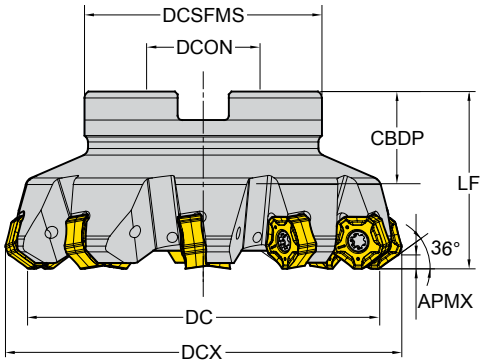
Milling - Face Milling - Cutter

Cutters for PNMU

Entry Angle: 36°
10 Corner Negative

<S> Shell Mill



ZEFP : Effective Number of Cutting Edges
CICT : Number of Inserts
CBDP : Connection Bore Depth

: p. 114

Unit : inch

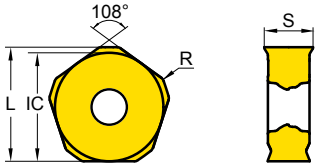
Series	APMX	Designation	EDP 1700..	DC	DCX	CICT	LF	TYPE	DCON	CBDP	DCSFMS	PCD1	PCD2	
PNMU 1206	.157	F36 - PNMU12 - D200Z4S075I	0468	2.000	2.530	4	1.575	Shell Mill	.750	.750	1.750	-	-	●
		F36 - PNMU12 - D250Z5S075I	0788	2.500	3.030	5	1.575		.750	.750	2.000	-	-	●
		F36 - PNMU12 - D300Z8S100I	0469	3.000	3.530	8	2.000		1.000	1.049	2.500	-	-	●
		F36 - PNMU12 - D400Z10S125I	0470	4.000	4.530	10	2.000		1.250	1.269	3.000	-	-	●
		F36 - PNMU12 - D500Z12S150I	0881	5.000	5.530	12	2.250		1.500	1.378	3.540	-	-	●
		F36 - PNMU12 - D600Z14S200I	0863	6.000	6.530	14	2.480		2.000	1.500	4.700	-	-	●

* Clamping Torque (Nm) 3.0Nm

PNMU12	Screw	Wrench	Handle	BIT
Description	TP154008	TPWBTP15	DH - H4	DB - TP15
EDP	18000006	18000217	18000189	18000208

PNMU - Face Milling Negative (10 Corners)

Series	KRINS	IC	S
PNMU 1206	36°	.551	.230



EDP 1200..

●: Stock item ○: Order made item

PNMU	Designation	RE (in)	Fz (in/tooth)	BS (in)	H20 P20	P15	P25	P30 K30	P30 M30 S30	P30 M30	P40 M40 S40	K10	K15
					YG012	YG712	YG713	YG622	YG612	YG602	YG613	YG5020	YG501G
PNMU General 	PNMU 1206ZNN	.031	.002 ~ .020	.083	● 0753	● 0596	○ 0645		● 0826	● 0535	● 0671	● 0534	● 0538
- ST Stainless Steel Super Alloy 	PNMU 1206 - ST	.031	.002 ~ .020	.083						● 0761	● 0760		

YG-1 USA - phone: 800-765-8665, E-mail: yg1usa.com
YG-1 HEAD OFFICE - phone: +82-32-526-0909, www.yg1.kr, E-mail: yg1@yg1.kr

Insert ISO Code System

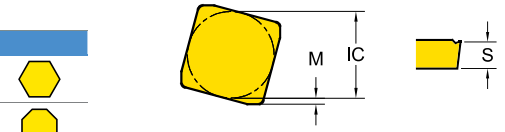
1	2	3	4	5	6	7
A	**P**	**K**	**T**	**16**	**04**	**08**
Shape	Relief Angle (AN)	Tolerance	Clamping & Chipbreaker	Insert Size	Insert Thickness (S)	CornerRadius

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

YG MILL INCH
Milling - Code System

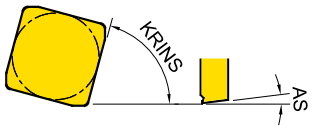
Insert ISO Code System

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

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

8 - 1 - Cutting Edge Angle (KRINS)

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

8 - 2 - Wiper Edge Clearance (AS)

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

8 - 3 - Edge Condition

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

8 - 4 - Feed Direction

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

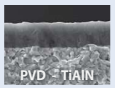
Milling Grades and Chip breakers

Milling Grades

Milling Grades		P Steel					M Stainless steel				K Cast iron				N Non - ferrous				S 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																							
	YG622			622									622													
	YG 612			612					612												612					
	YG602			602					602				602								602					
	YG613				613				613																	
	YG501											501														
CVD	YG5020										5020															
Uncoated	YG50															50										

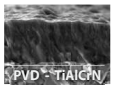
NEW

YG012
H10 - H30
P10 - P30



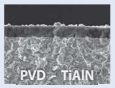
Optimized Milling Grade for Pre - Hardened & Hardened steel
- Applied Extreme Oxidaion PVD layer and Crack - free Substrate
- Excellent Cutting performance for Die & Mold applicaition

YG712
P10 - P30



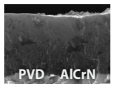
Milling Grade for Medium of Steel Application
- Superior wear resistance and excellent toughness in high speed machining
- Coating layer with high hardness and oxidation resistance

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

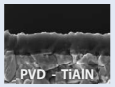
YG622
P20 - P35
K20 - K40



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

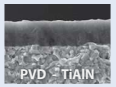
YG MILL INCH

TURNING
PARTING & GROOVING
MILLING
DRILLING
TECHNICAL INFORMATION

Milling Grades and Chip breakers

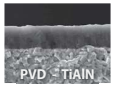
Milling Grades

YG602
P20 - P35 | M20 - M40
K20 - K40 | S15 - S25



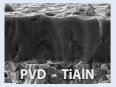
Universal grade for General Milling Application
- Ultra Dense PVD Coating with optimal thermal resistance & strength
- Sub - Micron substrate designed for demanding application

YG613
P30 - P50
M30 - M40



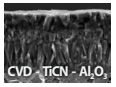
Milling Grade for Stainless Steel Application
- New coating layer with lubrication preventing built - up edge on ultra fine grain substrate with high toughness.
- The toughest substrate provides excellent cutting performance in stainless steel

YG501
K05 - K25



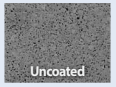
Hard Milling grade for Cast Iron
- Substrate especially designed for high wear resistance
- Excellent wear resistance in cast iron milling application

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