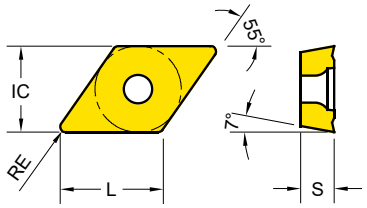
Turning Inserts - Positive

DCMT / DCGT (55° Positive)



Series	L	IC	S
DC** 0702	7.5	6.35	2.38
DC** 11T3	11.2	9.53	3.97

EDP 2200.. ●: Stock item ○: Order made item

DCGT DCMT		Designation	RE	Fn (mm/rev.)	Ap (mm)	P05 K10 YG1001	P10 K20 YG3010	P20 YG3020	P30 M20 YG3030	P20 YG801	M15 S10 YG211	M30 S20 YG213	M40 S30 YG214	N20 YG100	N20 YG10
-AL	 Aluminum	DCGT 11T302 - AL	0.2	0.02 ~ 0.08	0.5 ~ 1									● 0341	● 0342
		DCGT 11T304 - AL	0.4	0.05 ~ 0.25	0.5 ~ 2									● 0083	● 0332
		DCGT 11T308 - AL	0.8	0.1 ~ 0.3	1 ~ 2.5									● 0084	● 0333
-UF	 Finishing	DCMT 070204 - UF	0.4	0.05 ~ 0.2	0.5 ~ 1.5		● 0207	● 0208							
		DCMT 11T304 - UF	0.4	0.05 ~ 0.25	0.5 ~ 2		● 0213	● 0214							
		DCMT 11T308 - UF	0.8	0.05 ~ 0.25	1 ~ 2.5		● 0219	● 0220							
-UG	 General	DCMT 070204 - UG	0.4	0.1 ~ 0.25	0.5 ~ 1.5		● 0210	● 0211		● 0013					
		DCMT 070208 - UG	0.8	0.1 ~ 0.25	0.8 ~ 1.5		● 0484	● 0717							
		DCMT 11T304 - UG	0.4	0.15 ~ 0.3	0.5 ~ 2	● 0677	● 0216	● 0217		● 0014					
		DCMT 11T308 - UG	0.8	0.15 ~ 0.3	0.8 ~ 2.5	● 0678	● 0222	● 0223	● 0224	● 0015					

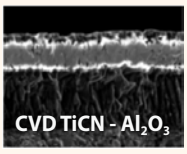
Cutting Speed			Vc (m/min.)																	
ISO	VDI	Sub Group	YG1001		YG3010		YG3020		YG3030		YG801		YG211		YG213		YG214		YG100		YG10	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
P	1~5	Non-Alloyed Steel	220	480	170	450	180	380	150	350	120	200	-	-	-	-	-	-	-	-	-	-
	6~9	Low-Alloyed Steel	220	420	180	380	110	350	90	300	70	200	-	-	-	-	-	-	-	-	-	-
	10~11	High-Alloyed Steel	-	-	100	330	60	300	70	250	-	-	-	-	-	-	-	-	-	-	-	-
M	12~13	Ferritic & Martensitic	-	-	-	-	-	-	120	230	-	-	130	230	110	180	80	150	-	-	-	-
	14	Austenitic Stainless Steel	-	-	-	-	-	-	80	200	-	-	100	200	40	130	30	120	-	-	-	-
K	15~16	Grey Cast Iron	170	420	120	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17~18	Nodular Cast Iron	120	410	120	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N	21~30	Non-Ferrous Metals (Al)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350	1200	250	800
S	31~37	Superalloys & Titanium	-	-	-	-	-	-	35	80	-	-	30	90	20	40	20	40	-	-	-	-
H	38~41	Hard Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Product Overview

Turning Grades

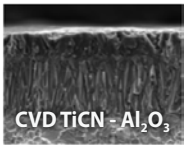
Turning Grades		P Steel				M Stainless steel			K Cast iron			N Non-ferrous		S Superalloys	
		P10	P20	P30	P40	M10	M20	M30	K10	K20	K30	N10	N20	S10	S20
CVD	YG1001	1001							1001						
	YG3010	3010							3010						
	YG3020		3020												
	YG3030		3030			3030									
PVD	YG801		801												
	YG211					211								211	
	YG213						213							213	
	YG214							214							214
DLC	YG100											100			
-	YG10											10			

YG1001
P01 - P10
K10 - K25



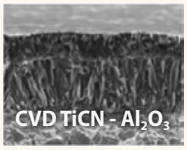
First choice for stable machining of Cast iron
- Substrate especially designed for high wear resistance
- Thick Al_2O_3 layer ensures good wear resistance at high cutting speeds including dry machining

YG3010
P05 - P20
K15 - K35



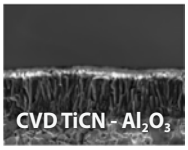
First choice for Finishing Steels, and Ductile Cast iron
- Finishing and light machining of steel under in stable condition
- New Al_2O_3 coating technology and excellent surface smoothness increase wear resistance and chipping resistance

YG3020
P15 - P30



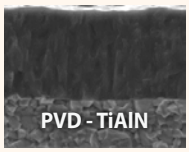
First Choice grade for general Steel application
- Substrate especially designed for good toughness
- Excellent surface smoothness increases wear resistance and reliability

YG3030
P20 - P35
M10 - M30



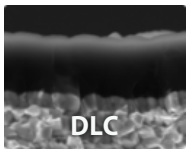
Interrupted cut of Steel and Stainless steel
- Heavy interrupted cut for Steel
- High cutting speed for Stainless steel

YG801
P10 - P30



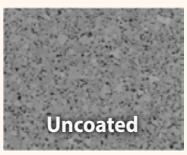
for Carbon Steel with Low cutting speed
- Recommended for mild steel and boring application
- Substrate and special PVD coating for excellent wear resistance

YG100
N05 - N25



First Choice grade for aluminum with DLC coating
- Submicron carbide for high wear resistance
- DLC coating minimizes Built Up Edge tendency.
- Improve tool life in sticky non-ferrous alloy

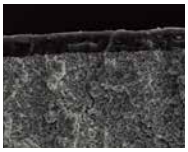
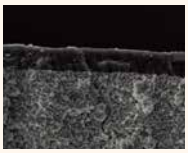
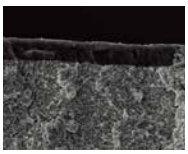
YG10
N05 - N25

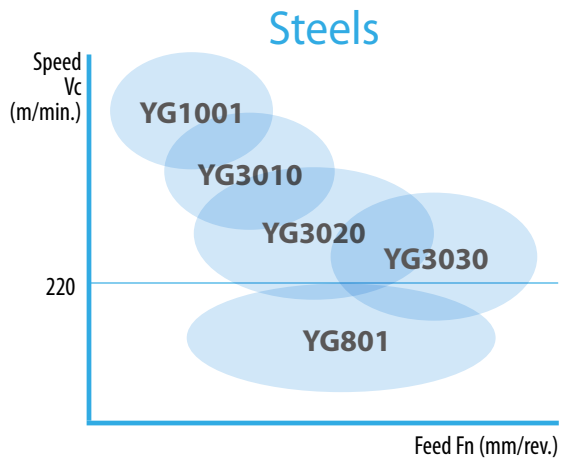


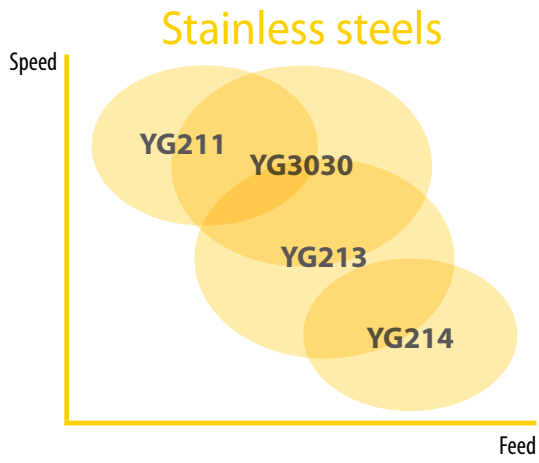
Uncoated Grade for General Aluminum
- Substrate consisted of submicron carbide for high wear resistance
- Shining surface to prevent built up edge

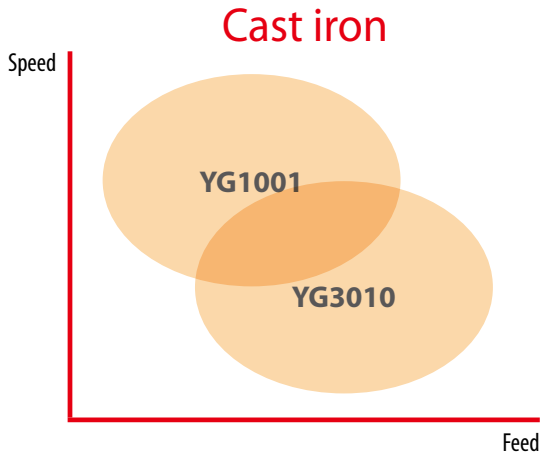
Product Overview

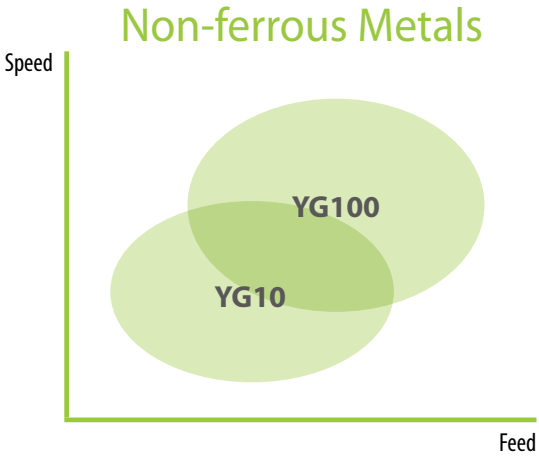
Turning Grade Map

YG211 M05 - M25 S05 - S20		**High wear resistance grade for Super alloys and Stainless steel** • Finishing Stainless steel • Finishing Super alloys and Titanium
YG213 M20 - M35 S15 - S25		**First Choice Grade on low cutting speed of Stainless steel** • First choice on Stainless steel for Low cutting speed • For Medium to low cutting speed
YG214 M30 - M40 S25 - S30		**Heavy Interrupted cut for Stainless steel** • For Heavy Interrupted cut on Stainless steel • Minimize risk of Mechanical fracture or Chipping





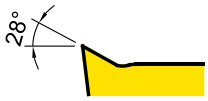


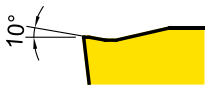


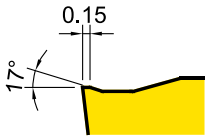
Product Overview

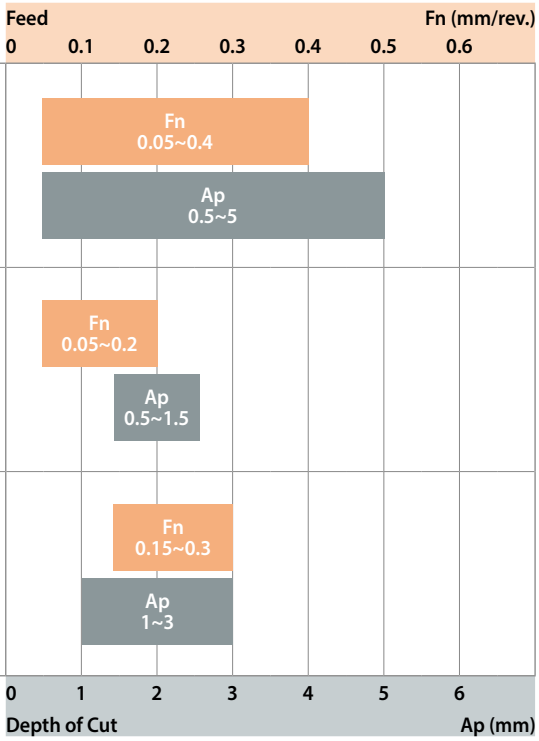
Turning Chipbreakers - Positive

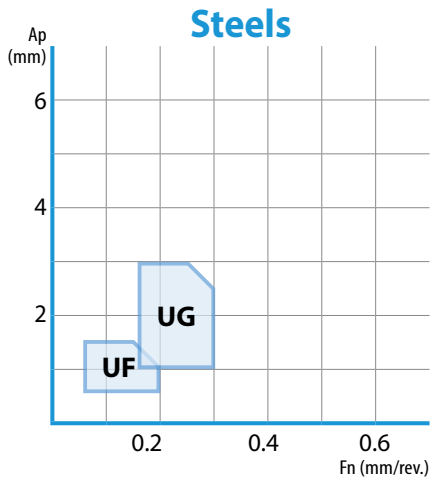
P	M	K	N	S			
			N		AL	Aluminum application	
P	M				UF	Finishing application	
P		K			UG	Medium application	

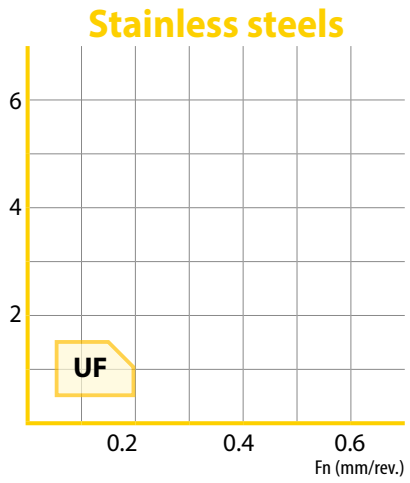


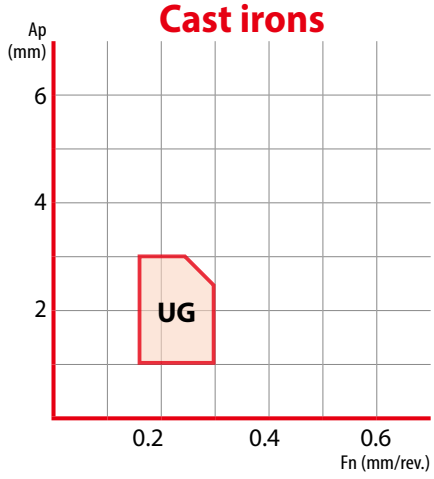


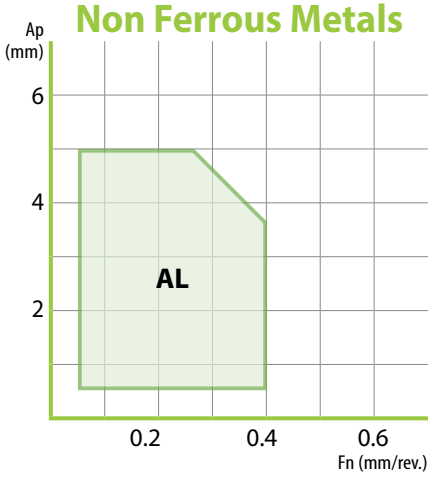












Insert ISO Code System

*Metric : According to ISO 1832

page 12 page 10

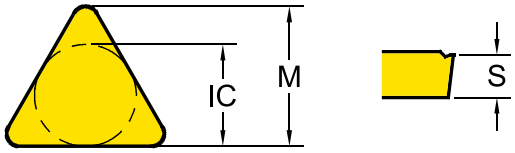
1	2	3	4	5	6	7	8	9
C	N	M	G	12	04	08	-UG	YG3020
Shape	Clearance	Tolerance	Clamping & Chipbreaker	Insert Size	Insert Thickness	Corner Radius	Chipbreaker Geometry	Grade

1 - Shape

Symbol	Shape	
H	Hexagonal	
O	Octagonal	
P	Pentagonal	
S	Square	
T	Triangular	
C	Rhombic 80°	
D	Rhombic 55°	
V	Rhombic 35°	
W	Trigon	
L	Rectangular	
K	Parallelogram 55°	
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 (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	
A	Cylindrical Clamping hole	X	
M		One Face	
G		Both Faces	
W	Screw Hole	X	
T		One Face	
U		Both Faces	
X	Special		

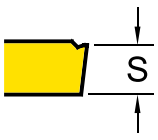
Insert ISO Code System

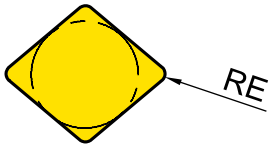
*Inch

1	2	3	4	5	6	7	page 12 8	page 10 9
C	N	M	G	4	3	2	-UG	YG3020
Shape	Clearance	Tolerance	Clamping & Chipbreaker	Insert Size	Insert Thickness	Corner Radius	Chipbreaker Geometry	Grade

5 - Insert Size

Metric							Inner Circle IC (mm)	Inch
S	T	C	D	V	W	R		
06	**11**	**06**	**07**	**11**			6.35	**2**
07							7.94	**2.5**
09	**16**	**09**	**11**	**16**	**06**	**09** (00)	9.525	**3**
12	**22**	**12**	**15**	**22**	**08**	**12** (00)	12.7	**4**
15		**16**					15.875	**5**
19		**19**					19.05	**6**
25		**25**					25.4	**8**
						06 (M0)	6	
						08 (M0)	8	
						10 (M0)	10	
						12 (M0)	12	
						16 (M0)	16	





6 - Insert Thickness (S)

Metric	Thickness - S (mm)	Inch
T1	1.98	**1.2**
02	2.38	**1.5**
03	3.18	**2**
T3	3.97	**2.5**
04	4.76	**3**
05	5.56	**3.5**
06	6.35	**4**
07	7.94	**5**
09	9.525	**6**

7 - Corner Radius (RE)

Metric	Corner Radius - RE (mm)	Inch
01	0.1	**0**
02	0.2	**0.5**
04	0.4	**1**
08	0.8	**2**
12	1.2	**3**
16	1.6	**4**
20	2.0	**5**
24	2.4	**6**