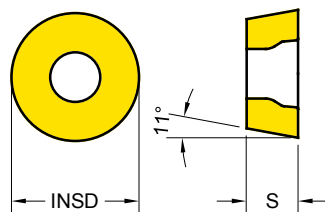


Milling - Profiling - Inserts

RPMT / RPMW - Profiling Positive (Round)



Series	INSD	S	Series	INSD	S
RPM* 08T2	.315	.109	RPM* 1003	.394	.125
RPM* 10T3	.394	.156	RPM* 1204	.472	.187

EDP 1200..

●: Stock item ○: Order made item

P25	P30	P20	P30	P40	K15	K20
M30	K30	M35	S30			
S20	H15					

RPMT RPMW	Designation	Fz (in/tooth)	YG602	YG622	YG712	YG713	YG613	YG501	YG5020
RPMT General	RPMT 08T2M0	- .004~.009	● 0038			○ 0660	● 0676		
	RPMT 10T3M0	- .006~.012	● 0036			○ 0644	● 0665		
	RPMT 1204M0	- .008~.014	● 0037	○ 0401	● 0415	○ 0643	● 0664	● 0462	
-ST Stainless Steel Super Alloy	RPMT 1204M0 -ST	- .004~.012	● 0230				● 0667		
-TR Hardened Steel	RPMT 1204M0 -TR	-				○ 0532			
RPMW Hard Materials	RPMW 1003M0	- .006~.012	● 0204	○ 0402		○ 0646			
	RPMW 1204M0	- .006~.014	● 0039			○ 0648			

Cutting Speed			Vc (ft/min)													
ISO	VDI	Sub Group	YG602		YG622		YG712		YG713		YG613		YG501		YG5020	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
P	1~5	Non-Alloyed Steel	590	1250	460	1310	560	980	660	980	330	690	-	-	-	-
	6~9	Low-Alloyed Steel	390	980	390	1050	590	820	560	890	230	590	-	-	-	-
	10~11	High-Alloyed Steel	230	490	230	560	330	460	280	480	130	290	-	-	-	-
M	12~13	Ferritic & Martensitic	390	660	-	-	-	-	-	-	230	590	-	-	-	-
	14	Austenitic Stainless Steel	430	820	-	-	-	-	-	-	230	660	-	-	-	-
K	15~16	Grey Cast Iron	390	820	390	890	-	-	-	-	-	-	590	1150	660	1150
	17~18	Nodular Cast Iron	430	720	430	790	-	-	-	-	-	-	390	890	490	980
N	21~30	Non-Ferrous Metals (Al)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	31~37	Superalloys & Titanium	80	150	-	-	-	-	-	-	-	-	-	-	-	-
H	38~41	Hard Materials	130	260	130	330	-	-	-	-	-	-	-	-	-	-

Milling - Code System

Insert ISO Code System

TURNING

PARTING & GROOVING

MILLING

DRILLING

TECHNICAL INFORMATION

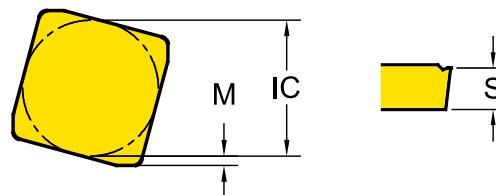
1	2	3	4	5	6	7
A	P	K	T	16	04	08
Shape	Relief Angle (AN)	Tolerance	Clamping & Chipbreaker	Insert Size	Insert Thickness (S)	CornerRadius

1 - Shape

Symbol	Shape	
H	Hexagonal	
O	Octagonal	
P	Pentagonal	
S	Square	
T	Triangular	
V	Rhombic 35°	
W	Trigon	
L	Rectangular	
A	Parallelogram 80°	
R	Round	

2 - Relief Angle (AN)

Symbol	Relief Angle (AN)	
N	No Relief Angle	
B	Relief 5°	
C	Relief 7°	
P	Relief 11°	
D	Relief 15°	
E	Relief 20°	
F	Relief 25°	
O	Special	



3 - Tolerance Class

Symbol	Inner Circle IC (in)	Nose Height M (in)	Thickness S (in)
C	±.0010	±.0005	±.0010
E	±.001	±.0010	±.001
G	±.001	±.0010	±.005
H	±.0005	±.0005	±.0010
K*	±.002~.006*	±.0005	±.005
M*	±.002~.006*	±.003~.010*	±.005
U*	±.003~.010*	±.005~.015*	±.005

* Tolerance is different by insert IC size. Please see ISO 1832

4 - Clamping & Chipbreaker

Symbol	Clamping	Chipbreaker	Figure
N	No clamping hole	X	
R		One Face	
W	Screw Hole	X	
T		One Face	
U		Both Faces	
X	Special		

5 - Insert Size

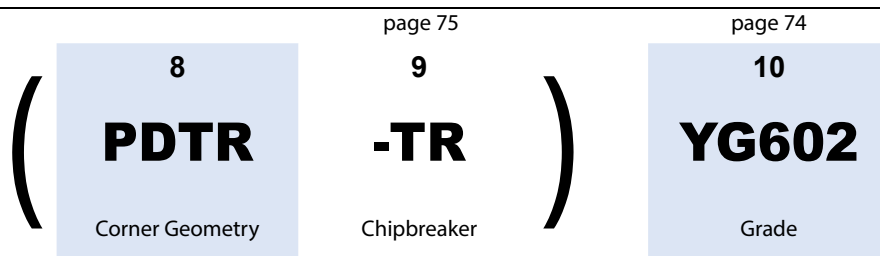
* No Standard for milling insert size

6 - Insert Thickness

* No Standard for milling insert thickness

Milling - Code System

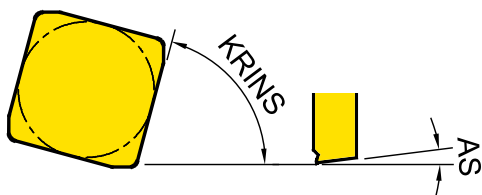
Insert ISO Code System



7 - Corner Radius (RE)

Symbol	Thickness - S (in)	Symbol	Thickness - S (in)
04	.016	16	.063
08	.031	20	.079
12	.047	24	.094

8 - Corner Geometry



8-1	8-2	8-3	8-4
P	D	T	R
Cutting Edge Angle (KRINS)	Wiper Edge Clearance (AS)	Edge Condition	Feed Direction

*Refer to page. 75 for -AL, -ST, -TR... types

8-1 - Cutting Edge Angle (KRINS)

Symbol	Cutting Edge Angle (KRINS)
P	90°
A	45°
D	60°
E	75°
F	85°
Z	Special

8-3 - Edge Condition

Symbol	Edge Condition
F	Sharp
E	Rounded
T	Chamfered
S	Chamfered and Rounded

8-2 - Wiper Edge Clearance (AS)

Symbol	Wiper Edge Clearance (AS)
N	0°
P	11°
D	15°
E	20°
F	25°
Z	Special

8-4 - Feed Direction

Symbol	Feed Direction
R	Right-hand Insert
N	Neutral Insert
L	Left-hand Insert

Milling Grades and Chip breakers

Milling Grades

Milling Grades	P Steel					M Stainless steel				K Cast iron				N Non-ferrous				S Superalloys				H Hardened steel		
	P05	P15	P25	P35	P45	M05	M15	M25	M35	K05	K15	K25	K35	N05	N15	N25	N35	S05	S15	S25	S35	H15	H25	H35
PVD	YG602			602				602				602						602						
	YG622			622								622										622		
	YG712		712																					
	YG713		713																					
	YG613			613				613										613						
	YG501									501														
CVD	YG5020									5020														
Uncoated	YG50													50										

TECHNICAL INFORMATION	YG602 P20 - P35 M20 - M40 K20 - K40 S15 - S25	 PVD - TiAlN	Universal grade for General Milling Application • Ultra Dense PVD Coating with optimal thermal resistance & strength • Sub-Micron substrate designed for demanding application
	YG622 P20 - P40 K20 - K40 H10 - H20	 PVD - AlCrN	Optimized Grade for High Alloyed or Prehardened Steel • Excellent hot hardness and oxidation resistance at high speed • Smooth surface treatment technology provide to prevent thermal shock and chipping resistance
	YG712 P10 - P30	 PVD - TiAlCrN	Milling Grade for Medium of Steel Application • Superior wear resistance and excellent toughness in high speed machining • Coating layer with high hardness and oxidation resistance
	YG713 P15 - P25	 PVD - TiAlN	Milling Grade for General Steel Application • Multi-layer TiAlN structure realizes stronger crater and flank wear resistance • Fine-grained carbide and balanced substrate
	YG613 P30 - P50 M30 - M40 S25 - S35	 PVD - TiAlN	Milling Grade for Stainless Steel Application • New coating layer with high toughness and lubrication on ultra fine grain substrate with high toughness. • The toughest substrates provides excellent cutting performance in stainless steel • Prevents welding and chipping of heat-resistant alloy workpieces through a special coating layer

Milling Grades and Chip breakers

Milling Grades

YG501 K05 - K25		Hard Milling grade for Cast Iron • High wear resistance substrate based on TiAlN PVD Coating • Very good for cast Iron
YG501G K05 - K25		Hard Milling grade for Cast Iron • High wear resistance substrate based on TiAlN / TiN PVD Coating • Excellent performance for cast Iron at high cutting speed
YG5020 K01 - K30		CVD Milling grade for Cast Iron • CVD coating for Excellent wear resistance • Improved Toughness for chipping resistance
YG50 N05 - N20		Uncoated Milling Grade for Aluminium • Submicron carbide substrate for high wear resistance • Preventing built up edge with shining surface

Milling Chip breakers

-AL		• For Aluminum • Very Sharp Geometry
-ST		• For Stainless Steel, Super Alloy • Sharp Geometry
General Inserts (No Description)		• First Choice for General Application
-TR		• For Hardened Steels • Reinforced Geometry
...W / ...N		• For Hardened Material and Cast Irons