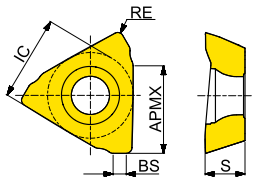
TPKT - Shoulder Milling Positive (3 Corner ISO)



Series	KRINS	IC	S
TP** 1104	90	7.54	4.28
TP** 1605	90	11.66	5.38

EDP 1200..

●: Stock item ○: Order made item

TPKT	Designation	RE (mm)	Fz (mm/tooth)	BS (mm)	H20 P20	P15	P25	P30 K30	P30 M30 S30	P30 M30	P40 M40 S40	K10	K15
					YG012	YG712	YG713	YG622	YG612	YG602	YG613	YG5020	YG501
NEW TPKT General 	TPKT 110404R-GN	0.4	0.05~0.24	1.60	● 0802	● 0807			● 0801			● 0808	
	TPKT 110408R-GN	0.8	0.05~0.24	1.15	● 0804	● 0811			● 0803			● 0812	
	TPKT 110416R-GN	1.6	0.05~0.24	0.60	● 0806	● 0815			● 0805			● 0816	
	TPKT 160508R-GN	0.8	0.05~0.27	1.79	● 0781	● 0779			● 0718			● 0780	
	TPKT 160516R-GN	1.6	0.05~0.27	1.20	● 0785	● 0786			● 0784			● 0787	
	TPKT 160524R-GN	2.4	0.05~0.27	0.70	● 0789	● 0790			● 0788			● 0791	
NEW -ST Stainless Steel Super Alloy 	TPKT 110404R-ST	0.4	0.05~0.15	1.60					● 0809		● 0810		
	TPKT 110408R-ST	0.8	0.05~0.15	1.15					● 0813		● 0814		
	TPKT 160508R-ST	0.8	0.05~0.15	0.60					● 0758		● 0759		

Milling - Code System

Insert ISO Code System

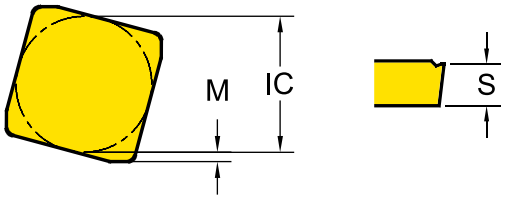
1	2	3	4	5	6	7
A	**P**	**K**	**T**	**16**	**04**	**08**
Shape	Relief Angle (AN)	Tolerance	Clamping & Chipbreaker	Insert Size	Insert Thickness (S)	Corner Radius

1 - Shape

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

2 - Relief Angle (AN)

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



3 - Tolerance Class

Symbol	InnerCircleIC (mm)	Nose Height M (mm)	Thickness S (mm)
C	± 0.025	± 0.013	± 0.025
E	± 0.025	± 0.025	± 0.025
G	± 0.025	± 0.025	± 0.13
H	± 0.013	± 0.013	± 0.025
K*	± 0.05~0.15*	± 0.013	± 0.025
M*	± 0.05~0.15*	± 0.08~0.2*	± 0.13
U*	± 0.08~0.25*	± 0.13~0.38*	±0.13

* 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

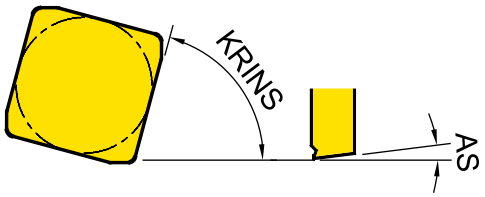
Insert ISO Code System

	page 147		page 146	
(	8 **PDTR** Corner Geometry	9 **-TR** Chipbreaker	)	10 **YG602** Grade

7 - Corner Radius (RE)

Symbol	Corner Radius - RE(mm)	Symbol	Corner Radius - RE(mm)
04	0.4	**16**	1.6
08	0.8	**20**	2.0
12	1.2	**24**	2.4

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. 147 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	Round	
T	Chamfer	
S	Chamfer and Round	

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

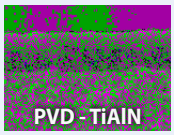
Symbol	Feed Direction	
R	Right-hand Insert	
N	Neutral Insert	
L	Left-hand Insert	

Milling Grades and Chipbreakers

Milling Grades

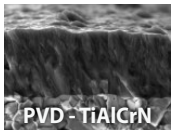
Milling Grades		P Steel					M Stainless steel				K Cast iron				N Non-ferrous				S Super alloys				H Hardened Steel			
		P05	P15	P25	P35	P45	M05	M15	M25	M35	K05	K15	K25	K35	N05	N15	N25	N35	S05	S15	S25	S35	H05	H15	H25	H35
PVD	YG012		012																					012		
	YG712		712																							
	YG713		713																							
	YG612			612					612												612					
	YG622			622									622													
	YG602			602					602				602							602						
	YG613				613					613																
	YG501											501														
CVD	YG5020											5020														
Uncoated	YG50															50										

NEW
YG012
H10 - H30
P10 - P30



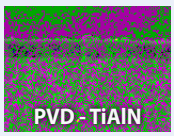
Optimized Milling Grade for Pre-Hardened & Hardened steel
- Applied Extreme Oxidaion PVD layer and Crack-free Substrate
- Excellent Cutting performance for Die & Mold applicaition

YG712
P10 - P30



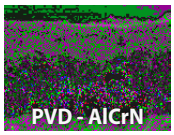
Milling Grade for Medium of Steel Application
- Superior wear resistance and excellent toughness in high speed machining
- Coating layer with high hardness and oxidation resistance

YG713
P15 - P25



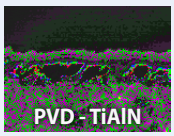
Milling Grade for General Steel Application
- Multi-layer TiAlN structure realizes stronger crater and flank wear resistance
- Fine-grained carbide and balanced substrate

YG622
P20 - P35
K20 - K40



Optimized Grade for High Alloyed or Prehardened Steel
Excellent for High Temperature Hardness and Oxidation Resistance at High Speed

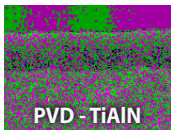
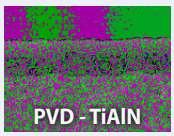
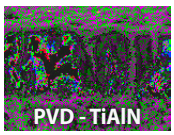
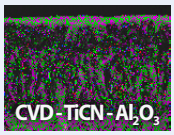
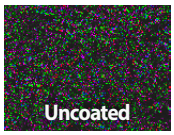
NEW
YG612
P20 - P40
M20 - M40
S20 - S40



Specialized Multi-Nano Coated Grade with high wear resistance and chipping resistance
- Special Multi-Nano coating prevent crack and providing predictible tool life
- Special universal Grade can acheive stable tool life in any workpiece

Milling Grades and Chipbreakers

Milling Grades

YG602 P20 - P35 M20 - M40 K20 - K40 S15 - S25		**Universal grade for General Milling Application** • Ultra Dense PVD Coating with optimal thermal resistance & strength • Sub-Micron substrate designed for demanding application
YG613 P30 - P50 M30 - M40		**Milling Grade for Stainless Steel Application** • New coating layer with lubrication preventing built-up edge on ultra fine grain substrate with high toughness. • The toughest substrate provides excellent cutting performance in stainless steel
YG501 K05- K25		**Hard Milling grade for Cast Iron** • Substrate especially designed for high wear resistance • Excellent wear resistance in cast iron milling application
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 Chipbreakers

–AL		• For Aluminum • Very Sharp Geometry
–ST		• For Stainless Steel, Super Alloy • Sharp Geometry
-GN **(General Type)**		• First Choice for General Application
–TR		• For Hardened Steels • Reinforced Geometry
...W / ...N		• For Hardened Material and Cast Irons