-ST010	NT-FT07
		1212K	11	●	●	12	12	125	12.5	22	-	-	-	NT-ST010	NT-FT07
		1616K	11	●	●	16	16	125	16.5	22	-	-	-	NT-ST010	NT-FT07
		2020K	11	●	●	20	20	125	25	26	-	-	-	NT-ST010	NT-FT07
VC□□1604	NT-SVJC ^{R/L}	1616H	16	●	●	16	16	100	16.5	35	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
		2020K	16	●	●	20	20	125	25	35	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
		2525M	16	●	●	25	25	150	32	35	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15

SVPC

POSITIVE 7°
with hole

VC□□



VC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	ℓ							
VC□□1103	NT-SVPC ^{R/L}	1010H	11	○	○	10	10	100	14.5	-	-	-	-	NT-ST010	NT-FT07
		1212H	11	●	●	12	12	100	16.5	-	-	-	-	NT-ST010	NT-FT07
		1616H	11	●	●	16	16	100	20.5	-	-	-	-	NT-ST010	NT-FT07
VC□□1604	NT-SVPC ^{R/L}	2020K	16	●	●	20	20	125	25	-	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
		2525M	16	●	●	25	25	150	32	-	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15

carbide

34

PCBN

69

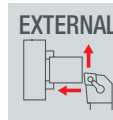
diamond

91

SVVCN

POSITIVE 7°
with hole

VC

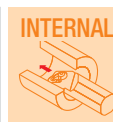
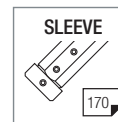
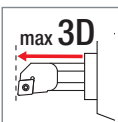
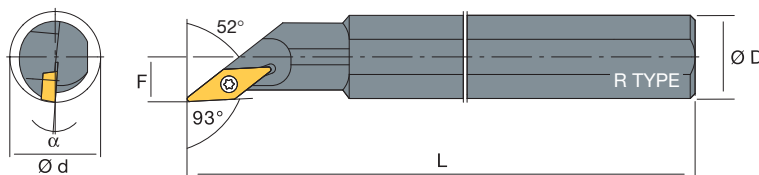


VC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS										
			H	B	L	F	α						
VC <input type="checkbox"/> <input type="checkbox"/> 1103	NT-SVVCN 1010H 11	○	10	10	100	5	-	-	-	-	NT-ST010	NT-FT07	
	1212H 11	●	12	12	100	6	-	-	-	-	NT-ST010	NT-FT07	
	1616H 11	●	16	16	100	8	-	-	-	-	NT-ST010	NT-FT07	
VC <input type="checkbox"/> <input type="checkbox"/> 1604	NT-SVVCN 2020K 16	●	20	20	125	10	-	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15	
	2525M 16	●	25	25	150	12.5	-	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15	

^SSVJC

POSITIVE 7°
with hole

VC



VC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
VC <input type="checkbox"/> <input type="checkbox"/> 1103	NT-S12M-SVJC ^{R/L} 11	●	●	12	14	150	7	7°	NT-ST010	NT-FT07					
	NT-S16Q-SVJC ^{R/L} 11	●	●	16	18	180	9	7°	NT-ST010	NT-FT07					
VC <input type="checkbox"/> <input type="checkbox"/> 1604	NT-S16Q-SVJC ^{R/L} 16	●	●	16	18	180	9	7°	NT-ST030	NT-FT15					
	NT-S20R-SVJC ^{R/L} 16	●	●	20	21	200	10.5	6°	NT-ST030	NT-FT15					
	NT-S25R-SVJC ^{R/L} 16	●	●	25	27	200	13.5	6°	NT-ST030	NT-FT15					
	NT-S32S-SVJC ^{R/L} 16	●	●	32	34	250	17	4°	NT-ST040	NT-FT15					
	NT-S40T-SVJC ^{R/L} 16	○	○	40	44	300	22	4°	NT-ST040	NT-FT15					

carbide

34

PCBN

69

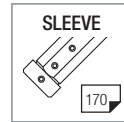
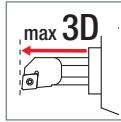
diamond

91

S^SSVQC

POSITIVE 7°
with hole

VC□□

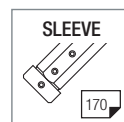
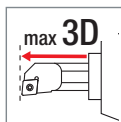
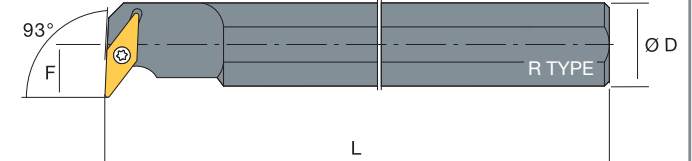
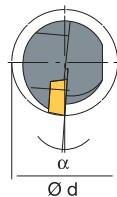


VC□□	DESCRIPTION	STOCK		DIMENSIONS					Screw	Clamp					
		R	L	ØD	Ød	L	F	α							
VC□□1103	NT-S16Q-SVQC ^{R/L} 11	●	●	16	22	180	13	7°	NT-ST010	NT-FT07					
	NT-S20R-SVQC ^{R/L} 11	●	●	20	27	200	15	6°	NT-ST010	NT-FT07					
VC□□1604	NT-S20R-SVQC ^{R/L} 16	●	●	20	27	200	19	8°	NT-ST030	NT-FT15					
	NT-S25R-SVQC ^{R/L} 16	●	●	25	33	200	20.5	4°	NT-ST030	NT-FT15					
	NT-S32S-SVQC ^{R/L} 16	●	●	32	41	250	22.5	8°	NT-ST040	NT-FT15					
	NT-S40T-SVQC ^{R/L} 16	○	○	40	40	300	27	6°	NT-ST040	NT-FT15					

S^SSVUC

POSITIVE 7°
with hole

VC□□



VC□□	DESCRIPTION	STOCK		DIMENSIONS					Screw	Clamp					
		R	L	ØD	Ød	L	F	α							
VC□□1103	NT-S16Q-SVUC ^{R/L} 11	●	●	16	22	180	13	7°	NT-ST010	NT-FT07					
	NT-S20R-SVUC ^{R/L} 11	●	●	20	27	200	15	6°	NT-ST010	NT-FT07					
VC□□1604	NT-S20R-SVUC ^{R/L} 16	●	●	20	31	200	19	8°	NT-ST030	NT-FT15					
	NT-S25R-SVUC ^{R/L} 16	●	●	25	33	200	20.5	4°	NT-ST030	NT-FT15					
	NT-S32S-SVUC ^{R/L} 16	●	●	32	42	250	22.5	8°	NT-ST040	NT-FT15					
	NT-S40T-SVUC ^{R/L} 16	○	○	40	51	300	27	6°	NT-ST040	NT-FT15					

carbide

34

PCBN

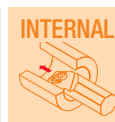
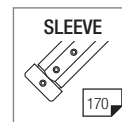
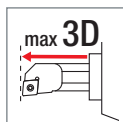
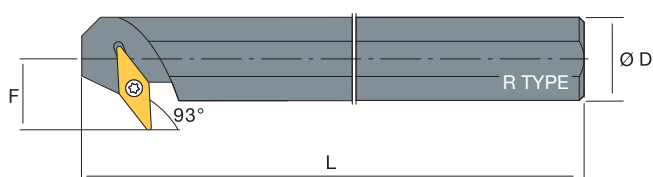
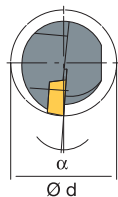
69

diamond

91

S^SSVZCPOSITIVE 7°
with hole

VC□□



VC□□	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
VC□□1604	NT-S25R-SVZC ^{R/L}	16	●	●	25	35	200	20.5	7.5°	NT-ST030	NT-FT15				
	NT-S32S-SVZC ^{R/L}	16	○	○	32	40	250	22	7.5°	NT-ST040	NT-FT15				
	NT-S40T-SVZC ^{R/L}	16	○	○	40	50	300	27	7.5°	NT-ST040	NT-FT15				

carbide

34

PCBN

69

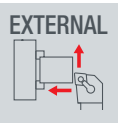
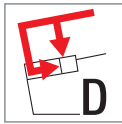
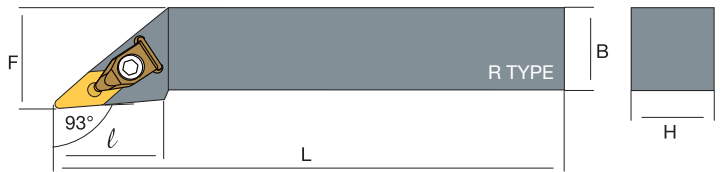
diamond

91

DVJN

NEGATIVE
with hole

VN□□

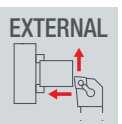
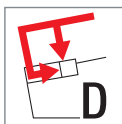
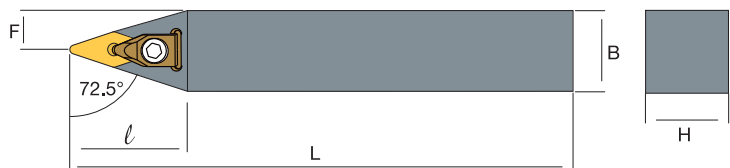


VN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	ℓ						
VN□□1604	NT-DVJN ^{R/L} 2020K 16	●	●	20	20	125	25	42	NT-SH075	NT-ST250*	NT-CS210	NT-SG200	NT-SC200	NT-TX20
	2525M 16	●	●	25	25	150	32	45	NT-SH075	NT-ST250*	NT-CS210	NT-SG200	NT-SC200	NT-TX20
	*NT-ST250 → NT-TX15													

DVVNN

NEGATIVE
with hole

VN□□



VN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	ℓ						
VN□□1604	NT-DVVNN 2020K 16	●	●	20	20	125	10	47	NT-SH075	NT-ST250*	NT-CS210	NT-SG200	NT-SC200	NT-TX20
	2525M 16	●	●	25	25	150	12.5	47	NT-SH075	NT-ST250*	NT-CS210	NT-SG200	NT-SC200	NT-TX20
	*NT-ST250 → NT-TX15													

carbide

35

PCBN

70

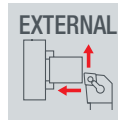
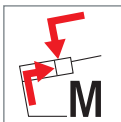
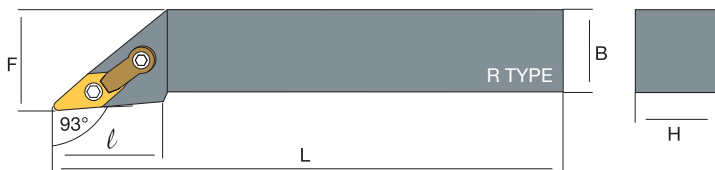
ceramic

114

MVJN

NEGATIVE
with hole

VN□□

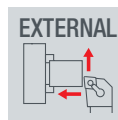
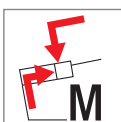


VN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
VN□□1604	NT-MVJN ^{R/L} 2020K 16	●	●	20	20	125	25	44	NT-SH075	NT-SP020	NT-WR020	NT-CS075	NT-SC010	NT-WR030
	2525M 16	●	●	25	25	150	32	44	NT-SH075	NT-SP020	NT-WR020	NT-CS075	NT-SC010	NT-WR030
	3232P 16	○	○	32	32	170	40	45	NT-SH075	NT-SP020	NT-WR020	NT-CS075	NT-SC010	NT-WR030

MVVNN

NEGATIVE
with hole

VN□□



VN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
VN□□1604	NT-MVVNN 2020K 16	●	●	20	20	125	10	44	NT-SH075	NT-SP020	NT-WR020	NT-CS075	NT-SC010	NT-WR030
	2525M 16	●	●	25	25	150	12.5	44	NT-SH075	NT-SP020	NT-WR020	NT-CS075	NT-SC010	NT-WR030
	3232P 16	○	○	32	32	170	16.0	44	NT-SH075	NT-SP020	NT-WR020	NT-CS075	NT-SC010	NT-WR030

carbide

35

PCBN

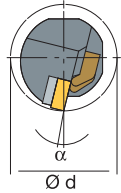
70

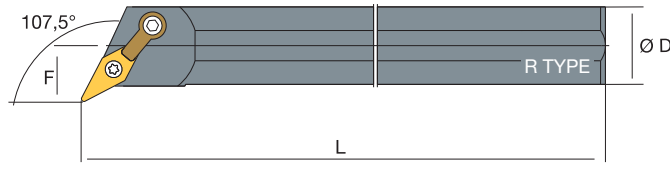
ceramic

114

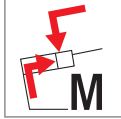
SMVQN

NEW

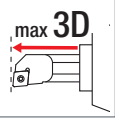




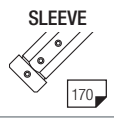
NEGATIVE with hole VN




M




max 3D



SLEEVE
170

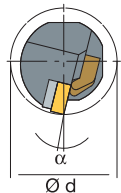


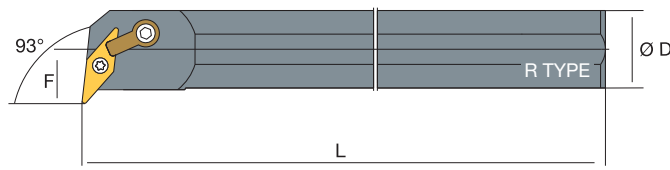
INTERNAL

VN 	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
VN 1604	NT-S25R-MVQN ^{R/L} 16	●	●	25	32	200	20	12°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
	NT-S32S-MVQN ^{R/L} 16	●	●	32	42	250	23	17°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
	NT-S40T-MVQN ^{R/L} 16	●	●	40	50	300	27	15°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MVQN ^{R/L} 16	○	○	50	63	350	33	12°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030


SMVUN

NEW

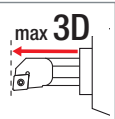




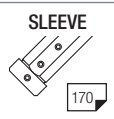
NEGATIVE with hole VN




M




max 3D



SLEEVE
170



INTERNAL

VN 	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
VN 1604	NT-S25R-MVUN ^{R/L} 16	●	●	25	37	200	20	12°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
	NT-S32S-MVUN ^{R/L} 16	●	●	32	40	250	22	12°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
	NT-S40T-MVUN ^{R/L} 16	●	●	40	50	300	27	15°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MVUN ^{R/L} 16	○	○	50	63	350	32	12°	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC010	NT-WR030

carbide

35

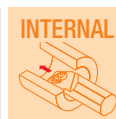
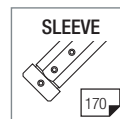
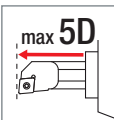
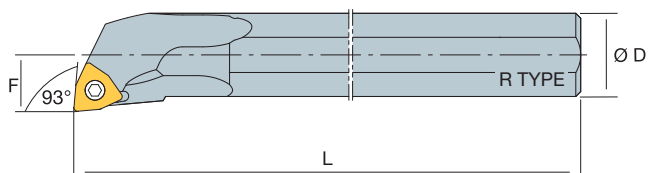
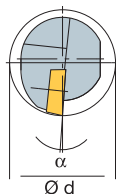
PCBN

70

ceramic

114

●, ○ = NEW ITEM

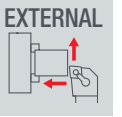
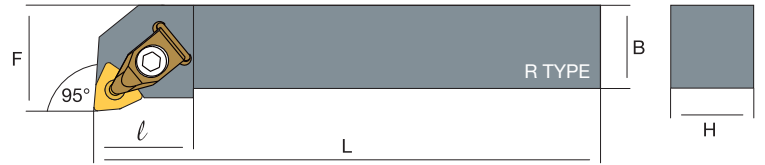
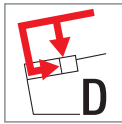
V⁺SWUCPOSITIVE 7°
with holeWC 

WC <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS												
		R	L	ØD	Ød	L	F	α								
WC <input type="checkbox"/> 12T3	NT-V12M-SWUC ^{R/L} 12-14	●	●	12	14	150	7	13	NT-ST020	NT-FT15						
	NT-V16Q-SWUC ^{R/L} 12-18	●	●	16	18	180	9	9	NT-ST020	NT-FT15						
	NT-V20R-SWUC ^{R/L} 12-22	●	●	20	22	200	11	5	NT-ST020	NT-FT15						
	NT-V25S-SWUC ^{R/L} 12-27	●	●	25	27	250	14	5	NT-ST020	NT-FT15						

DWLN

NEGATIVE
with hole

WN□□

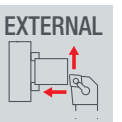
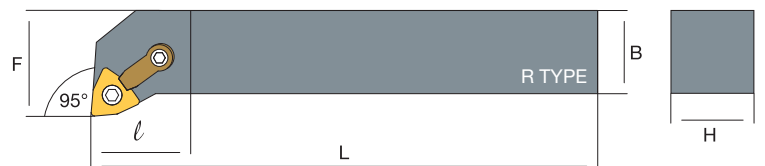
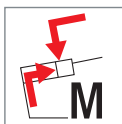


WN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
WN□□0604	NT-DWLN ^{R/L} 1616H 06	○	○	16	16	100	20	30	NT-SH003	NT-ST190	NT-CS250	NT-SG250	NT-SC250	NT-TX15
	2020K 06	●	●	20	20	125	25	34	NT-SH003	NT-ST190	NT-CS250	NT-SG250	NT-SC250	NT-TX15
	2525M 06	○	○	25	25	150	32	34	NT-SH003	NT-ST190	NT-CS250	NT-SG250	NT-SC250	NT-TX15
WN□□0804	NT-DWLN ^{R/L} 2020K 08	●	●	20	20	125	25	34	NT-SH010	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	2525M 08	●	●	25	25	150	32	34	NT-SH010	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	3225P 08	●	●	32	25	170	32	34	NT-SH010	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	*NT-ST200 → NT-WR025													

MWLN

NEGATIVE
with hole

WN□□



WN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	H	B	L	F	l						
WN□□0604	NT-MWLN ^{R/L} 2020K 06	○	○	20	20	125	25	32	NT-SH003	NT-SP020	NT-WR020	NT-CS009	NT-SC030	NT-WR025
	2525M 06	○	○	25	25	150	32	32	NT-SH003	NT-SP020	NT-WR020	NT-CS009	NT-SC030	NT-WR025
WN□□0804	NT-MWLN ^{R/L} 2020K 08	●	●	20	20	125	25	32	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	2525M 08	●	●	25	25	150	32	32	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	3232P 08	●	●	32	32	170	40	38	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030

carbide 37

PCBN 72

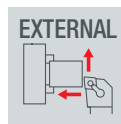
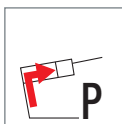
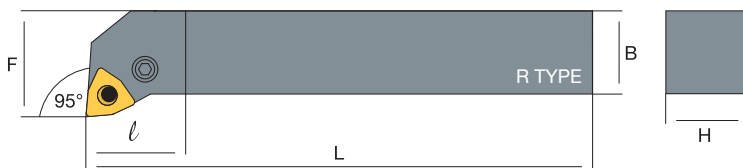
diamond 92

ceramic 115

PWLN

NEGATIVE with hole

WN

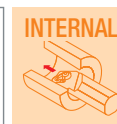
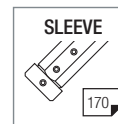
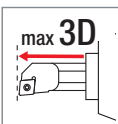
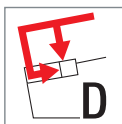
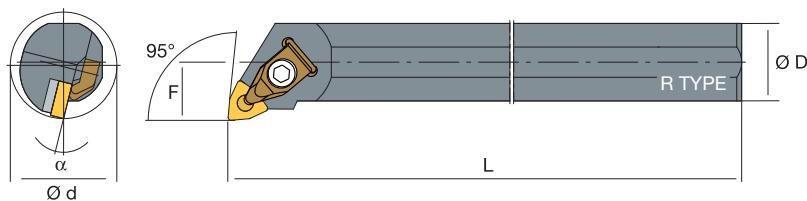


WN <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS									
		R	L	H	B	L	F	l					
WN <input type="checkbox"/> 0804	NT-PWLN ^{R/L} 2020K 08	●	●	20	20	125	25	26	NT-SH015	NT-SR020	NT-LL020	NT-SC025	NT-WR030
	2525M 08	●	●	25	25	150	32	28	NT-SH015	NT-SR020	NT-LL020	NT-SC025	NT-WR030

^ADWLN

NEGATIVE with hole

WN



WN <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F							α
WN <input type="checkbox"/> 0804	NT-A25R-DWLN ^{R/L} 08	●	●	25	32	200	17	14°	NT-SH015	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	NT-A32S-DWLN ^{R/L} 08	●	●	32	40	250	22	14°	NT-SH015	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	NT-A40T-DWLN ^{R/L} 08	●	●	40	50	300	27	12°	NT-SH015	NT-ST200*	NT-CS200	NT-SG200	NT-SC200	NT-TX20
	*NT-ST200 → NT-WR025													

carbide 37

PCBN 72

diamond 92

ceramic 115

SMWLN

NEGATIVE with hole WN□□

WN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
WN□□0604	NT-S16Q-MWLN ^{R/L} 06	○	○	16	22	180	11	18°	-	NT-SP030	NT-WR020	NT-CS030	NT-SC030	NT-WR025
WN□□0804	NT-S20R-MWLN ^{R/L} 08	●	●	20	25	200	13	17°	-	NT-SP035	NT-WR025	NT-CS030	NT-SC030	NT-WR025
	NT-S25R-MWLN ^{R/L} 08	●	●	25	32	200	17	14°	-	NT-SP035	NT-WR025	NT-CS010	NT-SC008	NT-WR030
	NT-S32S-MWLN ^{R/L} 08	●	●	32	40	250	22	14°	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S40T-MWLN ^{R/L} 08	●	●	40	50	300	27	12°	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
	NT-S50U-MWLN ^{R/L} 08	●	●	50	63	350	35	12°	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030

APWLN

NEW

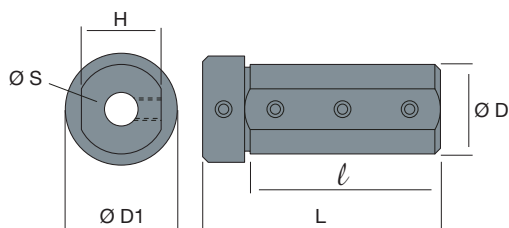
NEGATIVE with hole WN□□

WN□□	DESCRIPTION	STOCK		DIMENSIONS										
		R	L	ØD	Ød	L	F	α						
WN□□0804	NT-A25R-PWLN ^{R/L} 08	●	●	25	30	200	17	12°	-	NT-SR015	NT-LL015	NT-SC015	NT-WR025	
	NT-A32S-PWLN ^{R/L} 08	●	●	32	40	250	22	10°	NT-SH015	NT-SR020	NT-LL020	NT-SC025	NT-WR030	
	NT-A40T-PWLN ^{R/L} 08	●	●	40	48	300	27	8°	NT-SH015	NT-SR020	NT-LL020	NT-SC025	NT-WR030	

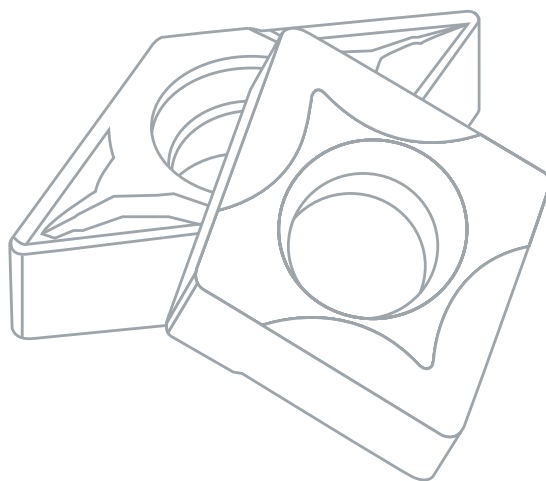
carbide 37 PCBN 72 diamond 92 ceramic 115

●, ○ = NEW ITEM

NT-SLB

NEW**SLEEVE
for boring bars**

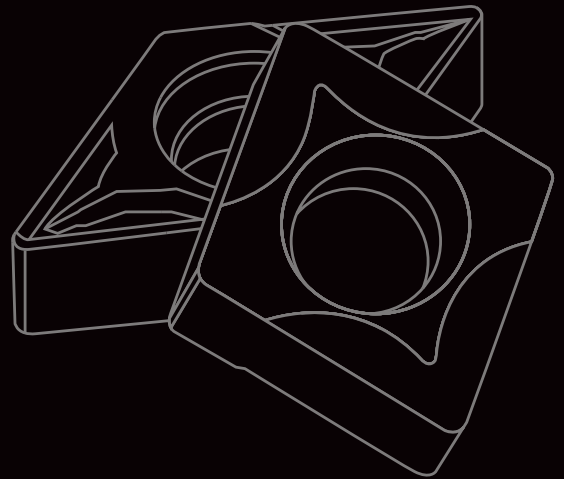
	DESCRIPTION	STOCK	DIMENSIONS											
			ØS	ØD	L	ℓ	D1	H						
NT-SLB	S03-D16-L62	★	3	16	62	55	19	14.5						
NT-SLB	S04-D16-L62	★	4	16	62	55	19	14.5						
	S04-D32-L85	★	4	32	85	70	38	29.5						
NT-SLB	S05-D32-L85	★	5	32	85	70	38	29.5						
NT-SLB	S06-D16-L62	★	6	16	62	55	19	14.5						
	S06-D20-L51	★	6	20	51	45	27	17.5						
	S06-D20-L67	★	6	20	67	60	27	17.5						
	S06-D25-L64	★	6	25	64	58	35	23.5						
	S06-D32-L85	★	6	32	85	70	38	29.5						
	S06-D40-L100	★	6	40	100	85	46	38						
NT-SLB	S08-D16-L62	★	8	16	62	55	19	14.5						
	S08-D20-L51	★	8	20	51	45	27	17.5						
	S08-D20-L67	★	8	20	67	60	27	17.5						
	S08-D25-L64	★	8	25	64	58	35	23.5						
	S08-D32-L85	★	8	32	85	70	38	29.5						
	S08-D40-L100	★	8	40	100	85	46	38						
	S08-D50-L100	★	8	50	100	85	58	48						
NT-SLB	S10-D16-L62	★	10	16	62	55	19	14.5						
	S10-D20-L51	★	10	20	51	45	27	17.5						
	S10-D20-L67	★	10	20	67	60	27	17.5						
	S10-D25-L64	★	10	25	64	58	35	23.5						
	S10-D32-L100	★	10	32	100	85	38	29.5						
	S10-D40-L100	★	10	40	100	85	46	38						
	S10-D50-L100	★	10	50	100	85	58	48						
NT-SLB	S12-D20-L51	★	12	20	51	45	27	17.5						
	S12-D20-L67	★	12	20	67	60	27	17.5						
	S12-D25-L64	★	12	25	64	58	35	23.5						
	S12-D32-L100	★	12	32	100	85	38	29.5						
	S12-D40-L100	★	12	40	100	85	46	38						
	S12-D50-L100	★	12	50	100	85	58	48						
NT-SLB	S16-D32-L100	★	16	32	100	85	38	29.5						
	S16-D40-L100	★	16	40	100	85	46	38						
	S16-D50-L100	★	16	50	100	85	58	48						
NT-SLB	S20-D50-L100	★	20	50	100	85	58	48						
NT-SLB	S25-D50-L100	★	25	50	100	85	58	48						



MICRONEGA /

carbide /173
PCBN /179
diamond /187
holders /195

MICRONEGA / carbide



GRADES

	ISO DIN 513															
	K					P					M					
	○	←	→	⊕	○	←	→	⊕	○	←	→	⊕				
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	
CARBIDE CVD																
CARBIDE PVD																
CARBIDE UNCOATED																
CERMET UNCOATED																

JC8015

JP5015

JP5025

JP5015

JP5025

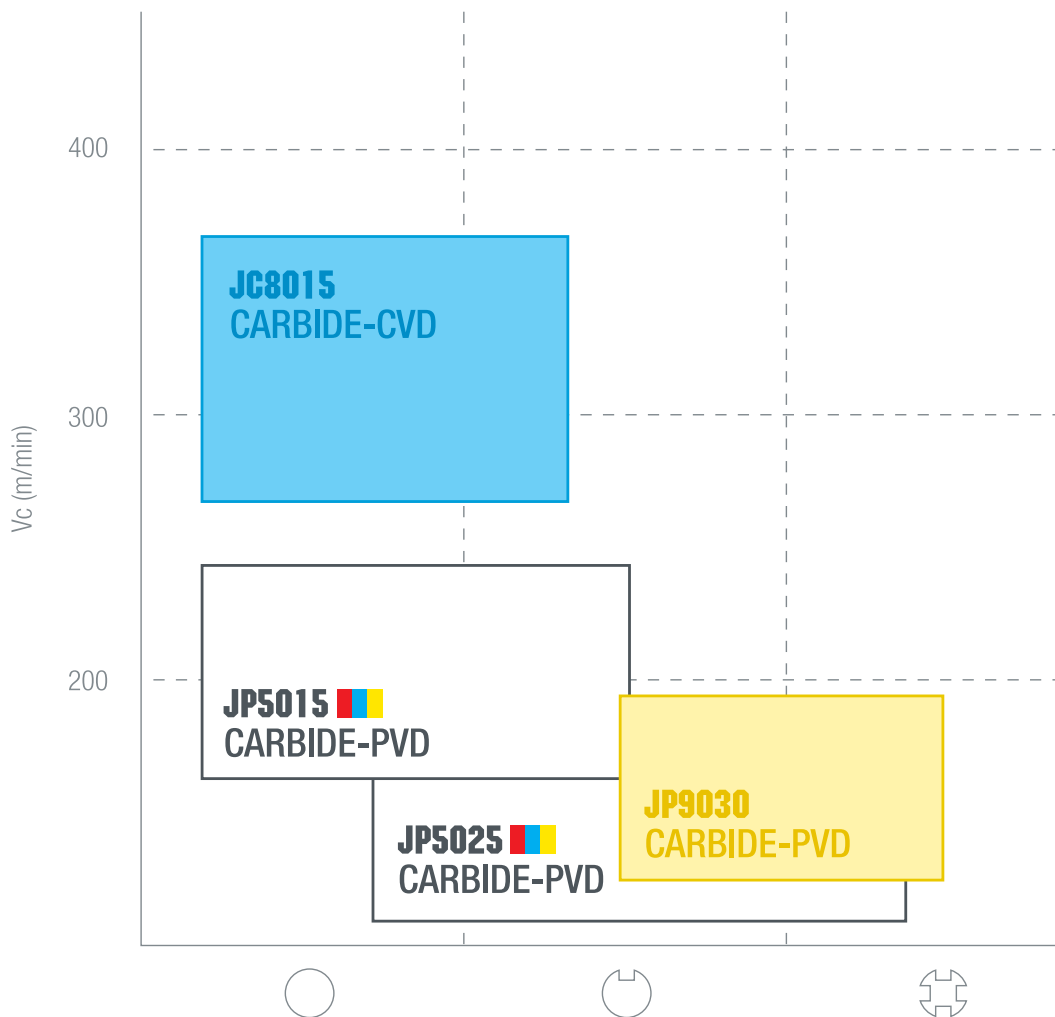
JP5015

JP5025

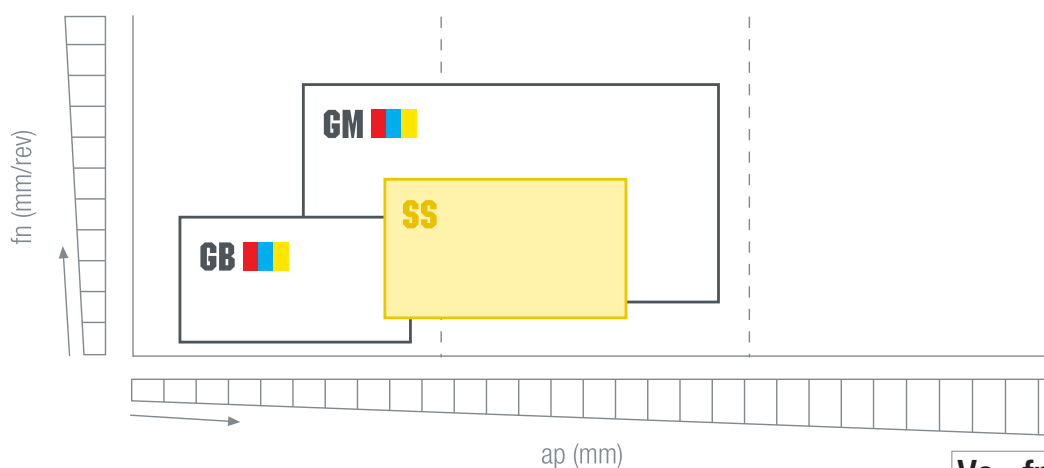
JP9030

RANGE ISO **K P M**

GRADES

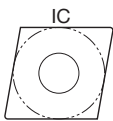


CHIPBREAKERS



NEGATIVE
with hole

CN □ □



MICRO CN □ □

IC 7,50

T 3,18

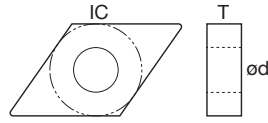
ød 3,60

HOLDERS 197

DESCRIPTION		r	CARBIDE-CVD				CARBIDE-PVD			CARBIDE	CERMET																	
			JC7010	JC8015	JC8025	JC9025	JP9030	JP5015	JP5025	JU6020	JU4015																	
GB	R TYPE 	MICRO 4 EDGES	CN.R02-GB ^{R/L}	0.2						★																		
			CN.R04-GB ^{R/L}	0.4						●																		
GM		MICRO 4 EDGES	CN.R02-GM	0.2							○																	
			CN.R04-GM	0.4		●			★	★	●																	
			CN.R08-GM	0.8								●																
SS		MICRO POLISHED 4 EDGES	CN.R02-SS	0.2					●																			
			CN.R04-SS	0.4					●																			
		<table border="1"> <tr> <th>OLD name</th> <th>NEW name</th> </tr> <tr> <td>NC5110</td> <td>JP5015</td> </tr> <tr> <td>NC5130</td> <td>JP5025</td> </tr> <tr> <td>NC2130</td> <td>JP9030</td> </tr> <tr> <td>NC5220</td> <td>JC8015</td> </tr> </table>		OLD name	NEW name	NC5110	JP5015	NC5130	JP5025	NC2130	JP9030	NC5220	JC8015															
OLD name	NEW name																											
NC5110	JP5015																											
NC5130	JP5025																											
NC2130	JP9030																											
NC5220	JC8015																											

**NEGATIVE
with hole**

DN □ □



MICRO	DN □ □
IC	7,00
T	3,18
Ød	3,60
HOLDERS	199

DESCRIPTION				CARBIDE-CVD				CARBIDE-PVD			CARBIDE	CERMET																	
				JC7010	JC8015	JC8025	JC9025	JP9030	JP5015	JP5025	JJ6020	JJ4015																	
GB		MICRO	DN.R02-GB ^{R/L}	0.2						*																			
			DN.R04-GB ^{R/L}	0.4						●																			
GM		MICRO	DN.R02-GM	0.2							○																		
			DN.R04-GM	0.4		●			*	*	●																		
			DN.R08-GM	0.8								●																	
SS		MICRO	DN.R02-SS	0.2					●																				
			DN.R04-SS	0.4					●																				
			<table border="1"> <tr> <th>OLD name</th> <th>NEW name</th> </tr> <tr> <td>NC5110</td> <td>JP5015</td> </tr> <tr> <td>NC5130</td> <td>JP5025</td> </tr> <tr> <td>NC2130</td> <td>JP9030</td> </tr> <tr> <td>NC5220</td> <td>JC8015</td> </tr> </table>		OLD name	NEW name	NC5110	JP5015	NC5130	JP5025	NC2130	JP9030	NC5220	JC8015															
OLD name	NEW name																												
NC5110	JP5015																												
NC5130	JP5025																												
NC2130	JP9030																												
NC5220	JC8015																												

GRADES

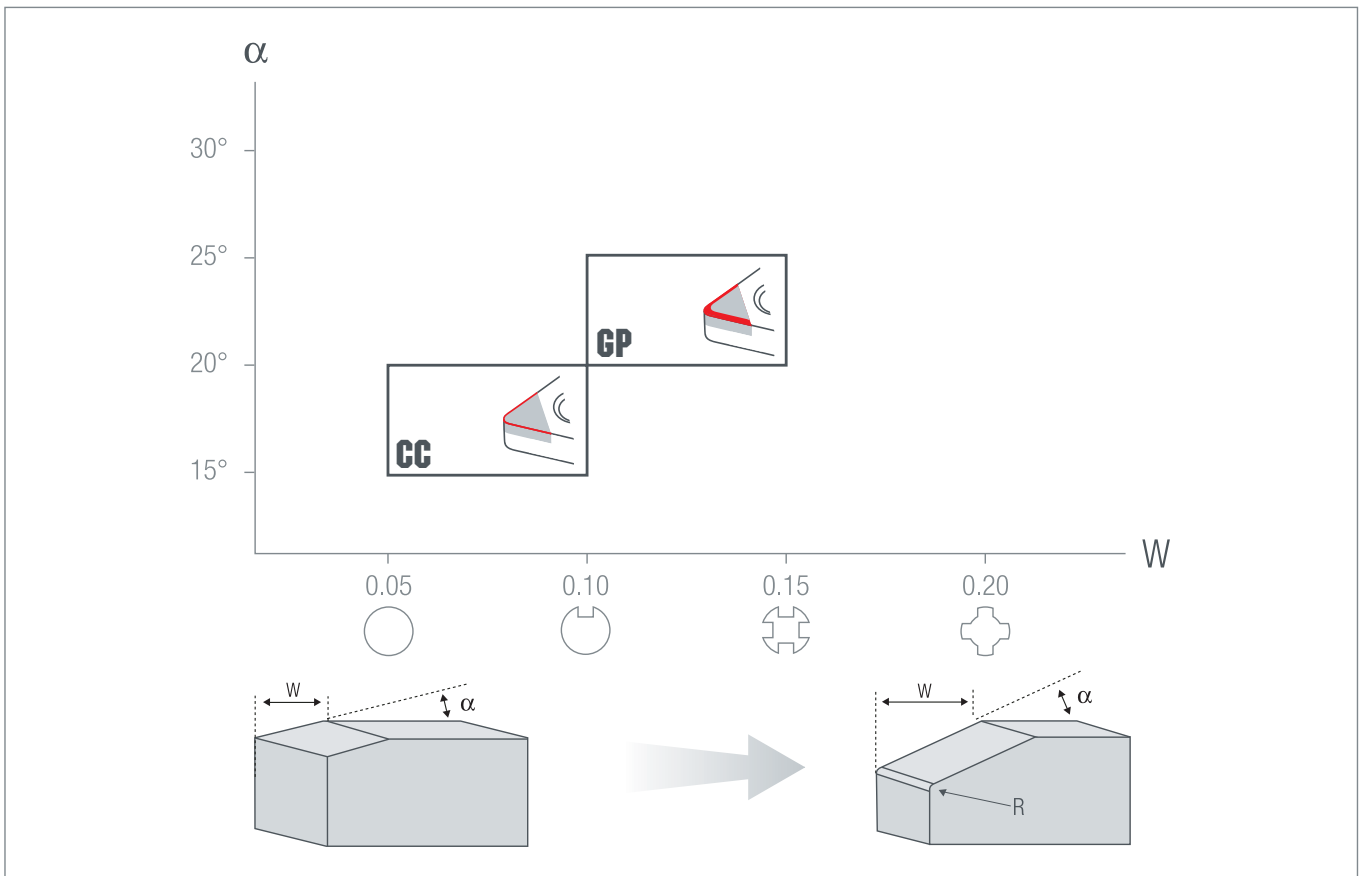
	H					K										
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40						
PCBN-Carbide reinforced																
PCBN-Vertical & Solid (NBS Series)		NBS150	NBS250				NBS450									

COATED

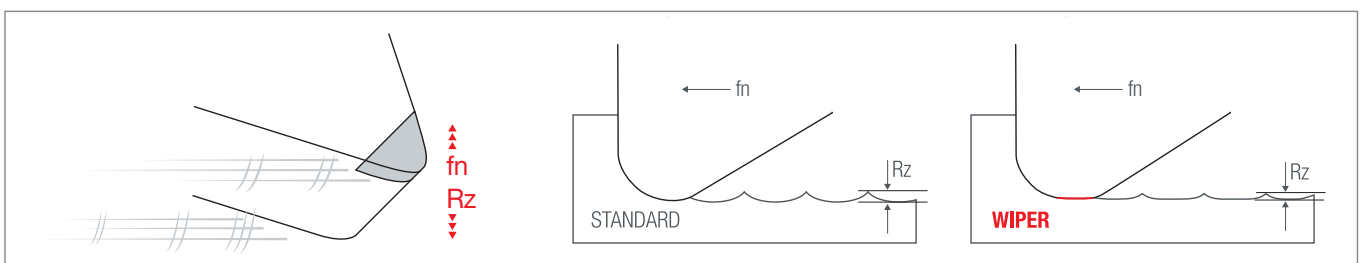
INSERT STYLE



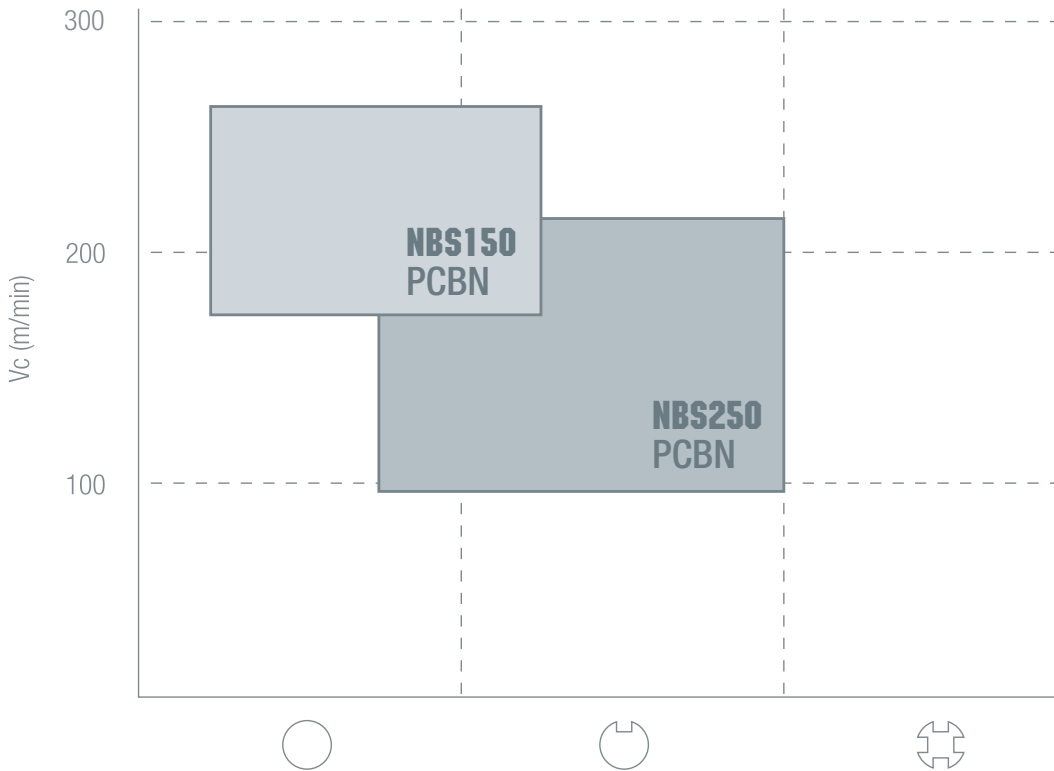
EDGE PREPARATION



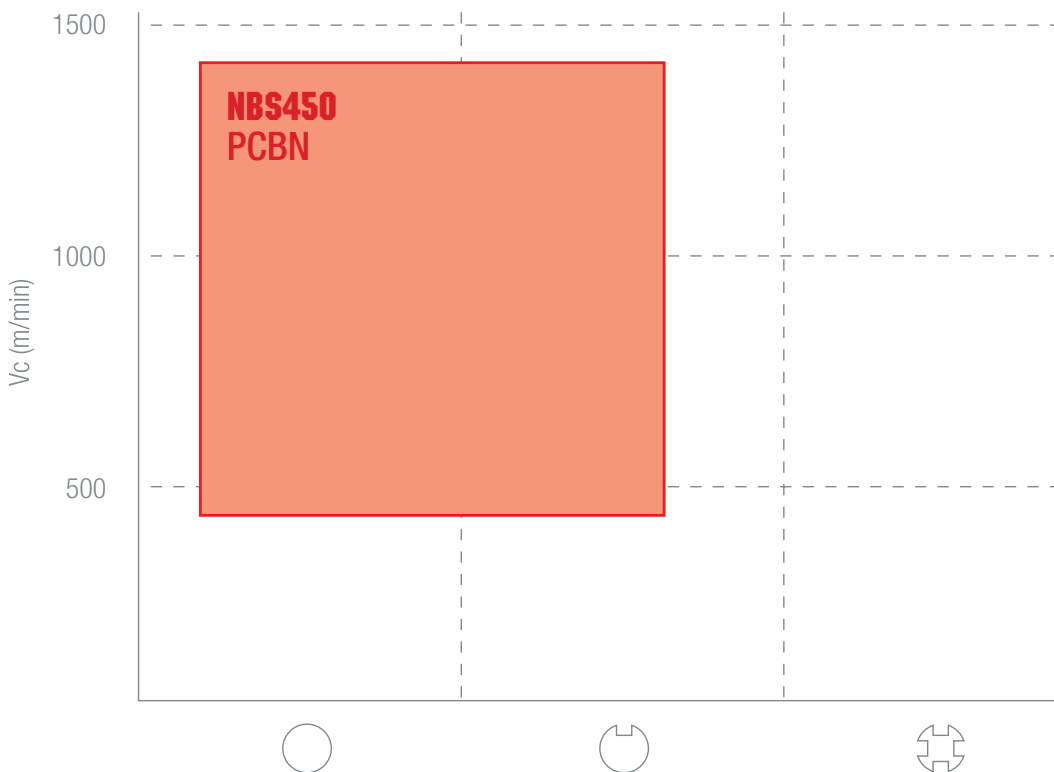
WIPER



RANGE ISO PCBN-Vertical (NBS Series)



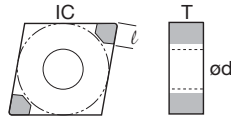
RANGE ISO PCBN-Vertical & Solid (NBS Series)



NEGATIVE - VERTICAL
with hole

NEW

CN □ □



MICRO	CN □ □
IC	7,50
T	3,18
Ød	3,60
HOLDERS	197

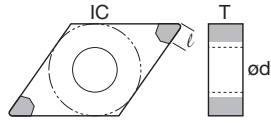
DESCRIPTION		IC	l	PCBN-Vertical										
				NBS150	NBS250	NBS450								
CC	MICRO 4 EDGES	CN.R02-4EV-CC		2.2	●									
				2.1	●									
				2.1	●									
GP	MICRO 4 EDGES	CN.R02-4EV-GP		2.2		●	●							
				2.1		●	●							
				2.1		●	●							
WH WIPER	MICRO 4 EDGES	CN.R04-4EV-WH		2.1	★									
				2.1	★									

●, ○ = NEW ITEM

NEGATIVE - VERTICAL
with hole

NEW

DN □ □



MICRO DN □ □

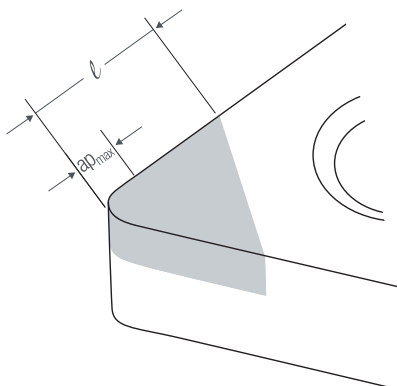
IC	7,00
T	3,18
Ød	3,60

HOLDERS ▶ 199

DESCRIPTION		IC	PCBN-Vertical										
			NBS150	NBS250	NBS450								
CC	MICRO 4 EDGES	DN.R02-4EV-CC	2.4	●									
			2.2	●									
			1.9	●									
GP	MICRO 4 EDGES	DN.R02-4EV-GP	2.4		●	●							
			2.2		●	●							
			1.9		●	●							
WH WIPER	MICRO 4 EDGES	DN.R04-4EV-WH	2.2	★									
			1.9	★									

●, ○ = NEW ITEM

CUTTING PARAMETERS



$$a_{p_{max}} < 20 \sim 30\% l$$

H	HH	HARDENED STEEL
		ACCIAIO TEMPRATO
		GEHÄRTETER STAHL
		ACIER TREMPÉ
		ACERO TEMPLADO
		ЗАКАЛЁННАЯ СТАЛЬ
H	HC	CASEHARDENED STEEL
		ACCIAIO CEMENTATO
		EINGESETZTER STAHL
		ACIER CEMENTÉ
		ACERO CEMENTADO
		ЦЕМЕНТИРОВАННАЯ СТАЛЬ
H	HB	BEARING STEEL
		ACCIAIO PER CUSCINETTI
		STAHL FÜR LAGER
		ACIER POUR ROULEMENTS
		ACERO PARA RODAMIENTOS
		СТАЛЬ ДЛЯ ПОДШИПНИКОВ
H	HM	HARD METAL (Co≥17%)
		METALLO DURO (Co≥17%)
		VHM (Co≥17%)
		CARBURE (Co≥17%)
		METAL DURO (Co≥17%)
		ТВЁРДЫЙ СПЛАВ (Co≥17%)

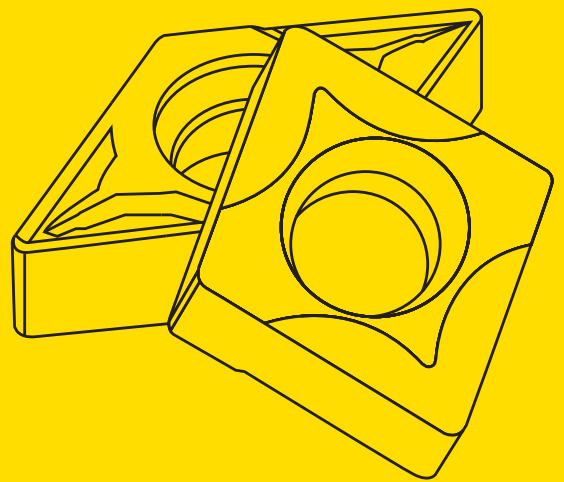
K	KG	GREY CAST IRON
		GHISA GRIGIA
		GRAUGUSS
		FONTE GRISE
		FUNDICIÓN GRIS
		ЧУГУН
K	KN	NODULAR CAST IRON
		GHISA SFEROIDALE
		SPHÄROGUSS
		FONTE NODULAIRE
		FUNDICIÓN NODULAR
		ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ
K	KW	WHITE CAST IRON
		GHISA BIANCA
		WEISSGUSS
		FONTE BLANCHE
		FUNDICIÓN BLANCA
		БЕЛЫЙ ЧУГУН
K	KS	SINTERED MATERIAL (FERROUS)
		MATERIALI SINTERIZZATI (FERROSI)
		SINTERMATERIALIEN (EISERNE)
		MATÉRIAUX FRITTÉS (FERREUX)
		MATERIALES SINTERIZADOS (BASE HIERRO)
		СПЕЧЁННЫЕ МАТЕРИАЛЫ (МЕТАЛЛ)

CUTTING PARAMETERS PCBN-Vertical (NBS Series)

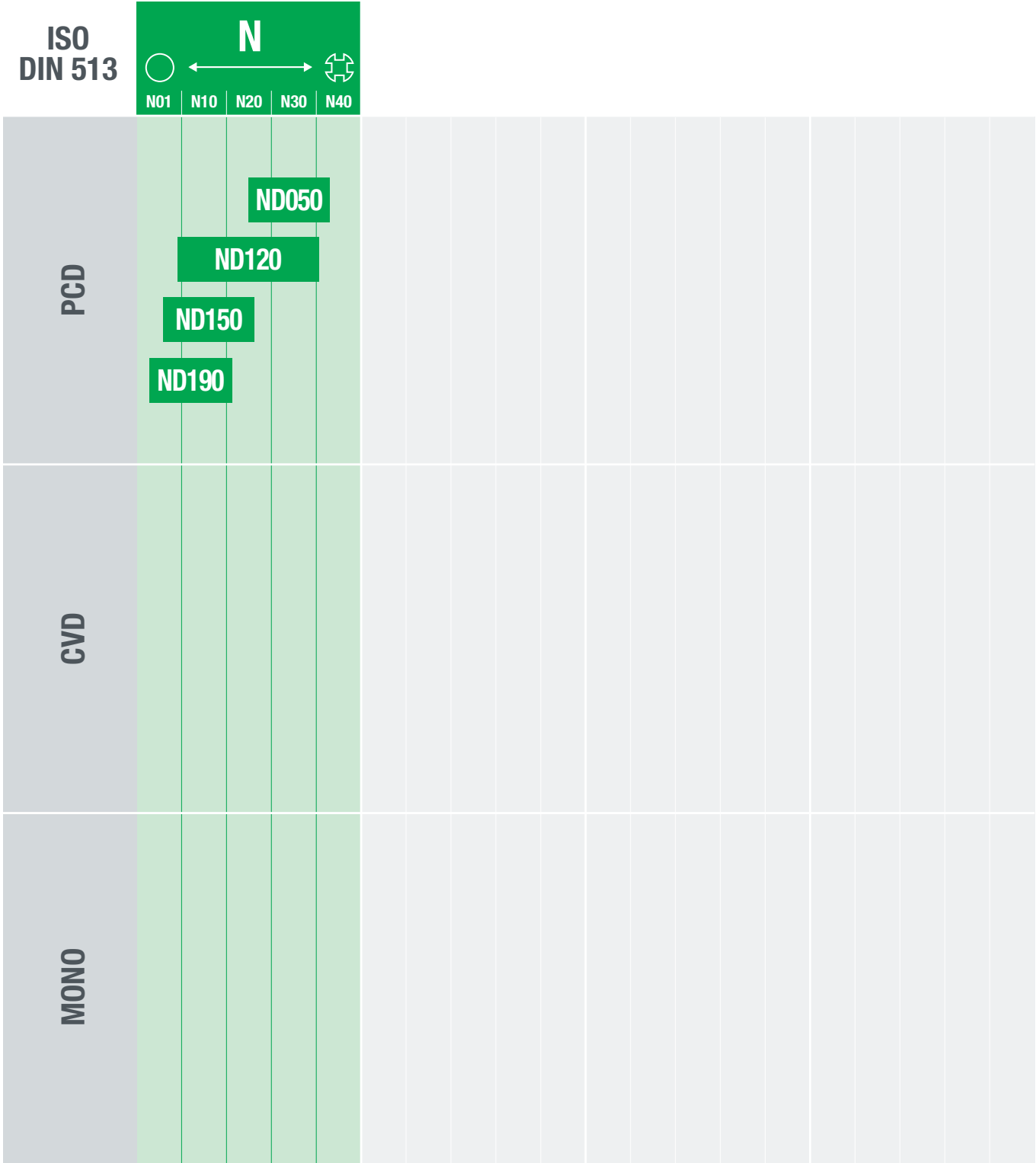
MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS		PCBN-Vertical				
					NBS150	NBS250	NBS450		
H	HH	0.05~0.25	0.05~0.20	○	☉	☉	★ 120~250	100~200	
				⊕	☉		★ 80~180	80~180	
	HC	0.05~0.25	0.08~0.25	○	☉	☉	★ 120~200	★ 100~180	
				⊕	☉		★ 80~160	80~160	
	HB	0.05~0.25	0.05~0.20	○	☉	☉	★ 120~220	★ 100~180	
				⊕	☉		★ 80~150	80~150	
K	KG	0.10~0.50	0.10~0.30	○	☉	☉			★ 400~1000
				⊕	☉				★ 400~800
	KN	0.10~0.30	0.05~0.20	○	☉	☉			★ 250~400
				⊕	☉				★ 150~300
	KW	0.10~0.30	0.10~0.30	○	☉	☉			★ 60~100
				⊕	☉				★ 50~80
	KS	0.05~0.20	0.05~0.25	○	☉	☉	★ 100~220		★ 160~250
				⊕	☉			★ 60~180	★ 120~200

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

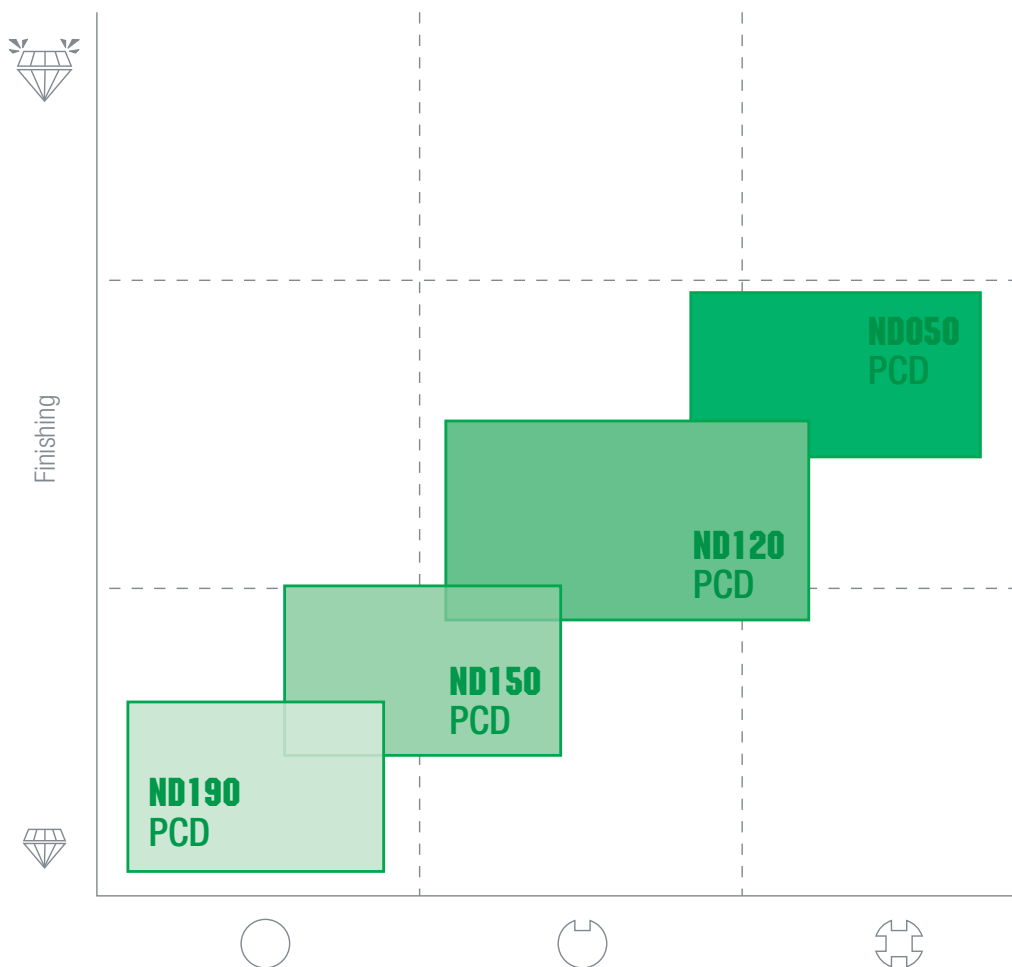
MICRONEGA / diamond



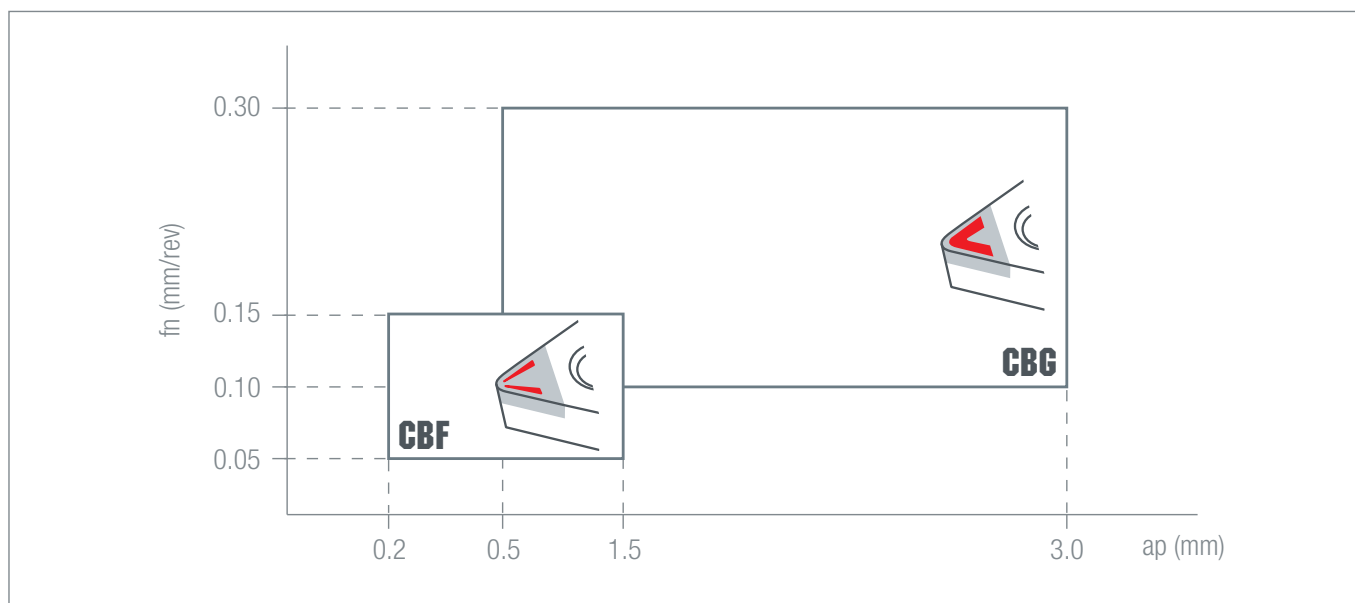
GRADES



RANGE ISO **N** DIAMOND



CHIPBREAKER APPLICATION



NEGATIVE with hole

CN □ □

NEW

MICRO	CN □ □
IC	7,50
T	3,18
Ød	3,60
HOLDERS	

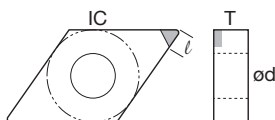
DESCRIPTION			l	PCD										
				ND050	ND120	ND150	ND190							
LARGE		MICRO	CN.R02-LRG	3.3	★	●	★	★						
			CN.R04-LRG	3.3	★	●	★	★						
			CN.R08-LRG	3.2	★	●	★	★						
CHIPBREAKER		MICRO	CN.R02-CBF	3.3		●								
			CN.R04-CBF	3.3		●								
		MICRO	CN.R04-CBG	3.3		●								
			CN.R08-CBG	3.2		●								
fn · ap														

**NEGATIVE
with hole**

DN □ □



NEW



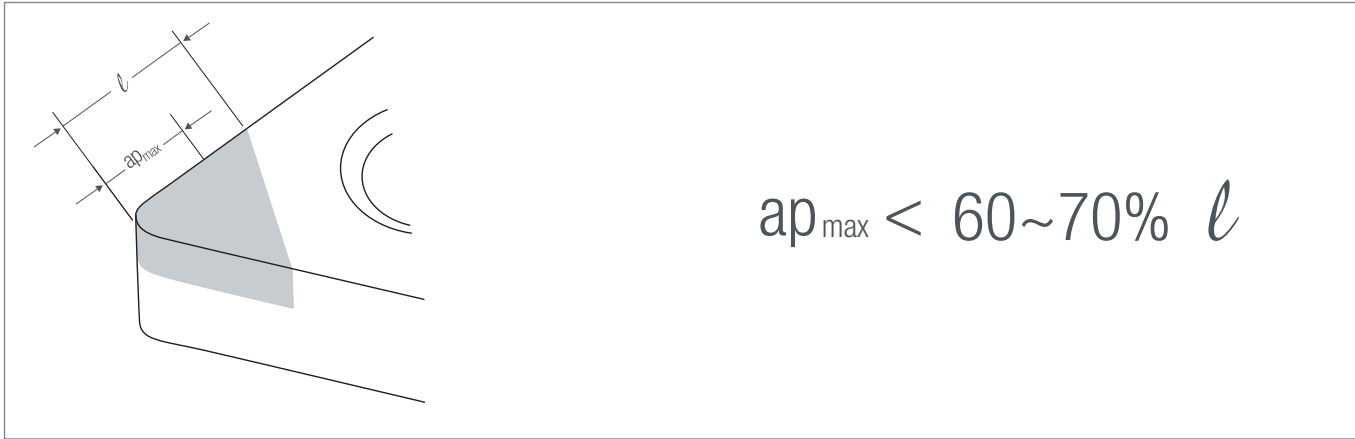
MICRO	DN □ □
IC	7,00
T	3,18
Ød	3,60
HOLDERS	199

DESCRIPTION		IC	l	PCD											
				ND050	ND120	ND150	ND190								
LARGE		MICRO	DN.R02-LRG		3.3	★	●	★	★						
			DN.R04-LRG		3.3	★	●	★	★						
			DN.R08-LRG		3.2	★	●	★	★						
CHIPBREAKER		MICRO	DN.R02-CBF		3.3		●								
			DN.R04-CBF		3.3		●								
		MICRO	DN.R04-CBG			3.3		●							
			DN.R08-CBG			3.2		●							

fn · ap 189

●, ○ = NEW ITEM

CUTTING PARAMETERS



$$ap_{max} < 60 \sim 70\% l$$

N	NA	ALUMINUM ALLOYS
		LEGHE DI ALLUMINIO
		ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM
		ALEACIONES DE ALUMINIO
		СПЛАВЫ АЛЮМИНИЯ
N	NS	ALUMINUM ALLOYS (Si >15%)
		LEGHE DI ALLUMINIO (Si >15%)
		ALUMINIUMLEGIERUNGEN (Si >15%)
		ALLIAGES D'ALUMINIUM (Si >15%)
		ALEACIONES DE ALUMINIO (Si >15%)
		СПЛАВЫ АЛЮМИНИЯ (Si >15%)
N	NH	ALUMINUM ALLOYS AGED AND HARDENED
		LEGHE DI ALLUMINIO TRATTATE ED INVECCHiate
		GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES
		ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS
		СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ
N	NB	BRASS
		OTTONE
		MESSING
		LAITON
		LATÓN
		ЛАТУНЬ

N	NC	BRONZE AND ELECTROLYTIC COPPER
		BRONZO E RAME ELETTRolitICO
		ELEKTROLYTISCHES KUPFER UND BRONZE
		BRONZE ET CUIVRE ÉLECTROLYTIQUE
		BRONCE Y COBRE ELECTROLÍTICO
		БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ
N	NG	GRAPHITE
		GRAFITE
		GRAPHIT
		GRAPHITE
		GRAFITO
		ГРАФИТ
H	HM	HARD METAL (Co≤16%)
		METALLO DURO (Co≤16%)
		VHM (Co≤16%)
		CARBURE (Co≤16%)
		METAL DURO (Co≤16%)
		ТВЕРДЫЙ СПЛАВ (Co≤16%)
S	ST	TITANIUM ALLOYS
		LEGHE DI TITANIO
		TITAN LEGIERUNGEN
		ALLIAGES DE TITANE
		ALEACIONES DE TITANIO
		СПЛАВЫ ТИТАНА

CUTTING PARAMETERS

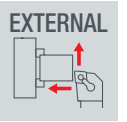
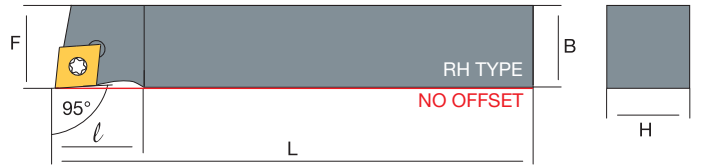
MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS	PCD					
				ND050	ND120	ND150	ND190		
N	NA	0.10~1.00	0.08~0.25	○ ⊕	☹		★ 600~2500		
		1.00~2.50	0.15~0.50	○ ⊕	☹		★ 600~1600		
	NS	0.10~1.00	0.05~0.20	○ ⊕	☹			500~1800	★ 500~1800
		1.00~2.50	0.08~0.35	○ ⊕	☹			500~1200	★ 500~1200
	NH	0.10~1.00	0.05~0.20	○ ⊕	☹			400~1000	★ 400~1000
		1.00~2.50	0.08~0.35	○ ⊕	☹			400~800	★ 400~800
	NB	0.10~1.00	0.10~0.30	○ ⊕	☹	★ 400~1200	400~1200		
		1.00~2.50	0.15~0.25	○ ⊕	☹	★ 400~1000	400~1000		
	NC	0.10~1.00	0.10~0.30	○ ⊕	☹	★ 300~800	300~800		
		1.00~2.50	0.15~0.25	○ ⊕	☹	★ 300~500	300~500		
	NG	0.10~1.00	0.08~0.25	○ ⊕	☹		★ 300~800	300~800	300~800
		1.00~2.50	0.15~0.50	○ ⊕	☹		★ 300~600	300~600	300~600
H	HM	0.10~0.50	0.08~0.25	○	☹			10~40	★ 10~40
S	ST	0.10~1.00	0.05~0.20	○ ⊕	☹	★ 100~200	100~200		
		1.00~2.50	0.08~0.20	○ ⊕	☹	★ 100~150	100~150		

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

MICRO CN

NEGATIVE
with hole

CN□□

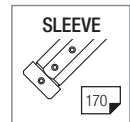
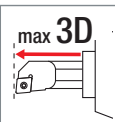
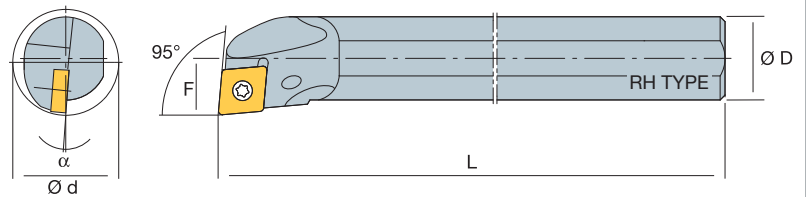


CN□□	DESCRIPTION	STOCK		DIMENSIONS						Screw	Tool					
		R	L	H	B	L	F	ℓ								
MICRO CN	NT-EX10H MICRO-CN RH/LH	●	●	10	10	100	10	15	NT-ST400	NT-FT10						
	NT-EX12H MICRO-CN RH/LH	●	●	12	12	100	12	15	NT-ST400	NT-FT10						
	NT-EX16K MICRO-CN RH/LH	●	●	16	16	120	16	15	NT-ST400	NT-FT10						
	NT-EX20K MICRO-CN RH/LH	●	●	20	20	120	20	15	NT-ST400	NT-FT10						
	NT-EX25M MICRO-CN RH/LH	●	●	25	25	150	25	15	NT-ST400	NT-FT10						

A MICRO CN

NEGATIVE
with hole

CN□□



CN□□	DESCRIPTION	STOCK		DIMENSIONS					Screw	Tool					
		R	L	ØD	Ød	L	F	α							
MICRO CN	NT-A08K MICRO-CN RH/LH	●	●	8	10	125	5.5	21°	NT-ST400	NT-FT10					
	NT-A10K MICRO-CN RH/LH	●	●	10	12	125	6	21°	NT-ST400	NT-FT10					
	NT-A12M MICRO-CN RH/LH	●	●	12	14	150	7	19°	NT-ST400	NT-FT10					
	NT-A16R MICRO-CN RH/LH	●	●	16	20	200	10	16°	NT-ST400	NT-FT10					
	NT-A20R MICRO-CN RH/LH	●	●	20	24	200	12.5	16°	NT-ST400	NT-FT10					

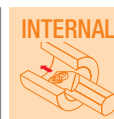
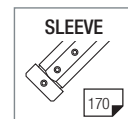
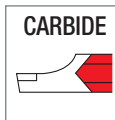
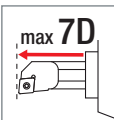
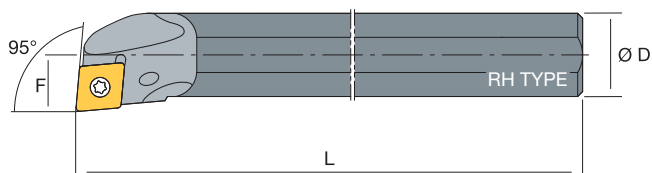
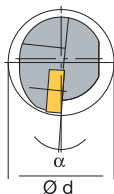
carbide 176

PCBN 183

diamond 190

E MICRO CNNEGATIVE
with hole

CN □ □



CN □ □	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
MICRO CN	NT-E08K MICRO-CN ^{RH/LH}	●	●	8	10	125	5.5	21°	NT-ST400	NT-FT10					
	NT-E10K MICRO-CN ^{RH/LH}	●	●	10	12	125	6	21°	NT-ST400	NT-FT10					
	NT-E12M MICRO-CN ^{RH/LH}	●	●	12	14	150	7	19°	NT-ST400	NT-FT10					
	NT-E16R MICRO-CN ^{RH/LH}	●	●	16	20	200	10	16°	NT-ST400	NT-FT10					
	NT-E20R MICRO-CN ^{RH/LH}	●	●	20	24	200	12.5	16°	NT-ST400	NT-FT10					

carbide

176

PCBN

183

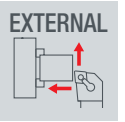
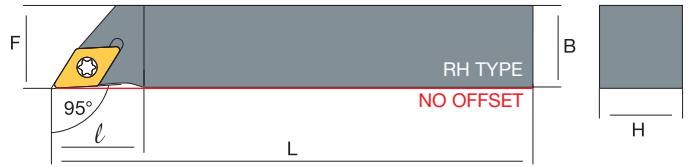
diamond

190

MICRO DN

NEGATIVE
with hole

DN

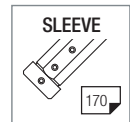
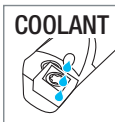
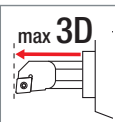
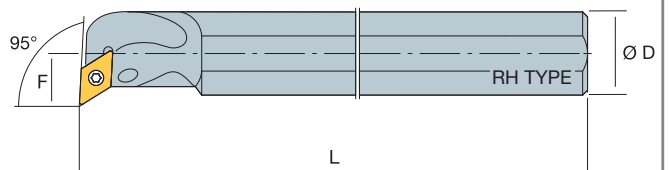
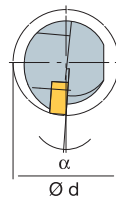


DN <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS												
		R	L	H	B	L	F	l								
MICRO DN	NT-EX10H MICRO-DN RH/LH	●	●	10	10	100	10	18	NT-ST400	NT-FT10						
	NT-EX12H MICRO-DN RH/LH	●	●	12	12	100	12	18	NT-ST400	NT-FT10						
	NT-EX16K MICRO-DN RH/LH	●	●	16	16	120	16	18	NT-ST400	NT-FT10						
	NT-EX20K MICRO-DN RH/LH	●	●	20	20	120	20	18	NT-ST400	NT-FT10						
	NT-EX25M MICRO-DN RH/LH	●	●	25	25	150	25	18	NT-ST400	NT-FT10						

A MICRO DN

NEGATIVE
with hole

DN



DN <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS												
		R	L	ØD	Ød	L	F	α								
MICRO DN	NT-A10K MICRO-DN RH/LH	●	●	10	15	125	9.3	19°	NT-ST400	NT-FT10						
	NT-A12M MICRO-DN RH/LH	●	●	12	16	150	9	17°	NT-ST400	NT-FT10						
	NT-A16R MICRO-DN RH/LH	●	●	16	20	200	11	17°	NT-ST400	NT-FT10						
	NT-A20R MICRO-DN RH/LH	●	●	20	24	200	13	17°	NT-ST400	NT-FT10						

carbide

177

PCBN

184

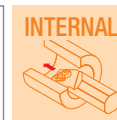
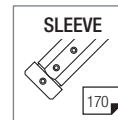
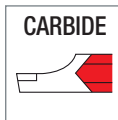
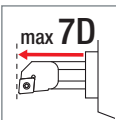
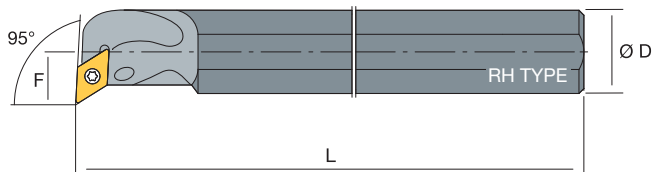
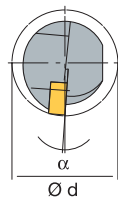
diamond

191

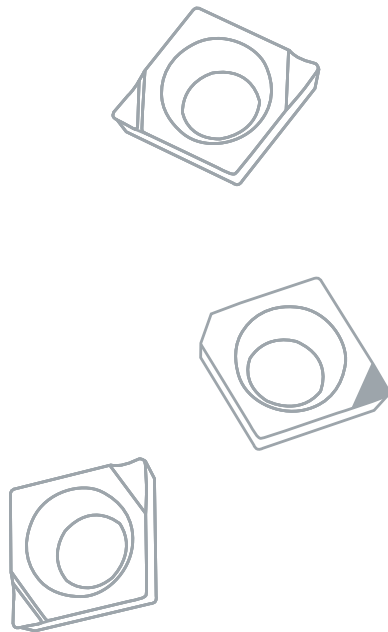
E MICRO DN

NEGATIVE
with hole

DN



DN <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	ØD	Ød	L	F	α							
MICRO DN	NT-E10K MICRO-DN ^{RH/LH}	●	●	10	15	125	9.3	19°	NT-ST400	NT-FT10					
	NT-E12M MICRO-DN ^{RH/LH}	●	●	12	16	150	9	17°	NT-ST400	NT-FT10					
	NT-E16R MICRO-DN ^{RH/LH}	●	●	16	20	200	11	17°	NT-ST400	NT-FT10					
	NT-E20R MICRO-DN ^{RH/LH}	●	●	20	24	200	13	17°	NT-ST400	NT-FT10					



MICROBORING /

carbide /203
PCBN /209
diamond /217
holders /223



MICROBORING / carbide

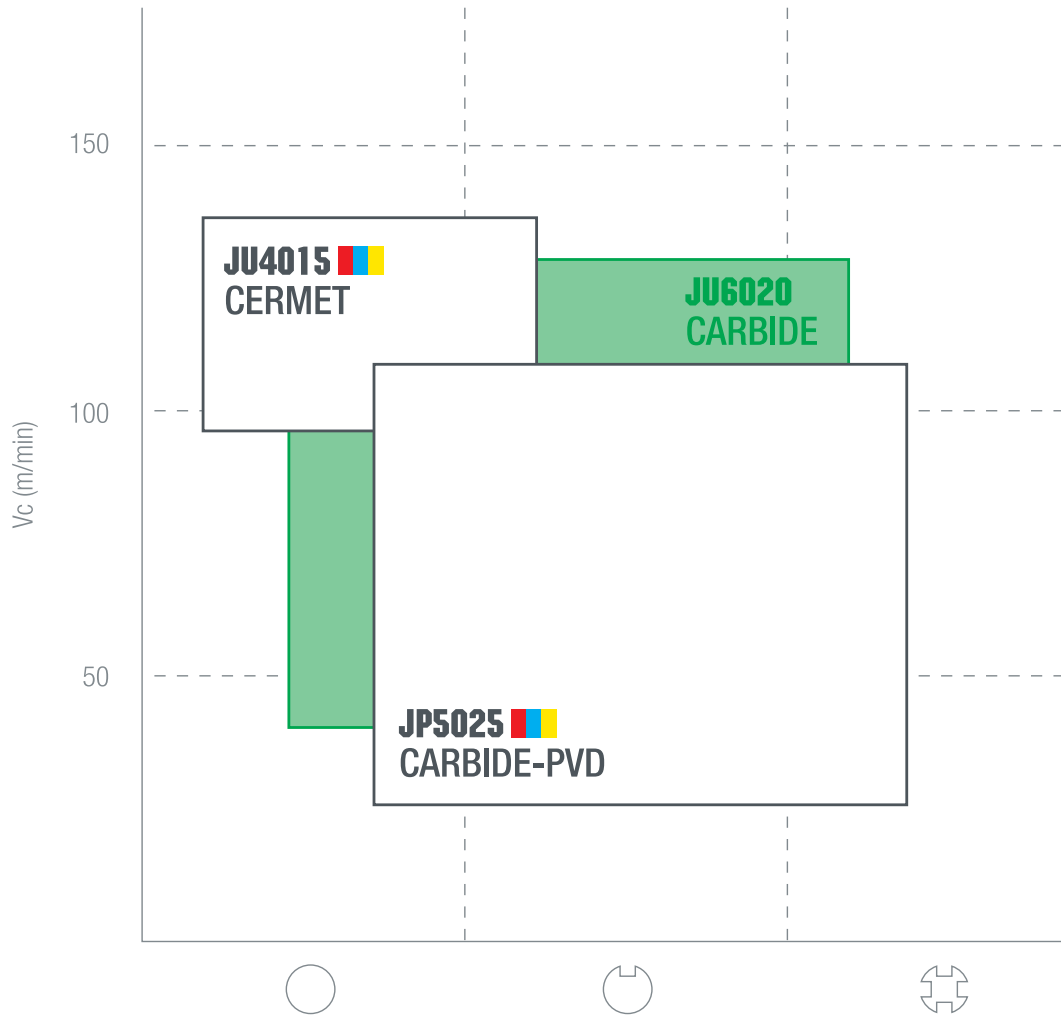


GRADES

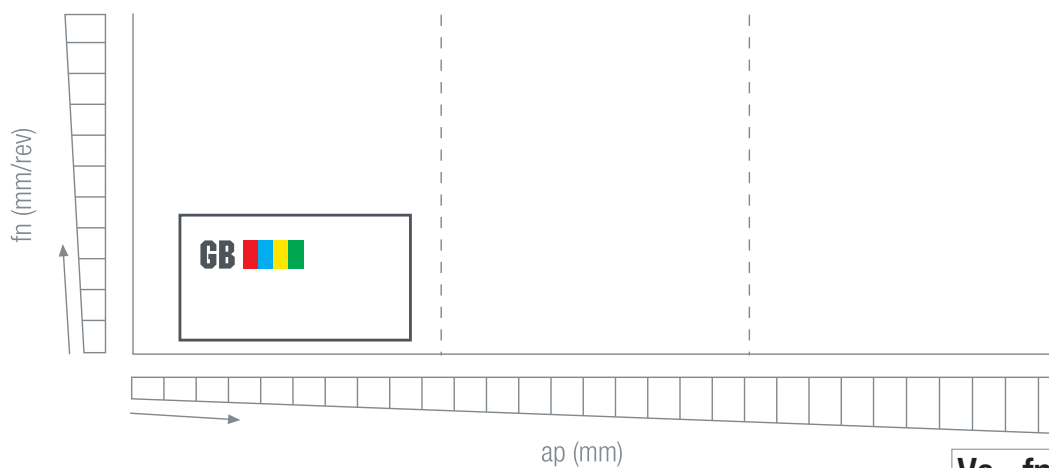
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	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	N01	N10	N20	N30	N40
CARBIDE CVD																				
CARBIDE PVD			JP5025					JP5025					JP5025							
CARBIDE UNCOATED																		JU6020		
CERMET UNCOATED	JU4015					JU4015					JU4015									

RANGE ISO **K P M N**

GRADES

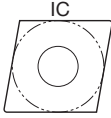



CHIPBREAKERS





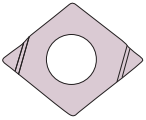

POSITIVE 7° with hole

CC

MICRO	CC <input type="checkbox"/>
IC	3,50
T	1,40
Ød	1,90

HOLDERS 225

DESCRIPTION		CARBIDE-CVD				CARBIDE-PVD			CARBIDE	CERMET			
		JC7010	JC8015	JC8025	JC9025	JP9030	JP5015	JP5025	JUG020	JU4015			
  <p>MICRO</p> <p>CC.R01-GBL</p> <p>CC.R02-GBL</p> <p>CC.R04-GBL</p>		0.1						●					
		0.2						●	●	○			
		0.4						●	●	○			
<p></p> <p>OLD name NEW name</p> <p>NC5130 JP5025</p>													

●, ○ = NEW ITEM

CUTTING PARAMETERS

K	KG	GREY CAST IRON	M	MM	MARTENSITIC AND FERRITIC STAINLESS STEEL
		GHISA GRIGIA			ACCIAI INOSSIDABILI MARTENSITICI E FERRITICI
		GRAUGUSS			MARTENSITISCHE UND FERRITISCHE ROSTFREIE STÄHLE
		FONTE GRISE			ACIERS INOXYDABLES MARTENSITIQUES ET FERRITIQUES
		FUNDICIÓN GRIS			ACEROS INOXIDABLES AUSTENITICOS Y FERRITICOS
		ЧУГУН			МАРТЕНСИТНЫЕ И ФЕРРИТНЫЕ НЕРЖАВЕЮЩИЕ СТАЛИ
K	KN	NODULAR CAST IRON	M	MA	AUSTENITIC STAINLESS STEEL
		GHISA SFEROIDALE			ACCIAI INOSSIDABILI AUSTENITICI
		SPHÄROGUSS			AUSTENITISCHE ROSTFREIE STÄHLE
		FONTE NODULAIRE			ACIERS INOXYDABLES AUSTENITIQUES
		FUNDICIÓN NODULAR			ACEROS INOXIDABLES AUSTENITICOS
		ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ			АУСТЕНИТНЫЕ НЕРЖАВЕЮЩИЕ СТАЛИ
P	PL	LOW CARBON AND FREE CUTTING STEEL	N	NA	ALUMINIUM ALLOYS
		ACCIAI A BASSO TENORE DI CARBONIO ED AUTOMATICI			LEGHE DI ALLUMINIO
		KOHLENSTOFFARME STÄHLE			ALUMINIUMLEGIERUNGEN
		ACIERS BAS CARBONE ET POUR DÉCOLLETAGE			ALLIAGES D'ALUMINIUM
		ACEROS DE BAJO CARBONO			ALEACIONES DE ALUMINIO
		НИЗКОУГЛЕРОДИСТАЯ И АВТОМАТНАЯ СТАЛЬ			СПЛАВЫ АЛЮМИНИЯ
P	PM	MEDIUM CARBON STEEL	N	NH	ALUMINIUM ALLOYS AGED AND HARDENED
		ACCIAI A MEDIO TENORE DI CARBONIO			LEGHE DI ALLUMINIO TRATTATE ED INVECCHiate
		MITTELGEKOHLTE FLUSSSTÄHLE			GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN
		ACIERS MOYEN CARBONE			ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES
		ACEROS DE MEDIO CARBONO			ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS
		СРЕДНЕУГЛЕРОДИСТАЯ СТАЛЬ			СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ
P	PH	HIGH CARBON STEEL	N	NB	BRASS
		ACCIAI AD ELEVATO TENORE DI CARBONIO			OTTONE
		KOHLENSTOFFREICHE STÄHLE			MESSING
		ACIERS HAUT CARBONE			LAITON
		ACEROS DE ALTO CARBONO			LATÓN
		ВЫСОКОУГЛЕРОДИСТАЯ СТАЛЬ			ЛАТУНЬ
P	PA	ALLOY STEEL	N	NC	BRONZE AND ELECTOLYTIC COPPER
		ACCIAI LEGATI			BRONZO E RAME ELETTRolitICO
		LEGIERTE STÄHLE			ELEKTROLYTISCHES KUPFER UND BRONZE
		ACIERS ALLIÉS			BRONZE ET CUIVRE ÉLECTROLYTIQUE
		ACEROS ALEADOS			BRONCE Y COBRE ELECTROLÍTICO
		СРЕДНЕЛЕГИРОВАННАЯ СТАЛЬ			БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ

MATERIAL	HM PVD	CERMET	CARBIDE	GB		
	JP5025	JU4015	JU6020			
	Vc (m/min)			ap (mm)	fn (mm/rev)	
K	KG	80~150	160~300	100~200	0.05~0.30	0.03~0.13
	KN	60~120	120~240	80~150	0.05~0.30	0.03~0.13
P	PL	80~150	160~300		0.05~0.30	0.03~0.13
	PM	60~120	120~240		0.05~0.30	0.03~0.13
	PH	50~100	100~200		0.05~0.30	0.03~0.13
	PA	40~100	80~200		0.05~0.30	0.03~0.13
M	MM	50~100	100~200		0.05~0.30	0.02~0.12
	MA	40~100	80~200		0.05~0.30	0.02~0.12
N	NA			200~300	0.05~0.50	0.03~0.15
	NH			150~250	0.05~0.50	0.03~0.15
	NB			100~200	0.05~0.50	0.03~0.15
	NC			100~200	0.05~0.50	0.03~0.15

GRADES

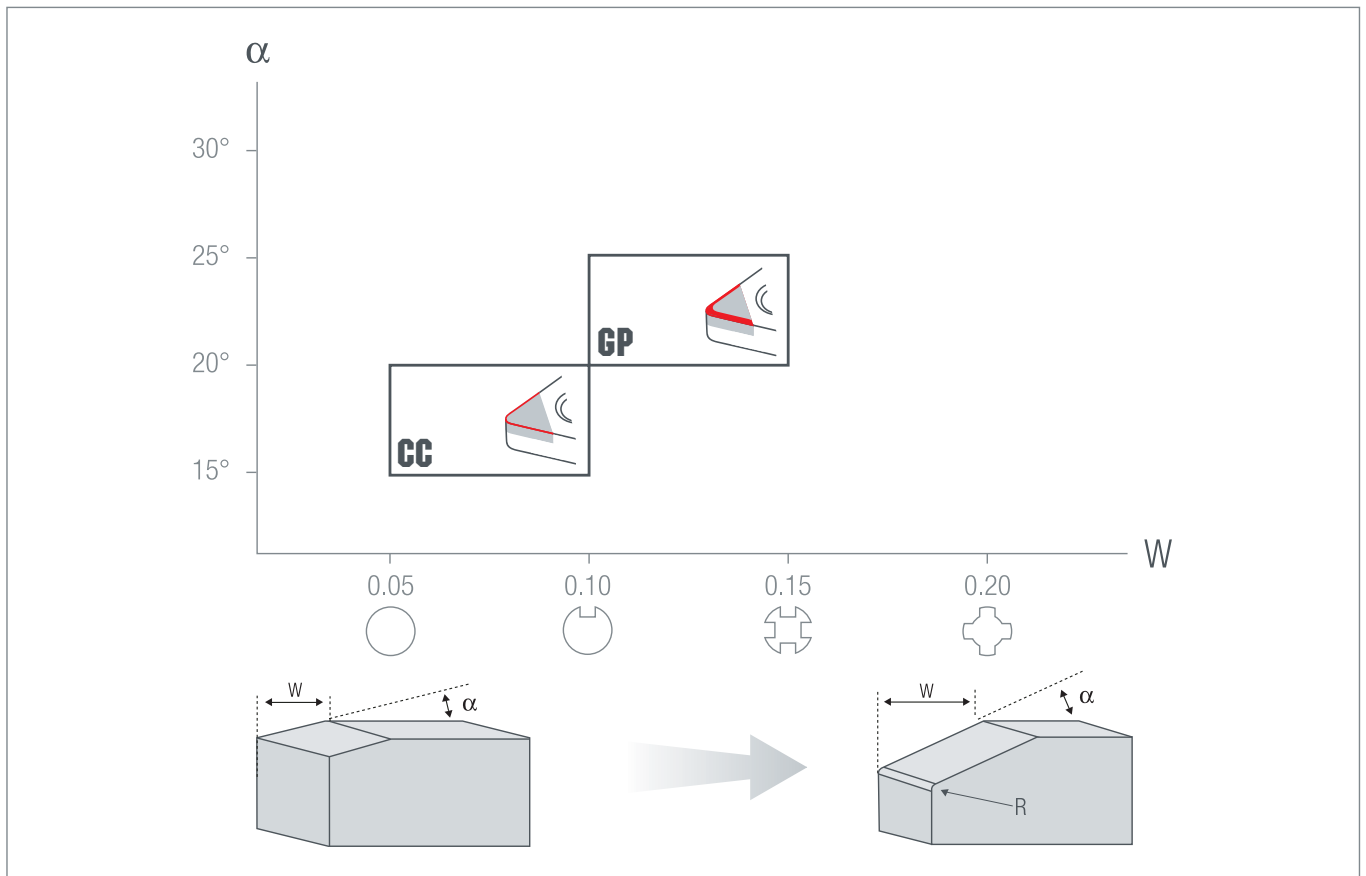
ISO DIN 513	H					K				
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40
PCBN-Carbide reinforced		NB150	NB250	NB350			NB450			
PCBN-Vertical & Solid (NBS Series)										

COATED

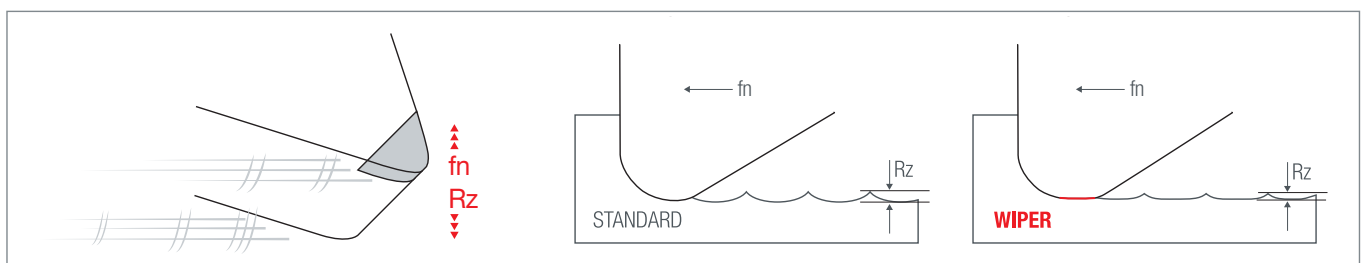
INSERT STYLE



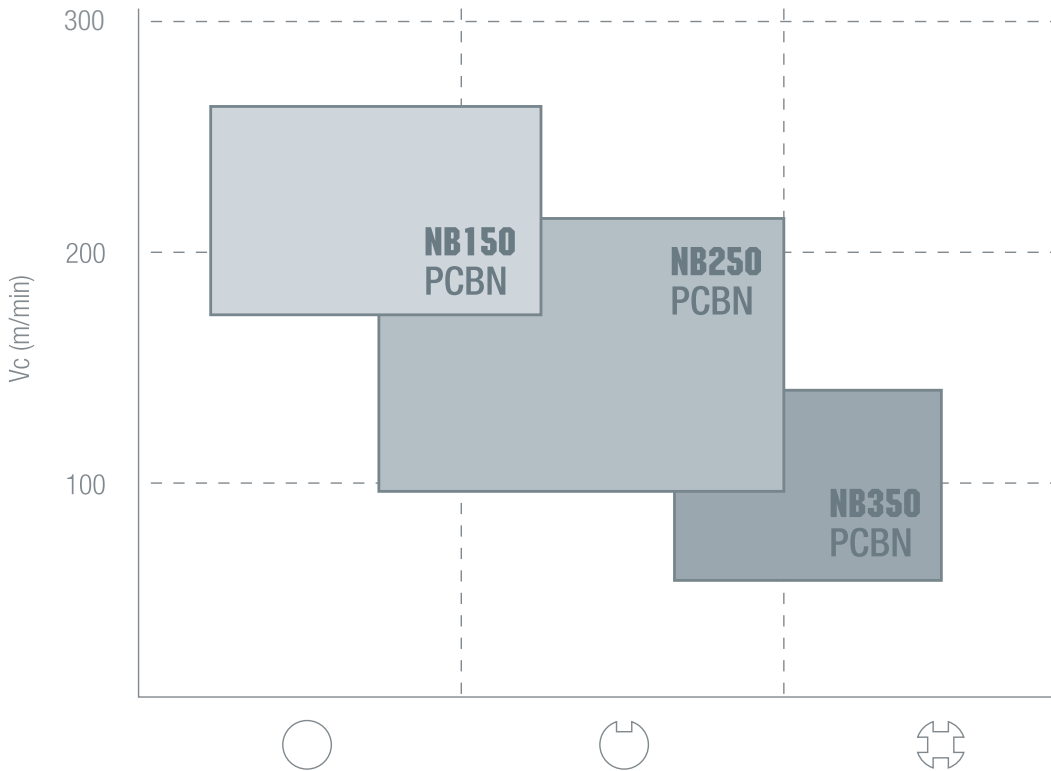
EDGE PREPARATION



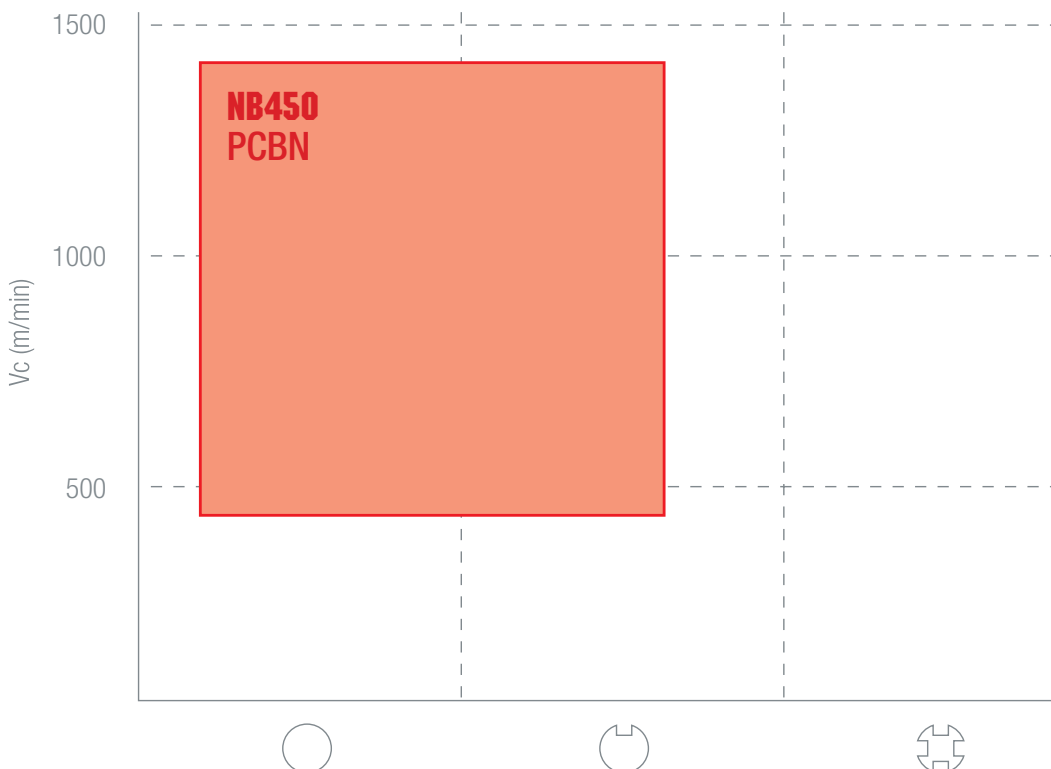
WIPER



RANGE ISO PCBN-Carbide reinforced



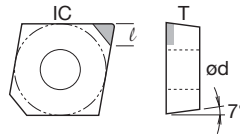
RANGE ISO PCBN-Carbide reinforced



POSITIVE 7°
with hole

NEW

CC □ □

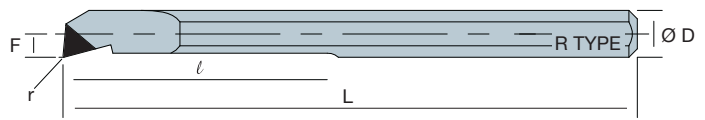


MICRO	CC □ □
IC	3,50
T	1,40
Ød	1,90
HOLDERS	225

DESCRIPTION		l	PCBN-Carbide reinforced			
			NB150	NB250	NB350	NB450U
CC	MICRO CC.R01-1E-CC CC.R02-1E-CC CC.R04-1E-CC	1.5				
		1.5	★			
		1.5	★			
GP	MICRO CC.R01-1E-GP CC.R02-1E-GP CC.R04-1E-GP	1.5				
		1.5	★	●	●	●*
		1.5	★	●	●	●*
WH WIPER	MICRO CC.R02-1E-WH CC.R04-1E-WH	1.5	★			
		1.5	★			
*NB450U = uncoated						


●, ○ = NEW ITEM

MINI-B



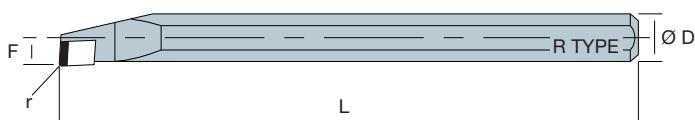
POSITIVE EDGE




DESCRIPTION	DIMENSIONS							PCBN									
	ØD	Ød	r	L	F	ℓ	NB150U										
							R	L									
	NT-MINI-B D3.0-L50-S2.8 ^{R/L}	2.8	3	0.05	50	1.4	20	■*									
	D3.0-L50-S3.0 ^{R/L}	3	3	0.10	50	1.5	20										
	D4.0-L60-S3.8 ^{R/L}	3.8	4	0.05	60	1.9	30	■*									
	D4.0-L60-S4.0 ^{R/L}	4	4	0.10	60	2.0	30										
	D5.0-L70-S4.8 ^{R/L}	4.8	5	0.05	70	2.4	40	■*									
	D5.0-L70-S5.0 ^{R/L}	5	5	0.10	70	2.5	40										
	D6.0-L70-S5.8 ^{R/L}	5.8	6	0.05	70	2.9	45	■*									
	D6.0-L70-S6.0 ^{R/L}	6	6	0.10	70	3.0	45										
D7.0-L80-S6.8 ^{R/L}	6.8	7	0.05	80	3.4	50	■*										
D7.0-L80-S7.0 ^{R/L}	7	7	0.10	80	3.5	50											
*NB150U = uncoated																	

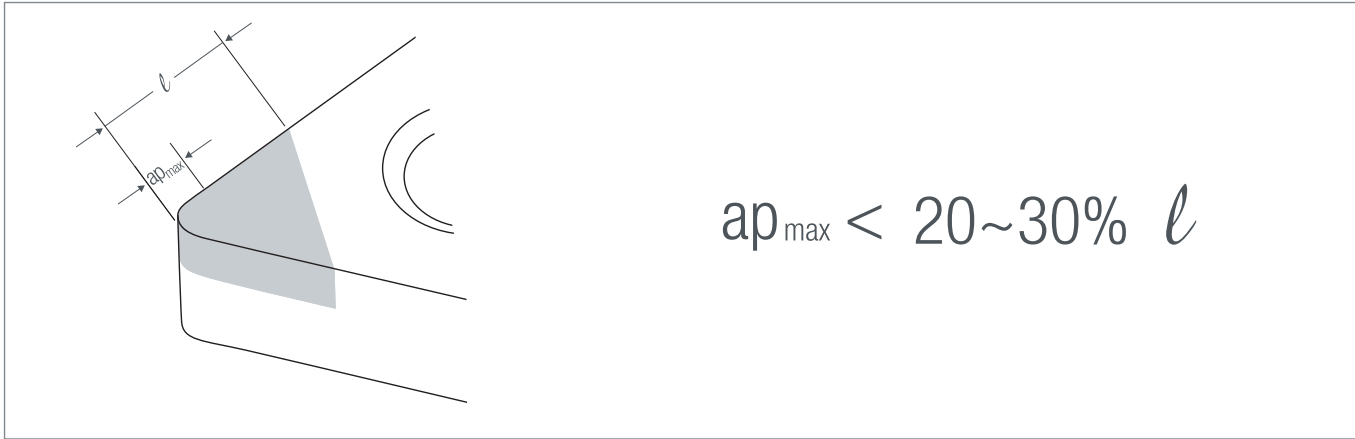
MINI-BH

STRONG EDGE



DESCRIPTION	DIMENSIONS							PCBN								
	ØD	Ød	r	L	F	ℓ	NB250U									
							R	L								
	NT-MINI-BH D3.5-L60-S3.0 ^{R/L}	3	3.5	0.20	60	1.85	-	●*								
	D4.5-L60-S4.0 ^{R/L}	4	4.5	0.20	60	2.35	-	●*								
	D5.5-L80-S5.0 ^{R/L}	5	5.5	0.20	80	2.85	-	●*								
	D6.5-L80-S6.0 ^{R/L}	6	6.5	0.20	80	3.35	-	●*								
	D7.5-L100-S7.0 ^{R/L}	7	7.5	0.20	100	3.85	-	○*								
	D8.5-L100-S8.0 ^{R/L}	8	8.5	0.20	100	4.35	-	○*								
*NB250U = uncoated																

CUTTING PARAMETERS

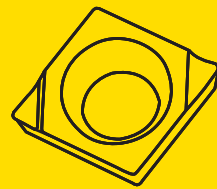


H	HH	<ul style="list-style-type: none"> 🇬🇧 HARDENED STEEL 🇮🇹 ACCIAIO TEMPRATO 🇩🇪 GEHÄRTETER STAHL 🇫🇷 ACIER TREMPÉ 🇪🇸 ACERO TEMPLADO 🇷🇺 ЗАКАЛЁННАЯ СТАЛЬ
	HC	<ul style="list-style-type: none"> 🇬🇧 CASEHARDENED STEEL 🇮🇹 ACCIAIO CEMENTATO 🇩🇪 EINGESETZTER STAHL 🇫🇷 ACIER CEMENTÉ 🇪🇸 ACERO CEMENTADO 🇷🇺 ЦЕМЕНТИРОВАННАЯ СТАЛЬ

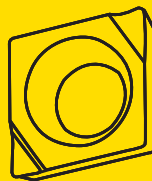
H	HB	<ul style="list-style-type: none"> 🇬🇧 BEARING STEEL 🇮🇹 ACCIAIO PER CUSCINETTI 🇩🇪 STAHL FÜR LAGER 🇫🇷 ACIER POUR ROULEMENTS 🇪🇸 ACERO PARA RODAMIENTOS 🇷🇺 СТАЛЬ ДЛЯ ПОДШИПНИКОВ
	HM	<ul style="list-style-type: none"> 🇬🇧 HARD METAL (Co≥17%) 🇮🇹 METALLO DURO (Co≥17%) 🇩🇪 VHM (Co≥17%) 🇫🇷 CARBURE (Co≥17%) 🇪🇸 METAL DURO (Co≥17%) 🇷🇺 ТВЁРДЫЙ СПЛАВ (Co≥17%)

MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS	PCBN-Carbide reinforced				
				NB150	NB250	NB350	NB450U	
H	HH	0.05~0.20	0.03~0.10	○	120~250	★ 100~200	100~180	
				⊕		80~180	★ 80~160	80~180
	HC	0.05~0.20	0.03~0.10	○		★ 100~180	100~160	
				⊕		80~160	★ 80~140	80~160
	HB	0.05~0.20	0.03~0.10	○	120~200	★ 100~180	100~160	
				⊕		80~150	★ 80~120	80~150
HM	0.05~0.15	0.03~0.08	○				★ 10~40	

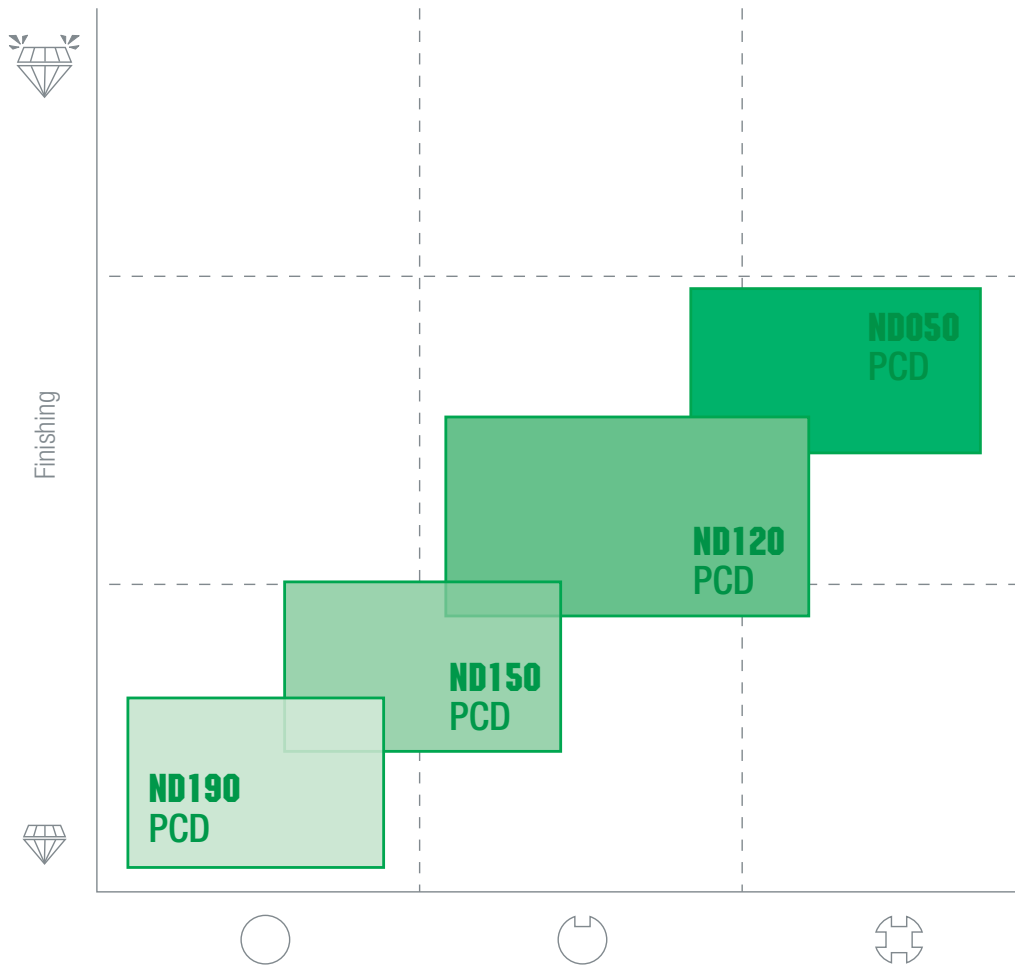
★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор



MICROBORING / diamond



RANGE ISO **N** DIAMOND



**POSITIVE 7°
with hole**

CC □ □

NEW

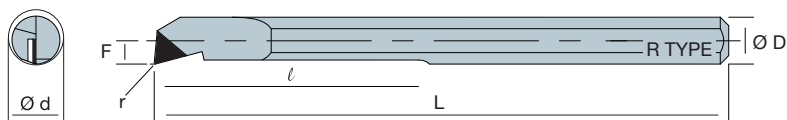
MICRO	CC □ □
IC	3,50
T	1,40
Ød	1,90
HOLDERS	▶ 225

DESCRIPTION		PCD												
			ND050	ND120	ND150	ND190								
STANDARD		MICRO	CC.R01	1.5										
		CC.R02	1.5	●	●		●							
		CC.R04	1.5	●	●		●							

●, ○ = NEW ITEM

MINI-B

POSITIVE EDGE



DESCRIPTION	DIMENSIONS							PCD						
	ØD	Ød	r	L	F	l	ND120							
							R	L						
	NT-MINI-B D3.0-L50-S2.8 R/L	2.8	3	0.05	50	1.4	20	■						
	D3.0-L50-S3.0 R/L	3	3	0.10	50	1.5	20							
	D4.0-L60-S3.8 R/L	3.8	4	0.05	60	1.9	30	■						
	D4.0-L60-S4.0 R/L	4	4	0.10	60	2.0	30							
	D5.0-L70-S4.8 R/L	4.8	5	0.05	70	2.4	40	■						
	D5.0-L70-S5.0 R/L	5	5	0.10	70	2.5	40							
	D6.0-L70-S5.8 R/L	5.8	6	0.05	70	2.9	45	■						
	D6.0-L70-S6.0 R/L	6	6	0.10	70	3.0	45							
D7.0-L80-S6.8 R/L	6.8	7	0.05	80	3.4	50	■							
D7.0-L80-S7.0 R/L	7	7	0.10	80	3.5	50								

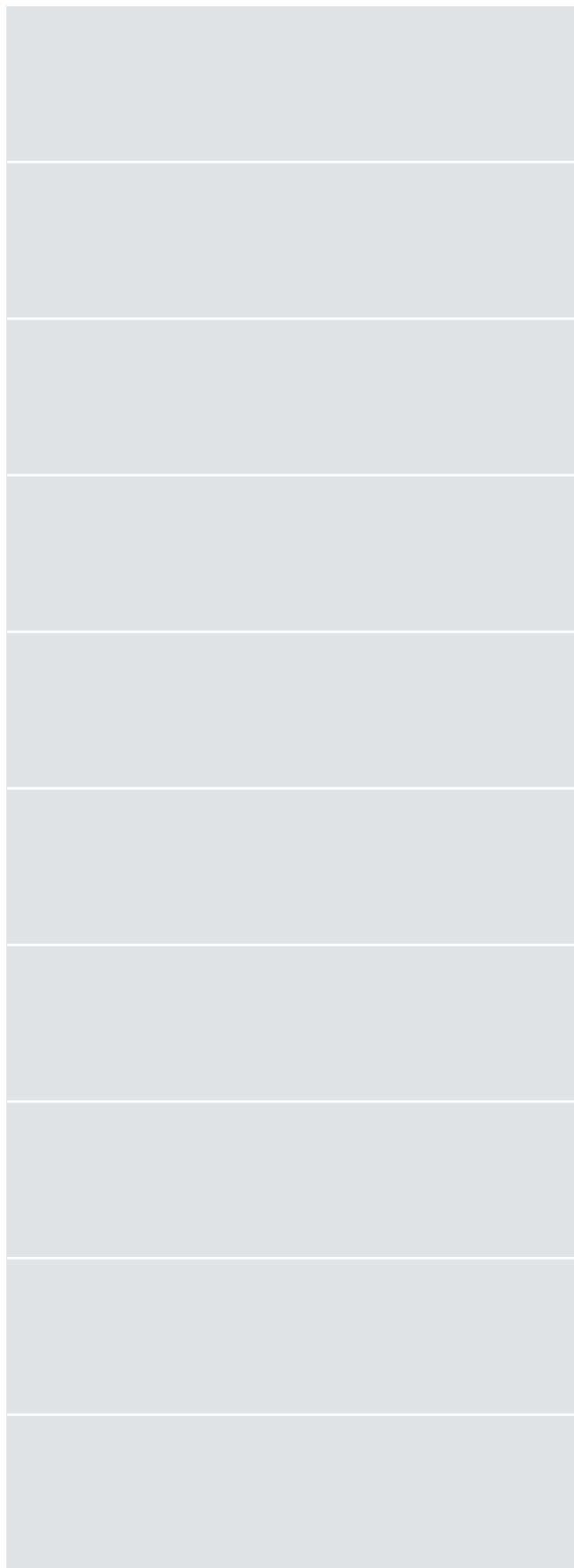
CUTTING PARAMETERS

N	NA	ALUMINUM ALLOYS
		LEGHE DI ALLUMINIO
		ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM
		ALEACIONES DE ALUMINIO
		СПЛАВЫ АЛЮМИНИЯ
N	NS	ALUMINUM ALLOYS (Si >15%)
		LEGHE DI ALLUMINIO (Si >15%)
		ALUMINIUMLEGIERUNGEN (Si >15%)
		ALLIAGES D'ALUMINIUM (Si >15%)
		ALEACIONES DE ALUMINIO (Si >15%)
		СПЛАВЫ АЛЮМИНИЯ (Si >15%)
N	NH	ALUMINUM ALLOYS AGED AND HARDENED
		LEGHE DI ALLUMINIO TRATTATE ED INVECCHiate
		GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES
		ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS
		СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ
N	NB	BRASS
		OTTONE
		MESSING
		LAITON
		LATÓN
		ЛАТУНЬ
N	NC	BRONZE AND ELECTROLYTIC COPPER
		BRONZO E RAME ELETTROLITICO
		ELEKTROLYTISCHES KUPFER UND BRONZE
		BRONZE ET CUIVRE ÉLECTROLYTIQUE
		BRONCE Y COBRE ELECTROLÍTICO
		БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ
N	NG	GRAPHITE
		GRAFITE
		GRAFIT
		GRAPHITE
		GRAFITO
		ГРАФИТ
H	HM	HARD METAL (Co≤16%)
		METALLO DURO (Co≤16%)
		VHM (Co≤16%)
		CARBURE (Co≤16%)
		METAL DURO (Co≤16%)
		ТВЁРДЫЙ СПЛАВ (Co≤16%)
S	ST	TITANIUM ALLOYS
		LEGHE DI TITANIO
		TITAN LEGIERUNGEN
		ALLIAGES DE TITANE
		ALEACIONES DE TITANIO
		СПЛАВЫ ТИТАНА

MATERIAL	ap (mm)	fn (mm/rev)	CUTTING CONDITIONS	PCD				
				ND050	ND120	ND150	ND190	
N	NA	0.03~0.20	0.05~0.10	○ □ ▽		★ 600~2500		
	NS	0.03~0.20	0.05~0.10	○ □ ▽			500~1800	★ 500~1800
	NH	0.03~0.20	0.05~0.10	○ □ ▽			400~1000	★ 400~1000
	NB	0.03~0.20	0.05~0.10	○ □ ▽	★ 400~1200	400~1200		
	NC	0.03~0.20	0.05~0.10	○ □ ▽	★ 300~800	300~800		
	NG	0.03~0.20	0.05~0.10	○ □ ▽		★ 300~800	300~800	300~800
H	HM	0.03~0.20	0.05~0.10	○			10~40	★ 10~40
S	ST	0.03~0.20	0.05~0.10	○ □ ▽	★ 100~200	100~200		







★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

CAPTION LEGENDA / LEGENDE / LÉGENDE / CLAVE / УСЛОВНЫЕ ОБОЗНАЧЕНИЯ









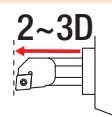
INTERNAL



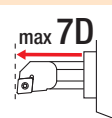
-  INTERNAL HOLDERS
-  UTENSILI PER LAVORAZIONE INTERNA
-  WERKZEUG FÜR INNENBEARBEITUNGEN
-  OUTILS POUR USINAGE INTÉRIEUR
-  HERRAMIENTAS PARA MECANIZADO INTERIOR
-  ИНСТРУМЕНТ ДЛЯ ВНУТРЕННЕЙ ОБРАБОТКИ



-  SCREW CLAMPING
-  BLOCCAGGIO A VITE
-  SCHRAUBSPANNUNG
-  FIXATION PAR VIS
-  AMARRE POR TORNILLO
-  КРЕПЛЕНИЕ ВИНТОМ









-  OVERHANG
-  SPORGENZA
-  UEBERSTAND
-  PORTE-À-FEUX
-  VOLADIZO
-  ВЫСТУП



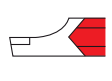
-  OVERHANG
-  SPORGENZA
-  UEBERSTAND
-  PORTE-À-FEUX
-  VOLADIZO
-  ВЫСТУП







COOLANT



-  INSIDE COOLANT TOOL
-  UTENSILE CON REFRIGERAZIONE INTERNA
-  WERKZEUG MIT IK
-  OUTIL AVEC TROUS D'HUILE
-  HERRAMIENTA CON SUMINISTRO INTERNO DE REFRIGERANTE
-  ИНСТРУМЕНТ С ВНУТРЕННИМ ОХЛАЖДЕНИЕМ

CARBIDE



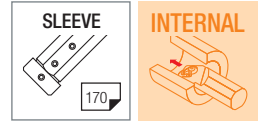
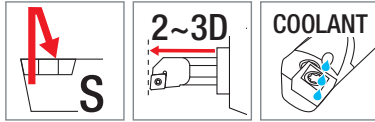
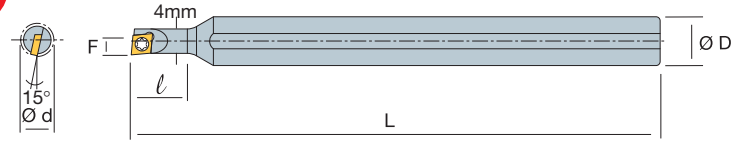
-  CARBIDE BODY WITH BRAZED STEEL HEAD
-  CORPO IN METALLO DURO CON TESTA IN ACCIAIO (BRASATA)
-  KÖRPER AUS VHM UND KOPF AUS STAHL (GELÖTET)
-  CORPS EN CARBURE ET TÊTE EN ACIER (SOUDÉ)
-  HERRAMIENTA EN METAL DURO CON CABEZA EN ACERO (SOLDADA)
-  КОРПУС ИЗ ТВЕРДОГО СПЛАВА СО СТАЛЬНОЙ ГОЛОВКОЙ

A MICRO CC

NEW

POSITIVE 7°
with hole

CC □ □

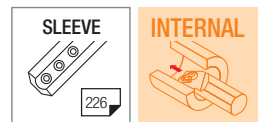
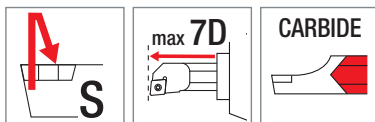
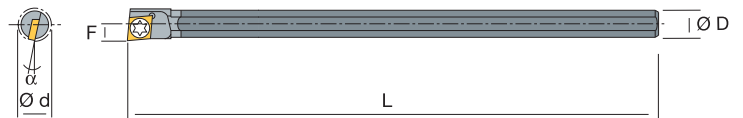


CC □ □	DESCRIPTION	STOCK	DIMENSIONS											
			ØD	Ød	L	F	ℓ							
MICRO CC	NT-A12H-MICRO-CC RH	●	12	5	100	2.5	8	NT-ST002	NT-FT06					
	NT-A16H-MICRO-CC RH	●	16	5	100	2.5	12	NT-ST002	NT-FT06					

C MICRO CC

POSITIVE 7°
with hole

CC □ □



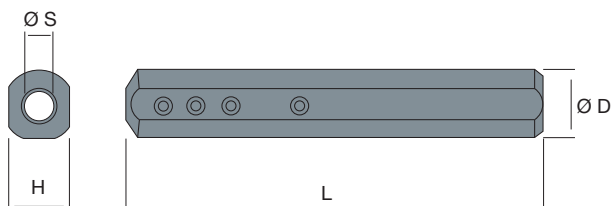
CC □ □	DESCRIPTION	STOCK	DIMENSIONS											
			ØD	Ød	L	F	α							
MICRO CC	NT-C04G-MICRO-CC RH	●	4	5	90	2.5	15°	NT-ST002	NT-FT06					
	NT-C05H-MICRO-CC RH	●	5	6	100	3	13°	NT-ST002	NT-FT06					

carbide 206 PCBN 213 diamond 220

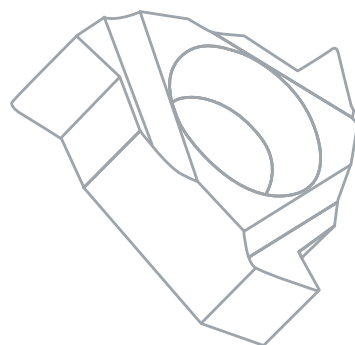
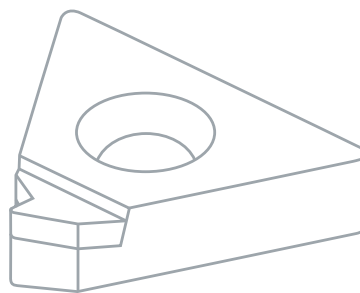
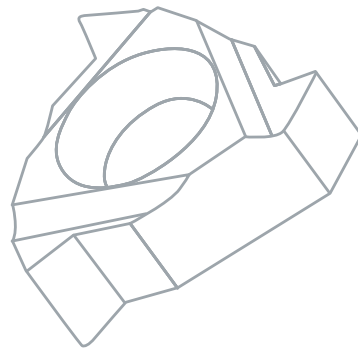
●, ○ = NEW ITEM

NT-SLV

SLEEVE
for boring bars



	DESCRIPTION	STOCK	DIMENSIONS									
			ØS	ØD	L	H						
MICRO CC	NT-SLV S3.0	●	3	16	100	14	NT-ST095	NT-WR020				
	NT-SLV S4.0	●	4	16	100	14	NT-ST095	NT-WR020				
	NT-SLV S5.0	●	5	16	100	14	NT-ST095	NT-WR020				
	NT-SLV S6.0	●	6	16	100	14	NT-ST095	NT-WR020				
	NT-SLV S7.0		7	16	100	14	NT-ST095	NT-WR020				
	NT-SLV S8.0		8	16	100	14	NT-ST095	NT-WR020				

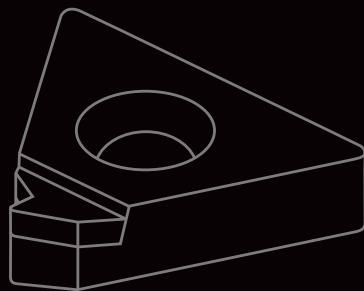


THREADING /

carbide /229
PCBN /235
diamond /241
holders /247



THREADING / carbide

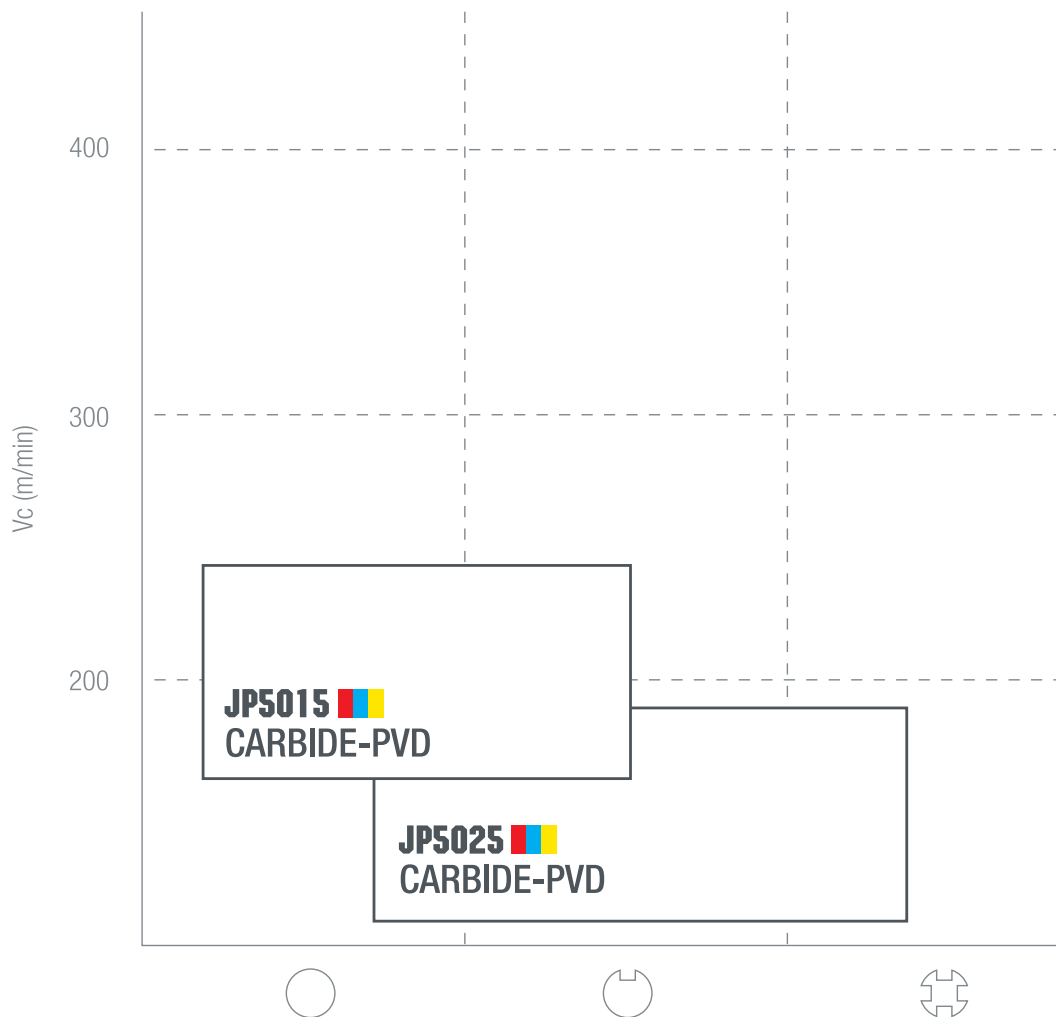


GRADES

	ISO DIN 513														
	K					P					M				
	○	←	→	⊕		○	←	→	⊕		○	←	→	⊕	
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40
CARBIDE CVD															
CARBIDE PVD		JP5015				JP5015					JP5015				
		JP5025				JP5025					JP5025				
CARBIDE UNCOATED															
CERMET UNCOATED															

RANGE ISO **K** **P** **M**

GRADES

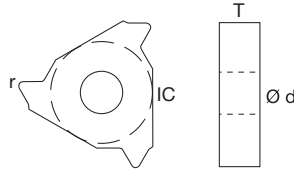


16ER

NEW



EXTERNAL METRIC

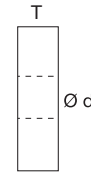
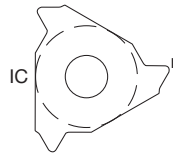





DESCRIPTION		DIMENSIONS						CARBIDE-PVD							
			r	IC	T	Ød	JP5015	JP5025							
	16ER	100ISO-TPM	1.00	0.12	9.525	3.6	3.95	★	★						
		125ISO-TPM	1.25	0.15	9.525	3.6	3.95	★	★						
		150ISO-TPM	1.50	0.19	9.525	3.6	3.95	★	★						
		175ISO-TPM	1.75	0.22	9.525	3.6	3.95	★	★						
		200ISO-TPM	2.00	0.25	9.525	3.6	3.95	★	★						
		250ISO-TPM	2.50	0.33	9.525	3.6	3.95	★	★						
		300ISO-TPM	3.00	0.41	9.525	3.6	3.95	★	★						

16IR

NEW

INTERNAL METRIC



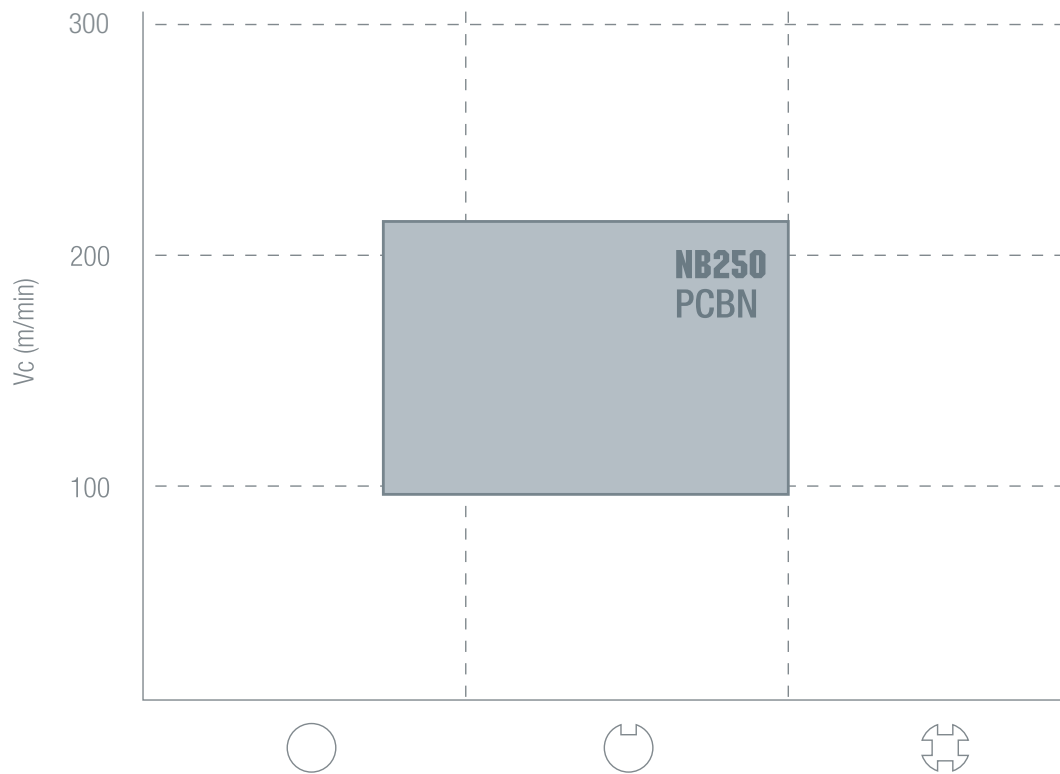
	DESCRIPTION	DIMENSIONS					CARBIDE-PVD								
			r	IC	T	Ød	JP5015	JP5025							
 	16IR														
	100ISO-TPM	1.00	0.07	9.525	3.6	3.95	★	★							
	125ISO-TPM	1.25	0.08	9.525	3.6	3.95	★	★							
	150ISO-TPM	1.50	0.11	9.525	3.6	3.95	★	★							
	175ISO-TPM	1.75	0.12	9.525	3.6	3.95	★	★							
	200ISO-TPM	2.00	0.14	9.525	3.6	3.95	★	★							
	250ISO-TPM	2.50	0.17	9.525	3.6	3.95	★	★							
300ISO-TPM	3.00	0.19	9.525	3.6	3.95	★	★								

GRADES

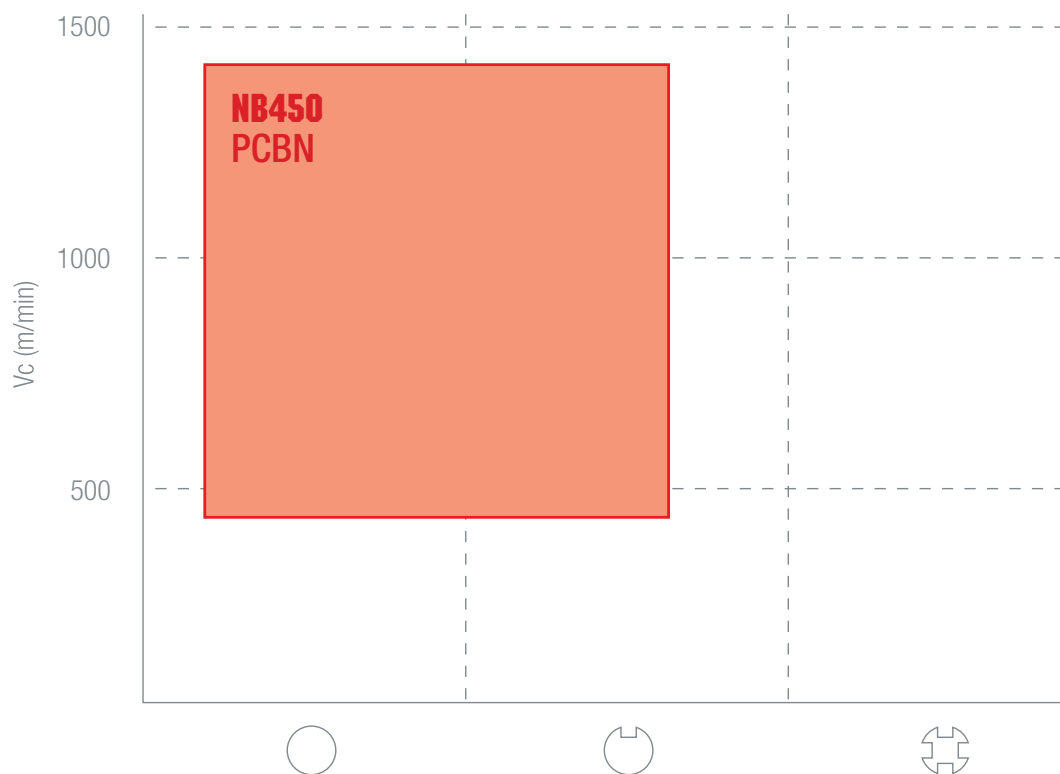
ISO DIN 513	H					K				
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40
PCBN-Carbide reinforced		NB250					NB450			
PCBN-Vertical & Solid (NBS Series)										

COATED

RANGE ISO H PCBN-Carbide reinforced

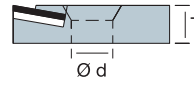
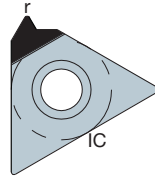


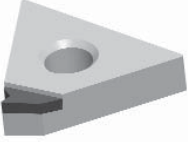
RANGE ISO K PCBN-Carbide reinforced



16ER

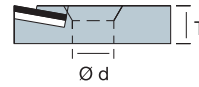
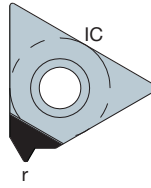
EXTERNAL METRIC


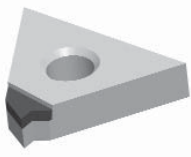


DESCRIPTION		DIMENSIONS					PCBN								
		$\frac{-P}{+T}$	r	IC	T	Ød	NB250U	NB450U							
	16ER	100ISO	1.00	0.12	9.525	3.6	3.95	●	●						
		125ISO	1.25	0.15	9.525	3.6	3.95	○	○						
		150ISO	1.50	0.19	9.525	3.6	3.95	●	●						
		175ISO	1.75	0.22	9.525	3.6	3.95	○	○						
		200ISO	2.00	0.25	9.525	3.6	3.95	●	●						
		250ISO	2.50	0.33	9.525	3.6	3.95	○	○						
		300ISO	3.00	0.41	9.525	3.6	3.95	○	○						
		NB250U = uncoated NB450U = uncoated													

16IR

INTERNAL METRIC



DESCRIPTION		DIMENSIONS					PCBN							
			r	IC	T	Ød	NB250U	NB450U						
	16IR	100ISO	1.00	0.07	9.525	3.6	3.95	○	○					
		125ISO	1.25	0.08	9.525	3.6	3.95	○	○					
		150ISO	1.50	0.11	9.525	3.6	3.95	○	○					
		175ISO	1.75	0.12	9.525	3.6	3.95	○	○					
		200ISO	2.00	0.14	9.525	3.6	3.95	○	○					
		250ISO	2.50	0.17	9.525	3.6	3.95	○	○					
		300ISO	3.00	0.19	9.525	3.6	3.95	○	○					
		NB250U = uncoated NB450U = uncoated												

CUTTING PARAMETERS

H	HH	HARDENED STEEL
		ACCIAIO TEMPRATO
		GEHÄRTETER STAHL
		ACIER TREMPÉ
		ACERO TEMPLADO
		ЗАКАЛЁННАЯ СТАЛЬ
H	HC	CASEHARDENED STEEL
		ACCIAIO CEMENTATO
		EINGESETZTER STAHL
		ACIER CEMENTÉ
		ACERO CEMENTADO
		ЦЕМЕНТИРОВАННАЯ СТАЛЬ

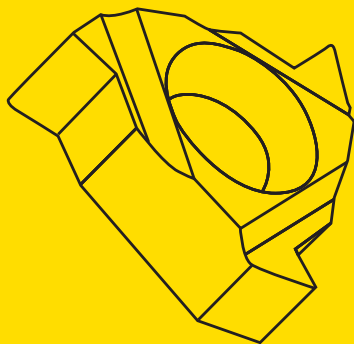
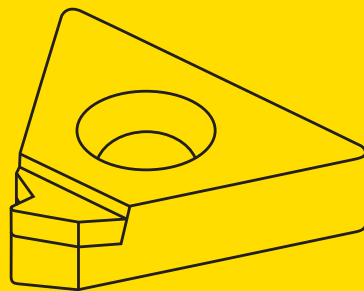
H	HB	BEARING STEEL
		ACCIAIO PER CUSCINETTI
		STAHL FÜR LAGER
		ACIER POUR ROULEMENTS
		ACERO PARA RODAMIENTOS
		СТАЛЬ ДЛЯ ПОДШИПНИКОВ
H	HM	HARD METAL (Co≥17%)
		METALLO DURO (Co≥17%)
		VHM (Co≥17%)
		CARBURE (Co≥17%)
		METAL DURO (Co≥17%)
		ТВЁРДЫЙ СПЛАВ (Co≥17%)

MATERIAL	ap (mm)	CUTTING CONDITIONS		PCBN	
				NB250U	NB450U
H	HH	0.07 max		★ 100~180	
				80~150	★ 80~140
	HC	0.07 max		★ 100~150	
				80~130	★ 80~120
	HB	0.07 max		★ 100~150	
				80~130	★ 80~120
	HM	0.07 max			★ 10~40

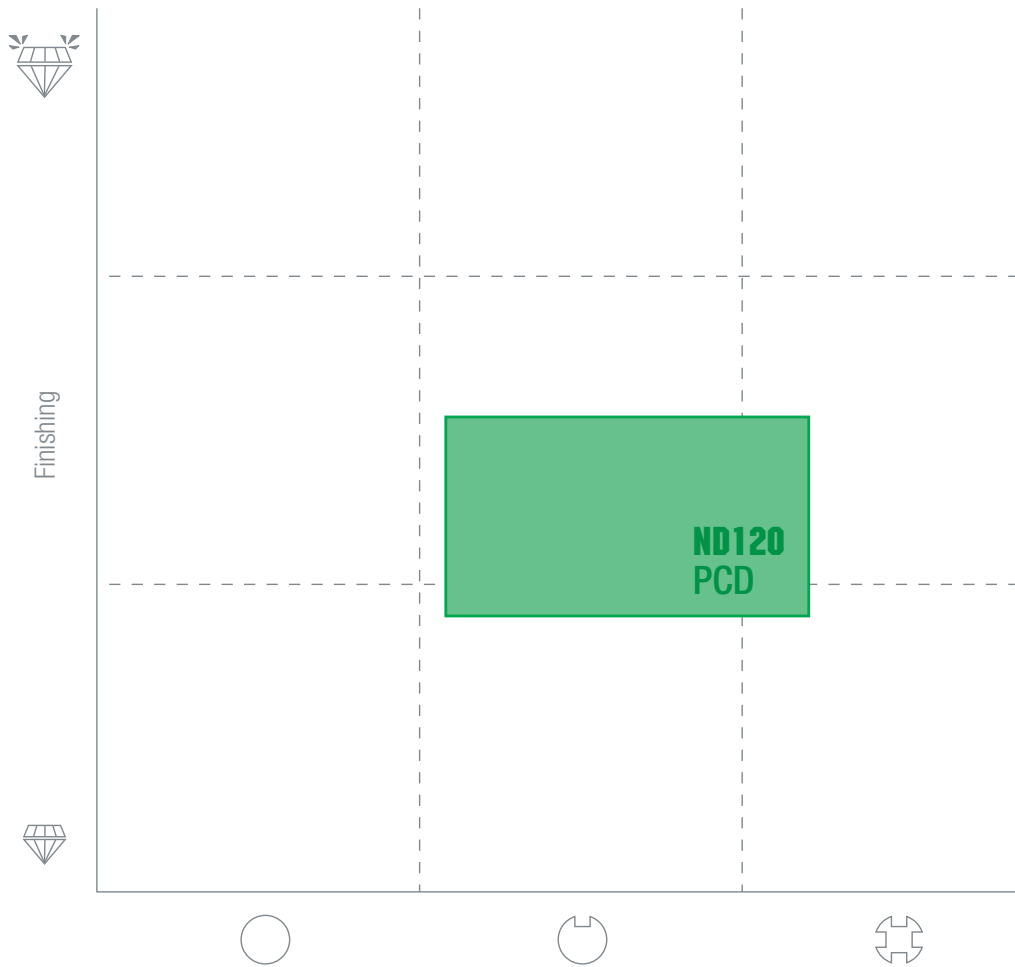
★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор



THREADING / diamond

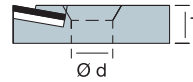
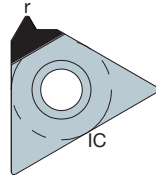


RANGE ISO **N** DIAMOND



16ER

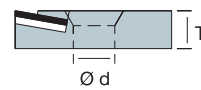
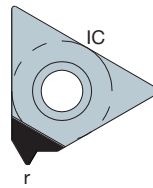
EXTERNAL METRIC



DESCRIPTION		DIMENSIONS						PCD						
		$\frac{-P}{+T}$	r	IC	T	Ød	ND120							
	16ER	100ISO	1.00	0.12	9.525	3.6	3.95	●						
		125ISO	1.25	0.15	9.525	3.6	3.95	●						
		150ISO	1.50	0.19	9.525	3.6	3.95	●						
		175ISO	1.75	0.22	9.525	3.6	3.95	○						
		200ISO	2.00	0.25	9.525	3.6	3.95	●						
		250ISO	2.50	0.33	9.525	3.6	3.95	○						
		300ISO	3.00	0.41	9.525	3.6	3.95	○						

16IR

INTERNAL METRIC



DESCRIPTION		DIMENSIONS					PCD							
		P	r	IC	T	Ød	ND120							
	16IR	100ISO	1.00	0.07	9.525	3.6	3.95	○						
		125ISO	1.25	0.08	9.525	3.6	3.95	○						
		150ISO	1.50	0.11	9.525	3.6	3.95	○						
		175ISO	1.75	0.12	9.525	3.6	3.95	○						
		200ISO	2.00	0.14	9.525	3.6	3.95	○						
		250ISO	2.50	0.17	9.525	3.6	3.95	○						
		300ISO	3.00	0.19	9.525	3.6	3.95	○						

CUTTING PARAMETERS

N	NA	ALUMINUM ALLOYS	
		LEGHE DI ALLUMINIO	
		ALUMINIUMLEGIERUNGEN	
		ALLIAGES D'ALUMINIUM	
		ALEACIONES DE ALUMINIO	
СПЛАВЫ АЛЮМИНИЯ			
N	NS	ALUMINUM ALLOYS (Si >15%)	
		LEGHE DI ALLUMINIO (Si >15%)	
		ALUMINIUMLEGIERUNGEN (Si >15%)	
		ALLIAGES D'ALUMINIUM (Si >15%)	
		ALEACIONES DE ALUMINIO (Si >15%)	
СПЛАВЫ АЛЮМИНИЯ (Si >15%)			
N	NH	ALUMINUM ALLOYS AGED AND HARDENED	
		LEGHE DI ALLUMINIO TRATTATE ED INVECCHiate	
		GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN	
		ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES	
		ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS	
СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ			
N	NB	BRASS	
		OTTONE	
		MESSING	
		LAITON	
		LATÓN	
ЛАТУНЬ			
N	NC	BRONZE AND ELECTROLYTIC COPPER	
		BRONZO E RAME ELETTROLITICO	
		ELEKTROLYTISCHES KUPFER UND BRONZE	
		BRONZE ET CUIVRE ÉLECTROLYTIQUE	
		BRONCE Y COBRE ELECTROLÍTICO	
БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ			
N	NG	GRAPHITE	
		GRAFITE	
		GRAPHIT	
		GRAPHITE	
		GRAFITO	
ГРАФИТ			
H	HM	HARD METAL (Co≤16%)	
		METALLO DURO (Co≤16%)	
		VHM (Co≤16%)	
		CARBURE (Co≤16%)	
		METAL DURO (Co≤16%)	
ТВЕРДЫЙ СПЛАВ (Co≤16%)			
S	ST	TITANIUM ALLOYS	
		LEGHE DI TITANIO	
		TITAN LEGIERUNGEN	
		ALLIAGES DE TITANE	
		ALEACIONES DE TITANIO	
СПЛАВЫ ТИТАНА			

MATERIAL	ap (mm)	CUTTING CONDITIONS	PCD		
			ND120		
N	NA	0.07 max			600~2500
	NS	0.07 max			500~1800
	NH	0.07 max			400~1000
	NB	0.07 max			400~1200
	NC	0.07 max			300~800
	NG	0.07 max			300~800
H	HM	0.07 max			10~40
S	ST	0.07 max			100~200

SER / SEL

16E□

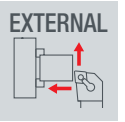
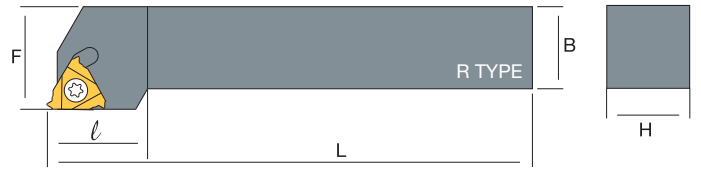


Image	DESCRIPTION	STOCK		DIMENSIONS						R				
		R	L	H	B	L	F	l	Image	Image	Image	Image	Image	
16ER	NT-SER	1212H 16	■		12	12	100	16	20	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		1212H 16N	●		12	12	100	12	20	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		1616H 16	●		16	16	100	20	22	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		2020K 16	●		20	20	125	25	32	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		2525M 16	●		25	25	150	32	25	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
16EL	NT-SEL	1212H 16N		○	12	12	100	12	20	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		1616H 16		○	16	16	100	20	22	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		2020K 16		●	20	20	125	25	32	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		2525M 16		●	25	25	150	32	25	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15

SIR / SIL

11I□ 16I□

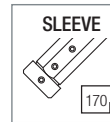
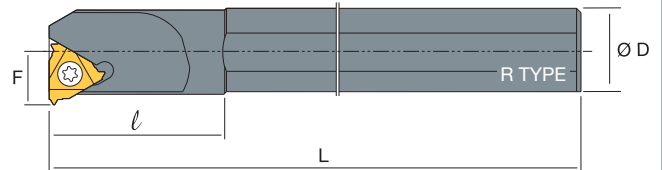
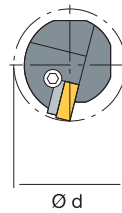
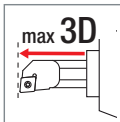
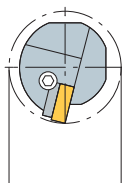


Image	DESCRIPTION	STOCK		DIMENSIONS						R				
		R	L	ØD	Ød	L	F	l	Image	Image	Image	Image	Image	
11IR	NT-SIR	1012 11	●		12	10	150	5.2	27	-	-	-	NT-ST090	NT-FT08
		1216 11	●		16	13	150	6.3	25	-	-	-	NT-ST090	NT-FT08
		1516 11	●		16	15	150	7.5	30	-	-	-	NT-ST090	NT-FT08
16IR	NT-SIR	2016 16	●		16	20	150	10	35	-	-	-	NT-ST030	NT-FT15
		2420S 16	●		20	24	180	12	35	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		3025S 16	●		25	30	200	15	35	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		3732S 16	●		32	37	250	18.5	35	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
16IL	NT-SIL	2016 16		●	16	20	150	10	35	-	-	-	NT-ST030	NT-FT15
		2420S 16		●	20	24	180	12	35	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		3025S 16		●	25	30	200	15	35	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
		3732S 16		●	32	37	250	18.5	35	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15

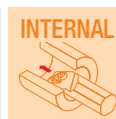
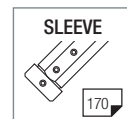
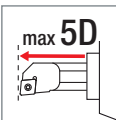
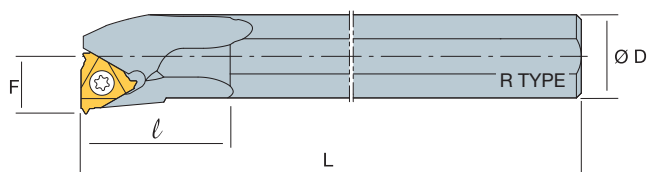
carbide 232

PCBN 238

diamond 244

V^SIR**11I □ 16I □**

Ø d



	DESCRIPTION	STOCK		DIMENSIONS									
		R	L	ØD	Ød	L	F						l
11IR	NT-V10M-SIR11-12	●		10	12	150	5.2	28	-	-	-	NT-ST090	NT-FT08
	NT-V16M-SIR11-13	●		16	13	150	6.3	25	-	-	-	NT-ST090	NT-FT08
	NT-V16M-SIR11-15	●		16	15	150	7.5	30	-	-	-	NT-ST090	NT-FT08
16IR	NT-V16M-SIR16-20	●		16	20	150	10	35	-	-	-	NT-ST030	NT-FT15
	NT-V20Q-SIR16-24	●		20	24	180	12	35	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
	NT-V25R-SIR16-30	●		25	30	200	15	35	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
	NT-V32S-SIR16-37	●		32	37	250	18.5	35	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15

carbide

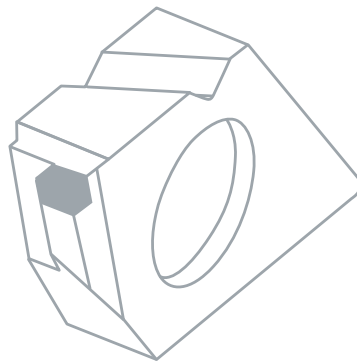
232

PCBN

238

diamond

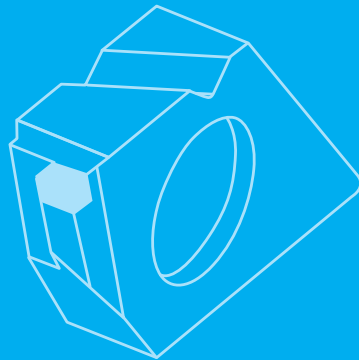
244



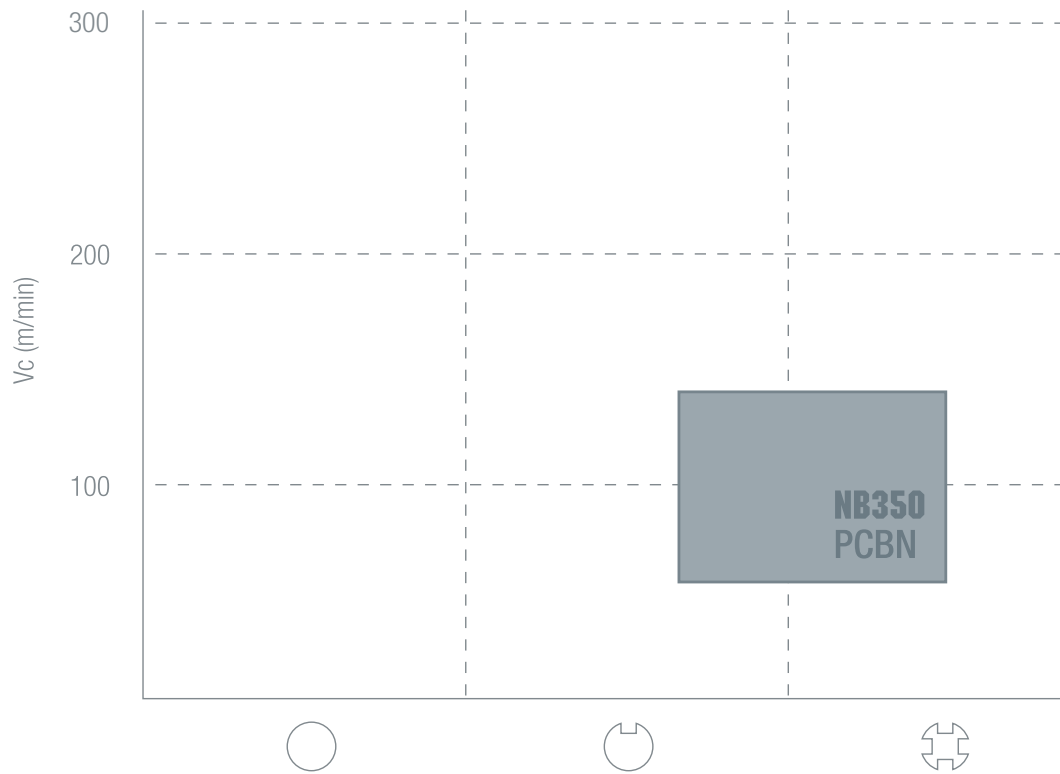
GROOVING /

PCBN /253
diamond /259
holders /265

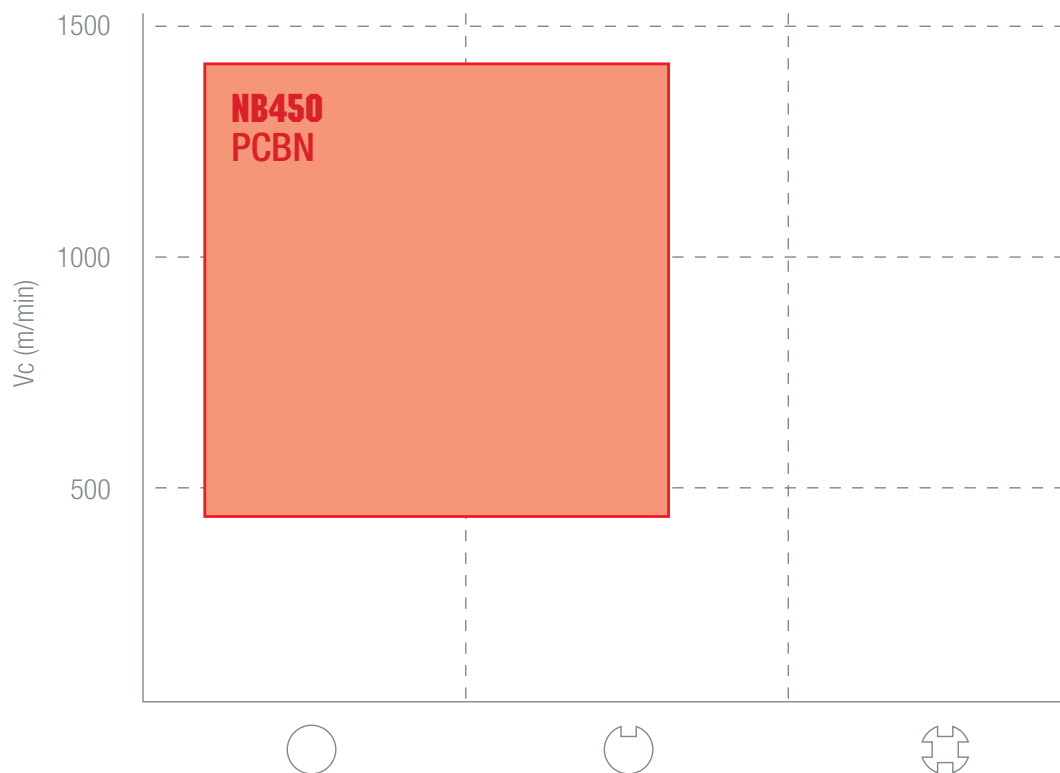
GROOVING / PCBN



RANGE ISO H PCBN-Carbide reinforced

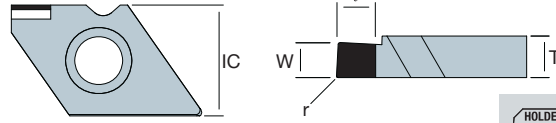


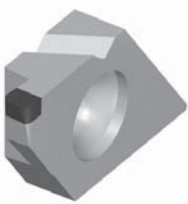
RANGE ISO K PCBN-Carbide reinforced



BGF

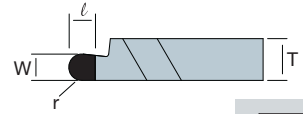
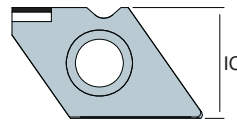
FLAT



DESCRIPTION	DIMENSIONS						PCBN-Carbide reinforced								
	W ±0.05	l	r	IC	T	NB350		NB450U							
						R	L	R	L						
	BGF R/L	100-010	1.00	1.8	0.10	12.70	4.76	●	●	○	○				
	120-010	1.20	1.8	0.10	12.70	4.76	●	○	○	○					
	140-010	1.40	1.8	0.10	12.70	4.76	●	○	○	○					
	150-010	1.50	2.6	0.10	12.70	4.76	●	●	○	○					
	170-010	1.70	2.6	0.10	12.70	4.76	○	○	○	○					
	185-010	1.85	2.6	0.10	12.70	4.76	○	○	○	○					
	195-010	1.95	2.6	0.10	12.70	4.76	●	○	○	○					
	200-010	2.00	3.0	0.10	12.70	4.76	●	○	○	○					
	200-020	2.00	3.0	0.20	12.70	4.76	●	●	○	○					
	225-020	2.25	3.0	0.20	12.70	4.76	○	○	○	○					
	230-020	2.30	3.0	0.20	12.70	4.76	○	○	○	○					
	250-020	2.50	3.5	0.20	12.70	4.76	●	●	○	○					
	275-020	2.75	3.5	0.20	12.70	4.76	○	○	○	○					
	280-020	2.80	3.5	0.20	12.70	4.76	○	○	○	○					
	300-020	3.00	4.5	0.20	12.70	4.76	●	●	●	●					
	330-020	3.30	4.5	0.20	12.70	4.76	○	○	○	○					
350-020	3.50	4.5	0.20	12.70	4.76	●	●	○	○						
400-020	4.00	4.5	0.20	12.70	4.76	●	●	○	○						
	NB450U = uncoated														

BGF

FULL RADIUS



DESCRIPTION		DIMENSIONS					PCBN-Carbide reinforced								
		W ±0.05	l	r	IC	T	NB350		NB450U						
							R	L	R	L					
	BGF R/L	100-050FR	1.00	1.8	0.50	12.70	4.76	○	○	○	○				
		150-075FR	1.50	2.6	0.75	12.70	4.76	○	●	○	○				
		200-100FR	2.00	3.0	1.00	12.70	4.76	●	○	○	○				
		250-125FR	2.50	3.5	1.25	12.70	4.76	○	○	○	○				
		300-150FR	3.00	4.5	1.50	12.70	4.76	●	○	○	○				
		350-175FR	3.50	4.5	1.75	12.70	4.76	○	○	○	○				
		400-200FR	4.00	4.5	2.00	12.70	4.76	●	○	○	○				
NB450U = uncoated															

CUTTING PARAMETERS

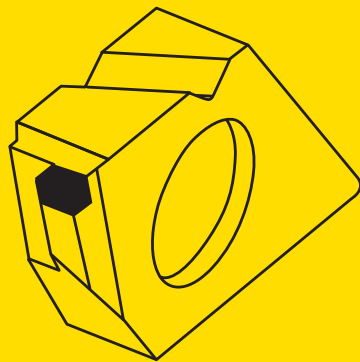
H	HH	HARDENED STEEL
		ACCIAIO TEMPRATO
		GEHÄRTETER STAHL
		ACIER TREMPÉ
H	HC	ACERO TEMPLADO
		ЗАКАЛЁННАЯ СТАЛЬ
		CASEHARDENED STEEL
		ACCIAIO CEMENTATO
		EINGESETZTER STAHL
		ACIER CEMENTÉ
		ACERO CEMENTADO
		ЦЕМЕНТИРОВАННАЯ СТАЛЬ

H	HB	BEARING STEEL
		ACCIAIO PER CUSCINETTI
		STAHL FÜR LAGER
		ACIER POUR ROULEMENTS
		ACERO PARA RODAMIENTOS
		СТАЛЬ ДЛЯ ПОДШИПНИКОВ

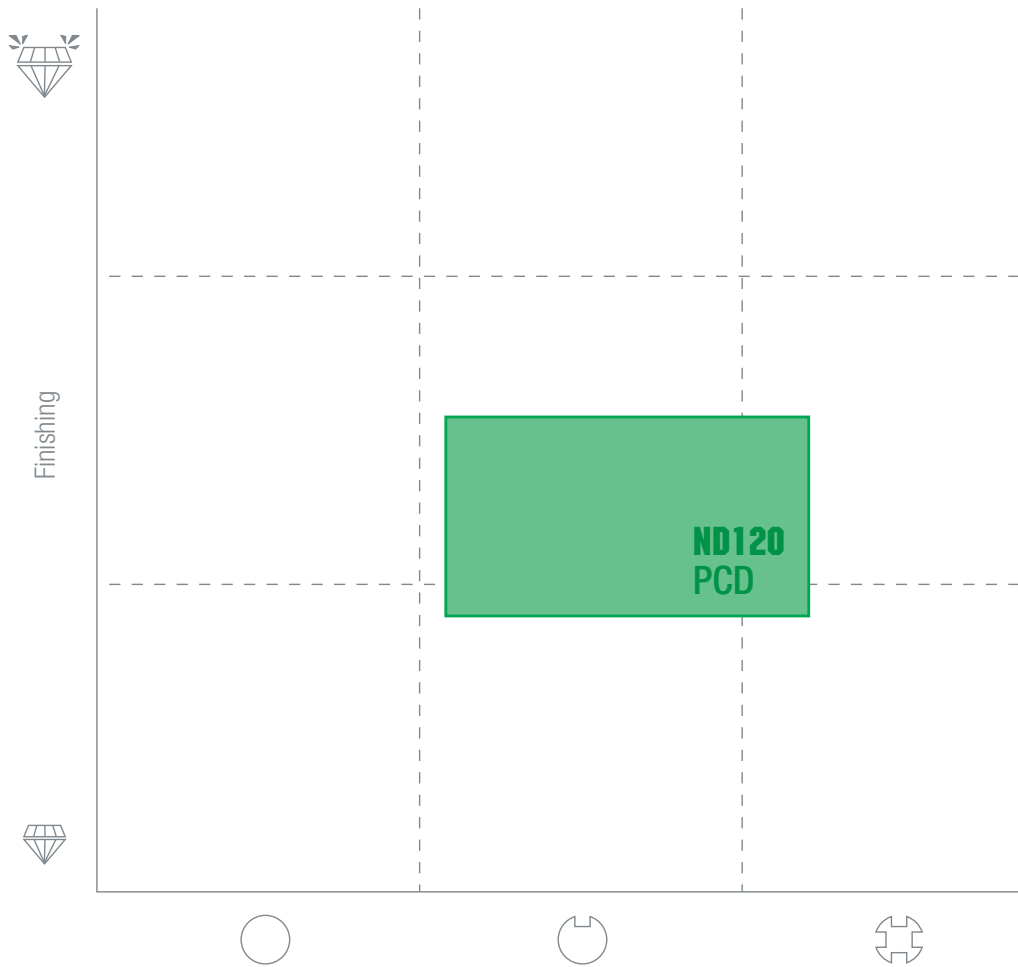
MATERIAL	W (mm)	fn (mm/rev)	CUTTING CONDITIONS		PCBN		
					NB350	NB450U	
H	HH	1.00~2.00	0.05~0.12	○	☹ ☹	★	
		2.00~3.00	0.05~0.15			80~150	
		3.00~4.00	0.08~0.15			★	
		1.00~2.00	0.05~0.12	⊕	☹	60~120	★
		2.00~3.00	0.05~0.15			60~120	80~150
		3.00~4.00	0.08~0.15			60~120	80~150
	HC	1.00~2.00	0.05~0.12	○	☹ ☹	★	
		2.00~3.00	0.05~0.15			80~140	
		3.00~4.00	0.08~0.15			★	
		1.00~2.00	0.05~0.12	⊕	☹	60~100	★
		2.00~3.00	0.05~0.15			60~100	80~140
		3.00~4.00	0.08~0.15			60~100	80~140
HB	1.00~2.00	0.05~0.12	○	☹ ☹	★		
	2.00~3.00	0.05~0.15			80~120		
	3.00~4.00	0.08~0.15			★		
	1.00~2.00	0.05~0.12	⊕	☹	60~100	★	
	2.00~3.00	0.05~0.15			60~100	80~120	
	3.00~4.00	0.08~0.15			60~100	80~120	

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

GROOVING / diamond

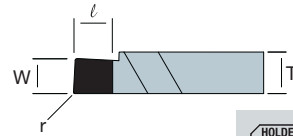
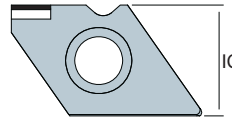


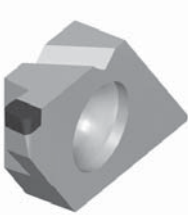
RANGE ISO **N** DIAMOND



BGF

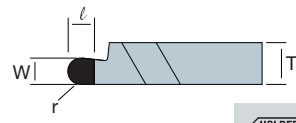
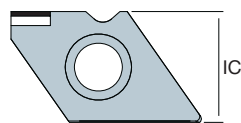
FLAT



DESCRIPTION	DIMENSIONS						PCD													
	W ±0.05	l	r	IC	T	ND120														
						R	L													
	BGF R/L	100-010	1.00	1.8	0.10	12.70	4.76	○												
		120-010	1.20	1.8	0.10	12.70	4.76	○												
		140-010	1.40	1.8	0.10	12.70	4.76	○												
		150-010	1.50	2.6	0.10	12.70	4.76	○												
		170-010	1.70	2.6	0.10	12.70	4.76	○												
		185-010	1.85	2.6	0.10	12.70	4.76	○												
		195-010	1.95	2.6	0.10	12.70	4.76	○												
		200-010	2.00	3.0	0.10	12.70	4.76	○												
		200-020	2.00	3.0	0.20	12.70	4.76	●												
		225-020	2.25	3.0	0.20	12.70	4.76	○												
		230-020	2.30	3.0	0.20	12.70	4.76	○												
		250-020	2.50	3.5	0.20	12.70	4.76	○												
		275-020	2.75	3.5	0.20	12.70	4.76	○												
		280-020	2.80	3.5	0.20	12.70	4.76	○												
		300-020	3.00	4.5	0.20	12.70	4.76	●												
		330-020	3.30	4.5	0.20	12.70	4.76	○												
	350-020	3.50	4.5	0.20	12.70	4.76	○													
	400-020	4.00	4.5	0.20	12.70	4.76	○													

BGF

FULL RADIUS



DESCRIPTION		DIMENSIONS					PCD								
		$W \pm 0.05$	l	r	IC	T	ND120								
							R	L							
	BGF R/L	100-050FR	1.00	1.8	0.50	12.70	4.76	○							
		150-075FR	1.50	2.6	0.75	12.70	4.76	○							
		200-100FR	2.00	3.0	1.00	12.70	4.76	○							
		250-125FR	2.50	3.5	1.25	12.70	4.76	○							
		300-150FR	3.00	4.5	1.50	12.70	4.76	●							
		350-175FR	3.50	4.5	1.75	12.70	4.76	○							
		400-200FR	4.00	4.5	2.00	12.70	4.76	○							

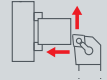
CUTTING PARAMETERS







N	NA	ALUMINUM ALLOYS
		LEGHE DI ALLUMINIO
		ALUMINIUMLEGIERUNGEN
		ALLIAGES D'ALUMINIUM
		ALEACIONES DE ALUMINIO
		СПЛАВЫ АЛЮМИНИЯ
N	NS	ALUMINUM ALLOYS (Si >15%)
		LEGHE DI ALLUMINIO (Si >15%)
		ALUMINIUMLEGIERUNGEN (Si >15%)
		ALLIAGES D'ALUMINIUM (Si >15%)
		ALEACIONES DE ALUMINIO (Si >15%)
		СПЛАВЫ АЛЮМИНИЯ (Si >15%)

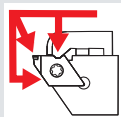
N	NB	BRASS
		OTTONE
		MESSING
		LAITON
		LATÓN
		ЛАТУНЬ
N	NG	GRAPHITE
		GRAFITE
		GRAPHIT
		GRAPHITE
		GRAFITO
		ГРАФИТ







MATERIAL	W (mm)	fn (mm/rev)	CUTTING CONDITIONS			PCD
						ND120
N	NA	1.00~2.00	0.05~0.12			600~2500
		2.00~3.00	0.05~0.15			600~2500
		3.00~4.00	0.08~0.15			600~2500
	NS	1.00~2.00	0.05~0.12			500~1500
		2.00~3.00	0.05~0.15			500~1500
		3.00~4.00	0.08~0.15			500~1500
	NB	1.00~2.00	0.05~0.12			400~1200
		2.00~3.00	0.05~0.15			400~1200
		3.00~4.00	0.08~0.15			400~1200
	NG	1.00~2.00	0.05~0.12			300~800
		2.00~3.00	0.05~0.15			300~800
		3.00~4.00	0.08~0.15			300~800

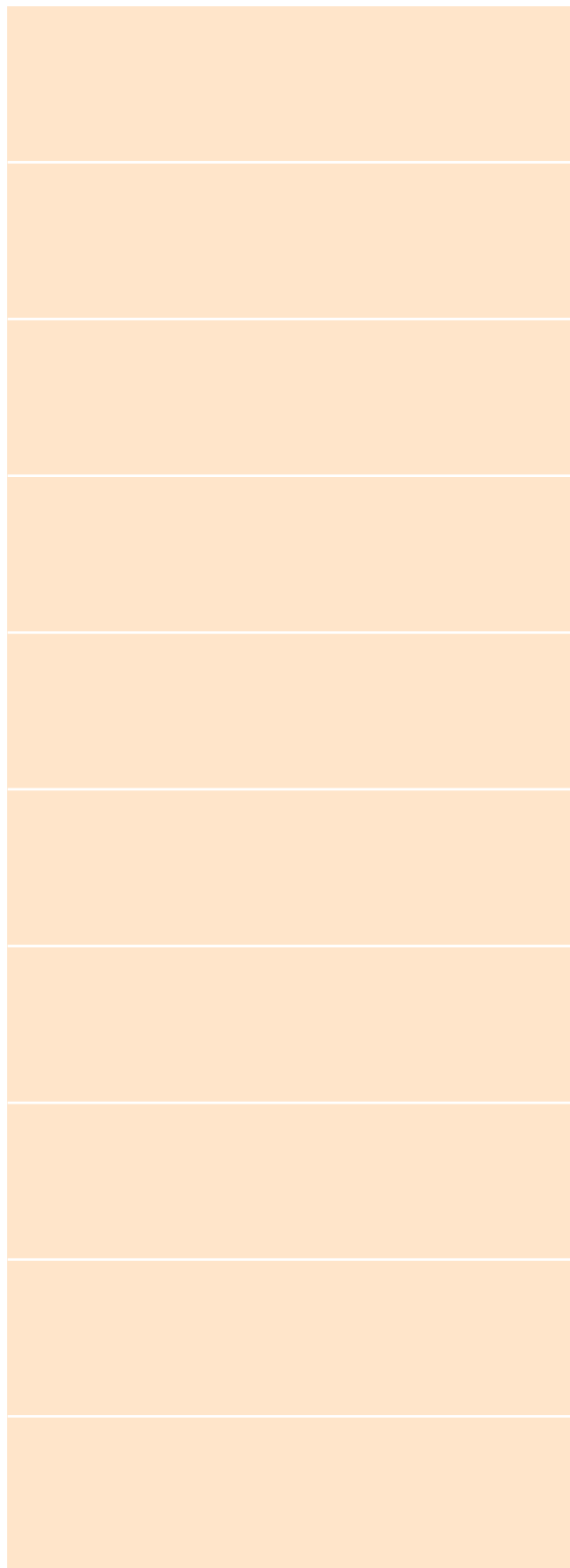
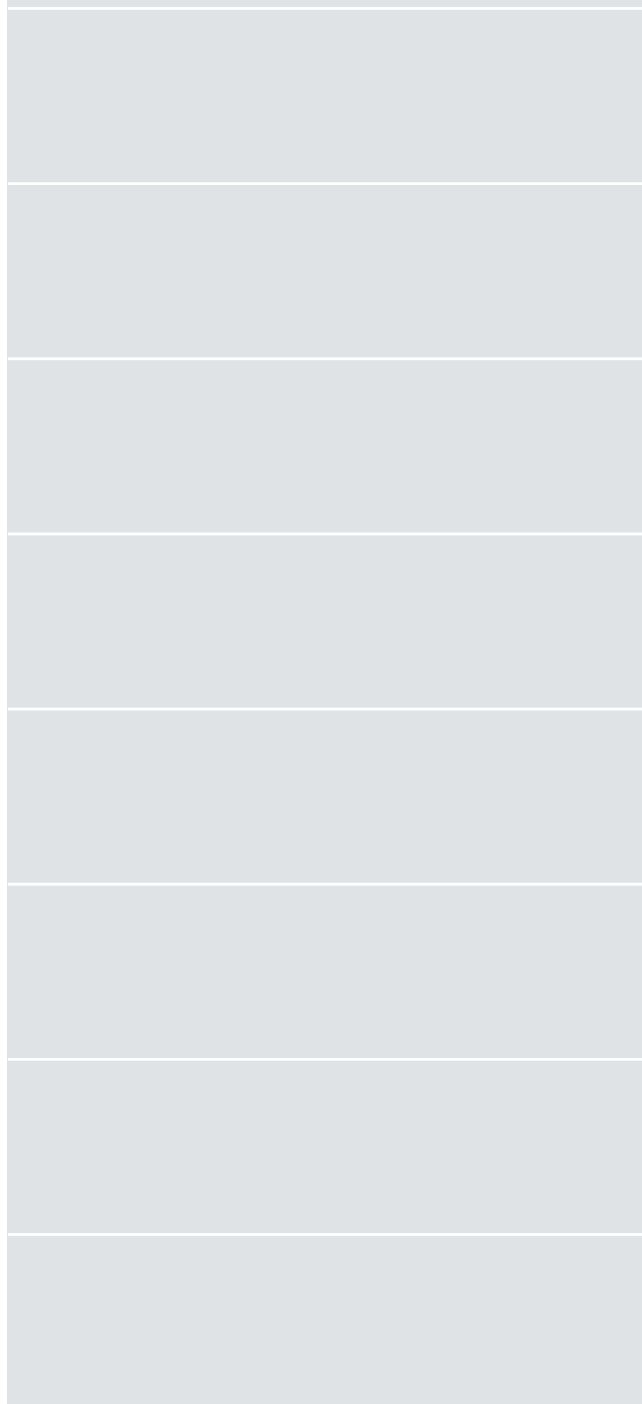
★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

CAPTION LEGENDA / LEGENDE / LÉGENDE / CLAVE / УСЛОВНЫЕ ОБОЗНАЧЕНИЯ**EXTERNAL**

-  EXTERNAL HOLDERS
-  UTENSILI PER LAVORAZIONE ESTERNA
-  WERKZEUG FÜR AUSSENBEARBEITUNGEN
-  OUTILS POUR USINAGE EXTÉRIEUR
-  HERRAMIENTAS PARA MECANIZADO EXTERIOR
-  ИНСТРУМЕНТ ДЛЯ ВНЕШНЕЙ ОБРАБОТКИ

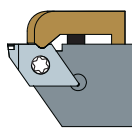



-  DOUBLE CLAMPING
-  DOPPIO BLOCCAGGIO
-  DOPPELKLEMME
-  FERMETURE DOUBLE
-  SUJECIÓN RÍGIDA
-  ДВОЙНОЕ КРЕПЛЕНИЕ



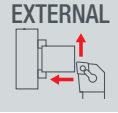
BGF-HLD






double clamp **BGFR/L**

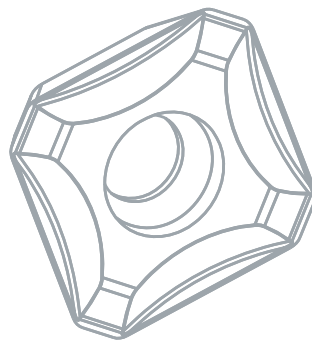
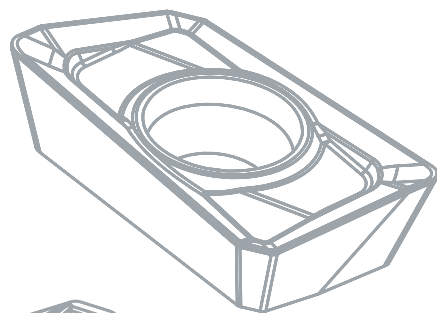
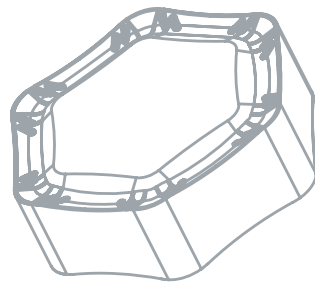




EXTERNAL

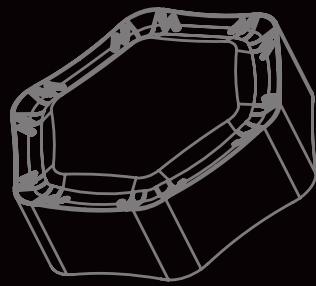


BGFR/L	DESCRIPTION	STOCK		DIMENSIONS											
		R	L	H	B	L	F	l							
BGFR/L	BGF-HLD	1616^{R/L}	●	○	16	16	150	30	44.5	NT-ST300	NT-FT15	NT-CS300 ^{R/L}	NT-SC300	NT-WR040	
		2020^{R/L}	●	●	20	20	150	30	44.5	NT-ST300	NT-FT15	NT-CS300 ^{R/L}	NT-SC300	NT-WR040	
		2525^{R/L}	●	●	25	25	150	30	44.5	NT-ST300	NT-FT15	NT-CS300 ^{R/L}	NT-SC300	NT-WR040	
		3232^{R/L}	○	○	32	32	170	40	44.5	NT-ST300	NT-FT15	NT-CS300 ^{R/L}	NT-SC300	NT-WR040	

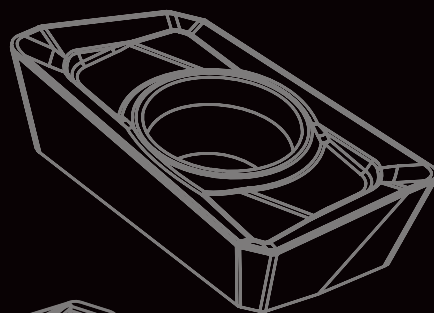


MILLING /

carbide /271
PCBN /297
diamond /307
ceramic /315
holders /323
















MILLING / carbide





ISO 1832

S	E	E	T	13	T3	AG	S	N	-TE	JP	55	30
1	2	3	4	5	6	7	8	9	10	11	12	13

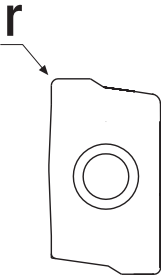




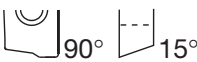
1		5
A		10 11 16
H		09
L		13
O		05 06
R		05 07 08 10 12 16
S		12 13
W		08





2	CLEARANCE ANGLE
C	 7°
D	 15°
E	 20°
F	 25°
N	 0°
P	 11°

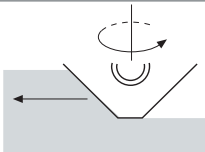
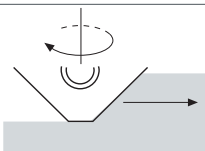
3	TOLERANCE [mm]	
		
E	±0.025	±0.025
G	±0.025	±0.13
K	±0.05 ~ ±0.13	±0.025
M	±0.05 ~ ±0.13	±0.13

4	SHAPE
T	
W	
X	NIKKO NORM




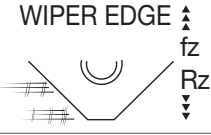
6	THICKNESS [mm]
01	1.59
02	2.38
03	3.18
35	3.50
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94

7	RADIUS [mm]
	
...	
MO	 metric
AF	 45° 25°
AG	 45° 30°
AN	 45° 0°
PD	 90° 15°

8	
E	
F	
S	
T	

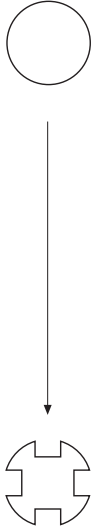
9	DIRECTION
L	
N	NEUTRAL
R	

S	E	E	T	13	T3	AG	S	N	-	TE	JP	55	30
1	2	3	4	5	6	7	8	9		10	11	12	13

10	CHIPBREAKERS
SC	LOW CUTTING FORCE
GL ^K	
GP	GENERAL MACHINING
GG ^K	
TE	REINFORCED EDGE
GH ^K	
WU	WIPER EDGE $\uparrow\uparrow$
WK ^K	
AL	ISO N

11	COATING TECHNOLOGY
JC	CVD
JD	DLC
JP	PVD
JU	UNCOATED

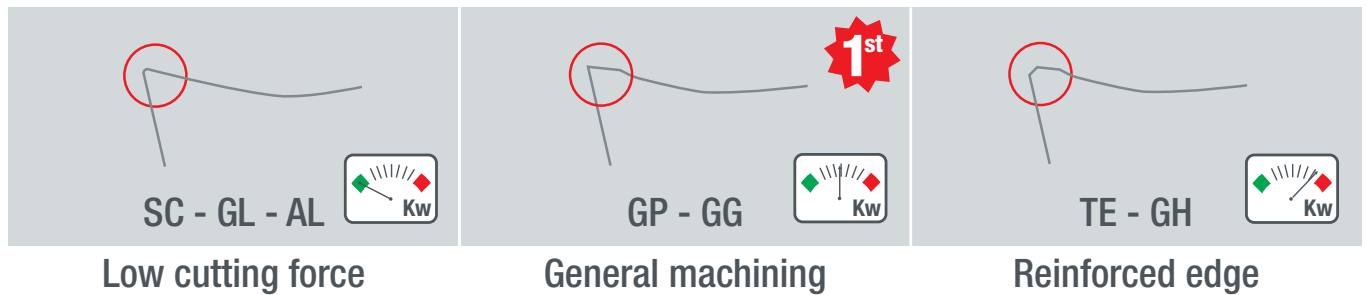
12	INSERT MATERIAL
35~39	CARBIDE ISO S
45~49	CERMET
55~59	CARBIDE UNIVERSAL
65~69	CARBIDE ISO N
75~79	CARBIDE ISO K
85~89	CARBIDE ISO P
95~99	CARBIDE ISO M

13	ISO CLASSIFICATION
05	
10	
15	
20	
25	
30	
35	
40	
45	

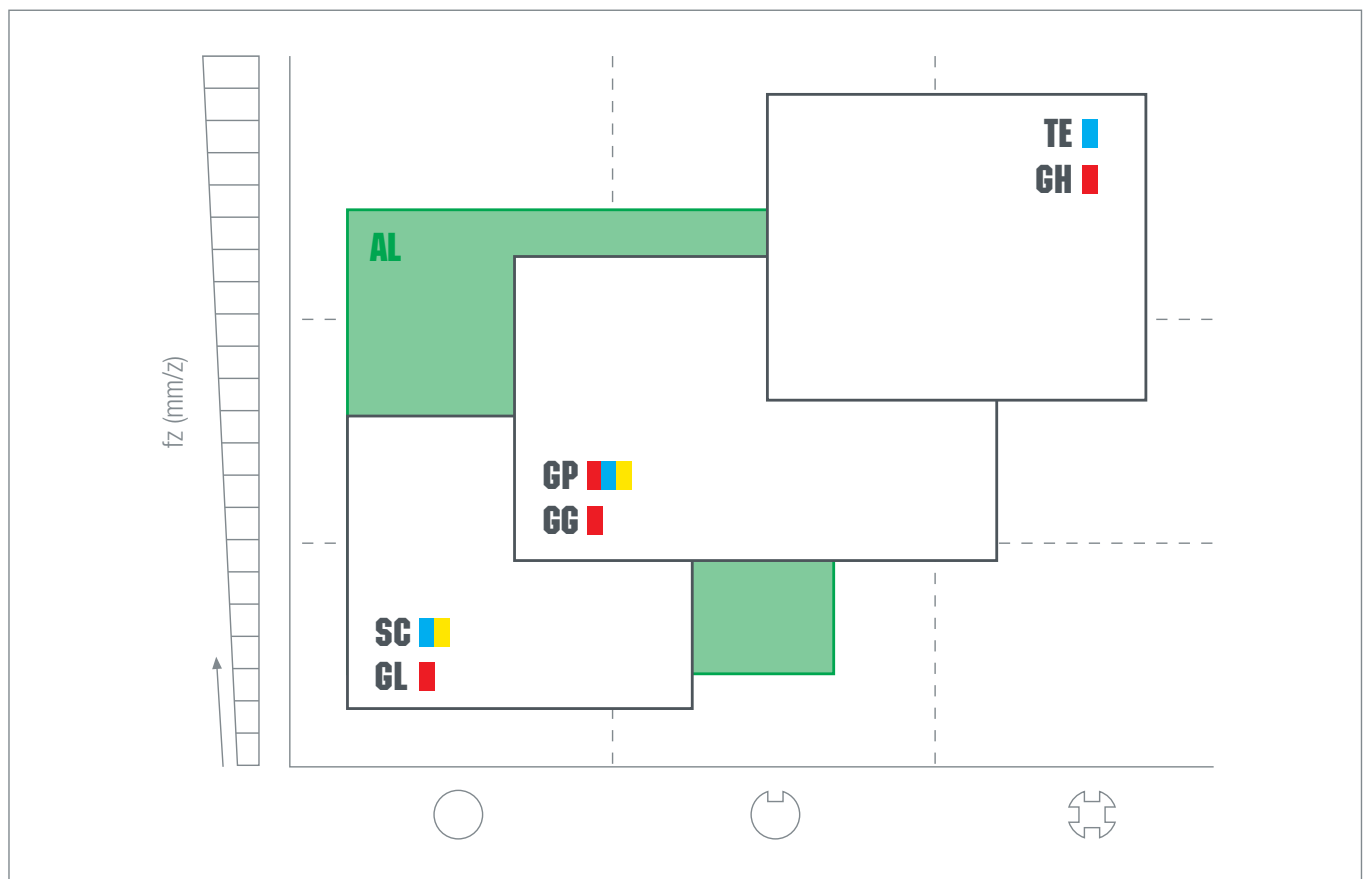
GRADES

ISO DIN 513	K					P					M					N				
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	N01	N10	N20	N30	N40
CARBIDE CVD	JC7515					JC8525					JC9530									
CARBIDE PVD	JP7525					JP5520 JP5530					JP5520 JP5530									
CARBIDE UNCOATED																JU6520				
CERMET UNCOATED	JU4525					JU4525					JU4525									

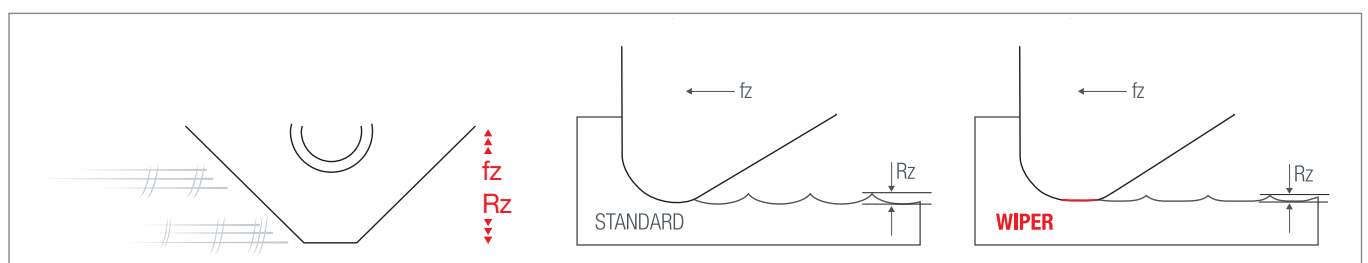
EDGE STYLE



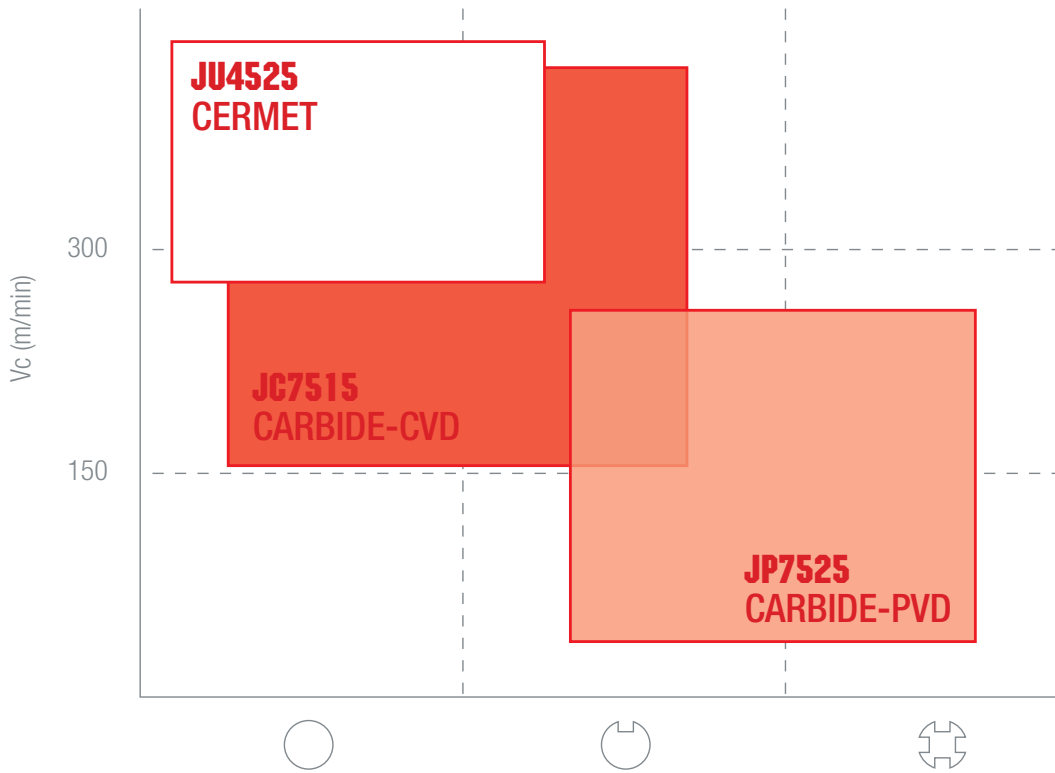
CUTTING EDGE APPLICATION



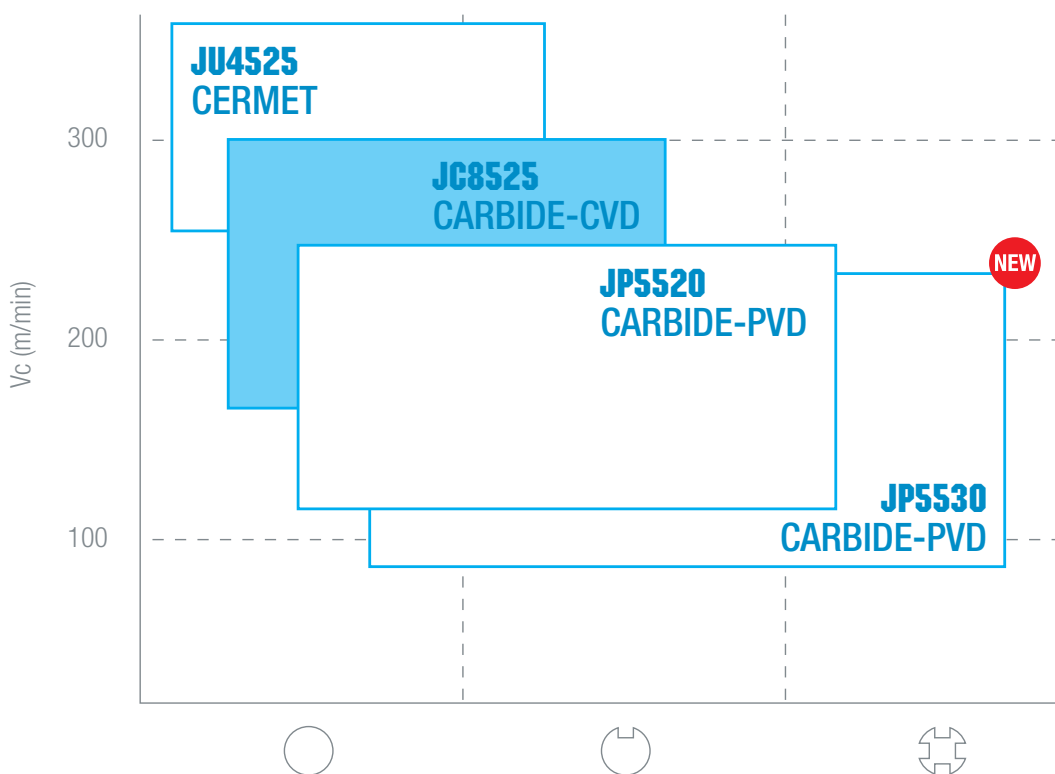
WIPER



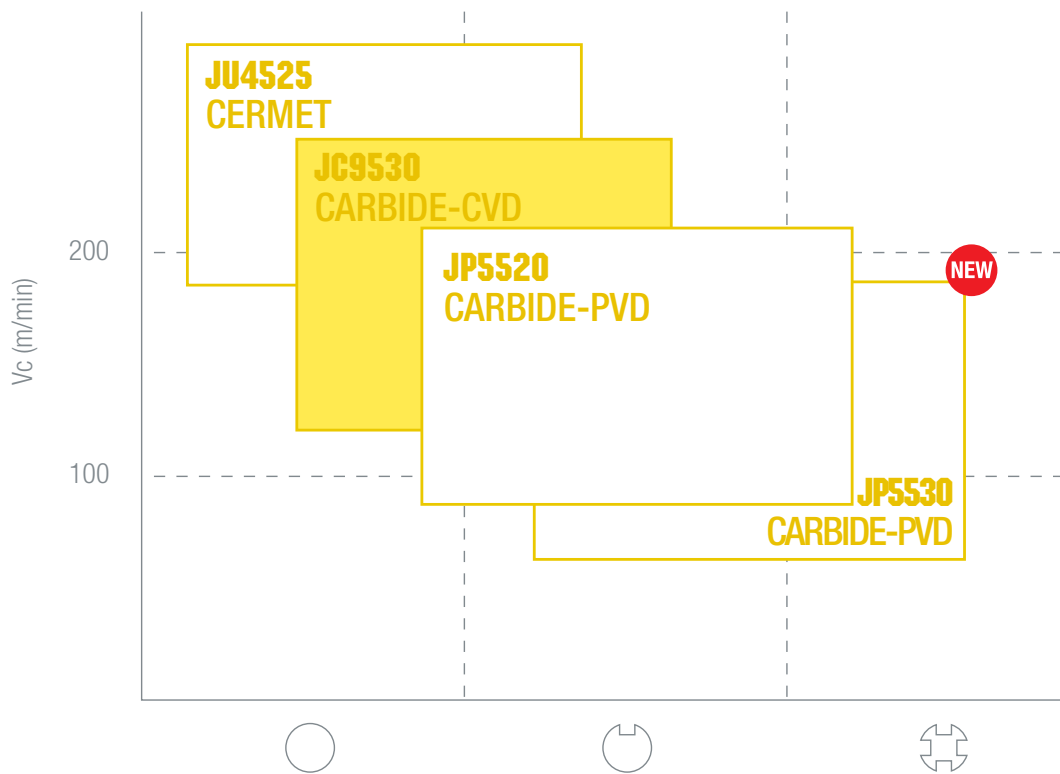
RANGE ISO **K**



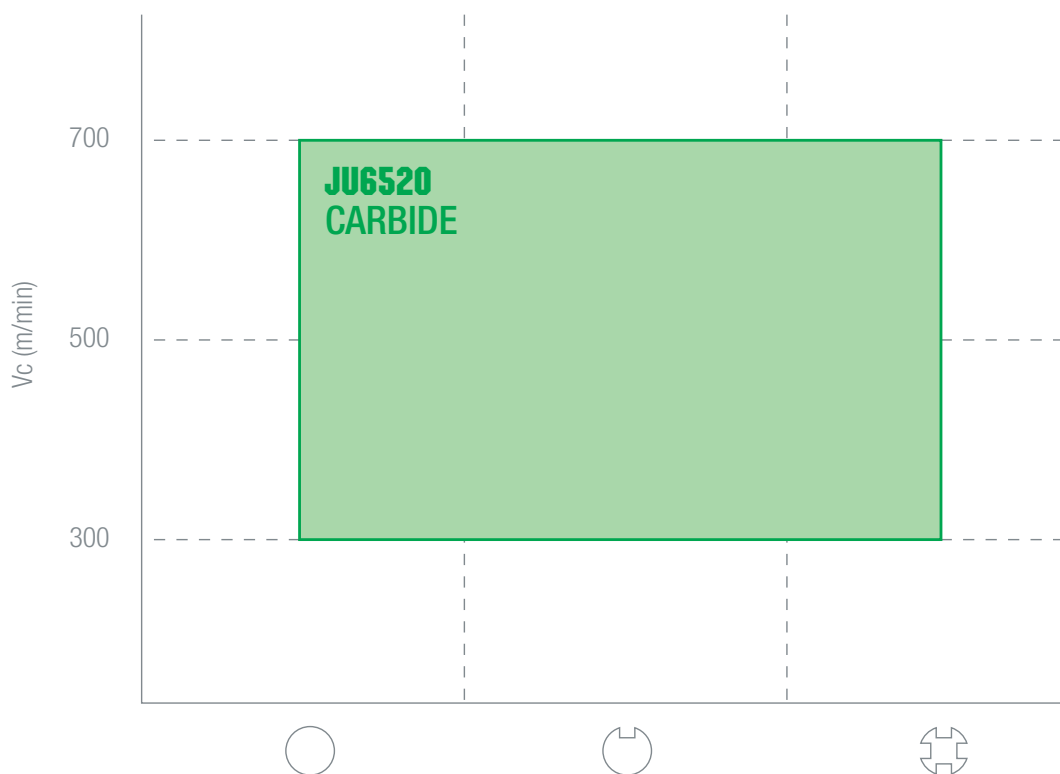
RANGE ISO **P**



RANGE ISO M



RANGE ISO N



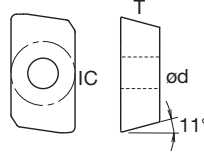
CHIPBREAKERS SELECTION

	AP□□	APKT-ISO	HN□□	LN□□	OD□□	OF□□
P M SC	281				285	
Edge Length	11 16				06	
P M K GP	281	282		284	285	286
Edge Length	11 16	10 16		13	06	05
P TE	281	282		284	285	
Edge Length	11 16	10 16		13	06	
K GL			283			
Edge Length			09			
K GG			283			
Edge Length			09			
K GH			283			
Edge Length			09			
P M K Wiper (WK, WU)			283		285	
Edge Length			09		06	
N AL	281				285	
Edge Length	11 16				06	

CHIPBREAKERS SELECTION

	RC□□	RD□□	RP□□	SE□□	SN□□	WN□□
P M SC	287	288	290	291		
Edge Length	10 12	10 12 16	10 12	12 13		
P M K GP		288	290	291	292	293
Edge Length		10 12 16	10 12	12 13	12	08
P TE		288	290	291		
Edge Length		05 07 10 12 16	10 12	13		
K GL						
Edge Length						
K GG				291		
Edge Length				13		
K GH				291		
Edge Length				13		
P M K Wiper (WK, WU)				291		
Edge Length				13		
N AL				291		
Edge Length				12 13		

POSITIVE 11°
with hole



AP□□ 1135□□ 1604□□

IC 6,35 9,525

T 3,50 4,76

Ød 2,80 4,50



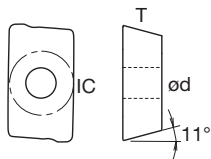
DESCRIPTION			CARBIDE-PVD		CARBIDE-CVD		CARBIDE	CERMET							
			JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JJ6520	JJ4525					
SC		APMT 113508ER-SC	★	★											
		160408ER-SC	★	★											
GP		APMT 113508ER-GP	●	●	●				★						
		160408ER-GP	●	●	●				★						
TE		APMT 113508ER-TE	●	●	●										
		160408ER-TE	●	●	●										
AL		POLISHED APKT 113504FR-AL						●							
		113508FR-AL							●						
		160408FR-AL							●						

●, ○ = NEW ITEM

POSITIVE 11°
with hole

NEW

APKT ISO



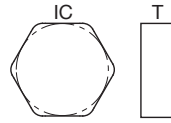
APKT	1003□□	1604□□
IC	6,72	9,525
T	3,18	4,76
Ød	2,80	4,40
HOLDERS		

DESCRIPTION		CARBIDE-PVD			CARBIDE-CVD		CARBIDE	CERMET						
		JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JU6520	JU4525					
GP		APKT 1003PDER-GP	★			★								
		1604PDER-GP	★			★								
TE		APKT 1003PDSR-TE	★			★								
		1604PDSR-TE	★			★								

**NEGATIVE
without hole**

NEW

HN □ □



HN □ □ 0905 □ □

IC 16,20

T 5,56

Ød -

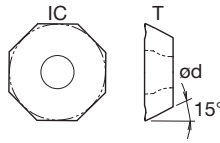
HOLDERS ▶ 331

DESCRIPTION			CARBIDE-PVD		CARBIDE-CVD		CARBIDE	CERMET							
			JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JJ6520	JJ4525					
GL		HNEX 090510-GL			●	●									
		090520-GL			●	●									
GG		HNEX 090520-GG			●	●									
GH		HNEX 090516-GH			●	●									
		090530-GH			●	●									
WK WIPER		HNEX 090502-WK			●	●									

●, ○ = NEW ITEM

POSITIVE 15°
with hole

NEW



OD □ □ 0605 □ □

IC 15,875

T 5,56

Ød 5,56

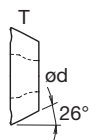
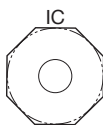
HOLDERS ▶ 332

DESCRIPTION	CARBIDE-PVD		CARBIDE-CVD		CARBIDE	CERMET								
	JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JJ6520	JJ4525						
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">SC</div> <div>ODKT 060508-SC</div> </div>	●	●												
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">GP</div> <div>ODKT 060508-GP</div> </div>	●	●	●											
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">TE</div> <div>ODKT 060508-TE</div> </div>	●	●												
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">AL</div> <div>ODKT 060508-AL</div> </div>	POLISHED					●								
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">WU WIPER</div> <div>ODKW 060508-WU</div> </div>	●	●	★					★						

●, ○ = NEW ITEM

POSITIVE 26°
with hole

OF □ □



OF □ □ 05T3 □ □

IC 12,70

T 3,97

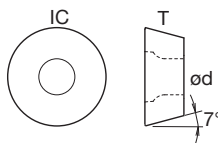
Ød 4,40



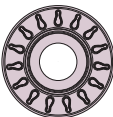
DESCRIPTION		CARBIDE-PVD			CARBIDE-CVD		CARBIDE	CERMET						
		JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JU6520	JU4525					
GP	 OFKT 05T305-GP	●	★			★								

POSITIVE 7°
with hole



RC □ □

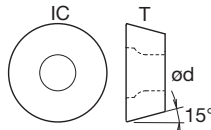



RC □ □	10T3 □ □	1204 □ □
IC	10,00	12,00
T	3,97	4,76
Ød	4,40	4,00
HOLDERS ▶	□	□

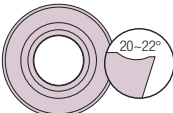
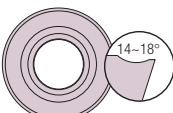
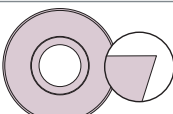
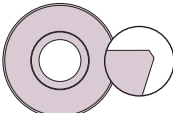
DESCRIPTION		CARBIDE-PVD		CARBIDE-CVD		CARBIDE	CERMET							
		JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JJ6520	JJ4525					
SC		RCET	10T3M0-SC	●										
			1204M0-SC	●										

POSITIVE 15° with hole

RD  

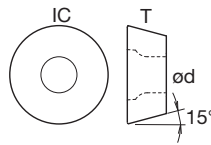


	RD	0501	0702	0803	1003/T3	1204	1604
IC	5,00	7,00	8,00	10,00	12,00	16,00	
T	1,51	2,38	3,18	3,18 / 3,97	4,76	4,76	
Ød	2,20	2,80	2,94	3,80 / 4,40	4,40	5,00	
HOLDERS		334	334	-	334	335	335

DESCRIPTION		CARBIDE-PVD			CARBIDE-CVD		CARBIDE	CERMET									
		JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JU6520	JU4525								
SC		RDET 1003M0-SC	●	●													
		RDET 10T3M0-SC	○	○													
		RDET 1204M0-SC	●	●													
		RDET 1604M0-SC	●	●													
GP		RDET 1003M0-GP	●	●													
		RDET 10T3M0-GP	●	○													
		RDET 1204M0-GP	●	●													
		RDET 1604M0-GP	●	●													
		RDMT 1204M0-GP	○	○													
RDMT 1604M0-GP	○	○															
TES (sharp)		RDEW 0501M0-TES	●	●					★								
		RDEW 0702M0-TES	●							●							
TE		RDEW 0702M0-TE	●	●					★								
		RDEW 0803M0-TE	★														
		RDEW 1003M0-TE	●	●						★							
		RDEW 10T3M0-TE	●	●													
		RDEW 1204M0-TE	●	●						★							
		RDEW 1604M0-TE	●	●						★							
		RDMW 1604M0-TE	●	●													

●, ○ = NEW ITEM

**POSITIVE 15°
with hole - DOT type**

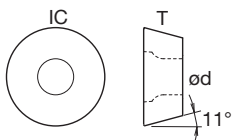


RD□□	12T3□□	1204□□	1605□□
IC	12,00	12,00	16,00
T	3,97	4,76	5,56
Ød	4,40	4,40	5,50
HOLDERS	-	335	-

DESCRIPTION		CARBIDE-PVD		CARBIDE-CVD		CARBIDE	CERMET														
		JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JJ6520	JJ4525												
SC (D6)		RDET	1204M0-SC-D6	■																	
TE (D6)		RDEW	1204M0-TE-D6	●	●																
			1605M0-TE-D6	■	■																
TE (D8)		RDMW	1204M0-TE-D6	●																	
		RDEW	12T3M0-TE-D8	●	○																
			1204M0-TE-D8	●	●																
		RDMW	1204M0-TE-D8	●	●																
			1605M0-TE-D8	○	○																

●, ○ = NEW ITEM

POSITIVE 11°
with hole



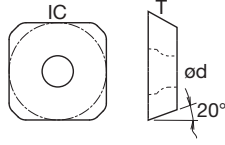
RP□□	1003□□	1204□□
IC	10,00	12,00
T	3,18	4,76
Ød	4,40	4,40
HOLDERS		

DESCRIPTION		CARBIDE-PVD			CARBIDE-CVD		CARBIDE	CERMET						
		JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JU6520	JU4525					
SC		RPET 1003M0-SC	○	○										
		1204M0-SC	●	●										
GP		RPET 1204M0-GP	●	●										
		RPMT 1204M0-GP	●	●										
TE		RPEW 1003M0-TE	○	○										
		1204M0-TE	●	●										
		RPMW 1003M0-TE	○	○										
		1204M0-TE	●	●										

●, ○ = NEW ITEM

POSITIVE 20°
with hole

SE □ □



SE □ □ 1204 □ □ 13T3 □ □

IC	12,70	13,40
T	4,76	3,97
ød	5,50	4,40



337

DESCRIPTION	CARBIDE-PVD		CARBIDE-CVD			CARBIDE	CERMET								
	JP5520	JP5530	JP7525	JC7515	JC8525	JC9530	JU6520	JU4525							
SC		SEET 1204AFEN-SC	●				★		●						
		13T3AGEN-SC	●	●											
GP		SEET 1204AFEN-GP		★			★								
		13T3AGEN-GP	●	●			★	★		●					
TE		SEET 13T3AGSN-TE	●	●											
GG		SEET 13T3AGSN-GG			●										
GH		SEET 13T3AGSN-GH			★										
AL		SEET 1204AFFN-AL						●							
		13T3AGFN-AL							●						
WU WIPER		SEET 13T3-WU	★	★	★					★					

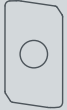
●, ○ = NEW ITEM

CUTTING PARAMETERS Vc (m/min)

K	KG	GREY CAST IRON	M	MM	MARTENSITIC AND FERRITIC STAINLESS STEEL
		GHISA GRIGIA			ACCIAI INOSSIDABILI MARTENSITICI E FERRITICI
		GRAUGUSS			MARTENSITISCHE UND FERRITISCHE ROSTFREIE STÄHLE
		FONTE GRISE			ACIERS INOXYDABLES MARTENSITIQUES ET FERRITIQUES
		FUNDICIÓN GRIS			ACEROS INOXIDABLES AUSTENITICOS Y FERRITICOS
		ЧУГУН			МАРТЕНСИТНЫЕ И ФЕРРИТНЫЕ НЕРЖАВЕЮЩИЕ СТАЛИ
K	KN	NODULAR CAST IRON	M	MA	AUSTENITIC STAINLESS STEEL
		GHISA SFEROIDALE			ACCIAI INOSSIDABILI AUSTENITICI
		SPHÄROGUSS			AUSTENITISCHE ROSTFREIE STÄHLE
		FONTE NODULAIRE			ACIERS INOXYDABLES AUSTENITIQUES
		FUNDICIÓN NODULAR			ACEROS INOXIDABLES AUSTENITICOS
		ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ			АУСТЕНИТНЫЕ НЕРЖАВЕЮЩИЕ СТАЛИ
P	PL	LOW CARBON AND FREE CUTTING STEEL	N	NA	ALUMINUM ALLOYS
		ACCIAI A BASSO TENORE DI CARBONIO ED AUTOMATICI			LEGHE DI ALLUMINIO
		KOHLENSTOFFARME STÄHLE			ALUMINIUMLEGIERUNGEN
		ACIERS BAS CARBONE ET POUR DÉCOLLETAGE			ALLIAGES D'ALUMINIUM
		ACEROS DE BAJO CARBONO			ALEACIONES DE ALUMINIO
		НИЗКОУГЛЕРОДИСТАЯ И АВТОМАТНАЯ СТАЛЬ			СПЛАВЫ АЛЮМИНИЯ
P	PM	MEDIUM CARBON STEEL	N	NH	ALUMINUM ALLOYS AGED AND HARDENED
		ACCIAI A MEDIO TENORE DI CARBONIO			LEGHE DI ALLUMINIO TRATTATE ED INVECCHiate
		MITTELGEKOHLTE FLUSSTÄHLE			GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN
		ACIERS MOYEN CARBONE			ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES
		ACEROS DE MEDIO CARBONO			ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS
		СРЕДНЕУГЛЕРОДИСТАЯ СТАЛЬ			СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ
P	PH	HIGH CARBON STEEL	N	NB	BRASS
		ACCIAI AD ELEVATO TENORE DI CARBONIO			OTTONE
		KOHLENSTOFFREICHE STÄHLE			MESSING
		ACIERS HAUT CARBONE			LAITON
		ACEROS DE ALTO CARBONO			LATÓN
		ВЫСОКОУГЛЕРОДИСТАЯ СТАЛЬ			ЛАТУНЬ
P	PA	ALLOY STEEL	N	NC	BRONZE AND ELECTROLYTIC COPPER
		ACCIAI LEGATI			BRONZO E RAME ELETTRolitICO
		LEGIERTE STÄHLE			ELEKTROLYTISCHES KUPFER UND BRONZE
		ACIERS ALLIÉS			BRONZE ET CUIVRE ÉLECTROLYTIQUE
		ACEROS ALEADOS			BRONCE Y COBRE ELECTROLÍTICO
		СРЕДНЕЛЕГИРОВАННАЯ СТАЛЬ			БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ


MATERIAL	CARBIDE-CVD			CARBIDE-PVD		CARBIDE	CERMET	
	JC7515	JC8525	JC9530	JP7525	JP5520	JP5530	JU6520	JU4525
K	KG	220~350			120~250			250~380
	KN	180~280			100~200			200~300
P	PL		220~300		160~250	140~220		250~350
	PM		220~300		160~250	140~220		250~350
	PH		200~280		140~220	120~200		220~300
	PA		180~250		100~180	80~160		200~280
M	MM		160~280		120~200	100~180		180~300
	MA		140~260		100~180	80~150		160~280
N	NA						400~1000	
	NH						300~800	
	NB						300~600	
	NC						200~500	

CUTTING PARAMETERS a_p (mm) & f_z (mm/z)


AP□□ 	1003... - 1135...	1604...			
--	-------------------	---------	--	--	--

		a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)
K	GP	0.50~5.00	0.10~0.24	0.50~8.00	0.12~0.28
	TE	1.00~5.00	0.12~0.26	1.00~8.00	0.14~0.30
P	SC	0.50~5.00	0.06~0.15	0.50~8.00	0.08~0.20
	GP	0.50~5.00	0.06~0.18	0.50~8.00	0.08~0.23
M	SC	0.50~5.00	0.05~0.14	0.50~8.00	0.06~0.18
	GP	0.50~5.00	0.06~0.16	0.50~8.00	0.08~0.20
N	AL	0.50~5.00	0.08~0.30	0.50~8.00	0.10~0.35

Cermet JU4525 fz-20%


HN□□ 	0905...				
--	---------	--	--	--	--

		a_p (mm)	f_z (mm/z)
K	GL	0.50~6.00	0.10~0.25
	GG	0.50~6.00	0.15~0.35
	GH	1.00~6.00	0.20~0.45
	WK	0.30~1.00	0.20~0.40

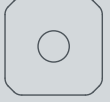
OF□□ 	05T3...				
OD□□		0605...			

		a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)
K	GP			0.50~3.50	0.15~0.38
	SC			0.50~3.50	0.08~0.25
P	GP	0.50~2.50	0.10~0.30	0.50~3.50	0.10~0.35
	TE			1.00~3.50	0.15~0.40
M	SC			0.50~3.50	0.06~0.22
	GP	0.50~2.50	0.08~0.22	0.50~3.50	0.08~0.25
N	AL			0.50~3.50	0.10~0.35

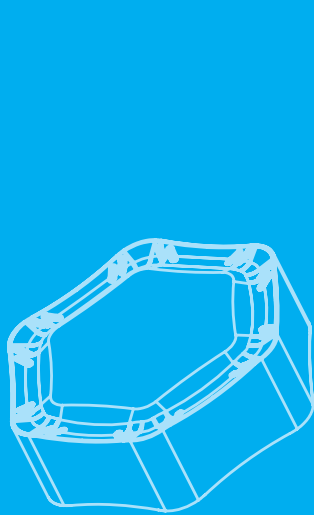
CUTTING PARAMETERS a_p (mm) & f_z (mm/z)

R□□□ 		0501...	0702... - 0803...	1003... - 10T3...	12T3... - 1204...	1604... - 1605...					
		a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)
P	SC				0.50~5.00	0.10~0.40	0.50~6.00	0.15~0.50	0.50~8.00	0.20~0.70	
	GP	0.50~2.00	0.05~0.35	0.50~3.00	0.10~0.40	0.50~5.00	0.10~0.50	0.50~6.00	0.20~0.60	1.00~8.00	0.25~0.80
	TE			0.50~3.00	0.10~0.45	1.00~5.00	0.15~0.60	1.00~6.00	0.20~0.70	1.00~8.00	0.30~1.00
M	SC				0.50~5.00	0.10~0.40	0.50~6.00	0.15~0.50	0.50~8.00	0.20~0.70	
	GP	0.50~2.00	0.05~0.30	0.50~3.00	0.10~0.35	0.50~5.00	0.10~0.50	0.50~6.00	0.20~0.60	1.00~8.00	0.25~0.80

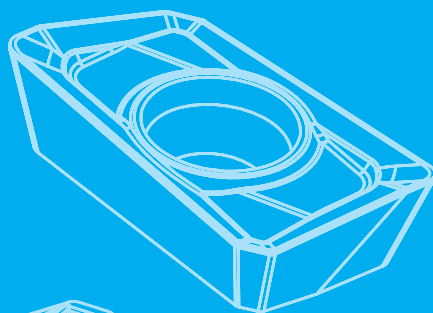
Cermet JU4525 fz-20%

SE□□ 		1204...	13T3...			
		a_p (mm)	f_z (mm/z)	a_p (mm)	f_z (mm/z)	
K	GG			0.50~4.50	0.10~0.35	
	GH			1.00~4.50	0.15~0.40	
P	SC	0.50~4.50	0.08~0.22	0.50~4.50	0.08~0.25	
	GP	0.50~4.50	0.10~0.20	0.50~4.50	0.10~0.35	
	TE			1.00~4.50	0.15~0.40	
M	SC	0.50~4.50	0.06~0.20	0.50~4.50	0.06~0.22	
	GP	0.50~4.50	0.08~0.22	0.50~4.50	0.08~0.25	
N	AL	0.50~4.50	0.10~0.35	0.50~4.50	0.10~0.35	

Cermet JU4525 fz-20%



MILLING / PCBN

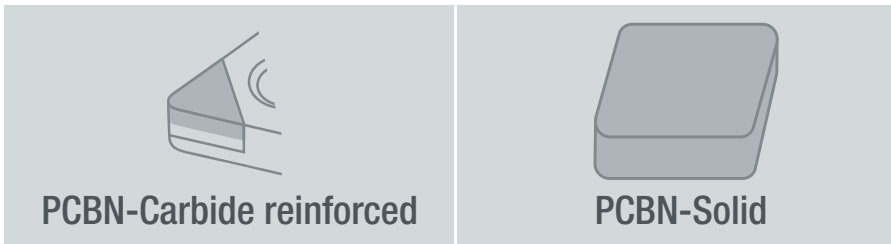


GRADES

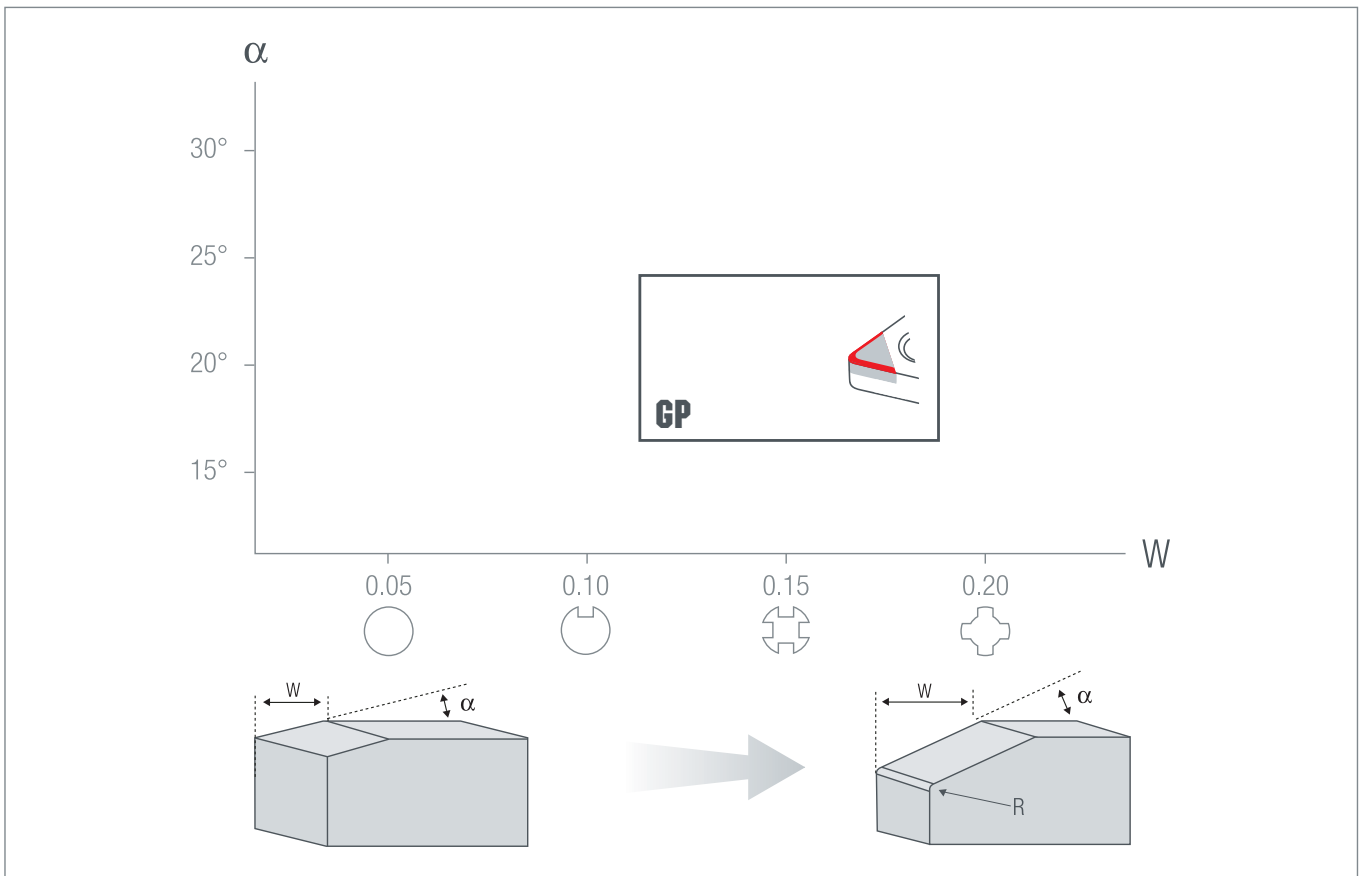
ISO DIN 513	H					K					S				
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40	S01	S10	S20	S30	S40
PCBN-Carbide reinforced															
						NB400					NB440				
PCBN-Vertical & Solid (NBS Series)															

COATED

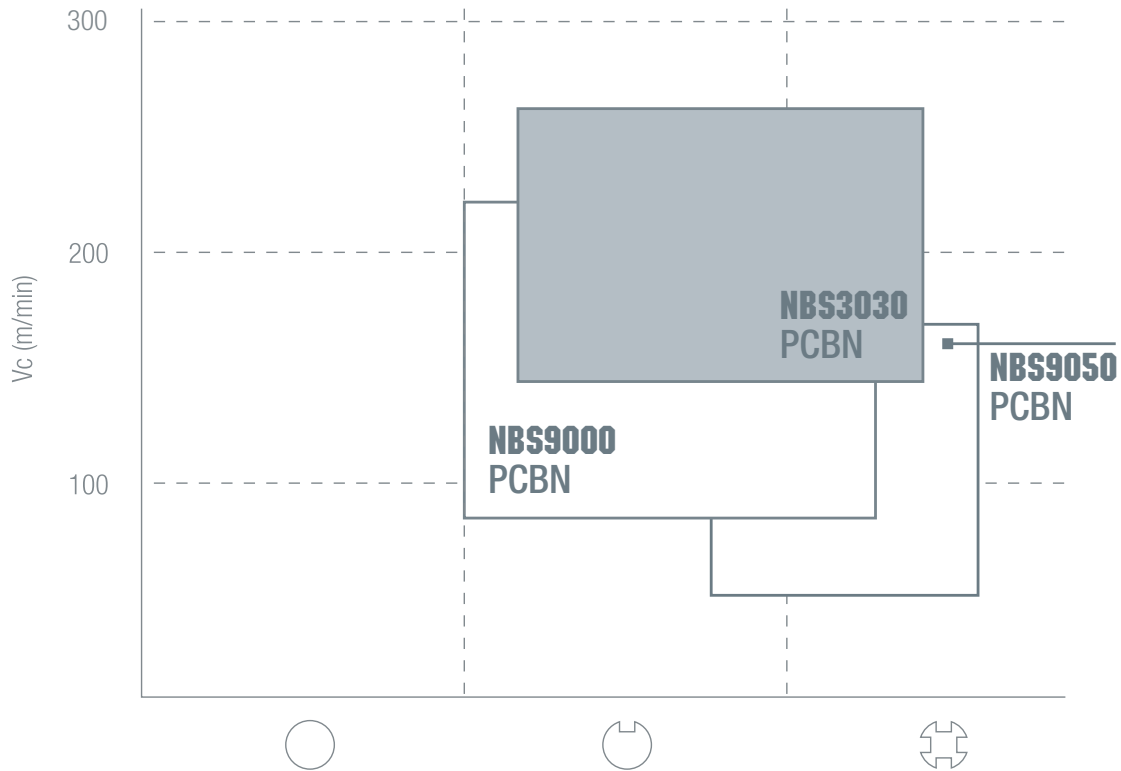
INSERT STYLE



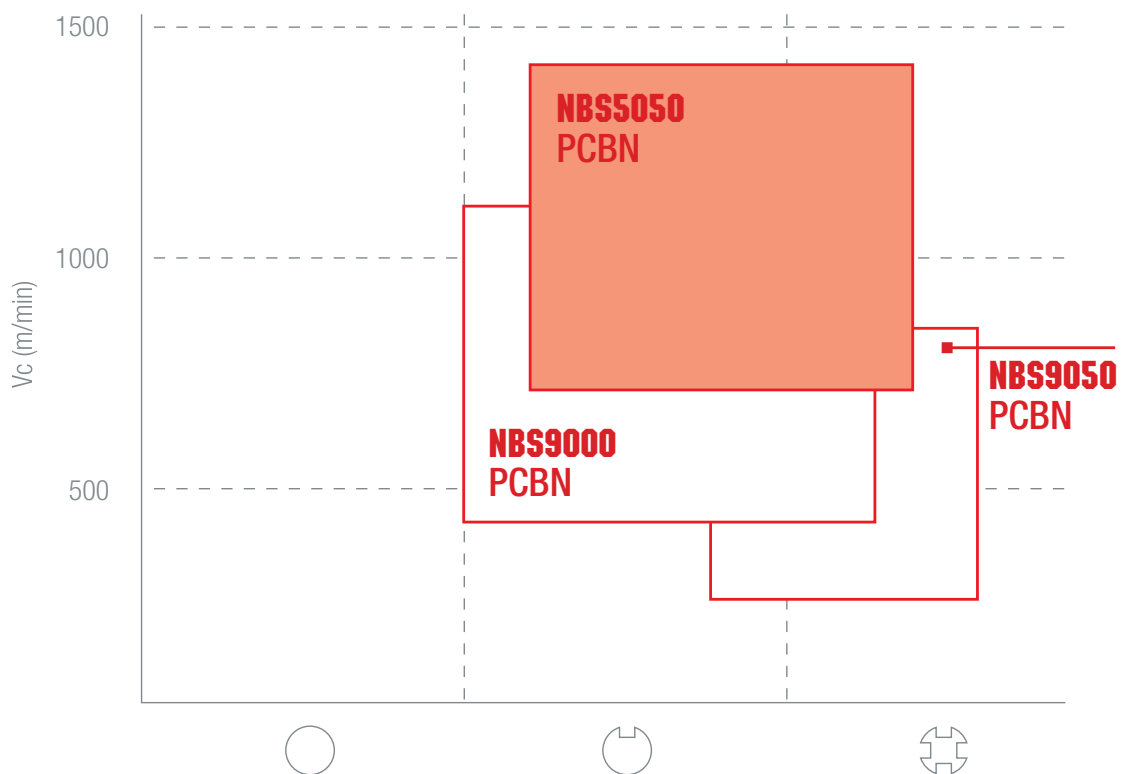
EDGE PREPARATION



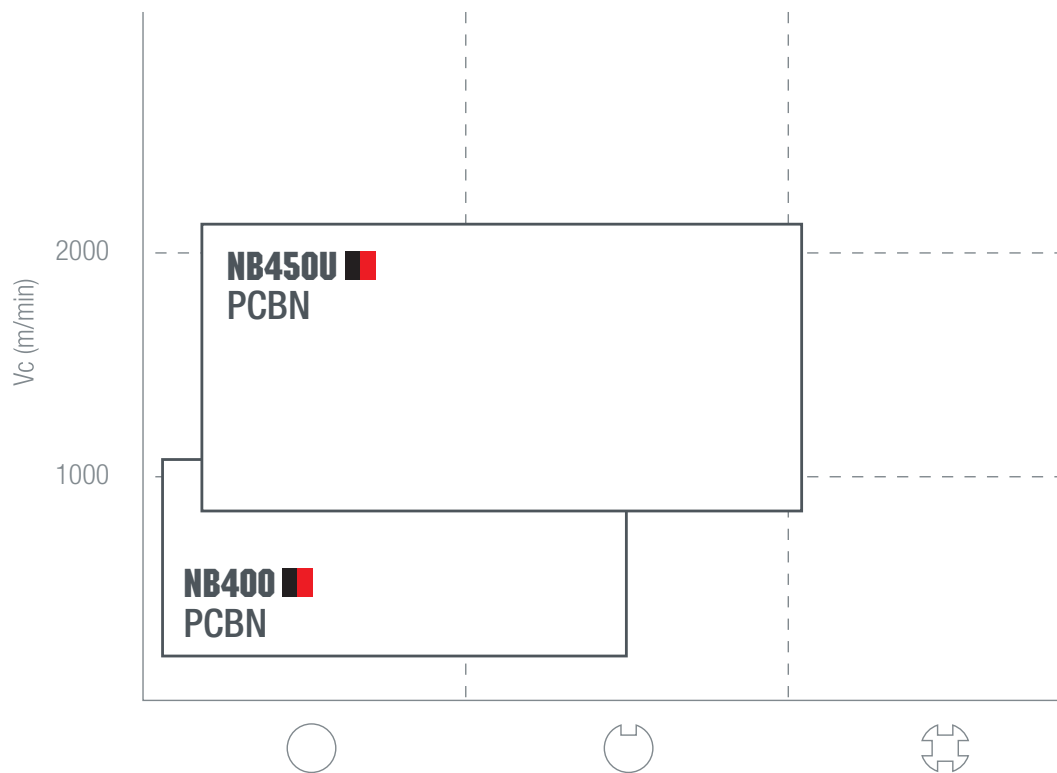
Range ISO **H** PCBN-Solid (NBS Series)



Range ISO **K** PCBN-Solid (NBS Series)

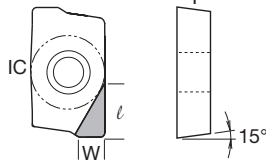


Range ISO **H** **K** PCBN-Carbide reinforced




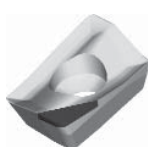
**POSITIVE 15°
with hole**

BD 



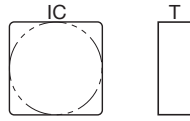
BD□□	07	11	17
IC	4,60	6,70	9,60
T	2,60	3,80	4,90
W	1,70	2,40	3,00

 **NIKKO SUPPLEMENT 2014**

DESCRIPTION		l	PCBN-Carbide reinforced																			
			NB350	NB400	NB450	NB440U																
	BD07	R04S	3.5			●																
		R08S	3.5			○																
	BD11	R04S	5.0			●																
		R08S	5.0			●																
	BD17	R04S	6.0			○																
		R08S	6.0			●																
NB440U = uncoated																						

**NEGATIVE - SOLID
without hole**

SN  




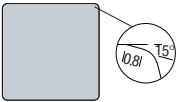


SN 0903 0904 1204

IC 9,525 9,525 12,70

T 3,18 4,76 4,76

Ød - - -

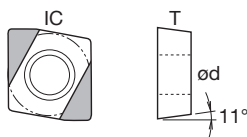
HOLDERS  338

DESCRIPTION			PCBN-Solid																
			NBS3030	NBS5050	NBS9000	NBS9050	NBS9090												
EN-GP		SNEN 0903EN-GP	S02020		●														
		0904EN-GP	S02020		●														
GP		SNEN 090312-GP	S02020			●													
		090412-GP	S02020			●													
		120412-GP	S02020	○	●	●													
		SNGN 090308-GP	S02020			○	○												
		090312-GP	S02020			●	●												
		090316-GP	S02020			○	○												
		SNGN 090408-GP	S02020			○													
		090412-GP	S02020			●													
		090416-GP	S02020			○													
		SNGN 120408-GP	S02020			●	○												
120412-GP	S02020			●	●														
120416-GP	S02020			○	○														
WK WIPER		SNEX 120412-WK	S02020		●														

●, ○ = NEW ITEM

**POSITIVE 11°
with hole**

XP □ □  90°





XP □ □ 0802 □ □

IC 7,94

T 2,38

Ød 3,60

 340

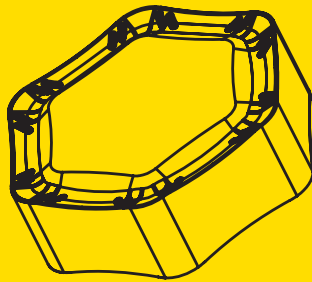
DESCRIPTION			PCBN-Carbide reinforced															
			NB350	NB400	NB450U	NB440U												
 5mm	XPGW 080204-2E-GP	S01520		○	●*	■*												
	080208-2E-GP	S01520		●	●*	■*												
<p>*NB440U = uncoated *NB450U = uncoated</p>																		

CUTTING PARAMETERS

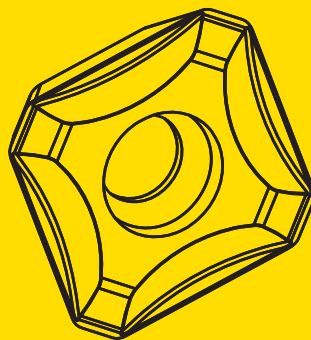
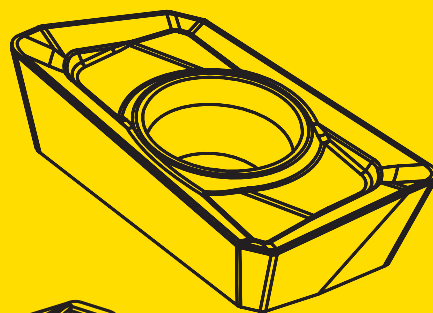
H	HH	HARDENED STEEL	GREY CAST IRON	
		ACCIAIO TEMPRATO		GHISA GRIGIA
		GEHÄRTETER STAHL		GRAUGUSS
		ACIER TREMPÉ		FONTE GRISE
		ACERO TEMPLADO		FUNDICIÓN GRIS
		ЗАКАЛЁННАЯ СТАЛЬ	ЧУГУН	
H	HC	CASEHARDENED STEEL	NODULAR CAST IRON	
		ACCIAIO CEMENTATO		GHISA SFEROIDALE
		EINGESETZTER STAHL		SPHÄROGUSS
		ACIER CEMENTÉ		FONTE NODULAIRE
		ACERO CEMENTADO		FUNDICIÓN NODULAR
		ЦЕМЕНТИРОВАННАЯ СТАЛЬ	ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ	
H	HB	BEARING STEEL	WHITE CAST IRON	
		ACCIAIO PER CUSCINETTI		GHISA BIANCA
		STAHL FÜR LAGER		WEISSGUSS
		ACIER POUR ROUEMENTS		FONTE BLANCHE
		ACERO PARA RODAMIENTOS		FUNDICIÓN BLANCA
		СТАЛЬ ДЛЯ ПОДШИПНИКОВ	БЕЛЫЙ ЧУГУН	
H	HM	HARD METAL (Co≥17%)	SINTERED MATERIAL (FERROUS)	
		METALLO DURO (Co≥17%)		MATERIALI SINTERIZZATI (FERROSI)
		VHM (Co≥17%)		SINTERMATERIALIEN (EISERNE)
		CARBURE (Co≥17%)		MATÉRIAUX FRITTÉS (FERREUX)
		METAL DURO (Co≥17%)		MATERIALES SINTERIZADOS (BASE HIERRO)
		ТВЁРДЫЙ СПЛАВ (Co≥17%)	СПЕЧЁННЫЕ МАТЕРИАЛЫ (МЕТАЛЛ)	

MATERIAL	ap (mm)	fz (mm/z)	CUTTING CONDITIONS	PCBN-Solid				PCBN-Carbide reinforced		
				NBS3030	NBS5050	NBS9000	NBS9050	NB400	NB450U	
H	HH	C.R.	0.05~0.30	0.03~0.15					100~300	*
		SOLID	0.50~2.00	0.05~0.23			150~400			100~300
	HC	C.R.	0.05~0.30	0.05~0.18					150~300	*
		SOLID	0.10~0.30	0.03~0.15					300~500	*
K	KG	C.R.	0.10~0.50	0.10~0.30					800~2000	*
		SOLID	1.00~4.00	0.15~0.40			600~1800		600~1800	
	KN	C.R.	0.10~0.30	0.03~0.15					150~250	*
		SOLID	0.10~0.30	0.05~0.18					150~300	*
KW	C.R.	0.10~0.30	0.05~0.18					150~300	*	
	SOLID	1.00~3.00	0.15~0.30			100~250		100~250		
	KS	C.R.	0.10~0.50	0.05~0.15					200~300	*
	SOLID	0.50~2.00	0.08~0.20			150~250		150~250	*	

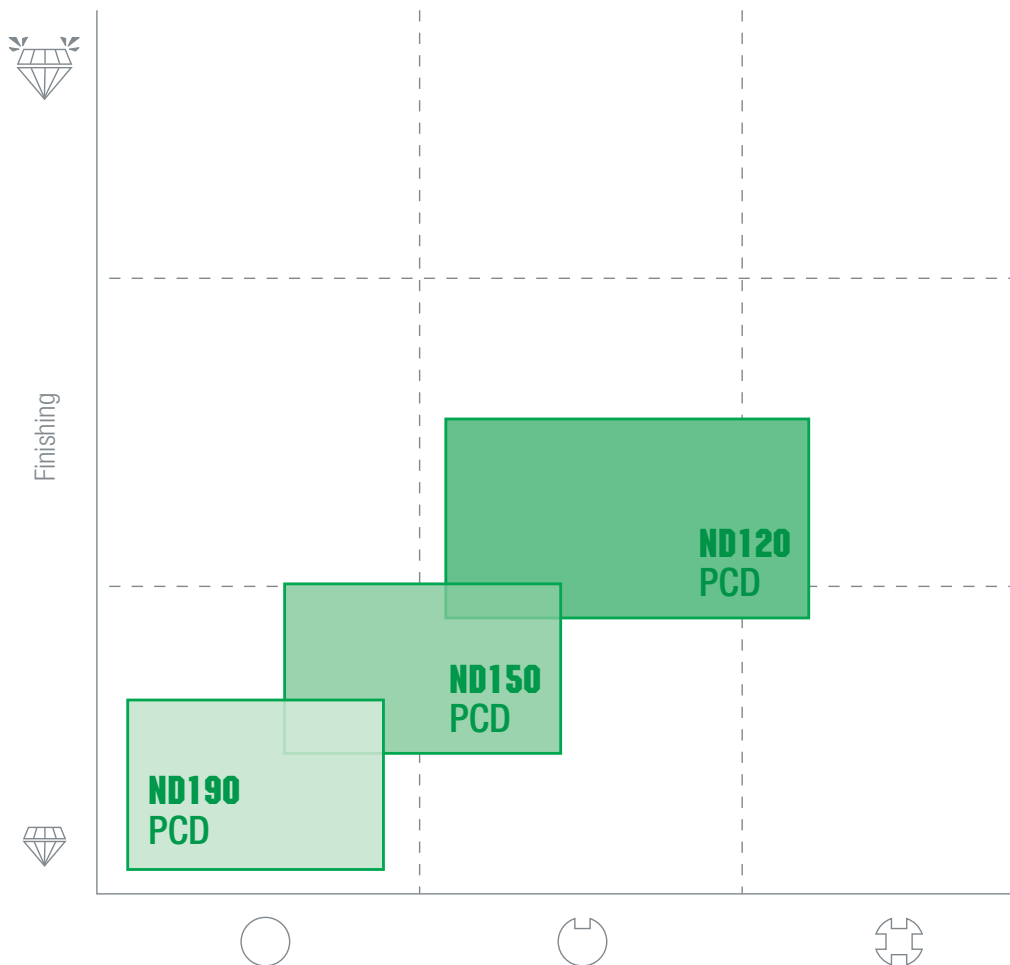
* = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор



MILLING / diamond

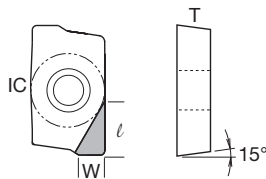


RANGE ISO **N** DIAMOND




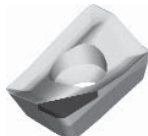
**POSITIVE 15°
with hole**

BD 



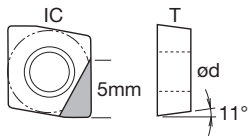
BD□□	07	11	17
IC	4,60	6,70	9,60
T	2,60	3,80	4,90
W	1,70	2,40	3,00

 **NIKKO SUPPLEMENT 2014**

DESCRIPTION		l	PCD													
			ND120	ND150	ND190											
	BD07	R02F	3.5	○												
		R04F	3.5	●												
		R08F	3.5	●												
	BD11	R02F	5.0	●												
		R04F	5.0	●												
		R08F	5.0	●												
	BD17	R02F	6.0	○												
		R04F	6.0	●												
		R08F	6.0	●												

**POSITIVE 11°
with hole**

XP 









XP 0802

IC 7,94

T 2,38

Ød 3,60

 339

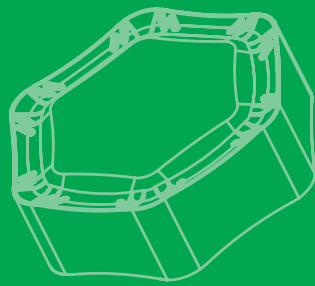
DESCRIPTION			PCD													
			ND120	ND150	ND190											
	 FACE MILLING	XPGT 0802FC-1E		●	●	○										
		XPGT 080204F-1E		●	●	○										
		080208F-1E		●	●	○										

CUTTING PARAMETERS

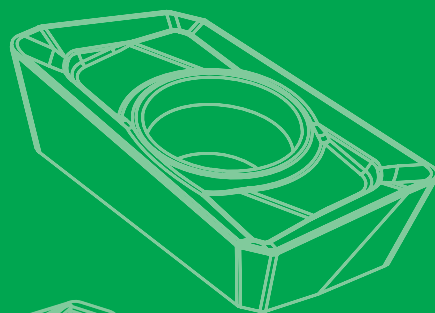
N	NA	ALUMINUM ALLOYS	N	NB	BRASS
		LEGHE DI ALLUMINIO			OTTONE
		ALUMINIUMLEGIERUNGEN			MESSING
		ALLIAGES D'ALUMINIUM			LAITON
		ALEACIONES DE ALUMINIO			LATÓN
		СПЛАВЫ АЛЮМИНИЯ			ЛАТУНЬ
N	NS	ALUMINUM ALLOYS (Si >15%)	N	NC	BRONZE AND ELECTOLYTIC COPPER
		LEGHE DI ALLUMINIO (Si >15%)			BRONZO E RAME ELETTRolitico
		ALUMINIUMLEGIERUNGEN (Si >15%)			ELEKTROLYTISCHES KUPFER UND BRONZE
		ALLIAGES D'ALUMINIUM (Si >15%)			BRONZE ET CUIVRE ÉLECTROLYTIQUE
		ALEACIONES DE ALUMINIO (Si >15%)			BRONCE Y COBRE ELECTROLÍTICO
		СПЛАВЫ АЛЮМИНИЯ (Si >15%)			БРОНЗА И ЭЛЕКТРОЛИТИЧЕСКАЯ МЕДЬ
N	NH	ALUMINUM ALLOYS AGED AND HARDENED	N	NG	GRAPHITE
		LEGHE DI ALLUMINIO TRATTATE ED INVECCHIATE			GRAFITE
		GEALTERTE UND BEHANDELTE ALUMINIUMLEGIERUNGEN			GRAPHIT
		ALLIAGES D'ALUMINIUM TRAITÉES ET VIEILLIES			GRAPHITE
		ALEACIONES DE ALUMINIO TRATADAS Y ENVEJACIDAS			GRAFITO
		СПЛАВЫ АЛЮМИНИЯ ОБРАБОТАННЫЕ И СОСТАРЕННЫЕ			ГРАФИТ

MATERIAL	ap (mm)	fz (mm/z)	CUTTING CONDITIONS	PCD		
				ND120	ND150	ND190
N	NA	0.20~0.50	0.05~0.18	★ 1000~3000		
		0.50~3.00	0.10~0.30	★ 500~1000		
	NS	0.20~0.50	0.05~0.18		★ 600~1000	600~1000
		0.50~3.00	0.10~0.30		★ 400~800	400~800
	NH	0.20~0.50	0.05~0.18		★ 500~800	500~800
		0.50~3.00	0.10~0.30		★ 300~700	300~700
	NB	0.20~0.50	0.05~0.18	★ 500~800		
		0.50~3.00	0.10~0.30	★ 300~700		
	NC	0.20~0.50	0.08~0.20	★ 400~600		
		0.50~3.00	0.15~0.30	★ 200~500		
	NG	0.20~0.50	0.10~0.25	★ 300~500		300~500
		0.50~3.00	0.12~0.28	★ 200~400		200~400

★ = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор



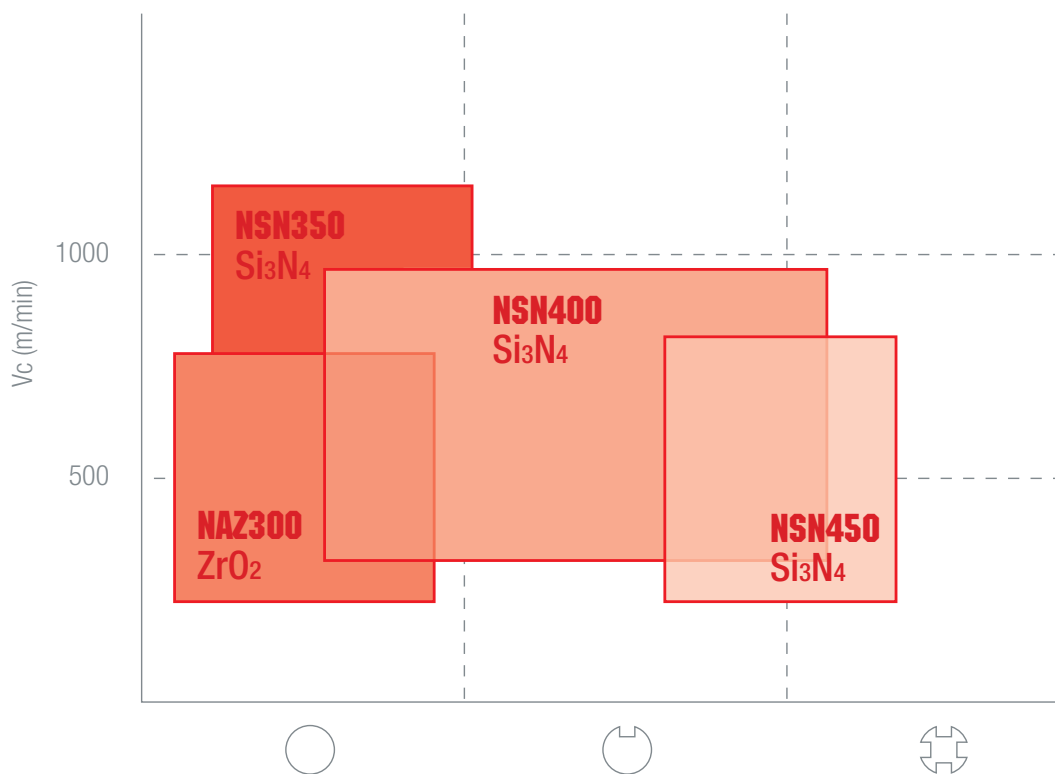
MILLING / ceramic



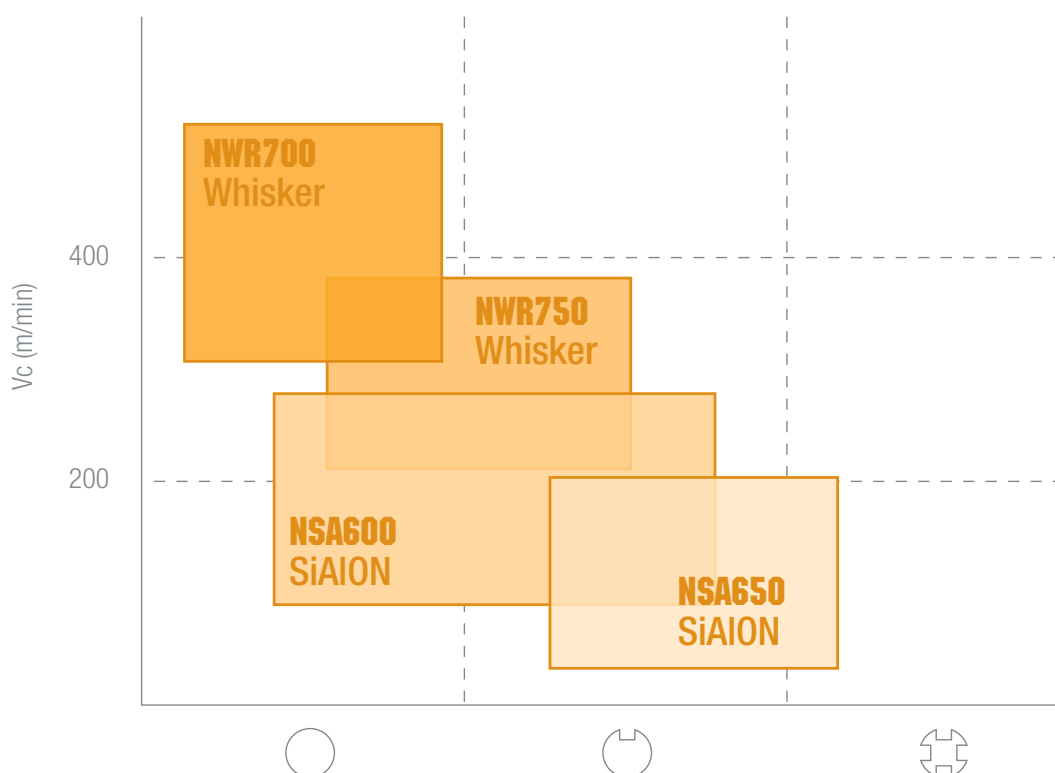
GRADES

ISO DIN 513	H					K					S				
	H01	H10	H20	H30	H40	K01	K10	K20	K30	K40	S01	S10	S20	S30	S40
Al ₂ O ₃															
Al ₂ O ₃ PVD															
ZrO ₂						NAZ300									
Si ₃ N ₄						NSN350	NSN400	NSN450							
SiAlON											NSA600	NSA650			
Whisker											NWR700	NWR750			



RANGE ISO **K** CERAMIC



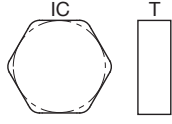
RANGE ISO **S** CERAMIC



NEGATIVE
without hole



HN  


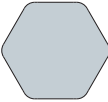
NEW



HN□□ 0905□□

IC 16,2
T 5,56
Ød -

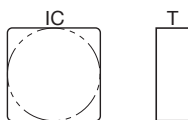
 


DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker	
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700
GP		HNEN	090520-GP		T02020			●				
			090530-GP		T02020			●				



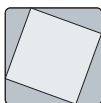

●, ○ = NEW ITEM

NEGATIVE
without hole

SN   



SN	0904	1204
IC	9,525	12,70
T	4,76	4,76
Ød	-	-
HOLDERS		338

DESCRIPTION		Al ₂ O ₃		ZrO ₂	Si ₃ N ₄			SiAlON		Whisker		
		NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700	NWR750
GP 	SNGN	090408-GP	T02020				●					
		090412-GP	T02020			●	●					
	SNGN	120408-GP	T01520								○	○
		120408-GP	T02020		○			●		○	○	
		120412-GP	T01520					●			○	○
		120412-GP	T02020		○			●	●	○	○	
		120416-GP	T01520								○	○
		120416-GP	T02020		○				○	○		
SNMN	120416-GP	T02020				●						
GS 	CHIPBREAKER	SNGX	120412-GS	S02020			●					
WK WIPER 	SNCN	0904-WK	T02020			●						
	SNCN	1204-WK	T02020			●						

●, ○ = NEW ITEM

NEGATIVE with hole

SP

NEW

SP 1205

IC 11,67

IC1 11,33

T 5,50

DESCRIPTION			Al ₂ O ₃			ZrO ₂	Si ₃ N ₄		SiAlON		Whisker	
			NAC150	NAC200	NAC250	NAZ300	NSN350	NSN400	NSN450	NSA600	NSA650	NWR700
GP		SPHX 1205PCTR-GP	T02020									
							●	●				

●, ○ = NEW ITEM

CUTTING PARAMETERS

H	HH	HARDENED STEEL	K	KG	GREY CAST IRON
		ACCIAIO TEMPRATO			GHISA GRIGIA
		GEHÄRTETER STAHL			GRAUGUSS
		ACIER TREMPÉ			FONTE GRISE
		ACERO TEMPLADO			FUNDICIÓN GRIS
	ЗАКАЛЁННАЯ СТАЛЬ	ЧУГУН			
H	HC	CASEHARDENED STEEL	K	KN	NODULAR CAST IRON
		ACCIAIO CEMENTATO			GHISA SFEROIDALE
		EINGESETZTER STAHL			SPHÄROGUSS
		ACIER CEMENTÉ			FONTE NODULAIRE
		ACERO CEMENTADO			FUNDICIÓN NODULAR
	ЦЕМЕНТИРОВАННАЯ СТАЛЬ	ЧУГУН С ШАРОВИДНЫМ ГРАФИТОМ			
H	HB	BEARING STEEL	S	SA	SUPER ALLOYS (Ni BASED)
		ACCIAIO PER CUSCINETTI			SUPERLEGHE (BASE Ni)
		STAHL FÜR LAGER			SONDERLEGIERUNGEN (Ni BASIS)
		ACIER POUR ROULEMENTS			SUPERALLIAGES (BASE Ni)
		ACERO PARA RODAMIENTOS			SUPERALEACIONES (BASE Ni)
	СТАЛЬ ДЛЯ ПОДШИПНИКОВ	СУПЕРСПЛАВЫ (НА ОСНОВЕ Ni)			

MATERIAL	ap (mm)	fz (mm/z)	CUTTING CONDITIONS	ZrO ₂	Si ₃ N ₄		SiAlON		Whisker			
				NAZ300	NSN350	NSM400	NSM450	NSA600	NSA650	NWR700	NWR750	
K	KG	0.50~1.00	0.05~0.20	☹ ☹	600~800	800~1400	800~1200*	600~1000				
		1.00~4.00	0.05~0.20	☹ ☹		600~1200	600~1000*	500~800				
	KN	0.50~1.00	0.05~0.15	☹ ☹			500~800		500~800*			
		1.00~4.00	0.05~0.15	☹ ☹			400~700		400~700*			
S	SA	0.50~1.50	0.05~0.15	☹ ☹							150~300*	150~250
		1.50~3.00	0.05~0.10	☹ ☹					50~150*	50~150		

* = 1st choice / 1^a scelta / 1. Wahl / 1^{er} choix / 1^{ra} elección / 1-й выбор

SELECTION GUIDE



<p>NT-HN</p> <p>60°</p> <p>HN□□0905 331</p> <p>K</p>	<p>NT-OD</p> <p>43°</p> <p>OD□□0605 332</p> <p>P M K N</p>	<p>NT-OF</p> <p>43°</p> <p>OF□□05T3 333</p> <p>P M</p>	<p>NT-SE</p> <p>45°</p> <p>SE□□13T3 337</p> <p>P M K N</p>	<p>NT-SN</p> <p>75°</p> <p>SN□□1204 338</p> <p>K S</p>
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






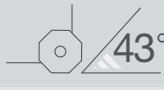
















































<p>NT-AP</p> <p>90°</p> <p>AP□□1135 327</p> <p>P M K N</p>	<p>NT-AP</p> <p>90°</p> <p>AP□□1604 327</p> <p>P M K N</p>	<p>NT-XP-AL</p> <p>90°</p> <p>XP□□0802 339</p> <p>N</p>	<p>NT-XP-ST</p> <p>90°</p> <p>XP□□0802 340</p> <p>K H</p>
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<p>NT-RD</p> <p>360°</p> <p>RD□□0501 334</p> <p>P M</p>	<p>NT-RD</p> <p>360°</p> <p>RD□□0702 334</p> <p>P M</p>	<p>NT-RD</p> <p>360°</p> <p>RD□□1003 334</p> <p>P M</p>	<p>NT-RD</p> <p>360°</p> <p>RD□□1204 335</p> <p>P M</p>	<p>NT-RD</p> <p>360°</p> <p>RD□□1604 335</p> <p>P M</p>
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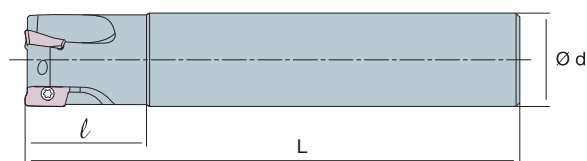
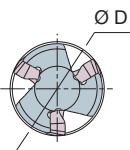
CAPTION LEGENDA / LEGENDE / LÉGENDE / CLAVE / УСЛОВНЫЕ ОБОЗНАЧЕНИЯ

	<ul style="list-style-type: none">  MACHINABLE MATERIALS  MATERIALI LAVORABILI  ZU BEARBEITENDEN MATERIALIEN  MATIÈRES USINABLES  MATERIALES MECANIZABLES  ОБРАБАТЫВАЕМЫЕ МАТЕРИАЛЫ 	<p>SIDE MILLING</p> 	<ul style="list-style-type: none">  SHOULDERING 90°  SPALLAMENTO 90°  ECKFRÄSEN 90°  ÉPAULEMENT 90°  ESCUADRADO 90°  фрезерование по периферии 90°
<p>ADJUSTABLE</p> 	<ul style="list-style-type: none">  AXIAL MICRO COMPENSATION  MICROREGISTRAZIONE ASSIALE  AXIALE MICROEINSTELLUNG  MICRO-RÉGISTRATION AXIALE  MICRO AJUSTE AXIAL  АКСИАЛЬНАЯ МИКРОЮСТИРОВКА 	<p>FACE MILLING</p> 	<ul style="list-style-type: none">  FACE MILLING 43°  SPIANATURA 43°  PLANDREHEN 43°  SURFAÇAGE 43°  PLANEADO 43°  торцовое фрезерование 43°
<p>ALU BODY</p>	<ul style="list-style-type: none">  ALUMINIUM BODY  CORPO IN ALLUMINIO  ALUMINIUM KÖRPER  CORPS EN ALUMINIUM  PLATO EN ALUMINIO  АЛЮМИНИЕВЫЙ КОРПУС 	<p>FACE MILLING</p> 	<ul style="list-style-type: none">  FACE MILLING 45°  SPIANATURA 45°  PLANDREHEN 45°  SURFAÇAGE 45°  PLANEADO 45°  торцовое фрезерование 45°
<p>STEEL BODY</p>	<ul style="list-style-type: none">  STEEL BODY  CORPO IN ACCIAIO  STAHL KÖRPER  CORPS EN ACIER  PLATO EN ACERO  СТАЛЬНОЙ КОРПУС 	<p>FACE MILLING</p> 	<ul style="list-style-type: none">  FACE MILLING 60°  SPIANATURA 60°  PLANDREHEN 60°  SURFAÇAGE 60°  PLANEADO 60°  торцовое фрезерование 60°
		<p>FACE MILLING</p> 	<ul style="list-style-type: none">  FACE MILLING 75°  SPIANATURA 75°  PLANDREHEN 75°  SURFAÇAGE 75°  PLANEADO 75°  торцовое фрезерование 75°
		<p>COPY MILLING</p> 	<ul style="list-style-type: none">  COPY MILLING  COPIATURA  KONTURFRÄSEN  COPIAGE  FRESADO DE PERFILES  объемное контурное фрезерование

NT-AP

POSITIVE 11°
with hole

AP□□



SIDE MILLING



AP□□	DESCRIPTION	STOCK	DIMENSIONS					ØD	Z	Ød	L	l	Screw	Tool					
			ØD	Z	Ød	L	l												
AP□□1135	NT-AP11	D016-S16-Z2	●	16	2	16	100	28					NT-ST018	NT-FT08					
		D016-S16-Z2-L150	●	16	2	16	150	28					NT-ST018	NT-FT08					
		D020-S20-Z3	●	20	3	20	110	28					NT-ST018	NT-FT08					
		D020-S20-Z3-L200	●	20	3	20	200	28					NT-ST018	NT-FT08					
		D025-S25-Z3	●	25	3	25	120	35					NT-ST018	NT-FT08					
		D025-S25-Z4	●	25	4	25	120	35					NT-ST018	NT-FT08					
		D032-S32-Z4	●	32	4	32	130	35					NT-ST018	NT-FT08					
		D032-S32-Z5	●	32	5	32	130	35					NT-ST018	NT-FT08					
AP□□1604	NT-AP16	D025-S25-Z2	●	25	2	25	120	40					NT-ST019	NT-FT15					
		D032-S32-Z3	●	32	3	32	130	45					NT-ST017	NT-FT15					
		D040-S32-Z4	●	40	4	32	150	45					NT-ST017	NT-FT15					

carbide

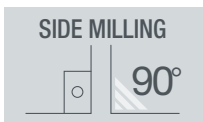
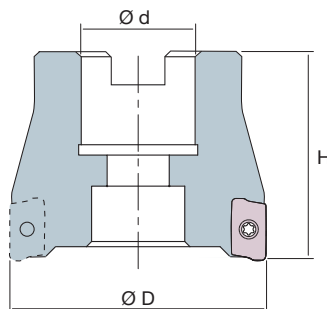
281

●, ○ = NEW ITEM

NT-AP

POSITIVE 11°
with hole

AP



AP <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Z	Ød	H							
AP <input type="checkbox"/> <input type="checkbox"/> 1135	NT-AP11 D040-F16-Z5	●	40	5	16	40	NT-ST018	NT-FT08					
		●	50	5	22	40	NT-ST018	NT-FT08					
		●	50	7	22	40	NT-ST018	NT-FT08					
AP <input type="checkbox"/> <input type="checkbox"/> 1604	NT-AP16 D040-F16-Z4	●	40	4	16	50	NT-ST017	NT-FT15					
		●	50	4	22	50	NT-ST017	NT-FT15					
		●	50	5	22	50	NT-ST017	NT-FT15					
		●	63	5	22	50	NT-ST017	NT-FT15					
		●	63	6	22	50	NT-ST017	NT-FT15					
		●	80	6	27	50	NT-ST017	NT-FT15					
		●	80	8	27	50	NT-ST017	NT-FT15					
		●	80	8	27	50	NT-ST017	NT-FT15					
		●	100	8	32	50	NT-ST017	NT-FT15					

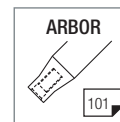
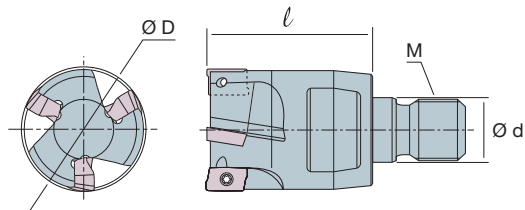
carbide 281

●, ○ = NEW ITEM

NT-AP

POSITIVE 11°
with hole

AP□□



AP□□	DESCRIPTION	STOCK	DIMENSIONS					ØD	Z	Ød	M	l	Screw	Tool						
			ØD	Z	Ød	M	l													
AP□□1135	NT-AP11	D016-M08-Z2	●	16	2	8.5	8	25	NT-ST018	NT-FT08										
		D020-M10-Z2	●	20	2	10.5	10	30	NT-ST018	NT-FT08										
		D020-M10-Z3	●	20	3	10.5	10	30	NT-ST018	NT-FT08										
		D025-M12-Z3	●	25	3	12.5	12	35	NT-ST018	NT-FT08										
		D025-M12-Z4	●	25	4	12.5	12	35	NT-ST018	NT-FT08										
		D032-M16-Z4	●	32	4	17	16	43	NT-ST018	NT-FT08										
		D032-M16-Z5	●	32	5	17	16	43	NT-ST018	NT-FT08										

carbide

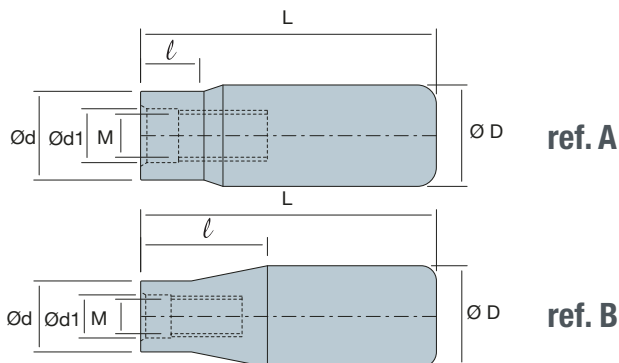
281

●, ○ = NEW ITEM

NT-ARB

NEW

ARBOR
for modular cutters



	DESCRIPTION	STOCK	DIMENSIONS							SHAPE						
			ØD	M	Ød	Ød ₁	L	ℓ								
NT-AP <small>329</small>	NT-ARB	D12-M06-120	●	12	6	11	6.5	120	10	ref. A						
		D16-M06-150T	●	16	6	11	6.5	150	32	ref. B						
NT-RD <small>336</small>	NT-ARB	D16-M06-200T	●	16	6	11	6.5	200	32	ref. B						
		D16-M08-150	●	16	8	14	8.5	150	10	ref. A						
		D16-M08-200	●	16	8	14	8.5	200	10	ref. A						
		D20-M08-200T	●	20	8	14	8.5	200	50	ref. B						
		D20-M08-250T	●	20	8	14	8.5	250	50	ref. B						
		D20-M10-150	●	20	10	18	10.5	150	12	ref. A						
		D20-M10-250	●	20	10	18	10.5	250	12	ref. A						
		D25-M10-200T	●	25	10	18	10.5	200	60	ref. B						
		D25-M10-250T	●	25	10	18	10.5	250	60	ref. B						
		D25-M12-200	●	25	12	23	12.5	200	15	ref. A						
		D25-M12-300	●	25	12	23	12.5	300	15	ref. A						
		D32-M12-250T	●	32	12	23	12.5	250	70	ref. B						
		D32-M12-350T	●	32	12	23	12.5	350	70	ref. B						
		D32-M16-200	●	32	16	29	17	200	18	ref. A						
		D32-M16-350	●	32	16	29	17	350	18	ref. A						

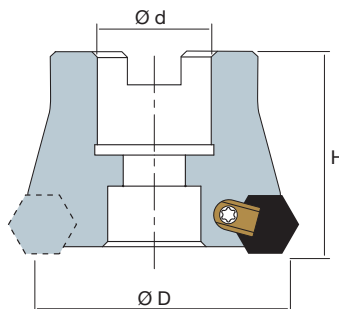
●, ○ = NEW ITEM

NT-HN

NEW

NEGATIVE
without hole

HN □ □



FACE MILLING



HN □ □	DESCRIPTION	STOCK	DIMENSIONS									
			ØD	Z	Ød	H						
HN □ □ 0905	NT-HN09 D063-F22-Z8	★	63	8	22	40						
	D080-F27-Z10	★	80	10	27	50						
	D100-F32-Z12	★	100	12	32	50						
	D125-F40-Z18	★	125	18	40	63						
	D160-F40-Z24	★	160	24	40	63						
	D200-F60-Z30	★	200	30	60	63						

carbide

283

ceramic

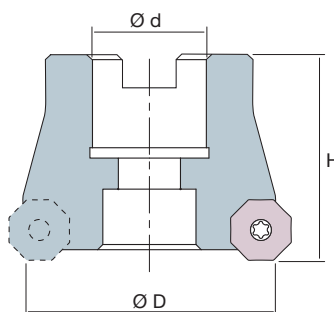
319

NT-OD

NEW

POSITIVE 15°
with hole

OD

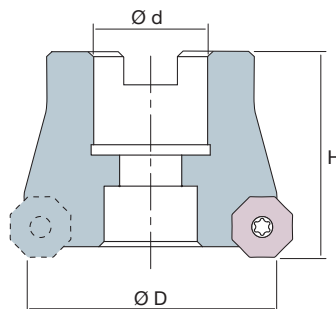


OD <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS									
			ØD	Z	Ød	H						
OD <input type="checkbox"/> 0605	NT-OD06	D050-F22-Z4	★	50	4	22	40					
		D063-F22-Z5	★	63	5	22	40					
		D080-F27-Z6	★	80	6	27	50					
		D100-F32-Z7	★	100	7	32	50					
		D125-F40-Z8	★	125	8	40	63					
		D160-F40-Z10	★	160	10	40	63					

NT-OF

POSITIVE 26°
with hole

OF□□



FACE MILLING



OF□□	DESCRIPTION	STOCK	DIMENSIONS				Screw	Tool				
			ØD	Z	Ød	H						
OF□□05T3	NT-OF05 D050-F22-Z5	●	50	5	22	40	NT-ST017	NT-FT15				
	D063-F22-Z6	●	63	6	22	40	NT-ST017	NT-FT15				
	D080-F27-Z7	●	80	7	27	50	NT-ST017	NT-FT15				
	D100-F32-Z8	●	100	8	32	50	NT-ST017	NT-FT15				

carbide

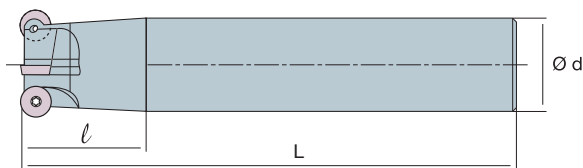
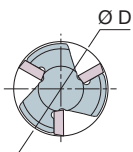
286

●, ○ = NEW ITEM

NT-RD

POSITIVE 15°
with hole

RD

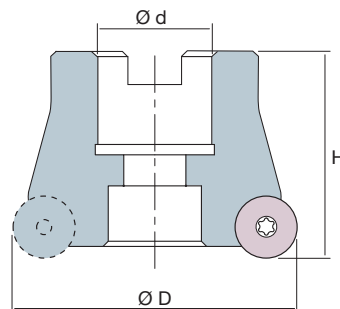


RD <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Z	Ød	L	l						
RD <input type="checkbox"/> 0501	NT-RD05	D009-S08-Z2-L100	●	9	2	8	100	12	-	-	-	NT-ST009	NT-FT06
		D010-S10-Z2-L100	●	10	2	10	100	18	-	-	-	NT-ST009	NT-FT06
		D011-S10-Z2-L100	●	11	2	10	100	15	-	-	-	NT-ST009	NT-FT06
		D012-S12-Z3-L100	●	12	3	12	100	22	-	-	-	NT-ST009	NT-FT06
		D013-S12-Z3-L100	●	13	3	12	100	18	-	-	-	NT-ST009	NT-FT06
		D016-S16-Z4-L150	●	16	4	16	150	30	-	-	-	NT-ST009	NT-FT06
		D017-S16-Z4-L150	●	17	4	16	150	20	-	-	-	NT-ST009	NT-FT06
RD <input type="checkbox"/> 0702	NT-RD07	D016-S16-Z2-L150	●	16	2	16	150	35	-	-	-	NT-ST011	NT-FT09
		D017-S16-Z2-L150	●	17	2	16	150	20	-	-	-	NT-ST011	NT-FT09
		D020-S20-Z3-L150	●	20	3	20	150	35	-	-	-	NT-ST011	NT-FT09
		D021-S20-Z3-L150	●	21	3	20	150	25	-	-	-	NT-ST011	NT-FT09
		D025-S25-Z5-L150	●	25	5	25	150	40	-	-	-	NT-ST011	NT-FT09
		D026-S25-Z5-L150	●	26	5	25	150	25	-	-	-	NT-ST011	NT-FT09
		D035-S32-Z6-L150	●	35	6	32	150	30	-	-	-	NT-ST011	NT-FT09
RD <input type="checkbox"/> 1003	NT-RD10	D020-S20-Z2-L150	●	20	2	20	150	40	-	-	-	NT-ST012	NT-FT15
		D021-S20-Z2-L150	●	21	2	20	150	25	-	-	-	NT-ST012	NT-FT15
		D025-S25-Z3-L150	●	25	3	25	150	40	-	-	-	NT-ST012	NT-FT15
		D026-S25-Z3-L150	●	26	3	25	150	25	-	-	-	NT-ST012	NT-FT15
		D030-S25-Z3-L150	●	30	3	25	150	25	-	-	-	NT-ST013	NT-FT15
		D032-S32-Z3-L150	●	32	3	32	150	40	NT-CS013	NT-ST013	NT-FT15	NT-ST013	NT-FT15
		D035-S32-Z4-L150	●	35	4	32	150	40	NT-CS013	NT-ST013	NT-FT15	NT-ST013	NT-FT15

NT-RD

POSITIVE 15°
with hole

RD□□



RD□□	DESCRIPTION	STOCK	DIMENSIONS								
			ØD	Z	Ød	H					
RD□□1003	NT-RD10 D042-F16-Z5	●	42	5	16	40	NT-CS013	NT-ST012	NT-FT15	NT-ST013	NT-FT15
	D052-F22-Z6	●	52	6	22	40	NT-CS013	NT-ST012	NT-FT15	NT-ST013	NT-FT15
RD□□1204	NT-RD12 D050-F22-Z4	●	50	4	22	50	NT-CS013	NT-ST017	NT-FT15	NT-ST013	NT-FT15
	D050-F22-Z5	●	50	5	22	50	NT-CS013	NT-ST017	NT-FT15	NT-ST013	NT-FT15
	D063-F22-Z5	●	63	5	22	50	NT-CS013	NT-ST017	NT-FT15	NT-ST013	NT-FT15
	D063-F22-Z6	●	63	6	22	50	NT-CS013	NT-ST017	NT-FT15	NT-ST013	NT-FT15
	D066-F22-Z6	●	66	6	22	50	NT-CS013	NT-ST017	NT-FT15	NT-ST013	NT-FT15
	D080-F27-Z6	●	80	6	27	50	NT-CS013	NT-ST017	NT-FT15	NT-ST013	NT-FT15
	D080-F27-Z5	●	80	5	27	55	NT-CS021	NT-ST021	NT-DT20	NT-ST021	NT-DT20
RD□□1604	NT-RD16 D063-F22-Z5	●	63	5	22	50	NT-CS021	NT-ST021	NT-DT20	NT-ST021	NT-DT20
	D066-F22-Z5	●	66	5	22	50	NT-CS021	NT-ST021	NT-DT20	NT-ST021	NT-DT20
	D080-F27-Z5	●	80	5	27	55	NT-CS021	NT-ST021	NT-DT20	NT-ST021	NT-DT20
	D100-F32-Z6	●	100	6	32	55	NT-CS021	NT-ST021	NT-DT20	NT-ST021	NT-DT20

carbide

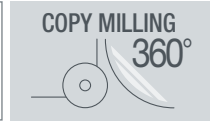
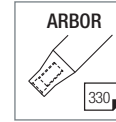
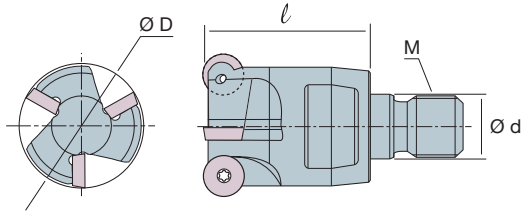
288

●, ○ = NEW ITEM

NT-RD

POSITIVE 15°
with hole

RD□□

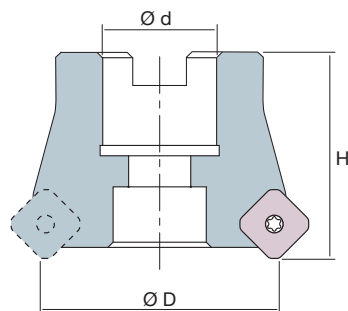


RD□□	DESCRIPTION	STOCK	DIMENSIONS					←			←		
			ØD	Z	Ød	M	ℓ						
RD□□0501	NT-RD05	D012-M06-Z2	●	12	2	6.5	6	18	-	-	-	NT-ST009	NT-FT06
		D012-M06-Z3	●	12	3	6.5	6	18	-	-	-	NT-ST009	NT-FT06
		D013-M06-Z2	●	13	2	6.5	6	18	-	-	-	NT-ST009	NT-FT06
		D013-M06-Z3	●	13	3	6.5	6	18	-	-	-	NT-ST009	NT-FT06
		D016-M08-Z4	●	16	4	8.5	8	23	-	-	-	NT-ST009	NT-FT06
		D017-M08-Z4	●	17	4	8.5	8	23	-	-	-	NT-ST009	NT-FT06
RD□□0702	NT-RD07	D016-M08-Z2	●	16	2	8.5	8	23	-	-	-	NT-ST011	NT-FT09
		D016-M08-Z3	●	16	3	8.5	8	23	-	-	-	NT-ST011	NT-FT09
		D017-M08-Z2	●	17	2	8.5	8	23	-	-	-	NT-ST011	NT-FT09
		D017-M08-Z3	●	17	3	8.5	8	23	-	-	-	NT-ST011	NT-FT09
		D020-M10-Z3	●	20	3	10.5	10	30	-	-	-	NT-ST011	NT-FT09
		D021-M10-Z2	●	21	2	10.5	10	30	-	-	-	NT-ST011	NT-FT09
		D021-M10-Z3	●	21	3	10.5	10	30	-	-	-	NT-ST011	NT-FT09
		D025-M12-Z4	●	25	4	12.5	12	35	-	-	-	NT-ST011	NT-FT09
		D025-M12-Z5	●	25	5	12.5	12	35	-	-	-	NT-ST011	NT-FT09
		D026-M12-Z4	●	26	4	12.5	12	35	-	-	-	NT-ST011	NT-FT09
		D026-M12-Z5	●	26	5	12.5	12	35	-	-	-	NT-ST011	NT-FT09
		D035-M16-Z5	●	35	5	17	16	43	-	-	-	NT-ST011	NT-FT09
		D035-M16-Z6	●	35	6	17	16	43	-	-	-	NT-ST011	NT-FT09
		RD□□1003	NT-RD10	D020-M10-Z2	●	20	2	10.5	10	30	-	-	-
D021-M10-Z2	●			21	2	10.5	10	30	-	-	-	NT-ST012	NT-FT15
D025-M12-Z3	●			25	3	12.5	12	35	-	-	-	NT-ST012	NT-FT15
D026-M12-Z3	●			26	3	12.5	12	35	-	-	-	NT-ST012	NT-FT15
D030-M12-Z3	●			30	3	12.5	12	35	-	-	-	NT-ST013	NT-FT15
D032-M16-Z3	●			32	3	17	16	43	NT-CS013	NT-ST012	NT-FT15	NT-ST013	NT-FT15
D035-M16-Z3	●			35	3	17	16	43	NT-CS013	NT-ST013	NT-FT15	NT-ST013	NT-FT15
D035-M16-Z4	●	35	4	17	16	43	NT-CS013	NT-ST013	NT-FT15	NT-ST013	NT-FT15		

NT-SE

POSITIVE 20°
with hole

SE□□



SE□□	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Z	Ød	H							
SE□□13T3	NT-SE13	D050-F22-Z4	●	50	4	22	40	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D050-F22-Z5	●	50	5	22	40	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D063-F22-Z5	●	63	5	22	50	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D063-F22-Z6	●	63	6	22	50	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D080-F27-Z6	●	80	6	27	50	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D080-F27-Z8	●	80	8	27	50	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D100-F32-Z7	●	10	7	32	50	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D100-F32-Z10	●	10	10	32	50	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D125-F40-Z8	●	125	8	40	63	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D125-F40-Z12	●	125	12	40	63	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D160-F40-Z10	●	160	10	40	63	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D160-F40-Z16	○	160	16	40	63	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D200-F60-Z12	●	200	12	60	63	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	
		D200-F60-Z20	○	200	20	60	63	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FT15	

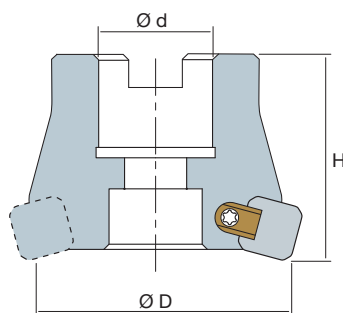
carbide 291

●, ○ = NEW ITEM

NT-SN

NEGATIVE
without hole

SN□□



FACE MILLING



SN□□	DESCRIPTION	STOCK	DIMENSIONS									
			ØD	Z	Ød	H						
SN□□1204	NT-SN12-75° D050-F22-Z5	●	50	5	22	40	NT-WD070	NT-SC060	NT-WR030			
	D063-F22-Z6	●	63	6	22	40	NT-WD070	NT-SC060	NT-WR030			
	D080-F27-Z8	●	80	8	27	50	NT-WD070	NT-SC060	NT-WR030			
	D100-F32-Z10	●	100	10	32	50	NT-WD070	NT-SC060	NT-WR030			
	D125-F40-Z12	●	125	12	40	63	NT-WD070	NT-SC060	NT-WR030			

PCBN

304

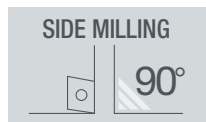
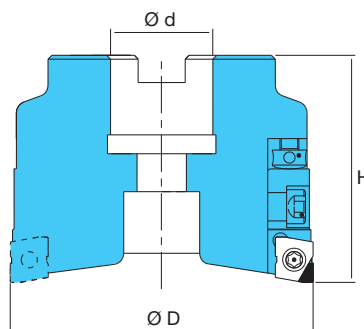
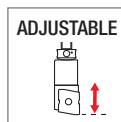
ceramic

320

NT-XP-AL

POSITIVE 11°
with hole

XP□□

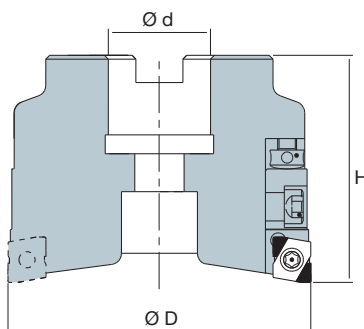


XP□□	DESCRIPTION	STOCK	DIMENSIONS									
			ØD	Z	Ød	H						
XP□□0802	NT-XP08 D063-F22-Z5-AL	●	63	5	22	50	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09
	D080-F27-Z7-AL	●	80	7	27	60	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09
	D100-F32-Z8-AL	●	100	8	32	50	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09
	D125-F40-Z10-AL	●	125	10	40	63	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09

NT-XP-ST

POSITIVE 11°
with hole

XP



SIDE MILLING

90°

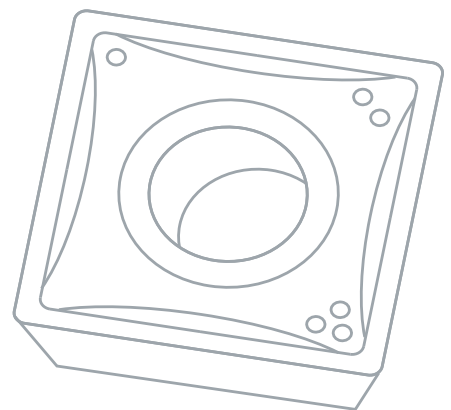
ADJUSTABLE



STEEL
BODY

P M K
N S H

XP <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Z	Ød	H							
XP <input type="checkbox"/> <input type="checkbox"/> 0802	NT-XP08	D050-F16-Z5-ST	●	50	5	16	50	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09
		D063-F22-Z6-ST	●	63	6	22	50	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09
		D080-F27-Z7-ST	●	80	7	27	60	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09
		D100-F32-Z8-ST	●	100	8	32	50	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-ST075	NT-FT09

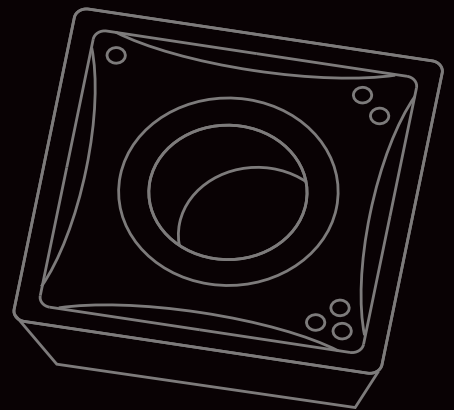


DRILLING /

carbide /343

holders /347

DRILLING / carbide



GRADES

	ISO DIN 513														
	K					P					M				
	○	←	→	⊕		○	←	→	⊕		○	←	→	⊕	
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40
CARBIDE CVD															
CARBIDE PVD															

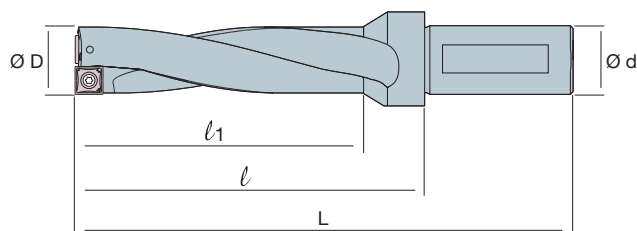
JP7525

JP5520

JP5530

JP5520

JP5530

NT-DRS**NEW****2xD****SP** 

SP <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Ød	L	l	l ₁						
SPMX0502	NT-DRS-2D D12.50-S20-05	★	12.5	20	94	44	26	NT-ST059	NT-FT06				
	D13.00-S20-05	★	13	20	94	44	26	NT-ST059	NT-FT06				
	D13.50-S20-05	★	13.5	20	96	46	28	NT-ST059	NT-FT06				
	D14.00-S20-05	★	14	20	96	46	28	NT-ST059	NT-FT06				
	D14.50-S20-05	★	14.5	20	99	49	30	NT-ST059	NT-FT06				
	D15.00-S20-05	★	15	20	99	49	30	NT-ST059	NT-FT06				
SPMX0602	NT-DRS-2D D15.50-S25-06	★	15.5	25	108	52	32	NT-ST061	NT-FT06				
	D16.00-S25-06	★	16	25	108	52	32	NT-ST061	NT-FT06				
	D16.50-S25-06	★	16.5	25	110	54	34	NT-ST061	NT-FT06				
	D17.00-S25-06	★	17	25	110	54	34	NT-ST061	NT-FT06				
	D17.50-S25-06	★	17.5	25	113	57	36	NT-ST061	NT-FT06				
	D18.00-S25-06	★	18	25	113	57	36	NT-ST061	NT-FT06				
	D18.50-S25-06	★	18.5	25	115	59	38	NT-ST061	NT-FT06				
	D19.00-S25-06	★	19	25	115	59	38	NT-ST061	NT-FT06				
	D19.50-S25-06	★	19.5	25	119	63	40	NT-ST061	NT-FT06				
	D20.00-S25-06	★	20	25	119	63	40	NT-ST061	NT-FT06				
	D20.50-S25-06	★	20.5	25	121	65	42	NT-ST061	NT-FT06				
	D21.00-S25-06	★	21	25	121	65	42	NT-ST061	NT-FT06				
	D21.50-S25-06	★	21.5	25	123	67	44	NT-ST061	NT-FT06				
	SPMX07T3	NT-DRS-2D D22.00-S25-07	★	22	25	123	67	44	NT-ST062	NT-FT07			
D22.50-S32-07		★	22.5	32	131	71	46	NT-ST062	NT-FT07				
D23.00-S32-07		★	23	32	131	71	46	NT-ST062	NT-FT07				
D23.50-S32-07		★	23.5	32	134	74	48	NT-ST062	NT-FT07				
D24.00-S32-07		★	24	32	134	74	48	NT-ST062	NT-FT07				
D24.50-S32-07		★	24.5	32	137	77	50	NT-ST062	NT-FT07				
D25.00-S32-07		★	25	32	137	77	50	NT-ST062	NT-FT07				
D25.50-S32-07		★	25.5	32	139	79	52	NT-ST062	NT-FT07				
D26.00-S32-07		★	26	32	139	79	52	NT-ST062	NT-FT07				
D26.50-S32-07		★	26.5	32	141	81	54	NT-ST062	NT-FT07				
D27.00-S32-07		★	27	32	141	81	54	NT-ST062	NT-FT07				
D27.50-S32-07	★	27.5	32	144	84	56	NT-ST062	NT-FT07					
SPMX0904	NT-DRS-2D D28.00-S32-09	★	28	32	144	84	56	NT-ST063	NT-FT15				
	D28.50-S32-09	★	28.5	32	146	86	58	NT-ST063	NT-FT15				
	D29.00-S32-09	★	29	32	146	86	58	NT-ST063	NT-FT15				
	D29.50-S32-09	★	29.5	32	151	91	60	NT-ST063	NT-FT15				
	D30.00-S32-09	★	30	32	151	91	60	NT-ST063	NT-FT15				
	D31.00-S32-09	★	31	32	154	94	62	NT-ST063	NT-FT15				
	D32.00-S32-09	★	32	32	156	96	64	NT-ST063	NT-FT15				
	D33.00-S32-09	★	33	32	159	99	66	NT-ST063	NT-FT15				

carbide

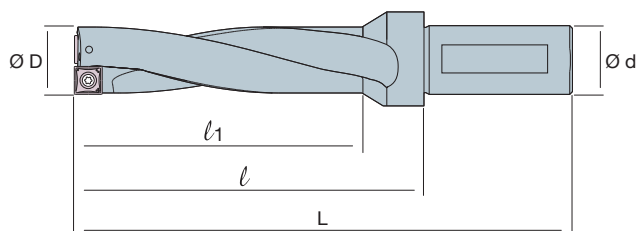
345

NT-DRS

NEW

2xD

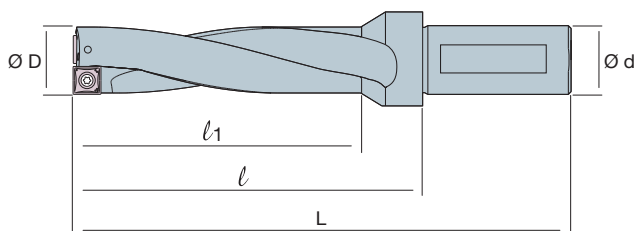
SP□□



SP□□	DESCRIPTION	STOCK	DIMENSIONS					NT-ST064	NT-FT15			
			ØD	Ød	L	l	l1					
SPMX1104	NT-DRS-2D D34.00-S32-11	★	34	32	161	101	68	NT-ST064	NT-FT15			
	D34.00-S40-11	★	34	40	171	101	68	NT-ST064	NT-FT15			
	D35.00-S32-11	★	35	32	164	104	70	NT-ST064	NT-FT15			
	D35.00-S40-11	★	35	40	174	104	70	NT-ST064	NT-FT15			
	D36.00-S32-11	★	36	32	167	107	72	NT-ST064	NT-FT15			
	D36.00-S40-11	★	36	40	177	107	72	NT-ST064	NT-FT15			
	D37.00-S32-11	★	37	32	170	110	74	NT-ST064	NT-FT15			
	D37.00-S40-11	★	37	40	180	110	74	NT-ST064	NT-FT15			
	D38.00-S32-11	★	38	32	173	113	76	NT-ST064	NT-FT15			
	D38.00-S40-11	★	38	40	183	113	76	NT-ST064	NT-FT15			
	D39.00-S32-11	★	39	32	175	115	78	NT-ST064	NT-FT15			
	D39.00-S40-11	★	39	40	185	115	78	NT-ST064	NT-FT15			
	D40.00-S32-11	★	40	32	178	118	80	NT-ST064	NT-FT15			
	D40.00-S40-11	★	40	40	188	118	80	NT-ST064	NT-FT15			
	D41.00-S32-11	★	41	32	181	121	82	NT-ST064	NT-FT15			
D41.00-S40-11	★	41	40	191	121	82	NT-ST064	NT-FT15				
SPMX1405	NT-DRS-2D D42.00-S40-14	★	42	40	193	123	84	NT-ST066	NT-DT20			
	D43.00-S40-14	★	43	40	196	126	86	NT-ST066	NT-DT20			
	D44.00-S40-14	★	44	40	198	128	88	NT-ST066	NT-DT20			
	D45.00-S40-14	★	45	40	202	132	90	NT-ST066	NT-DT20			
	D46.00-S40-14	★	46	40	205	135	92	NT-ST066	NT-DT20			
	D47.00-S40-14	★	47	40	207	137	94	NT-ST066	NT-DT20			
	D48.00-S40-14	★	48	40	210	140	96	NT-ST066	NT-DT20			
	D49.00-S40-14	★	49	40	212	142	98	NT-ST066	NT-DT20			
	D50.00-S40-14	★	50	40	215	145	100	NT-ST066	NT-DT20			

carbide

345

NT-DRS**NEW****3xD****SP** 

SP <input type="checkbox"/> <input type="checkbox"/>	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Ød	L	l	l1						
SPMX0502	NT-DRS-3D D12.50-S20-05	★	12.5	20	107	57	39	NT-ST059	NT-FT06				
	D13.00-S20-05	★	13	20	107	57	39	NT-ST059	NT-FT06				
	D13.50-S20-05	★	13.5	20	110	60	42	NT-ST059	NT-FT06				
	D14.00-S20-05	★	14	20	110	60	42	NT-ST059	NT-FT06				
	D14.50-S20-05	★	14.5	20	114	64	45	NT-ST059	NT-FT06				
	D15.00-S20-05	★	15	20	114	64	45	NT-ST059	NT-FT06				
SPMX0602	NT-DRS-3D D15.50-S25-06	★	15.5	25	124	68	48	NT-ST061	NT-FT06				
	D16.00-S25-06	★	16	25	124	68	48	NT-ST061	NT-FT06				
	D16.50-S25-06	★	16.5	25	127	71	51	NT-ST061	NT-FT06				
	D17.00-S25-06	★	17	25	127	71	51	NT-ST061	NT-FT06				
	D17.50-S25-06	★	17.5	25	131	75	54	NT-ST061	NT-FT06				
	D18.00-S25-06	★	18	25	131	75	54	NT-ST061	NT-FT06				
	D18.50-S25-06	★	18.5	25	134	78	57	NT-ST061	NT-FT06				
	D19.00-S25-06	★	19	25	134	78	57	NT-ST061	NT-FT06				
	D19.50-S25-06	★	19.5	25	139	83	60	NT-ST061	NT-FT06				
	D20.00-S25-06	★	20	25	139	83	60	NT-ST061	NT-FT06				
	D20.50-S25-06	★	20.5	25	142	86	63	NT-ST061	NT-FT06				
	D21.00-S25-06	★	21	25	142	86	63	NT-ST061	NT-FT06				
	D21.50-S25-06	★	21.5	25	145	89	66	NT-ST061	NT-FT06				
	SPMX07T3	NT-DRS-3D D22.00-S25-07	★	22	25	145	89	66	NT-ST062	NT-FT07			
D22.50-S32-07		★	22.5	32	154	94	69	NT-ST062	NT-FT07				
D23.00-S32-07		★	23	32	154	94	69	NT-ST062	NT-FT07				
D23.50-S32-07		★	23.5	32	158	98	72	NT-ST062	NT-FT07				
D24.00-S32-07		★	24	32	158	98	72	NT-ST062	NT-FT07				
D24.50-S32-07		★	24.5	32	162	102	75	NT-ST062	NT-FT07				
D25.00-S32-07		★	25	32	162	102	75	NT-ST062	NT-FT07				
D25.50-S32-07		★	25.5	32	165	105	78	NT-ST062	NT-FT07				
D26.00-S32-07		★	26	32	165	105	78	NT-ST062	NT-FT07				
D26.50-S32-07		★	26.5	32	168	108	81	NT-ST062	NT-FT07				
D27.00-S32-07		★	27	32	168	108	81	NT-ST062	NT-FT07				
D27.50-S32-07	★	27.5	32	172	112	84	NT-ST062	NT-FT07					
SPMX0904	NT-DRS-3D D28.00-S32-09	★	28	32	172	112	84	NT-ST063	NT-FT15				
	D28.50-S32-09	★	28.5	32	175	115	87	NT-ST063	NT-FT15				
	D29.00-S32-09	★	29	32	175	115	87	NT-ST063	NT-FT15				
	D29.50-S32-09	★	29.5	32	181	121	90	NT-ST063	NT-FT15				
	D30.00-S32-09	★	30	32	181	121	90	NT-ST063	NT-FT15				
	D31.00-S32-09	★	31	32	185	125	93	NT-ST063	NT-FT15				
	D32.00-S32-09	★	32	32	188	128	96	NT-ST063	NT-FT15				
	D33.00-S32-09	★	33	32	192	132	99	NT-ST063	NT-FT15				

carbide

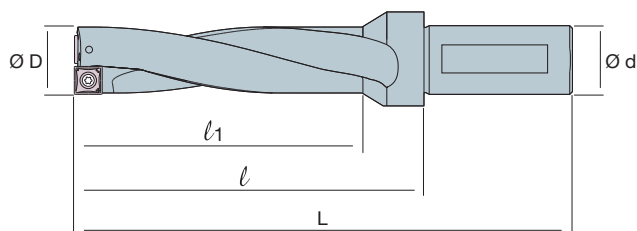
345

NT-DRS

NEW

3xD

SP□□



SP□□	DESCRIPTION	STOCK	DIMENSIONS					Screw	Holder	Screwdriver			
			ØD	Ød	L	l	l1						
SPMX1104	NT-DRS-3D D34.00-S32-11	★	34	32	195	135	102	NT-ST064	NT-FT15				
	D34.00-S40-11	★	34	40	205	135	102	NT-ST064	NT-FT15				
	D35.00-S32-11	★	35	32	199	139	105	NT-ST064	NT-FT15				
	D35.00-S40-11	★	35	40	209	139	105	NT-ST064	NT-FT15				
	D36.00-S32-11	★	36	32	203	143	108	NT-ST064	NT-FT15				
	D36.00-S40-11	★	36	40	213	143	108	NT-ST064	NT-FT15				
	D37.00-S32-11	★	37	32	207	147	111	NT-ST064	NT-FT15				
	D37.00-S40-11	★	37	40	217	147	111	NT-ST064	NT-FT15				
	D38.00-S32-11	★	38	32	211	151	114	NT-ST064	NT-FT15				
	D38.00-S40-11	★	38	40	221	151	114	NT-ST064	NT-FT15				
	D39.00-S32-11	★	39	32	214	154	117	NT-ST064	NT-FT15				
	D39.00-S40-11	★	39	40	224	154	117	NT-ST064	NT-FT15				
	D40.00-S32-11	★	40	32	218	158	120	NT-ST064	NT-FT15				
	D40.00-S40-11	★	40	40	228	158	120	NT-ST064	NT-FT15				
	D41.00-S32-11	★	41	32	222	162	123	NT-ST064	NT-FT15				
D41.00-S40-11	★	41	40	232	162	123	NT-ST064	NT-FT15					
SPMX1405	NT-DRS-3D D42.00-S40-14	★	42	40	235	165	126	NT-ST066	NT-DT20				
	D43.00-S40-14	★	43	40	239	169	129	NT-ST066	NT-DT20				
	D44.00-S40-14	★	44	40	242	172	132	NT-ST066	NT-DT20				
	D45.00-S40-14	★	45	40	247	177	135	NT-ST066	NT-DT20				
	D46.00-S40-14	★	46	40	251	181	138	NT-ST066	NT-DT20				
	D47.00-S40-14	★	47	40	254	184	141	NT-ST066	NT-DT20				
	D48.00-S40-14	★	48	40	258	188	144	NT-ST066	NT-DT20				
	D49.00-S40-14	★	49	40	261	191	147	NT-ST066	NT-DT20				
	D50.00-S40-14	★	50	40	265	195	150	NT-ST066	NT-DT20				

carbide

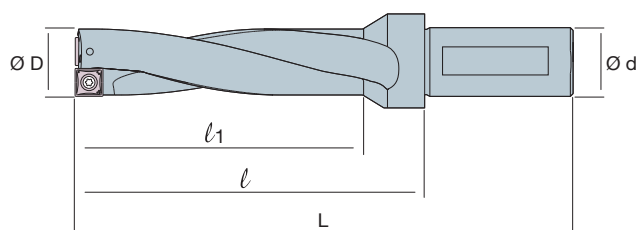
▶ 345

NT-DRS

NEW

4xD

SP□□



SP□□	DESCRIPTION	STOCK	DIMENSIONS										
			ØD	Ød	L	l	l1						
SPMX0502	NT-DRS-4D D12.50-S20-05	★	12.5	20	120	70	52	NT-ST059	NT-FT06				
	D13.00-S20-05	★	13	20	120	70	52	NT-ST059	NT-FT06				
	D13.50-S20-05	★	13.5	20	124	74	56	NT-ST059	NT-FT06				
	D14.00-S20-05	★	14	20	124	74	56	NT-ST059	NT-FT06				
	D14.50-S20-05	★	14.5	20	129	79	60	NT-ST059	NT-FT06				
	D15.00-S20-05	★	15	20	129	79	60	NT-ST059	NT-FT06				
SPMX0602	NT-DRS-4D D15.50-S25-06	★	15.5	25	140	84	64	NT-ST061	NT-FT06				
	D16.00-S25-06	★	16	25	140	84	64	NT-ST061	NT-FT06				
	D16.50-S25-06	★	16.5	25	144	88	68	NT-ST061	NT-FT06				
	D17.00-S25-06	★	17	25	144	88	68	NT-ST061	NT-FT06				
	D17.50-S25-06	★	17.5	25	149	93	72	NT-ST061	NT-FT06				
	D18.00-S25-06	★	18	25	149	93	72	NT-ST061	NT-FT06				
	D18.50-S25-06	★	18.5	25	153	97	76	NT-ST061	NT-FT06				
	D19.00-S25-06	★	19	25	153	97	76	NT-ST061	NT-FT06				
	D19.50-S25-06	★	19.5	25	159	103	80	NT-ST061	NT-FT06				
	D20.00-S25-06	★	20	25	159	103	80	NT-ST061	NT-FT06				
	D20.50-S25-06	★	20.5	25	163	107	84	NT-ST061	NT-FT06				
	D21.00-S25-06	★	21	25	163	107	84	NT-ST061	NT-FT06				
	D21.50-S25-06	★	21.5	25	167	111	88	NT-ST061	NT-FT06				
	SPMX07T3	NT-DRS-4D D22.00-S25-07	★	22	25	167	111	88	NT-ST062	NT-FT07			
D22.50-S32-07		★	22.5	32	177	117	92	NT-ST062	NT-FT07				
D23.00-S32-07		★	23	32	177	117	92	NT-ST062	NT-FT07				
D23.50-S32-07		★	23.5	32	182	122	96	NT-ST062	NT-FT07				
D24.00-S32-07		★	24	32	182	122	96	NT-ST062	NT-FT07				
D24.50-S32-07		★	24.5	32	187	127	100	NT-ST062	NT-FT07				
D25.00-S32-07		★	25	32	187	127	100	NT-ST062	NT-FT07				
D25.50-S32-07		★	25.5	32	191	131	104	NT-ST062	NT-FT07				
D26.00-S32-07		★	26	32	191	131	104	NT-ST062	NT-FT07				
D26.50-S32-07		★	26.5	32	195	135	108	NT-ST062	NT-FT07				
D27.00-S32-07		★	27	32	195	135	108	NT-ST062	NT-FT07				
D27.50-S32-07		★	27.5	32	200	140	112	NT-ST062	NT-FT07				
SPMX0904	NT-DRS-4D D28.00-S32-09	★	28	32	200	140	112	NT-ST063	NT-FT15				
	D28.50-S32-09	★	28.5	32	204	144	116	NT-ST063	NT-FT15				
	D29.00-S32-09	★	29	32	204	144	116	NT-ST063	NT-FT15				
	D29.50-S32-09	★	29.5	32	211	151	120	NT-ST063	NT-FT15				
	D30.00-S32-09	★	30	32	211	151	120	NT-ST063	NT-FT15				
	D31.00-S32-09	★	31	32	216	156	124	NT-ST063	NT-FT15				
	D32.00-S32-09	★	32	32	220	160	128	NT-ST063	NT-FT15				
	D33.00-S32-09	★	33	32	225	165	132	NT-ST063	NT-FT15				

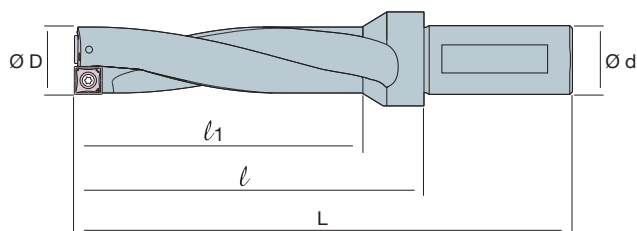
carbide
345

NT-DRS

NEW

4xD

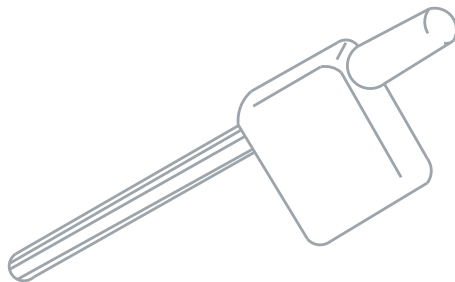
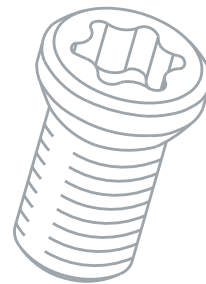
SP□□









SP□□	DESCRIPTION	STOCK	DIMENSIONS					Screw	Holder	Screwdriver			
			ØD	Ød	L	l	l1						
SPMX1104	NT-DRS-4D D34.00-S32-11	★	34	32	229	169	136	NT-ST064	NT-FT15				
	D34.00-S40-11	★	34	40	239	169	136	NT-ST064	NT-FT15				
	D35.00-S32-11	★	35	32	234	174	140	NT-ST064	NT-FT15				
	D35.00-S40-11	★	35	40	244	174	140	NT-ST064	NT-FT15				
	D36.00-S32-11	★	36	32	239	179	144	NT-ST064	NT-FT15				
	D36.00-S40-11	★	36	40	249	179	144	NT-ST064	NT-FT15				
	D37.00-S32-11	★	37	32	244	184	148	NT-ST064	NT-FT15				
	D37.00-S40-11	★	37	40	254	184	148	NT-ST064	NT-FT15				
	D38.00-S32-11	★	38	32	249	189	152	NT-ST064	NT-FT15				
	D38.00-S40-11	★	38	40	259	189	152	NT-ST064	NT-FT15				
	D39.00-S32-11	★	39	32	253	193	156	NT-ST064	NT-FT15				
	D39.00-S40-11	★	39	40	263	193	156	NT-ST064	NT-FT15				
	D40.00-S32-11	★	40	32	258	198	160	NT-ST064	NT-FT15				
	D40.00-S40-11	★	40	40	268	198	160	NT-ST064	NT-FT15				
	D41.00-S32-11	★	41	32	263	203	164	NT-ST064	NT-FT15				
D41.00-S40-11	★	41	40	273	203	164	NT-ST064	NT-FT15					
SPMX1405	NT-DRS-4D D42.00-S40-14	★	42	40	277	207	168	NT-ST066	NT-DT20				
	D43.00-S40-14	★	43	40	282	212	172	NT-ST066	NT-DT20				
	D44.00-S40-14	★	44	40	286	216	176	NT-ST066	NT-DT20				
	D45.00-S40-14	★	45	40	292	222	180	NT-ST066	NT-DT20				
	D46.00-S40-14	★	46	40	297	227	184	NT-ST066	NT-DT20				
	D47.00-S40-14	★	47	40	301	231	188	NT-ST066	NT-DT20				
	D48.00-S40-14	★	48	40	306	236	192	NT-ST066	NT-DT20				
	D49.00-S40-14	★	49	40	310	240	196	NT-ST066	NT-DT20				
	D50.00-S40-14	★	50	40	315	245	200	NT-ST066	NT-DT20				

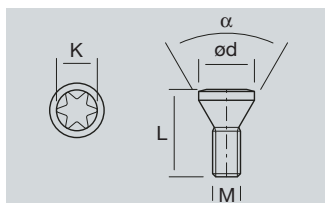
carbide


▶ 345









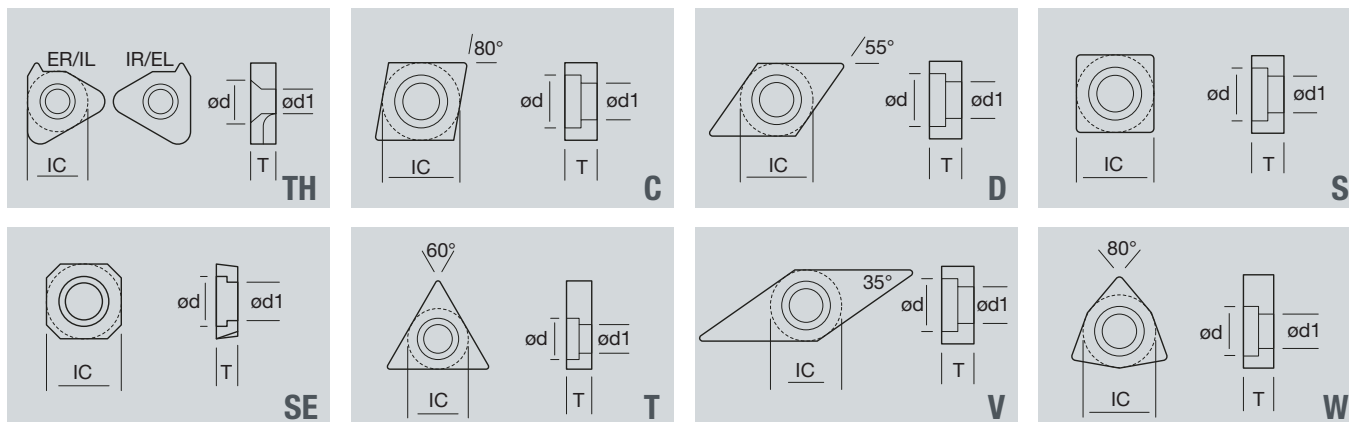
SPARE PARTS /

-  INSERTS CLAMPING SCREWS
-  VITI PER SERRAGGIO INSERTI
-  WENDEPLATTENSCHRAUBEN
-  VIS DE SERRAGE PLAQUETTE
-  TORNILLOS DE FIJACIÓN PLACAS
-  ВИНТЫ ДЛЯ КРЕПЛЕНИЯ ПЛАСТИН









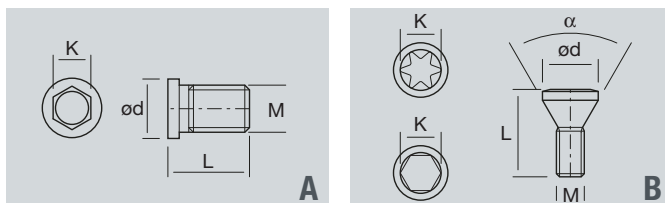
DESCRIPTION	$\varnothing d$	M	L	α	K torx 	TORQUE (Nm)
NT-ST002	2.60	M1.6 x 0.35	3.30	60°	T6	0.50
NT-ST003	2.70	M2 x 0.4	4.20	60°	T6	0.50
NT-ST004	3.10	M2.2 x 0.45	4.90	60°	T7	0.80
NT-ST006	3.10	M2.5 x 0.45	5.00	60°	T7	0.80
NT-ST007	6.80	M4 x 0.5	13.80	60°	T15	3.50
NT-ST009	2.70	M2 x 0.4	3.60	60°	T6	0.50
NT-ST010	3.50	M2.5 x 0.45	6.00	60°	T7	0.80
NT-ST011	3.50	M2.5 x 0.45	5.60	60°	T9	1.20
NT-ST012	5.30	M3.5 x 0.6	6.90	60°	T15	3.50
NT-ST013	5.30	M3.5 x 0.6	9.00	60°	T15	3.50
NT-ST014	4.30	M3 x 0.5	5.80	90°	T10	1.40
NT-ST015	4.30	M3 x 0.5	6.80	90°	T10	1.40
NT-ST017	5.50	M4 x 0.7	10.70	60°	T15	3.50
NT-ST018	3.50	M2.5 x 0.45	6.00	60°	T8	1.20
NT-ST019	5.50	M4 x 0.7	8.50	60°	T15	3.50
NT-ST020	5.50	M4 x 0.7	9.00	60°	T15	3.50
NT-ST021	7.00	M5 x 0.8	11.00	60°	T20	4.50
NT-ST025	5.50	M3.5 x 0.6	7.30	60°	T15	3.50
NT-ST030	5.50	M3.5 x 0.6	9.00	60°	T15	3.50
NT-ST035	5.10	M3.5 x 0.6	8.80	60°	T15	3.50
NT-ST040	5.50	M3.5 x 0.6	11.50	60°	T15	3.50
NT-ST050	5.50	M4 x 0.5	11.50	60°	T15	3.50
NT-ST059	2.80	M2 x 0.4	4.30	60°	T6	0.50
NT-ST061	3.00	M2.2 x 0.45	5.50	60°	T6	0.50
NT-ST062	3.50	M2.5 x 0.45	6.50	60°	T7	0.80
NT-ST063	5.50	M3.5 x 0.6	8.00	60°	T15	3.50
NT-ST064	5.50	M4 x 0.7	10.00	60°	T15	3.50
NT-ST066	6.40	M5 x 0.8	10.80	43°	T20	4.50
NT-ST075	4.20	M3 x 0.5	7.00	60°	T9	1.20
NT-ST090	4.50	M2.5 x 0.45	7.70	60°	T8	1.20
NT-ST300	6.80	M5 x 0.8	12.00	60°	T20	4.50
NT-ST400	4.30	M3 x 0.5	7.00	60°	T10	1.40



-  SHIM
-  SOTTOPLACCHETTA
-  UNTERLEGPLATTE
-  SOU PLAQUETTE
-  PLACA BASE
-  ПОДЛОЖКА









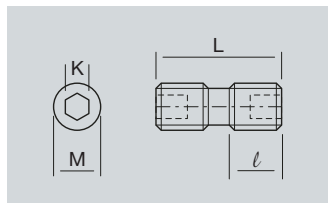
DESCRIPTION	IC	T	ød	ød1	INSERT	DRAWING
NT-SH001	11.40	3.90	8.40	6.70	CC□□12	ref. C
NT-SH002	8.00	3.20	5.00	2.40	TP□□16	ref. T
NT-SH003	9.20	3.20	6.60	5.80	WN□□06	ref. W
NT-SH004	10.70	3.00	6.80	5.20	SE□□13	ref. SE
NT-SH005	9.30	3.20	6.60	5.80	TN□□16	ref. T
NT-SH006	9.10	3.20	6.60	4.50	TN□□16	ref. T
NT-SH007	8.50	3.20	6.60	5.20	DC□□11, DN□□11	ref. D
NT-SH008	12.00	4.80	8.00	7.30	TN□□22	ref. T
NT-SH010	12.20	4.80	8.00	7.30	WN□□08	ref. W
NT-SH011	8.50	3.20	6.60	5.20	CC□□09	ref. C
NT-SH015	11.80	3.20	8.40	6.70	WN□□08	ref. W
NT-SH020	12.50	3.20	8.40	6.70	DN□□1506	ref. D
NT-SH025	12.30	6.40	8.00	7.30	DN□□1504	ref. D
NT-SH030	12.40	4.80	8.00	7.30	CN□□12	ref. C
NT-SH035	12.50	3.20	8.40	6.70	CN□□12	ref. C
NT-SH045	12.30	4.80	8.00	7.30	DN□□1506	ref. D
NT-SH050	8.20	3.20	6.60	5.40	VB□□16, VC□□16	ref. W
NT-SH055	15.50	4.80	10.80	9.70	CN□□16	ref. C
NT-SH060	9.50	3.20	6.00	4.20	16ER/16IL	ref. TH
NT-SH065	9.50	3.20	6.00	4.20	16IR/16EL	ref. TH
NT-SH070	12.30	4.80	8.00	7.30	SN□□12	ref. S
NT-SH075	9.20	3.20	6.60	5.80	VN□□16	ref. V
NT-SH080	18.70	4.80	13.10	11.20	CN□□19	ref. C
NT-SH090	18.70	4.80	13.10	11.20	SN□□19	ref. S


-  SHIM SCREW
-  VITI PER SERRAGGIO SOTTOPLACCHETTA
-  SCHRAUBEN FÜR UNTERLEGPLATTE
-  VIS POUR SERRAGE SOU PLAQUETTE
-  TORNILLOS DE FIJACIÓN PLACAS BASE
-  ВИНТЫ ДЛЯ КРЕПЛЕНИЯ ПОДЛОЖКИ









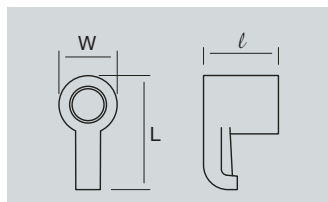
DESCRIPTION	Ød	M	L	α	K		DRAWING
					hexa 	torx 	
NT-SR001	7.80	M6 x 0.75	9.00	-	4	-	ref. A
NT-SR002	6.30	M5 x 0.75	6.00	-	3.5	-	ref. A
NT-SR010	6.30	M5 x 0.75	8.60	-	3.5	-	ref. A
NT-ST008	6.00	M3 x 0.5	8.00	90°	2	-	ref. B
NT-ST022	3.00	M2 x 0.4	5.00	60°	-	T6	ref. B
NT-ST080	5.50	M3 x 0.5	8.90	180°	2.5	-	ref. B
NT-ST190	6.30	M4 x 0.7	8.00	90°	-	T15	ref. B
NT-ST200	7.90	M4 x 0.7	10.00	90°	2.5	-	ref. B
NT-ST250	6.30	M4 x 0.7	8.00	90°	-	T15	ref. B

-  CLAMP SCREW (M-STYLE CLAMPING)
-  VITI PER SERRAGGIO STAFFE (BLOCCAGGIO M)
-  SCHRAUBE FÜR SPANNPRATZE (M HALTER)
-  VIS POUR BRIDE (SERRAGE M)
-  TORNILLOS PARA FIJACIÓN POR CUÑA
-  ВИНТЫ ДЛЯ КРЕПЛЕНИЯ ХОМУТА (КРЕПЕЖ М)








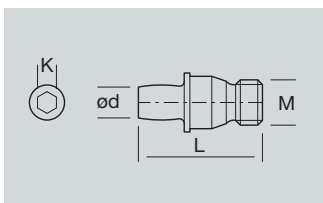
DESCRIPTION	M	L	l	K hexa 		
NT-SC008	M6 x 1	24.00	8.50	3		
NT-SC010	M6 x 1	30.00	11.50	3		
NT-SC030	M5 x 0.8	18.00	5.50	2.5		
NT-SC070	M8 x 1	30.00	13.00	4		


-  CLAMPS (M-STYLE CLAMPING)
-  STAFFE (BLOCCAGGIO M)
-  PRATZEN (M HALTER)
-  BRIDE (SERRAGE M)
-  CUÑAS (FIJACIÓN M)
-  ХОМУТЫ(КРЕПЕЖ М)









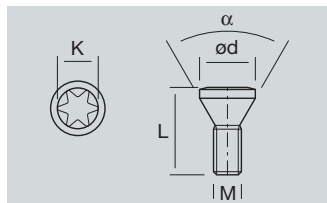
DESCRIPTION	W	L	l			
NT-CS009	7.75	14.90	10.95			
NT-CS010	9.40	18.20	13.50			
NT-CS015	10.80	22.25	17.40			
NT-CS025	9.40	21.45	13.70			
NT-CS030	7.90	16.90	7.90			
NT-CS070	10.70	19.35	16.75			
NT-CS075	9.40	24.45	13.70			

-  ECCENTRIC LOCK PIN (M-STYLE CLAMPING)
-  PERNI ECCENTRICI (BLOCCAGGIO M)
-  EXZENTRISCHE STIFTE (M HALTER)
-  GOUPILLE EXCENTRIQUE POUR SERRRAGE M
-  PERNOS DE CERRADURA (PARA FIJACIÓN M)
-  Штифт эксцентрический (крепёж М)



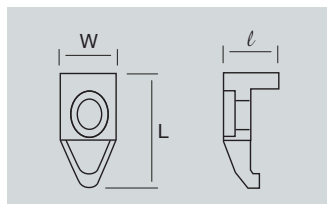
DESCRIPTION	M	L	<i>l</i>	K hexa 		
NT-SP010	M6.3 x 1	17.70	5.00	3		
NT-SP020	M5 x 0.8	14.00	3.70	2		
NT-SP025	M6.3 x 1	19.20	5.00	3		
NT-SP030	M5 x 0.8	11.00	3.70	2		
NT-SP035	M5 x 0.8	11.00	5.02	2.5		
NT-SP040	M8 x 1	21.80	6.20	3		
NT-SP050	M10 x 1	21.80	7.80	4		

-  CLAMP SCREWS (D-STYLE CLAMPING)
-  VITI PER SERRAGGIO STAFFE (BLOCCAGGIO D)
-  SCHRAUBEN FÜR SPANNPRATZEN (D HALTER)
-  VIS POUR BRIDE (SERRAGE D)
-  TORNILLOS PARA FIJACIÓN BRIDAS (FIJACIÓN D)
-  ДЛЯ КРЕПЛЕНИЯ ХОМУТА (КРЕПЁЖ D)









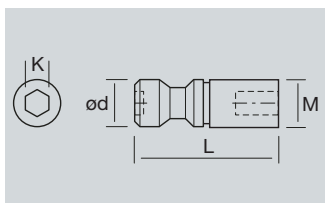
DESCRIPTION	Ød	M	L	K		
NT-SC200	9.70	M6 x 1	24.00	T20		
NT-SC250	6.80	M4 x 0.7	18.80	T15		


-  CLAMPS (D-STYLE CLAMPING)
-  STAFFE (BLOCCAGGIO D)
-  PRATZEN (D HALTER)
-  BRIDE (SERRAGE D)
-  CUÑAS (FIJACIÓN D)
-  ХОМУТЫ (КРЕПЁЖ D)









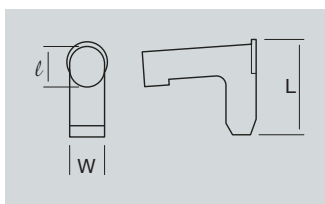
DESCRIPTION	W	L	l			
NT-CS200	13.00	26.00	11.00			
NT-CS210	12.10	29.00	11.00			
NT-CS250	11.00	21.00	10.00			

-  LEVER LOCKING SCREWS (P-STYLE CLAMPING)
-  VITI PER SERRAGGIO LEVE (BLOCCAGGIO P)
-  KNIHEBELSCHRAUBEN (P HALTER)
-  VIS POUR LEVIER (SERRAGE P)
-  TORNILLOS PARA APRETAR LAS PALANCAS (FIJACIÓN P)
-  ВИНТЫ ДЛЯ КРЕПЛЕНИЯ РЫЧАЖКА(КРЕПЁЖ P)



DESCRIPTION	Ød	M	L	K		
				hexa 		
NT-SC020	8.00	M8 x 1	23.50	3		
NT-SC025	8.00	M8 x 1	21.00	3		

-  LEVERS (P-STYLE CLAMPING)
-  LEVE (BLOCCAGGIO P)
-  KNIHEBEL (P HALTER)
-  LEVIER (SERRAGE P)
-  PALANCAS (FIJACIÓN P)
-  РЫЧАЖКИ(КРЕПЁЖ P)



DESCRIPTION	w	L	l			
NT-LL015	4.75	13.60	4.45			
NT-LL020	4.60	14.50	5.00			

DESCRIPTION			DESCRIPTION		
16ER□□□ISO	■ THREADING carbide	232	CNMG□□□□□-NFP	■ TURNING carbide	20
16ER□□□ISO	■ THREADING diamond	244	CNMG□□□□□-NMK	■ TURNING carbide	20
16ER□□□ISO	■ THREADING PCBN	238	CNMG□□□□□-NMM	■ TURNING carbide	21
16IR□□□ISO	■ THREADING carbide	233	CNMG□□□□□-NMP	■ TURNING carbide	20
16IR□□□ISO	■ THREADING diamond	245	CNMG□□□□□-NRK	■ TURNING carbide	20
16IR□□□ISO	■ THREADING PCBN	239	CNMG□□□□□-NRP	■ TURNING carbide	21
APKT□□□□□FR-AL	■ MILLING carbide	281	CNMG□□□□□-NSP	■ TURNING carbide	20
APKT□□□□□PDER-GP	■ MILLING carbide	282	CNMG□□□□□-NTP	■ TURNING carbide	21
APKT□□□□□PDER-TE	■ MILLING carbide	282	CNMG□□□□□-NUP	■ TURNING carbide	21
APMT□□□□□ER-GP	■ MILLING carbide	281	CNMG□□□□□R/L-NMU	■ TURNING carbide	21
APMT□□□□□ER-SC	■ MILLING carbide	281	CNMM□□□□□-MRP	■ TURNING carbide	21
APMT□□□□□ER-TE	■ MILLING carbide	281	CNMN□□□□□-GP	■ TURNING ceramic	103
BD□□.R□□F	■ MILLING diamond	311	CNMX□□□□□-GP	■ TURNING ceramic	103
BD□□.R□□S	■ MILLING PCBN	303	DCGT□□□□□	■ TURNING diamond	85
BGF-HLD □□□□R/L	■ GROOVING holders	267	DCGT□□□□□-LRG	■ TURNING diamond	85
BGFR/L □□□-□□□	■ GROOVING diamond	262	DCGW□□□□□	■ TURNING diamond	85
BGFR/L □□□-□□□	■ GROOVING PCBN	256	DCGW□□□□□-2E-CC	■ TURNING PCBN	55
BGFR/L □□□-□□□FR	■ GROOVING diamond	263	DCGW□□□□□-2E-GP	■ TURNING PCBN	55
BGFR/L □□□-□□□FR	■ GROOVING PCBN	257	DCGW□□□□□-2E-GS	■ TURNING PCBN	55
CCGT□□□□□	■ TURNING diamond	83	DCGW□□□□□-2E-HI	■ TURNING PCBN	55
CCGT□□□□□-LRG	■ TURNING diamond	83	DCGW□□□□□-LRG	■ TURNING diamond	85
CCGW□□□□□	■ TURNING diamond	83	DCGW□□□□□R/L-1S	■ TURNING diamond	85
CCGW□□□□□-2E-CC	■ TURNING PCBN	51	DCGX□□□□□-CBF	■ TURNING diamond	85
CCGW□□□□□-2E-GP	■ TURNING PCBN	51	DCGX□□□□□-CBG	■ TURNING diamond	85
CCGW□□□□□-2E-GS	■ TURNING PCBN	51	DCGX□□□□□-PMN	■ TURNING carbide	23
CCGW□□□□□-2E-HI	■ TURNING PCBN	51	DCMT□□□□□-PMU	■ TURNING carbide	23
CCGW□□□□□-2E-WH	■ TURNING PCBN	51	DNGA□□□□□	■ TURNING diamond	86
CCGW□□□□□-LRG	■ TURNING diamond	83	DNGA□□□□□-2E-CC	■ TURNING PCBN	56
CCGW□□□□□R/L-1S	■ TURNING diamond	83	DNGA□□□□□-2E-GP	■ TURNING PCBN	56
CCGX□□□□□-CBF	■ TURNING diamond	83	DNGA□□□□□-2E-HI	■ TURNING PCBN	56
CCGX□□□□□-CBG	■ TURNING diamond	83	DNGA□□□□□-4EV-CC	■ TURNING PCBN	57
CCGX□□□□□-PMN	■ TURNING carbide	19	DNGA□□□□□-4EV-GP	■ TURNING PCBN	57
CCMT□□□□□-PMU	■ TURNING carbide	19	DNGA□□□□□-4EV-HI	■ TURNING PCBN	57
CNGA□□□□□	■ TURNING diamond	84	DNGA□□□□□-CC	■ TURNING ceramic	104
CNGA□□□□□-2E-CC	■ TURNING PCBN	52	DNGA□□□□□-GP	■ TURNING ceramic	104
CNGA□□□□□-2E-GP	■ TURNING PCBN	52	DNGA□□□□□-GS	■ TURNING ceramic	104
CNGA□□□□□-2E-HI	■ TURNING PCBN	52	DNGA□□□□□-LRG	■ TURNING diamond	86
CNGA□□□□□-2E-WH	■ TURNING PCBN	52	DNGG□□□□□-NMN	■ TURNING carbide	25
CNGA□□□□□-4EV-CC	■ TURNING PCBN	53	DNGM□□□□□	■ TURNING diamond	86
CNGA□□□□□-4EV-GP	■ TURNING PCBN	53	DNGM□□□□□-LRG	■ TURNING diamond	86
CNGA□□□□□-4EV-HI	■ TURNING PCBN	53	DNGN□□□□□-GP	■ TURNING ceramic	105
CNGA□□□□□-4EV-WH	■ TURNING PCBN	53	DNGN□□□□□-GP	■ TURNING PCBN	58
CNGA□□□□□-CC	■ TURNING ceramic	102	DNMA□□□□□	■ TURNING carbide	24
CNGA□□□□□-GP	■ TURNING ceramic	102	DNMA□□□□□-GP	■ TURNING ceramic	104
CNGA□□□□□-GS	■ TURNING ceramic	102	DNMG□□□□□-NFM	■ TURNING carbide	25
CNGA□□□□□-LRG	■ TURNING diamond	84	DNMG□□□□□-NFP	■ TURNING carbide	24
CNGA□□□□□-WH	■ TURNING ceramic	102	DNMG□□□□□-NMK	■ TURNING carbide	24
CNGA□□□□□-WK	■ TURNING ceramic	102	DNMG□□□□□-NMM	■ TURNING carbide	25
CNGG□□□□□-NMN	■ TURNING carbide	22	DNMG□□□□□-NMP	■ TURNING carbide	24
CNMG□□□□□	■ TURNING diamond	84	DNMG□□□□□-NRK	■ TURNING carbide	24
CNMG□□□□□-LRG	■ TURNING diamond	84	DNMG□□□□□-NRP	■ TURNING carbide	24
CNGN□□□□□-CC	■ TURNING ceramic	103	DNMG□□□□□-NSP	■ TURNING carbide	24
CNGN□□□□□-GP	■ TURNING ceramic	103	DNMG□□□□□-NTP	■ TURNING carbide	24
CNGN□□□□□-GP	■ TURNING PCBN	54	DNMG□□□□□-NUP	■ TURNING carbide	24
CNGX□□□□□-GP	■ TURNING ceramic	103	DNMG□□□□□R/L-NMU	■ TURNING carbide	24
CNMA□□□□□	■ TURNING carbide	20	HNEN□□□□□-GP	■ MILLING ceramic	319
CNMA□□□□□-GP	■ TURNING ceramic	102	HNEX□□□□□-GG	■ MILLING carbide	283
CNMG□□□□□-NFM	■ TURNING carbide	21	HNEX□□□□□-GH	■ MILLING carbide	283

DESCRIPTION		
HNE□□□□□□-GL	■ MILLING carbide	283
HNE□□□□□□-WK	■ MILLING carbide	283
KNUX□□□□□□R/L-11	■ TURNING carbide	26
LNGX□□□□□□ER-GP	■ MILLING carbide	284
LNGX□□□□□□ER-TE	■ MILLING carbide	284
MICRO CC.R□□	■ MICROBORING diamond	220
MICRO CC.R□□-1E-CC	■ MICROBORING PCBN	213
MICRO CC.R□□-1E-GP	■ MICROBORING PCBN	213
MICRO CC.R□□-1E-WH	■ MICROBORING PCBN	213
MICRO CC.R□□-GBL	■ MICROBORING carbide	206
MICRO CN.R□□-4EV-CC	■ MICRONEGA PCBN	183
MICRO CN.R□□-4EV-GP	■ MICRONEGA PCBN	183
MICRO CN.R□□-4EV-WH	■ MICRONEGA PCBN	183
MICRO CN.R□□-CBF	■ MICRONEGA diamond	190
MICRO CN.R□□-CBG	■ MICRONEGA diamond	190
MICRO CN.R□□-GBR/L	■ MICRONEGA carbide	176
MICRO CN.R□□-GM	■ MICRONEGA carbide	176
MICRO CN.R□□-LRG	■ MICRONEGA diamond	190
MICRO CN.R□□-SS	■ MICRONEGA carbide	176
MICRO DN.R□□-4EV-CC	■ MICRONEGA PCBN	184
MICRO DN.R□□-4EV-GP	■ MICRONEGA PCBN	184
MICRO DN.R□□-4EV-WH	■ MICRONEGA PCBN	184
MICRO DN.R□□-CBF	■ MICRONEGA diamond	191
MICRO DN.R□□-CBG	■ MICRONEGA diamond	191
MICRO DN.R□□-GBR/L	■ MICRONEGA carbide	177
MICRO DN.R□□-GM	■ MICRONEGA carbide	177
MICRO DN.R□□-LRG	■ MICRONEGA diamond	191
MICRO DN.R□□-SS	■ MICRONEGA carbide	177
NT-A□□□-DCLNR/L12	■ TURNING holders	133
NT-A□□□-DDUNR/L1506	■ TURNING holders	142
NT-A□□□-DTFNR/L16	■ TURNING holders	154
NT-A□□□-DWLNR/L08	■ TURNING holders	168
NT-A□□□-MICRO-CC-RH	■ MICROBORING holders	225
NT-A□□□-MICRO-CN-RH/LH	■ MICRONEGA holders	197
NT-A□□□-MICRO-DN-RH/LH	■ MICRONEGA holders	199
NT-A□□□-PCLNR/L12	■ TURNING holders	134
NT-A□□□-PWLNR/L08	■ TURNING holders	169
NT-A□□□-SCLCR/L□□	■ TURNING holders	128
NT-A□□□-SDUCR/L□□	■ TURNING holders	130
NT-A□□□-STFCR/L□□	■ TURNING holders	150
NT-AP11 D...	■ MILLING holders	327
NT-AP16 D...	■ MILLING holders	327
NT-ARB D...	■ MILLING holders	330
NT-C□□□-MICRO-CC-RH	■ MICROBORING holders	225
NT-CS□□□	■ SPARE PARTS	360,362
NT-DCLNR/L□□□□□12	■ TURNING holders	131
NT-DDJNR/L□□□□□□□	■ TURNING holders	141
NT-DRS-2D D...	■ DRILLING holders	348
NT-DRS-3D D...	■ DRILLING holders	350
NT-DRS-4D D...	■ DRILLING holders	352
NT-DTGNR/L□□□□□16	■ TURNING holders	153
NT-DTJNR/L□□□□□16	■ TURNING holders	153
NT-DVJNR/L□□□□□16	■ TURNING holders	163
NT-DVNN□□□□□16	■ TURNING holders	163
NT-DWLNR/L□□□□□□□	■ TURNING holders	167
NT-E□□□-MICRO-CN-RH/LH	■ MICRONEGA holders	198
NT-E□□□-MICRO-DN-RH/LH	■ MICRONEGA holders	200
NT-E□□□-SCLCR/L□□	■ TURNING holders	130

DESCRIPTION		
NT-E□□□-SDUCR/L□□	■ TURNING holders	139
NT-E□□□-STFCR/L□□	■ TURNING holders	151
NT-EX□□□-MICRO-CN-RH/LH	■ MICRONEGA holders	197
NT-EX□□□-MICRO-DN-RH/LH	■ MICRONEGA holders	199
NT-HN09 D...	■ MILLING holders	331
NT-L□□□□	■ SPARE PARTS	363
NT-MCKNR/L□□□□□12	■ TURNING holders	132
NT-MCLNR/L□□□□□□□	■ TURNING holders	131
NT-MCRNR/L□□□□□12	■ TURNING holders	132
NT-MDJNR/L□□□□□1506	■ TURNING holders	141
NT-MINI-B D...	■ MICROBORING diamond	221
NT-MINI-B D...	■ MICROBORING PCBN	214
NT-MINI-BH D...	■ MICROBORING PCBN	215
NT-MSBNR/L□□□□□□□	■ TURNING holders	145
NT-MSKNR/L□□□□□□□	■ TURNING holders	146
NT-MSSDNN□□□□□12	■ TURNING holders	145
NT-MSSNR/L□□□□□□□	■ TURNING holders	146
NT-MTJNR/L□□□□□□□	■ TURNING holders	154
NT-MVJNR/L□□□□□16	■ TURNING holders	164
NT-MVVNN□□□□□16	■ TURNING holders	164
NT-MWLNR/L□□□□□□□	■ TURNING holders	167
NT-OD06 D...	■ MILLING holders	332
NT-OF05 D...	■ MILLING holders	333
NT-PCLNR/L□□□□□12	■ TURNING holders	133
NT-PDJNR/L□□□□□1506	■ TURNING holders	142
NT-PWLNR/L□□□□□08	■ TURNING holders	168
NT-RD05 D...	■ MILLING holders	334
NT-RD07 D...	■ MILLING holders	334
NT-RD10 D...	■ MILLING holders	334
NT-RD12 D...	■ MILLING holders	335
NT-RD16 D...	■ MILLING holders	335
NT-S□□□-CTUPR/L□□	■ TURNING holders	157
NT-S□□□-MCLNR/L□□	■ TURNING holders	162
NT-S□□□-MDUNR/L1506	■ TURNING holders	143
NT-S□□□-MSKNR/L□□	■ TURNING holders	147
NT-S□□□-MTUNR/L□□	■ TURNING holders	155
NT-S□□□-MVQNR/L□□	■ TURNING holders	165
NT-S□□□-MVUNR/L□□	■ TURNING holders	165
NT-S□□□-MWLNR/L□□	■ TURNING holders	169
NT-S□□□-SCLCR/L□□	■ TURNING holders	129
NT-S□□□-SCZCR/L□□	■ TURNING holders	130
NT-S□□□-SDQCR/L□□	■ TURNING holders	137
NT-S□□□-SDUCR/L□□	■ TURNING holders	138
NT-S□□□-SDZCR/L□□	■ TURNING holders	140
NT-S□□□-SSKCR/L□□	■ TURNING holders	144
NT-S□□□-STFCR/L□□	■ TURNING holders	151
NT-S□□□-STUBR/L06	■ TURNING holders	148
NT-S□□□-STUPR/L□□	■ TURNING holders	156
NT-S□□□-SVJCR/L□□	■ TURNING holders	160
NT-S□□□-SVQCR/L□□	■ TURNING holders	161
NT-S□□□-SVUCR/L□□	■ TURNING holders	161
NT-S□□□-SVZCR/L□□	■ TURNING holders	162
NT-SC□□□	■ SPARE PARTS	360,362,363
NT-SCACR/L□□□□□□□	■ TURNING holders	127
NT-SCLCR/L□□□□□□□	■ TURNING holders	127
NT-SCLCR/L□□□□□□□□N	■ TURNING holders	128
NT-SDACR/L□□□□□□□	■ TURNING holders	135
NT-SDJCR/L□□□□□□□	■ TURNING holders	135

DESCRIPTION			DESCRIPTION		
NT-SDJCR/L□□□□□□□□	TURNING holders	136	RPEW□□□□□□MO-TE	MILLING carbide	290
NT-SDNCN□□□□□□□□	TURNING holders	136	RPMT□□□□□□MO-GP	MILLING carbide	290
NT-SE13 D...	MILLING holders	337	RPMW□□□□□□MO-TE	MILLING carbide	290
NT-SER/L□□□□□□□16	THREADING holders	249	SCGW□□□□□□□-GP	TURNING ceramic	108
NT-SH□□□□	SPARE PARTS	358	SCGX□□□□□□□-PMN	TURNING carbide	27
NT-SIR/L□□□□□-□□	THREADING holders	249	SCMT□□□□□□□-PMU	TURNING carbide	27
NT-SLB S...	TURNING holders	170	SEET□□□□□□□□□-AL	MILLING carbide	291
NT-SLV S...	MICROBORING holders	226	SEET□□□□□□□□□-GG	MILLING carbide	291
NT-SN12-75° D...	MILLING holders	338	SEET□□□□□□□□□-GH	MILLING carbide	291
NT-SP□□□□	SPARE PARTS	361	SEET□□□□□□□□□-GP	MILLING carbide	291
NT-SR□□□□	SPARE PARTS	359	SEET□□□□□□□□□-SC	MILLING carbide	291
NT-SSDCN□□□□□□□□	TURNING holders	144	SEET□□□□□□□□□-TE	MILLING carbide	291
NT-ST□□□□	SPARE PARTS	357,359	SNCN□□□□□-WK	MILLING ceramic	320
NT-STACR/L□□□□□□□□	TURNING holders	149	SNEN□□□□□□□-GP	MILLING PCBN	304
NT-STFCR/L□□□□□□□□	TURNING holders	149	SNEN□□□□□□□-WK	MILLING PCBN	304
NT-STGCR/L□□□□□□□□	TURNING holders	150	SNGA□□□□□□□-2E-CC	TURNING PCBN	60
NT-SWJBR/L□□□□□□□□	TURNING holders	158	SNGA□□□□□□□-2E-GP	TURNING PCBN	60
NT-SWJCR/L□□□□□□□□	TURNING holders	159	SNGA□□□□□□□-2E-HI	TURNING PCBN	60
NT-SVPCR/L□□□□□□□□	TURNING holders	159	SNGA□□□□□□□-8EV-CC	TURNING PCBN	61
NT-SWBN□□□□□□□□	TURNING holders	158	SNGA□□□□□□□-8EV-GP	TURNING PCBN	61
NT-SWCN□□□□□□□□	TURNING holders	160	SNGA□□□□□□□-8EV-HI	TURNING PCBN	61
NT-V□□□-SCLCR/L□□-□□	TURNING holders	129	SNGA□□□□□□□-CC	TURNING ceramic	109
NT-V□□□-SDQCR/L□□-□□	TURNING holders	137	SNGA□□□□□□□-GP	TURNING ceramic	109
NT-V□□□-SDUCR/L□□-□□	TURNING holders	139	SNGG□□□□□□□-NMN	TURNING carbide	29
NT-V□□□-SIR□□-□□	THREADING holders	250	SNGN□□□□□□□-CC	TURNING ceramic	110
NT-V□□□-STLCR/L□□-□□	TURNING holders	152	SNGN□□□□□□□-GP	MILLING ceramic	320
NT-V□□□-SWJCR/L□□-□□	TURNING holders	166	SNGN□□□□□□□-GP	MILLING PCBN	304
NT-XP08 D...-AL	MILLING holders	339	SNGN□□□□□□□-GP	TURNING ceramic	110
NT-XP08 D...-ST	MILLING holders	340	SNGN□□□□□□□-GP	TURNING PCBN	62
ODKT□□□□□□□-AL	MILLING carbide	285	SNGX□□□□□□□-GP	TURNING ceramic	110
ODKT□□□□□□□-GP	MILLING carbide	285	SNGX□□□□□□□-GS	MILLING ceramic	320
ODKT□□□□□□□-SC	MILLING carbide	285	SNGX□□□□□□ANEN-GP	MILLING carbide	292
ODKT□□□□□□□-TE	MILLING carbide	285	SNMA□□□□□□□	TURNING carbide	28
ODKT□□□□□□□-WU	MILLING carbide	285	SNMA□□□□□□□-GP	TURNING ceramic	109
OFKT□□□□□□□-GP	MILLING carbide	286	SNMG□□□□□□□-NFM	TURNING carbide	29
RCET□□□□□□MO-SC	MILLING carbide	287	SNMG□□□□□□□-NFP	TURNING carbide	28
RCGX□□□□□□□-GP	TURNING ceramic	106	SNMG□□□□□□□-NMK	TURNING carbide	28
RCGX□□□□□□□-GS	TURNING ceramic	106	SNMG□□□□□□□-NMM	TURNING carbide	29
RCGX□□□□□□□-HI	TURNING ceramic	106	SNMG□□□□□□□-NMP	TURNING carbide	28
RDET□□□□□□□MO-GP	MILLING carbide	288	SNMG□□□□□□□-NRK	TURNING carbide	28
RDET□□□□□□□MO-SC	MILLING carbide	288	SNMG□□□□□□□-NRP	TURNING carbide	28
RDET□□□□□□□MO-SC-D6	MILLING carbide	289	SNMG□□□□□□□-NSP	TURNING carbide	28
RDEW□□□□□□□MO-GP	MILLING carbide	288	SNMG□□□□□□□-NTP	TURNING carbide	28
RDEW□□□□□□□MO-TE	MILLING carbide	288	SNMG□□□□□□□-NUP	TURNING carbide	28
RDEW□□□□□□□MO-TE-D6	MILLING carbide	289	SNMG□□□□□□□R/L-NMU	TURNING carbide	29
RDEW□□□□□□□MO-TE-D8	MILLING carbide	289	SNMM□□□□□□□-MRP	TURNING carbide	29
RDEW□□□□□□□MO-TE-S	MILLING carbide	288	SNMN□□□□□□□-GP	MILLING ceramic	320
RDMT□□□□□□□MO-GP	MILLING carbide	288	SNMN□□□□□□□-GP	TURNING ceramic	110
RDMW□□□□□□□MO-TE	MILLING carbide	288	SNMX□□□□□□□-GP	TURNING ceramic	110
RDMW□□□□□□□MO-TE-D6	MILLING carbide	289	SPHX□□□□□□PCTR-GP	MILLING ceramic	321
RDMW□□□□□□□MO-TE-D8	MILLING carbide	289	SPMX□□□□□□□-GP	DRILLING carbide	345
RNGN□□□□□□□-CC	TURNING ceramic	107	TCGT□□□□□□□□	TURNING diamond	87
RNGN□□□□□□□-GP	TURNING ceramic	107	TCGT□□□□□□□□-LRG	TURNING diamond	87
RNGN□□□□□□□-GP	TURNING PCBN	59	TCGW□□□□□□□□	TURNING diamond	87
RNGN□□□□□□□-HI	TURNING ceramic	107	TCGW□□□□□□□□-1S	TURNING diamond	87
RNGN□□□□□□□-HI	TURNING PCBN	59	TCGW□□□□□□□□-3E-CC	TURNING PCBN	63
RPET□□□□□□□MO-GP	MILLING carbide	290	TCGW□□□□□□□□-3E-GP	TURNING PCBN	63
RPET□□□□□□□MO-SC	MILLING carbide	290	TCGW□□□□□□□□-3E-HI	TURNING PCBN	63

DESCRIPTION		
TCGW□□□□□□-LRG	TURNING diamond	87
TCGX□□□□□□-CBF	TURNING diamond	87
TCGX□□□□□□-CBG	TURNING diamond	87
TCGX□□□□□□-PMN	TURNING carbide	30
TCMT□□□□□□-PMU	TURNING carbide	30
TNGA□□□□□□	TURNING diamond	88
TNGA□□□□□□-3E-CC	TURNING PCBN	64
TNGA□□□□□□-3E-GP	TURNING PCBN	64
TNGA□□□□□□-3E-HI	TURNING PCBN	64
TNGA□□□□□□-6EV-CC	TURNING PCBN	65
TNGA□□□□□□-6EV-GP	TURNING PCBN	65
TNGA□□□□□□-6EV-HI	TURNING PCBN	65
TNGA□□□□□□-CC	TURNING ceramic	111
TNGA□□□□□□-GP	TURNING ceramic	111
TNGA□□□□□□-GS	TURNING ceramic	111
TNGA□□□□□□-LRG	TURNING diamond	88
TNGG□□□□□□-NMN	TURNING carbide	32
TNGM□□□□□□	TURNING diamond	88
TNGM□□□□□□-LRG	TURNING diamond	88
TNGN□□□□□□-CC	TURNING ceramic	112
TNGN□□□□□□-GP	TURNING ceramic	112
TNGN□□□□□□-GP	TURNING PCBN	66
TNMA□□□□□□	TURNING carbide	31
TNMG□□□□□□-NFM	TURNING carbide	32
TNMG□□□□□□-NFP	TURNING carbide	31
TNMG□□□□□□-NMK	TURNING carbide	31
TNMG□□□□□□-NMM	TURNING carbide	32
TNMG□□□□□□-NMP	TURNING carbide	31
TNMG□□□□□□-NRK	TURNING carbide	31
TNMG□□□□□□-NRP	TURNING carbide	31
TNMG□□□□□□-NSP	TURNING carbide	31
TNMG□□□□□□-NUP	TURNING carbide	31
TNMG□□□□□□R/L-NMU	TURNING carbide	32
TPGN□□□□□□-CC	TURNING ceramic	113
TPGN□□□□□□-GP	TURNING ceramic	113
TPGT□□□□□□	TURNING diamond	89
TPGW□□□□□□	TURNING diamond	89
TPGW□□□□□□-3E-CC	TURNING PCBN	67
TPGW□□□□□□-3E-GP	TURNING PCBN	67
TPGW□□□□□□-3E-HI	TURNING PCBN	67
TPGX□□□□□□-CBF	TURNING diamond	89
TPGX□□□□□□-CBG	TURNING diamond	89
VBGT□□□□□□	TURNING diamond	90
VBGT□□□□□□-LRG	TURNING diamond	90
VBGW□□□□□□	TURNING diamond	90
VBGW□□□□□□-2E-CC	TURNING PCBN	68
VBGW□□□□□□-2E-GP	TURNING PCBN	68
VBGW□□□□□□-2E-GS	TURNING PCBN	68
VBGW□□□□□□-2E-HI	TURNING PCBN	68
VBGW□□□□□□-LRG	TURNING diamond	90
VBGX□□□□□□-CBF	TURNING diamond	90
VBGX□□□□□□-CBG	TURNING diamond	90
VBMT□□□□□□-PMU	TURNING carbide	33
VCGT□□□□□□	TURNING diamond	93
VCGT□□□□□□-LRG	TURNING diamond	93
VCGW□□□□□□	TURNING diamond	93
VCGW□□□□□□-2E-CC	TURNING PCBN	69
VCGW□□□□□□-2E-GP	TURNING PCBN	69

DESCRIPTION		
VCGW□□□□□□-LRG	TURNING diamond	93
VCGW□□□□□□R/L-1S	TURNING diamond	90
VCGX□□□□□□-CBF	TURNING diamond	93
VCGX□□□□□□-CBG	TURNING diamond	93
VCGX□□□□□□-PMN	TURNING carbide	34
VCMT□□□□□□-PMU	TURNING carbide	34
VNGA□□□□□□-2E-CC	TURNING PCBN	70
VNGA□□□□□□-2E-GP	TURNING PCBN	70
VNGA□□□□□□-2E-HI	TURNING PCBN	70
VNGA□□□□□□-4EV-CC	TURNING PCBN	71
VNGA□□□□□□-4EV-GP	TURNING PCBN	71
VNGA□□□□□□-4EV-HI	TURNING PCBN	71
VNGA□□□□□□-CC	TURNING ceramic	114
VNGA□□□□□□-GP	TURNING ceramic	114
VNGA□□□□□□-GS	TURNING ceramic	114
VNMG□□□□□□-NMN	TURNING carbide	35
VNMG□□□□□□-NFM	TURNING carbide	35
VNMG□□□□□□-NFP	TURNING carbide	35
VNMG□□□□□□-NMK	TURNING carbide	35
VNMG□□□□□□-NMM	TURNING carbide	35
VNMG□□□□□□-NMP	TURNING carbide	35
VNMG□□□□□□-NRK	TURNING carbide	35
VNMG□□□□□□-NSP	TURNING carbide	35
VNMG□□□□□□-NUP	TURNING carbide	35
WCMT□□□□□□-PMU	TURNING carbide	36
WNGA□□□□□□	TURNING diamond	92
WNGA□□□□□□-3E-CC	TURNING PCBN	72
WNGA□□□□□□-3E-GP	TURNING PCBN	72
WNGA□□□□□□-3E-HI	TURNING PCBN	72
WNGA□□□□□□-6EV-CC	TURNING PCBN	73
WNGA□□□□□□-6EV-GP	TURNING PCBN	73
WNGA□□□□□□-6EV-HI	TURNING PCBN	73
WNGA□□□□□□-CC	TURNING ceramic	115
WNGA□□□□□□-GP	TURNING ceramic	115
WNGA□□□□□□-LRG	TURNING diamond	92
WNGG□□□□□□-NMN	TURNING carbide	38
WNGM□□□□□□	TURNING diamond	92
WNGM□□□□□□-LRG	TURNING diamond	92
WNGX□□□□□□ER-GP	MILLING carbide	293
WNMA□□□□□□	TURNING carbide	37
WNMG□□□□□□-NFM	TURNING carbide	38
WNMG□□□□□□-NFP	TURNING carbide	37
WNMG□□□□□□-NMK	TURNING carbide	37
WNMG□□□□□□-NMM	TURNING carbide	38
WNMG□□□□□□-NMP	TURNING carbide	37
WNMG□□□□□□-NRK	TURNING carbide	37
WNMG□□□□□□-NRP	TURNING carbide	37
WNMG□□□□□□-NSP	TURNING carbide	37
WNMG□□□□□□-NTP	TURNING carbide	37
WNMG□□□□□□-NUP	TURNING carbide	37
XPGT□□□□□□F-1E	MILLING diamond	312
XPGT□□□□□□FC-1E	MILLING diamond	312
XPGW□□□□□□-2E-GP	MILLING PCBN	305



STOCK CLASSIFICATION

- , ● Standard stock items, usually available in warehouse.
- , ○ Non standard stock items, please ask for availability and minimum order quantity if applicable.
- Stock exhaustion.
- ★ Future introduction .
- , ● Not included in the previous catalogue.

STANDARD PACKAGING

- holders, PCBN, diamond 1 piece
- carbide, ceramic 10 pieces

Due to continuous evolution of cutting materials and introduction of new products, stock situation reported in the present catalogue may vary without notice.



CLASSIFICAZIONE STOCK

- , ● Materiale stock standard, normalmente disponibile a magazzino.
- , ○ Materiale NON stock standard, richiedere disponibilità ed eventuale quantitativo minimo.
- Esaurimento stock.
- ★ Articolo di futura introduzione.
- , ● Non presente nel catalogo 2013.

CONFEZIONAMENTO STANDARD

- holders, PCBN, diamond 1 pezzo
- carbide, ceramic 10 pezzi

Grazie alla continua introduzione di nuovi prodotti ed all'evoluzione dei materiali da taglio, la situazione stock menzionata nel presente catalogo può variare senza preavviso.



KLASSIFIZIERUNG DER VERFÜGBARKEIT

- , ● Stock standard, normalerweise Verfügbar - Lagerware.
- , ○ NICHT Stock standard, KEINE Lagerware. Verfügbarkeit und Mindestmenge muss angefragt werden.
- Vorraterschöpfung.
- ★ Artikel, der in Zukunft eingeführt wird.
- , ● Nicht im vorherigen Katalog vorhanden.

STANDARD VERPACKUNGSEINHEIT

- holders, PCBN, diamond 1 Stk
- carbide, ceramic 10 Stk

Wegen der ständigen Entwicklung neuer Produkte und Schneidstoffe, kann die angegebene Verfügbarkeit der Produkte in jedem Moment ohne Voranmeldung geändert werden.



CLASSIFICATION STOCK

- , ● Matériel stock standard, normalement disponible en stock.
- , ○ Matériel stock non standard, demander disponibilité au magasin et éventuellement quantitatif minimum.
- Épuisement du stock.
- ★ Article prochainement introduit.
- , ● Pas présent dans l'ancien catalogue.

CONDITIONEMENT STANDARD

- holders, PCBN, diamond 1 pièce
- carbide, ceramic 10 pièce

Grace à l'introduction continue de nouveaux produits et à l'évolution des outils de coupe, la situation des stocks mentionnés dans ce catalogue peut être modifiée sans préavis.



CLASIFICACIÓN DE STOCK

- , ● Artículos stock standard, usualmente disponibles en almacén.
- , ○ Artículos NON stock standard, ponerse en contacto con nosotros para verificar disponibilidad y eventual cuantía mínima.
- Agotamiento de stock.
- ★ Artículo disponible en futuro.
- , ● Artículo non disponible anteriormente.

CAJA STANDARD

- holders, PCBN, diamond 1 unidad
- carbide, ceramic 10 unidad

En consecuencia de la continua introducción de nuevos productos y de la evolución de los materiales de corte, la clasificación de stock indicada en el presente catálogo puede cambiar sin previo aviso.



КЛАССИФИКАЦИЯ НАЛИЧИЯ НА СКЛАДЕ

- , ● Стандартный склад, обычно в наличии на складе.
- , ○ Нестандартный склад, наличие на складе не гарантируется.
- складские остатки.
- ★ Продукция на фазе внедрения
- , ● Отсутствует в предыдущем каталоге.

СТАНДАРТНАЯ УПАКОВКА

- holders, PCBN, diamond 1 ШТУКА
- carbide, ceramic 10 ШТУК

Благодаря постоянному внедрению новой продукции и разработке новых материалов, продукция упомянутая в данном каталоге, а также наличие на её складе, может изменяться без предварительного уведомления.

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