

NEW PRODUCT NEWS

CHASEMILLPOWER



Small but Powerful Positive Insert with Dovetail Design



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Small but Powerful Positive Insert with Dovetail Design

TaeguTec is proud to introduce a brand new product line to its popular CHASEMILL family. The CHASEMILL POWER line has a unique design with “double dovetail” shape 2PKT inserts that enable high productive machining. The double dovetail insert pocket bears most of the cutting forces and relieves the insert screw from the cutting load thus provides powerful and secure insert clamping. Moreover this unique design makes it possible to clamp the insert with a bigger size screw compared to similar size conventional design inserts. These features combined with the high positive design make the CHASEMILL POWER an excellent choice for high productive machining even in low power and unstable setups.

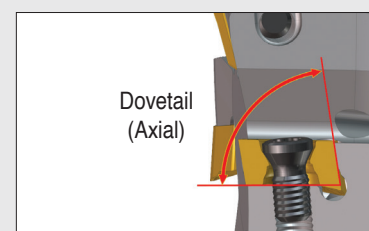
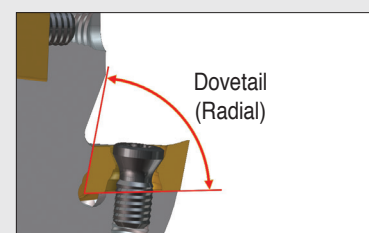
The unique 2PKT 05 insert is a high positive double sided insert with 2 cutting edges. The double sided design protects the unused cutting edge from potential damage or micro-chipping due to chip-hitting. The 2PKT 05 can take depth of cut upto 4.2 mm (max) and produces true 90 degree shoulder even with multiple passes.

This new line is available in end mills from 12mm-32mm, modular type from 12mm-25mm and face mill type from 32mm-40mm. In end mill type these are also available overcut diameter sizes 13mm, 17mm and 21mm to facilitate deep cavity or shoulder machining. 2PKT 05 inserts are available in 2 geometries, “M” for general purpose machining applications and “ML” for low power machining in unstable setups and long overhangs.

The CHASEMILL POWER line is ideally suited for die and mold, automotive, miniature and general purpose industries. The CHASEMILL POWER is a versatile tool that can perform general face milling, true 90 degree shoulder milling, full slotting, straight as well as helical ramping with high productivity and reliability.

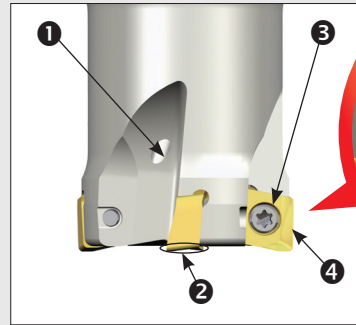
FEATURES

- 2 cutting edges and 90° shoulder milling
- 2PKT 05 insert's high axial, positive geometry generates lower cutting force
- Double dovetail geometries for strong clamping force
- Bigger screw than the competitor's
 - Competitor's similar size insert: M1.8 screw
 - 2PKT 05 insert: M2.0 screw
- Protects against unexpected screw or insert failure



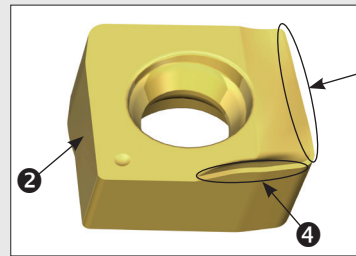
Cutter

- ❶ Internal coolant supply
- ❷ High relief for ramp-down application
- ❸ Bigger screw and double dovetail pocket gives increased insert stability
- ❹ Helical cutting edge for 90 degree cutting

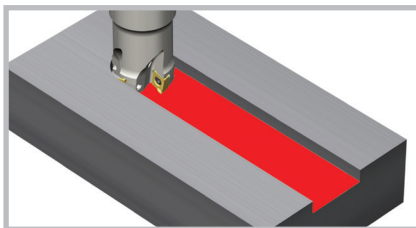


Insert

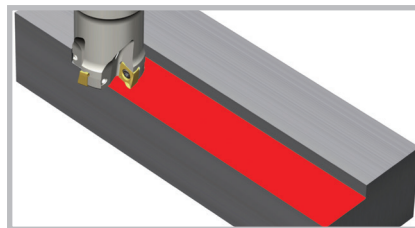
- ❶ 2 corners double side insert
- ❷ Double dovetail shape insert
- ❸ High positive axial rake for low cutting force
- ❹ Wiper for superb surface finish quality



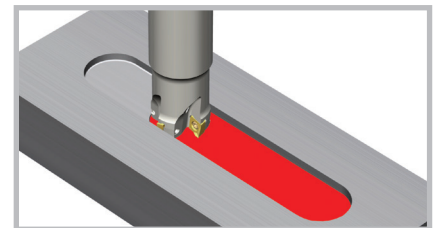
Various milling application with 2PKT insert



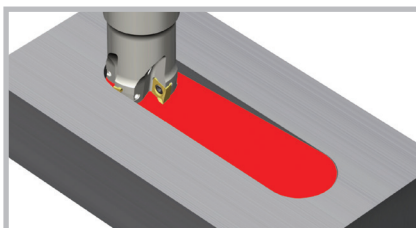
Slotting



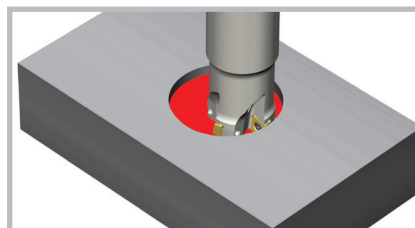
Shouldering



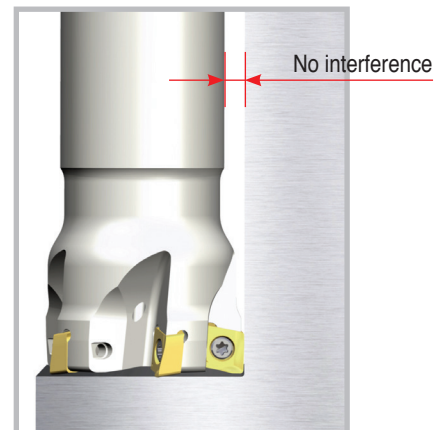
Step down



Ramping



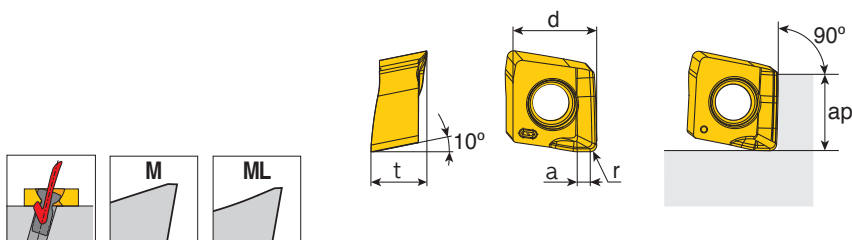
Helical ramping





Interference free type
cutter diameters 13, 17, 21, 25, 32mm types
enable deep milling without interference

2PKT 05

Insert



Size	Dimension (mm)				
	d	t	ap	a	r
05	5.17	3.4	4.7	0.8	0.4

Insert	Designation	Recommended machining conditions		CVD coated		PVD coated				
		Feed (mm/tooth)	ap (mm)	TT6800	TT9540	TT2510	TT3540	TT6080	TT8080	TT9080
	2PKT 050304R-M	0.06~0.18	0.5~4.2	•		•		•	•	•
	2PKT 050304R-ML	0.05~0.12	0.5~4.2		•		•	•	•	•

•: Standard item

2P TE90...-05

End mill

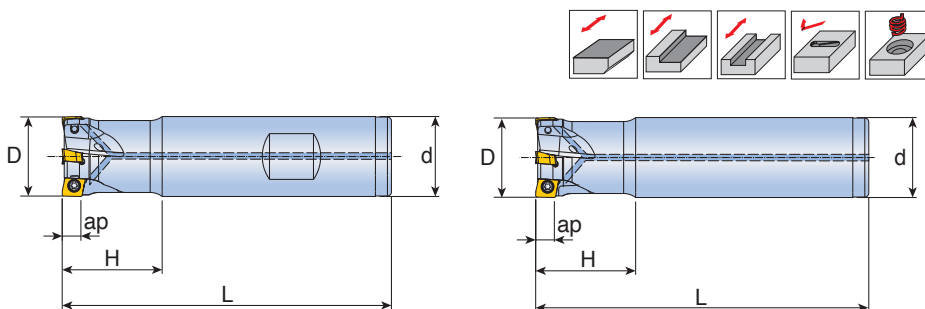
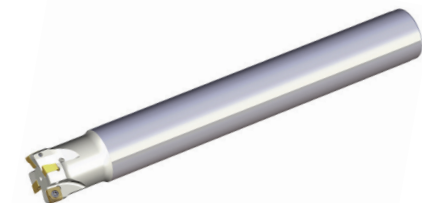


Fig.1

Fig.2

Designation		Dimension (mm)					Coolant	Fig.	Insert
		D	d	L	H	ap			
2P TE90-212-12-05	2	12	12	80	20	4.7	●	2	2PKT 050304R-M 2PKT 050304R-ML
213-12-05	2	13	12	80	20	4.7	●	2	
316-W16-05	3	16	16	90	25	4.7	●	1	
316-16-05-L110	3	16	16	110	25	4.7	●	2	
216-16-05-L150	2	16	16	150	25	4.7	●	2	
317-16-05-L110	3	17	16	110	20	4.7	●	2	
320-W20-05	3	20	20	105	25	4.7	●	1	
420-W20-05	4	20	20	105	25	4.7	●	1	
421-20-05-L160	4	21	20	160	25	4.7	●	2	
425-W20-05	4	25	20	115	25	4.7	●	1	
525-W20-05	5	25	20	115	25	4.7	●	1	
625-W25-05	6	25	25	115	25	4.7	●	1	
632-W25-05	6	32	25	130	30	4.7	●	1	
732-W25-05	7	32	25	130	30	4.7	●	1	

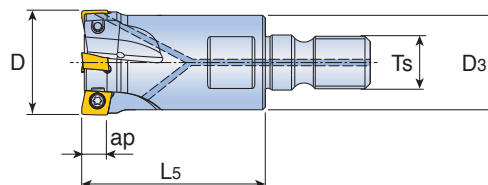
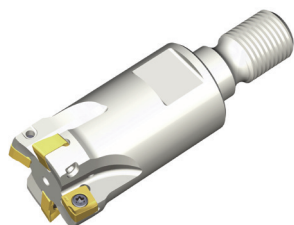
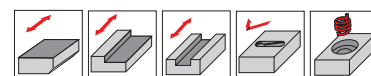
• Coolant through type

Spare parts

Designation	Screw	Wrench			
2P TE90...-05	TS 20043I/HG-P	TD 6P			

2P TE90...-M...-05

Modular



Designation		Dimension (mm)					Coolant	Insert
		D	D ₃	L ₅	T _s	a _p		
2P TE90-212-M06-05	2	12	9.7	23	6	4.7	•	2PKT 050304R-M 2PKT 050304R-ML
316-M08-05	3	16	13	23	8	4.7	•	
420-M10-05	4	20	18	35	10	4.7	•	
525-M12-05	5	25	21	35	12	4.7	•	
625-M12-05	6	25	21	35	12	4.7	•	

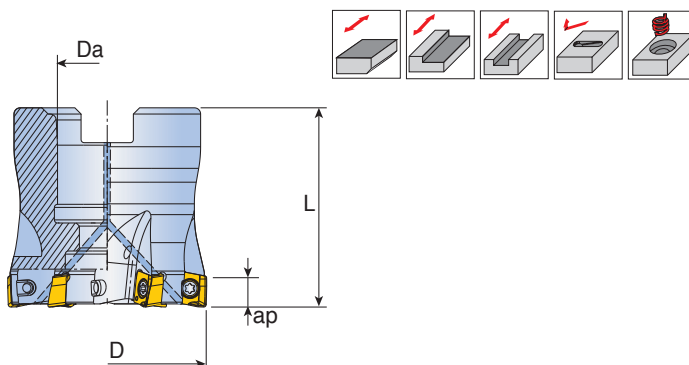
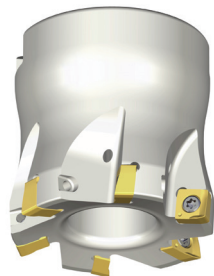
• Coolant through type

Spare parts

Designation	Screw	Wrench			
2P TE90...-M...-05	TS 20043I/HG-P	TD 6P			

2P TF90...-05

Face mill



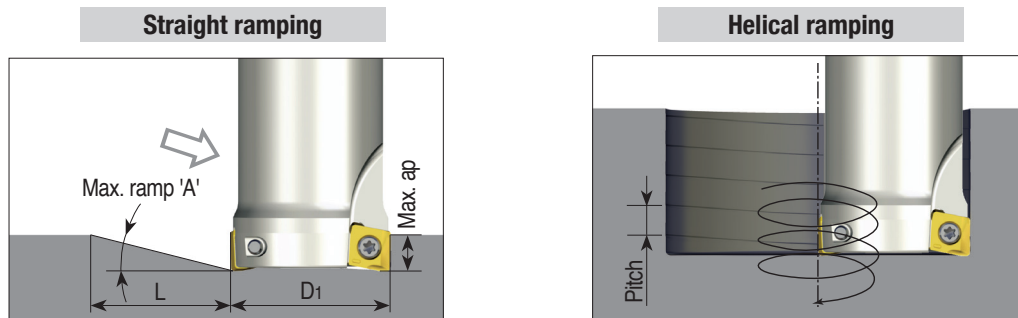
Designation		Dimension (mm)				Coolant	Kg	Mounting bolt	Insert
		D	Da	L	ap				
2P TF90-632-16R-05	6	32	16	32	4.7	●	0.13	SH M8X1.25X25	2PKT 050304R-M 2PKT 050304R-ML
732-16R-05	7	32	16	32	4.7	●	0.12	SH M8X1.25X25	
840-16R-05	8	40	16	40	4.7	●	0.24	SH M8X1.25X30	
840-22R-05	8	40	22	40	4.7	●	0.20	SH M10X1.5X30	

• Mounting bolt with coolant through hole is available on request.
(ordering example: SH M8X1.25X25-C)

Spare parts

Designation	Screw	Wrench			
2P TF90...-05	TS 20043I/HG-P	TD 6P			

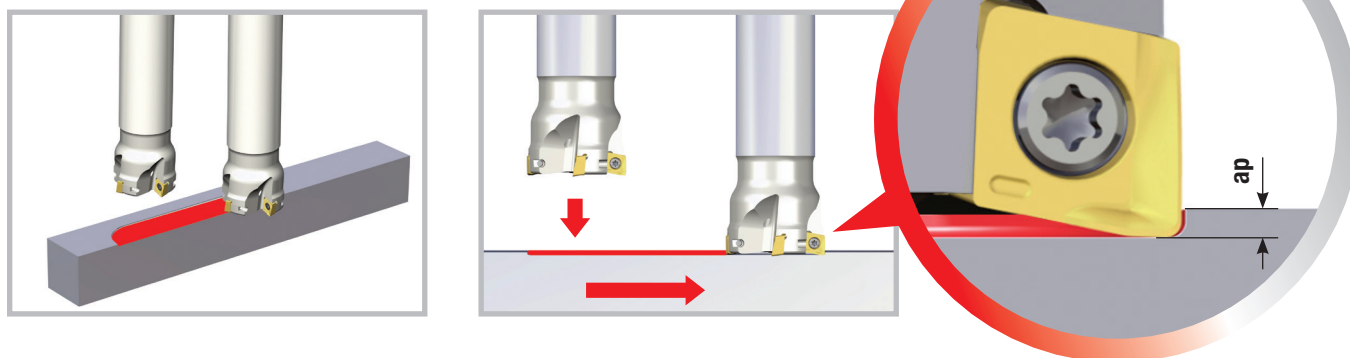
Ramping data



2PKT 05

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
12	7.5	4.7	36	15.9		1.4
					24	4.2
16	4.4	4.7	61	23.9		1.6
					32	3.3
20	3	4.7	90	31.9		1.7
					40	2.8
25	2.2	4.7	122	41.9		1.7
					50	4.7
32	1.6	4.7	168	55.9		1.8
					64	4.7
40	1.2	4.7	224	71.9		4.7
					80	4.7

Step down milling



Max. depth of step down milling (mm)

Max. depth of step down	2PKT 05
ap (mm)	0.7

Recommended cutting conditions

Cutting speed :Vc(m/min)

ISO	Material	Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Coated					
						TT9080	TT8080	TT6800	TT6080	TT2510	
P	Non-alloy steel, cast steel, free cutting steel	< 0.25%C	Annealed	420	125	1	220-370	170-250			
		>= 0.25%C	Annealed	650	190	2	180-310	130-220			
		< 0.55%C	Quenched and tempered	850	250	3	115-195	90-170			
		>= 0.55%C	Annealed	750	220	4	130-210	100-190			
			Quenched and tempered	1000	300	5	115-175	70-160			
	Low alloy steel and cast steel (less than 5% of alloying elements)	Annealed		600	200	6	175-265	150-220			
				930	275	7	130-215	110-190			
		Quenched and tempered		1000	300	8	105-185	80-160			
				1200	350	9	95-160	70-120			
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	85-155	70-110				
Quenched and tempered		1100	325	11	75-135	60-100					
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	115-270	90-200				
		Martensitic	820	240	13	100-230	70-160				
		Austenitic	600	180	14	120-275	100-210				
K	Gray cast iron (GG)	Ferritic		160	15			180-350	200-390		
		Pearlitic		250	16			140-280	160-300		
	Cast iron nodular (GGG)	Ferritic		180	17			115-230	130-250		
		Pearlitic		260	18			100-200	110-210		
	Malleable cast iron	Ferritic		130	19			190-310	210-330		
		Pearlitic		230	20			120-260	130-280		
N	Aluminum - wrought alloy	Not cureable		60	21						
		Cured		100	22						
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23					
			Cured		90	24					
		>12% Si	High temp.		130	25					
	Copper alloys	>1% Pb	Free cutting		110	26					
			Brass		90	27					
	Non-metallic		Duroplastics, fiber plastics			29					
		Hard rubber			30						
S	High temp. alloys	Fe based	Annealed		200	31	40-80	30-65			
			Cured		280	32	30-60	20-45			
		Ni or Co based	Annealed		250	33	35-70	25-50			
			Cured		350	34	30-60	20-40			
			Cast		320	35	35-65	20-45			
	Titanium, Ti alloys		Rm 400		36	90-130	60-100				
Alpha+beta alloys cured		Rm 1050		37	35-70	25-55					
H	Hardened steel	Hardened		55HRC	38	40-75			70-180		
		Hardened		60HRC	39	30-55			50-130		
	Chilled cast iron	Cast		400	40						
	Cast iron nodular	Hardened		55HRC	41						

• For more information of material groups, see the Technical Guide "material conversion table".

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel