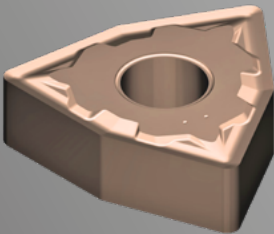
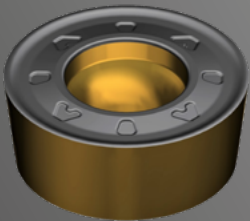
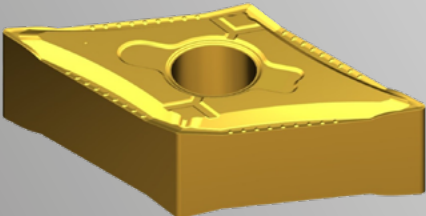
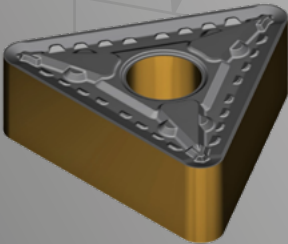
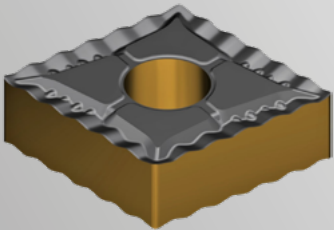
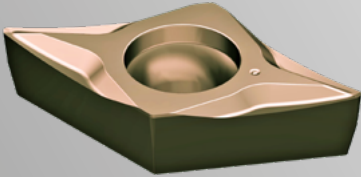
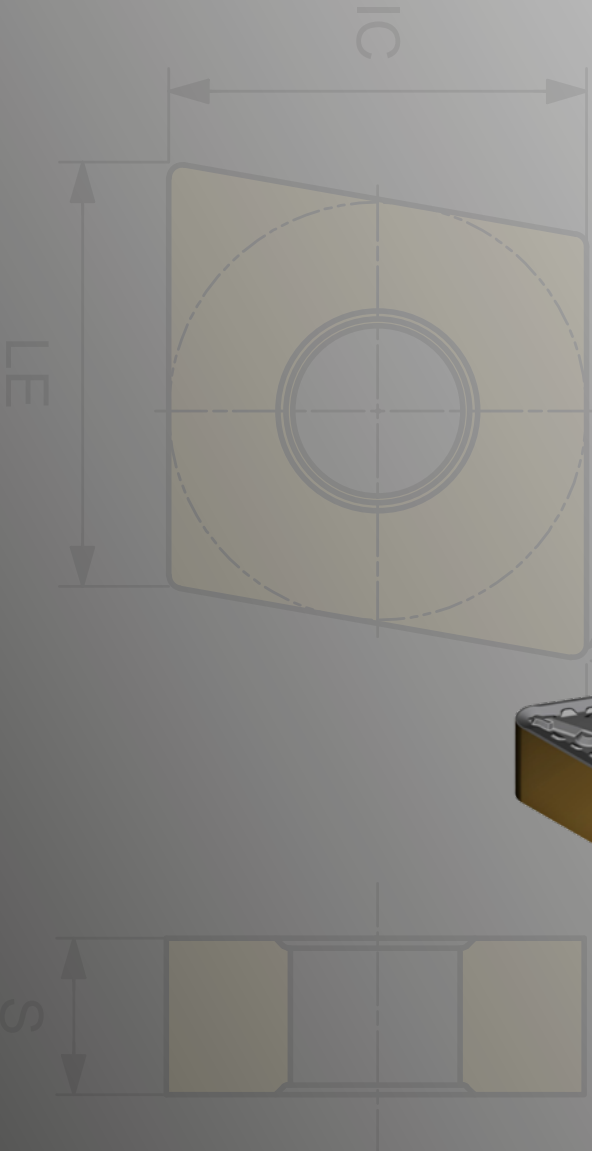


TURNING INSERTS



Insert configuration	P.2 - 3
Grade & Chipbreaker guide	P.4 - 9
Negative inserts	P.10 - 44
Positive inserts	P.45 - 60
Alpha-numeric index	P.61





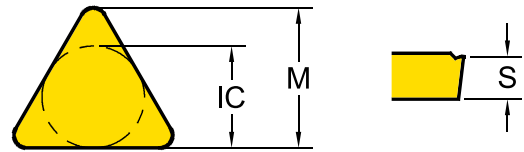
INSERT CODE GUIDE

*ISO

1	2	3	4	5	6	7	8	9
C	N	M	G	12	04	08	-BG	ET33C
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	



3 - Tolerance Class

Symbol	Inner Circle IC (mm)	Nose Height M (mm)	Thickness S (mm)
E	±0.025	±0.025	±0.025
G	±0.025	±0.025	±0.13
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

2 - Relief Angle (AN)

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

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	

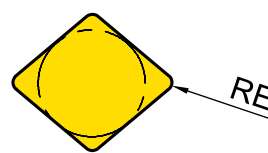
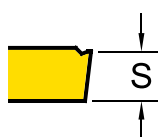


*ANSI

1	2	3	4	5	6	7	8	9
C	N	M	G	4	3	2	-BG	ET33C
Shape	Clearance	Tolerance	Clamping & Chipbreaker	Insert Size	Insert Thickness	Corner Radius	Chipbreaker Geometry	Grade

5 - Insert Size

Metric (ISO)							Inscribed Circle IC (mm)	ANSI
S	T	C	D	V	W	R		
06	11	06	07	11			6.53	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
						06 (M0)	6	
						08 (M0)	8	
						10 (M0)	10	
						12 (M0)	12	
						16 (M0)	16	



6 - Insert Thickness (S)

Metric (ISO)	Thickness - S (mm)	ANSI
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

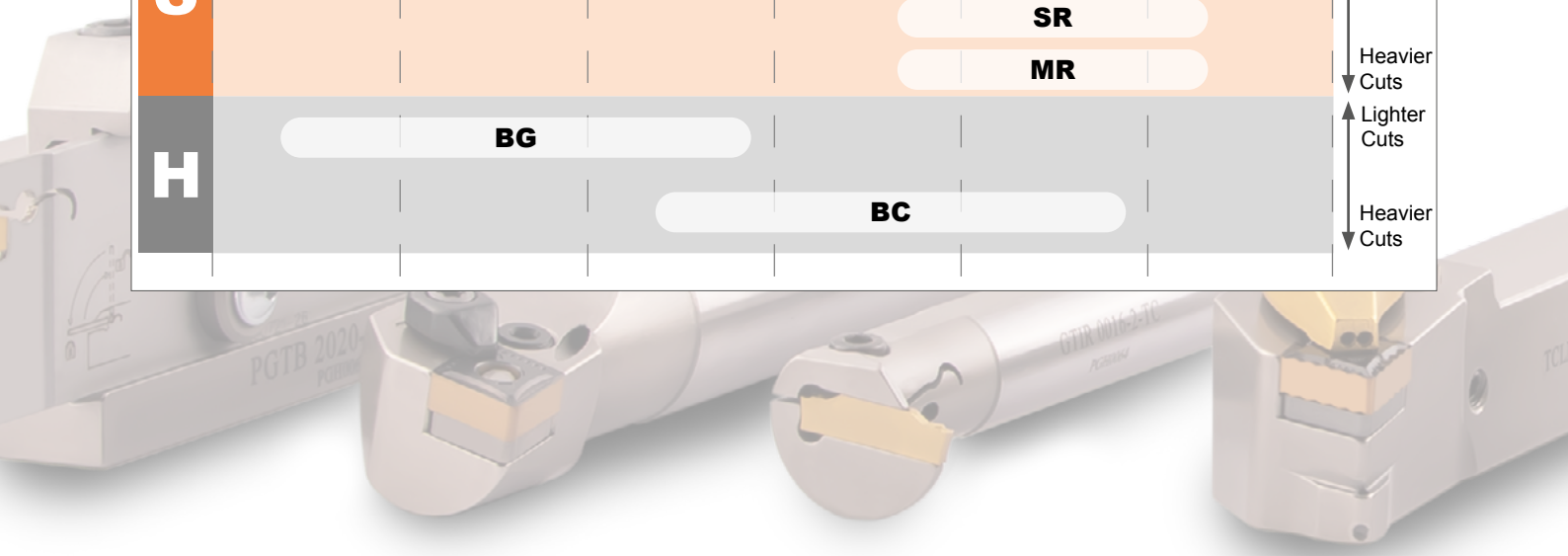
7 - Corner Radius (RE)

Metric (ISO)	Corner Radius - RE (mm)	ANSI
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



NEGATIVE CHIPBREAKER GUIDE

ISO	Finishing	Semi-Finishing	Medium	Semi-Roughing	Roughing	Heavy Roughing	
P	BF	PSF					Lighter Cuts
		BL					
		WM					
			BG				
			BM				
				BC			
					BR		
						BH	Heavier Cuts
M	MF	PSF					Lighter Cuts
			MM				
			MG				
					MR		Heavier Cuts
K	BF	PSF					Lighter Cuts
		BG					
			BC				
					..MA		Heavier Cuts
						KR	Lighter Cuts
S	SF						Lighter Cuts
			SM				
					SR		Heavier Cuts
					MR		Lighter Cuts
H		BG					Lighter Cuts
				BC			Heavier Cuts





NEGATIVE CHIPBREAKER GUIDE

P	M	K	N	S	H	NEGATIVE		P	M	K	N	S	H	NEGATIVE		
●	○						BF Finishing	●							MF Finishing of stainless steel	
●							BL Light cutting and sticky materials	●							MM Medium cutting of stainless steel	
●							BM Medium cutting and unstable conditions	●							MG Medium to difficult conditions in stainless steel and HRSA	
●	○	●			●		BG Medium cutting First choice	●					●		MR Roughing of stainless steel and scale/skin HRSA	
●		●			●		BC Cast iron and medium roughing of steel	●	○						WM Wiper geometry for improved surface finish in steel	
●		●					BR Roughing and interrupted cut	●	●	●					PSF Cermets chipbreaker for semi-finishing to semi-medium cuts	
●		●					BH Heavy roughing						●		SF Finishing of clean HRSA material	
		●					--MA Cast iron heavy roughing Flat insert type		○						SM Medium cutting of clean HRSA material	
		●					KR Cast iron heavy roughing and interrupted cut		○					●		SR Roughing of clean HRSA material





POSITIVE CHIPBREAKER GUIDE

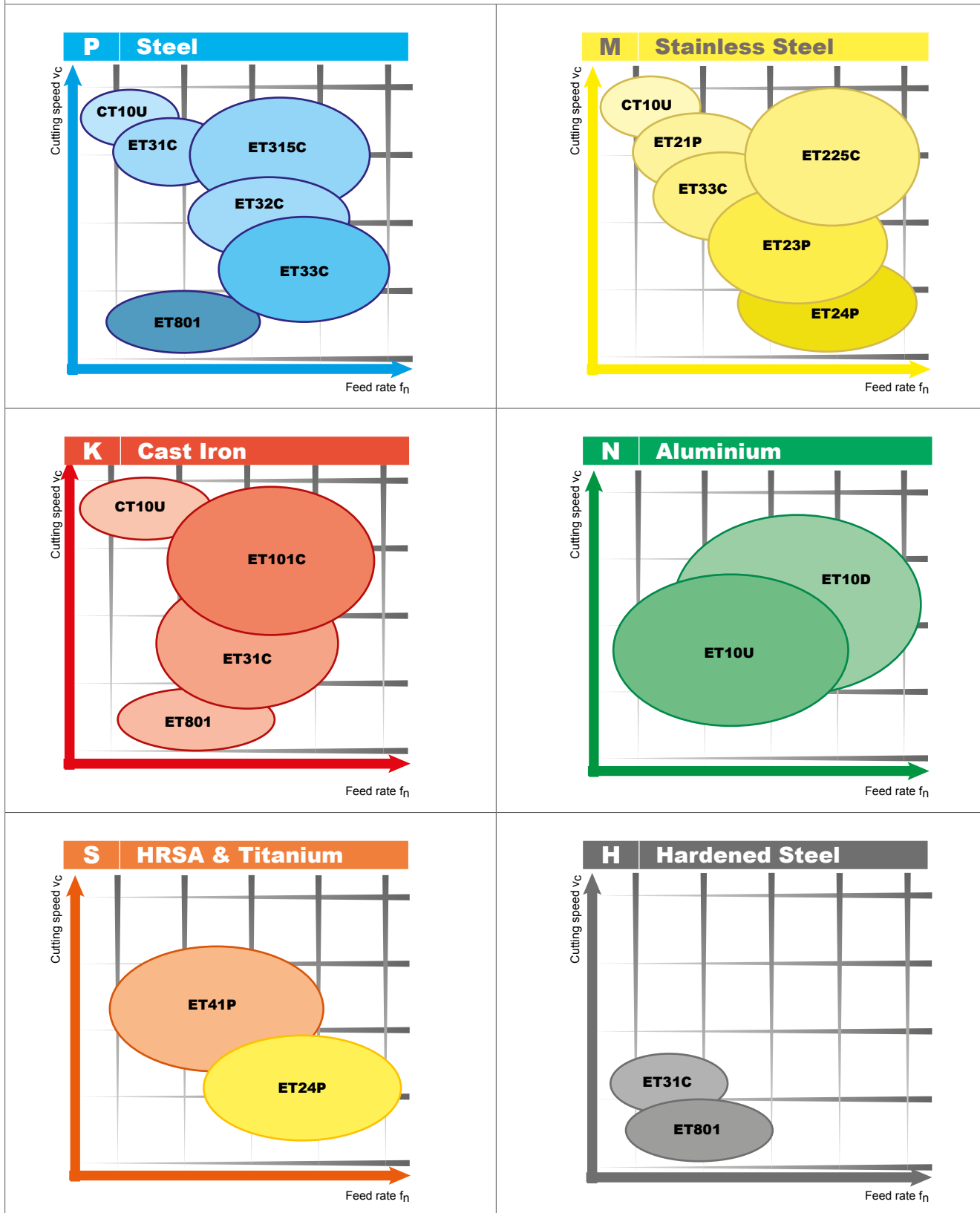
ISO	Finishing	Semi-Finishing	Medium	Semi-Roughing	Roughing	Heavy Roughing	
P	PF		PM				Lighter Cuts
	BF						Heavier Cuts
			BG				Lighter Cuts
M	PF		PM				Lighter Cuts
	MF						Heavier Cuts
		MSF					Lighter Cuts
			MM				Heavier Cuts
K	PF		PM				Lighter Cuts
	BF						Heavier Cuts
			BG				Lighter Cuts
N			AL				Lighter Cuts
							Heavier Cuts
S	MF						Lighter Cuts
		MSF					Heavier Cuts
			MM				Lighter Cuts
H	BF						Lighter Cuts
			BG				Heavier Cuts

P	M	K	N	S	H	POSITIVE	P	M	K	N	S	H	POSITIVE
			●			AL For Aluminium		●					MSF Finishing to medium cutting of clean HRSA material and stainless steel
●		●				BF Finishing		●			○		MF Finishing of stainless steel
●	●	●				PF Cermet chipbreaker for finishing	●	●	●				PM Cermet chipbreaker for medium cutting
●		●				BG Medium cutting		●			○		MM Medium cutting of stainless steel



INSERT GRADE APPLICATION AREA

The charts below indicate grade selection in relation to cutting speed and feed rate





INSERT GRADES

	 K05 - K15 CVD TiCN - Al ₂ O ₃	ET101C First choice for stable turning of cast iron CVD TiCN - Al ₂ O ₃		 P10 - P20 M05 - M20 S10 - S20 PVD Coated	ET21P Optimised grade for cutting of stainless steel at high cutting speeds. PVD Coated
	 P05 - P20 K15 - K35 H05 - H10 CVD TiCN - Al ₂ O ₃	ET31C First choice for high speed finishing of steels and ductile cast iron. CVD TiCN - Al ₂ O ₃		 M15 - M35 CVD Coated	ET225C Optimised grade for cutting of stainless steel high speeds and feed rate CVD Coated
	 P10 - P25 CVD TiCN - Al ₂ O ₃	ET315C Balanced grade for continuous cutting of steels. CVD TiCN - Al ₂ O ₃		 M20 - M35 PVD Coated	ET23P First choice for stable turning of stainless steel. PVD Coated
	 P15 - P30 CVD TiCN - Al ₂ O ₃	ET32C Versatile grade for general turning of steels. CVD TiCN - Al ₂ O ₃		 M30 - M40 S30 - S50 PVD Coated	ET24P Optimised grade for interrupted cutting of stainless steel and skin & scale cuts in HRSA. PVD Coated
	 P20 - P35 M20 - M30 CVD TiCN - Al ₂ O ₃	ET33C Tough grade for turning of stainless steel and interrupted cutting of steel. CVD TiCN - Al ₂ O ₃		 M05 - M15 S05 - S15 PVD Coated	ET41P Optimised grade for clean HRSA materials. PVD Coated
	 N05 - N35 TaC Diamond Coated	ET10D First choice for high speed turning of aluminium, and Si >10% TaC Diamond Coated		 P10 - P20 M10 - M20 K10 - K20 Uncoated	CT10U Cermet grade for finishing, semi-finishing and medium cutting Uncoated
	 N05 - N35 Uncoated	ET10U Polished face for general turning of aluminium. Uncoated		 P10 - P30 M20 - M30 K20 - K30 H20 - H30 PVD Coated	ET801 Turning grade for mid and low cutting conditions in most steels, cast iron and some stainless steels PVD Coated

COATING

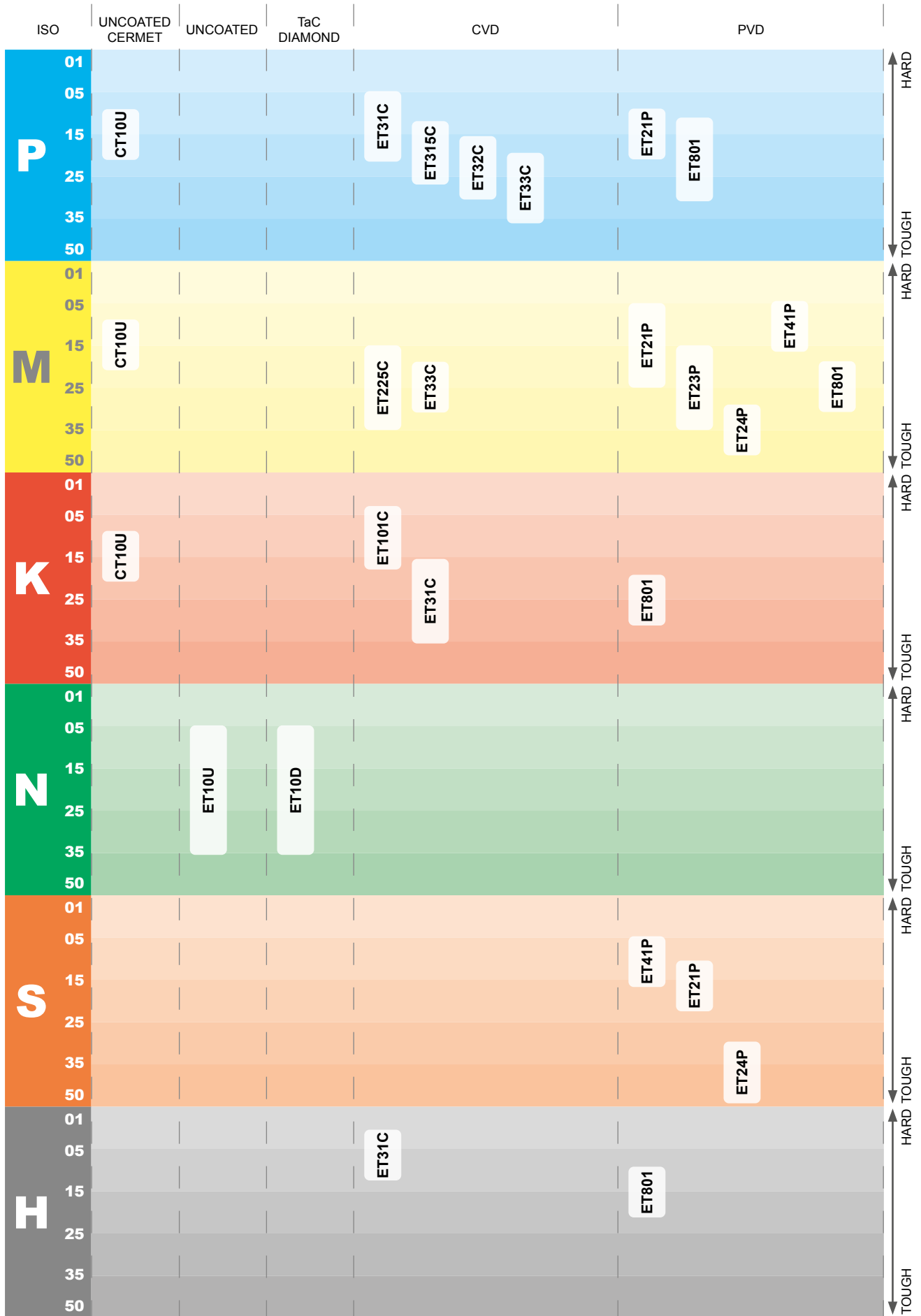
	Multi-layer CVD coated grades are finished with a special process to enable smoother chip flow.		Single layer PVD coated grades are designed to balance edge strength with extended tool life.		TaC Diamond coated inserts maintain sharp cutting edge due to coating thickness of ≤ 1 µm and highly polished face.
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TURNING INSERTS

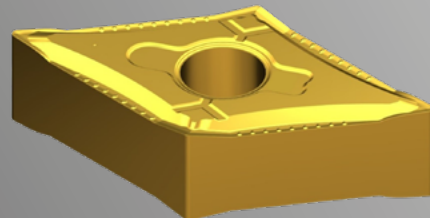
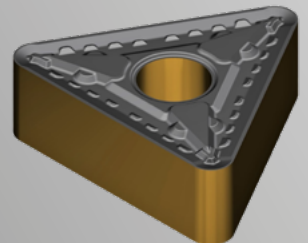
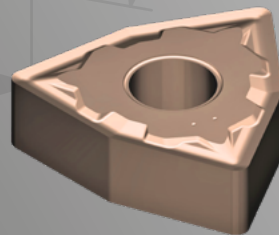
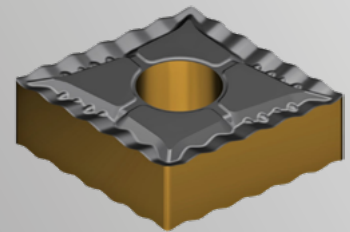
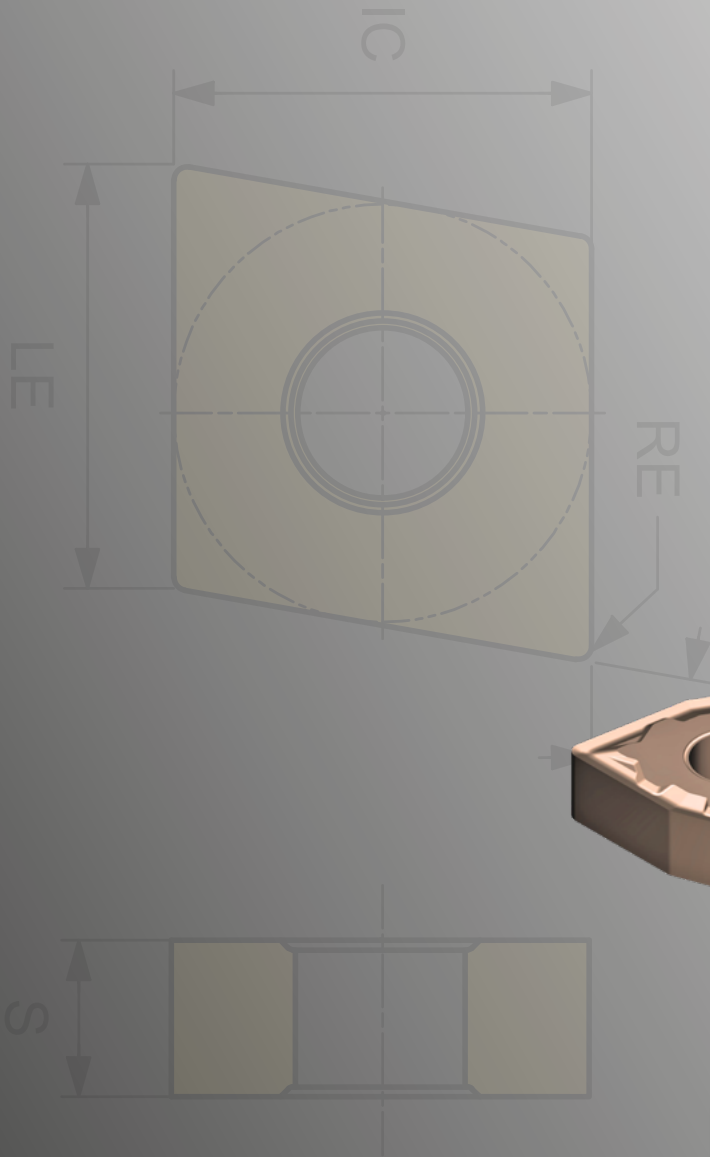


INSERT GRADE MAP



NEGATIVE INSERTS

CN Style	P.11 - 17
DN Style	P.18 - 23
KN style	P.24
SN Style	P.25 - 29
TN Style	P.30 - 34
VN Style	P.35 - 38
WN Style	P.39 - 44





TURNING INSERTS



CNGG 80° RHOMBIC TYPE

▶ EDP Code TI..... Example: CNGG 120404-SF ET41P = TI01032

	<table border="1"> <tr> <th>INSERT</th> <th>LE</th> <th>IC</th> <th>S</th> </tr> <tr> <td>CNGG 1204</td> <td>12</td> <td>12.7</td> <td>4.76</td> </tr> </table>	INSERT	LE	IC	S	CNGG 1204	12	12.7	4.76	<table border="1"> <tr> <th>P</th><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td>●</td> </tr> <tr> <th>M</th><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td>●</td> </tr> <tr> <th>K</th><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td> </tr> <tr> <th>N</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td> </tr> <tr> <th>S</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td> </tr> <tr> <th>H</th><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td> </tr> </table>														P	●	●	●	●	○					●				●	M				●	●	●	●	○	○					●	K	●	●											●	●	N													●	●	S								○	○	○	●				H		○										○		
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CNGG	ISO DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																															
Finishing 	SF	CNGG 120401-SF	0.1	0.10 - 0.30	0.1 - 3.0									●																																																																																																			
		CNGG 120402-SF	0.2	0.10 - 0.30	0.1 - 3.0									●																																																																																																			
		CNGG 120404-SF	0.4	0.10 - 0.30	0.2 - 3.0									●																																																																																																			
		CNGG 120408-SF	0.8	0.10 - 0.30	0.2 - 3.0									●																																																																																																			

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

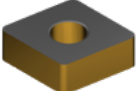


TURNING INSERTS



CNMA 80° RHOMBIC TYPE

▶ EDP Code TI..... Example: CNMA 120404 ET31C = TI00328

CNMA	ISO DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility															
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
Heavy Roughing 	CNMA 120404	0.4	0.15 - 0.50	0.5 - 5.0	●	■														
	CNMA 120408	0.8	0.15 - 0.50	1.0 - 5.0	●	■														
	CNMA 120412	1.2	0.15 - 0.50	1.5 - 5.0	●	■														
	CNMA 120416	1.6	0.15 - 0.50	1.5 - 5.0	●															
	CNMA 160612	1.2	0.15 - 0.50	1.5 - 5.0	●	■														
	CNMA 160616	1.6	0.15 - 0.50	2.0 - 5.0	●	■														
	CNMA 190612	1.2	0.15 - 0.50	1.5 - 9.0	●															
	CNMA 190616	1.6	0.15 - 1.00	3.0 - 10.0	●	■														

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

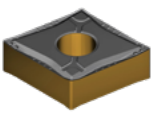
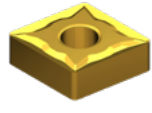
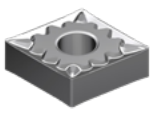
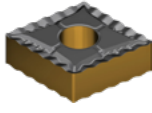


TURNING INSERTS



CNMG 80° RHOMBIC TYPE

► EDP Code TI..... Example: CNMG 120404-BF ET31C = T100402

CNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Finishing 	BF CNMG 120404-BF	0.4	0.05 - 0.25	0.5 - 1.5			●	●	●	●	○				●			●
	CNMG 120408-BF	0.8	0.05 - 0.25	1.0 - 2.5		■	●	●	●	●	●	●	○	○				●
	CNMG 120412-BF	1.2	0.05 - 0.25	1.5 - 2.5		■	●	●	●	●	●	●	○	○	○	●		
Finishing 	MF CNMG 120404-MF	0.4	0.07 - 0.30	0.2 - 1.5					●	●	●	●	●	●	●			
	CNMG 120408-MF	0.8	0.07 - 0.30	0.2 - 1.5					●	●	●	●	●	●	●			
	CNMG 120412-MF	1.2	0.07 - 0.30	0.2 - 1.5					●	●	●	●	●	●	●			
Finishing to Medium Cermet 	PSF CNMG 120404-PSF	0.4	0.07 - 0.30	0.4 - 3.0														●
	CNMG 120408-PSF	0.8	0.10 - 0.30	0.6 - 3.0														●
Light cuts to Medium 	BL CNMG 120404-BL	0.4	0.10 - 0.30	0.5 - 2.0		■	●	●	●									
	CNMG 120408-BL	0.8	0.10 - 0.30	1.0 - 3.0		■	●	●	●							●		
	CNMG 120412-BL	1.2	0.10 - 0.30	1.5 - 3.0		■	●	●	●									

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

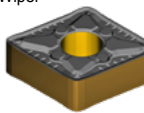
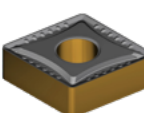
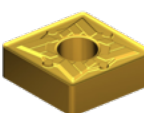


TURNING INSERTS



CNMG 80° RHOMBIC TYPE

► EDP Code TI..... Example: CNMG 120404-WM ET101C = TI01659

CNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility																			
					P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Finishing to Medium Wiper 	WM CNMG 120404-WM	0.4	0.10 - 0.50	0.5 - 3.5	●	●	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120408-WM	0.8	0.10 - 0.50	0.8 - 3.5	●	●	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-WM	1.2	0.10 - 0.50	1.0 - 3.5	●	●	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
Medium 	BG CNMG 120404-BG	0.4	0.20 - 0.40	0.5 - 2.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120408-BG	0.8	0.20 - 0.40	1.0 - 3.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-BG	1.2	0.20 - 0.40	1.5 - 3.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160608-BG	0.8	0.20 - 0.40	1.5 - 5.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160612-BG	1.2	0.20 - 0.40	1.5 - 5.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160616-BG	1.6	0.20 - 0.40	2.0 - 5.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190608-BG	0.8	0.20 - 0.50	1.0 - 6.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190612-BG	1.2	0.20 - 0.50	1.5 - 6.0	●	■	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
Medium 	MM CNMG 120404-MM	0.4	0.20 - 0.35	0.5 - 3.5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120408-MM	0.8	0.20 - 0.35	1.0 - 3.5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-MM	1.2	0.20 - 0.35	1.5 - 3.5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190608-MM	0.8	0.20 - 0.50	1.0 - 5.5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190612-MM	1.2	0.20 - 0.50	1.5 - 5.5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190616-MM	1.6	0.20 - 0.50	2.0 - 5.5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

■ = Available while stocks last

ISO	P			M		K		N	S	H
	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-



TURNING INSERTS



CNMG 80° RHOMBIC TYPE

▶ EDP Code TI..... Example: CNMG 120404-BF ET31C = T100402

		INSERT				Material Compatibility																					
		LE	IC	S		P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
		12	12.7	4.76	CNMG 1204	●	●	●	●	○			●	●	●	●	○		●	○						●	
		16	15.88	6.35	CNMG 1606																		●	●			
		19	19.05	6.35	CNMG 1906																						
CNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)																							
	Medium SM	CNMG 120408-SM	0.8	0.10 - 0.25	0.5 - 4.0													●	●	●	●						
		CNMG 120412-SM	1.2	0.10 - 0.25	0.5 - 4.0														●	●	●	●					
	Medium & Unstable BM	CNMG 120404-BM	0.4	0.15 - 0.30	0.5 - 3.0		■	●	●				00569	01827	00570	00105											
		CNMG 120408-BM	0.8	0.15 - 0.30	1.0 - 3.0	●	■	●	●			01452	00572	00958	00573	00107								●	00074		
		CNMG 120412-BM	1.2	0.15 - 0.30	1.5 - 3.0		■	●	●				00669	01589	00670	00671											
	Medium & Unstable MG	CNMG 120404-MG	0.4	0.20 - 0.40	0.5 - 4.0													●									
		CNMG 120408-MG	0.8	0.20 - 0.40	1.0 - 4.0														●	●	●	●					
		CNMG 120412-MG	1.2	0.20 - 0.40	1.5 - 4.0														●	●	●	●					
		CNMG 160608-MG	0.8	0.20 - 0.50	1.0 - 4.0															●	●	●	●				
		CNMG 160612-MG	1.2	0.20 - 0.50	1.5 - 4.0															●	●	●	●				
		CNMG 160616-MG	1.6	0.20 - 0.50	2.0 - 4.0															●	●	●	●				
		CNMG 190616-MG	1.6	0.20 - 0.50	2.0 - 5.0															●	●	●	●				
	Semi-Roughing BC	CNMG 120404-BC	0.4	0.20 - 0.40	0.5 - 4.0	●	■	●	●				01448	00355	01824	00356	00357										
		CNMG 120408-BC	0.8	0.20 - 0.40	1.0 - 4.0	●	■	●	●				01450	00358	01828	00359	00360										
		CNMG 120412-BC	1.2	0.20 - 0.40	1.5 - 4.0	●	■	●	●				01455	00361	01830	00362	00363										

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-

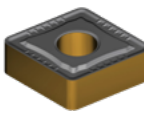
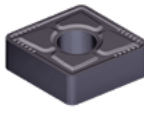
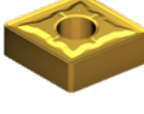
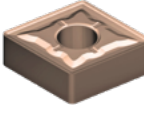


TURNING INSERTS



CNMG 80° RHOMBIC TYPE

► EDP Code TI..... Example: CNMG 120404-BF ET31C = T100402

CNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility																	
					P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D
Roughing 	BR CNMG 120408-BR	0.8	0.30 - 0.50	1.0 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-BR	1.2	0.30 - 0.50	1.5 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120416-BR	1.6	0.30 - 0.50	2.0 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160608-BR	0.8	0.30 - 0.50	1.0 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160612-BR	1.2	0.30 - 0.50	1.5 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160616-BR	1.6	0.30 - 0.50	2.0 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190608-BR	0.8	0.30 - 0.80	3.0 - 9.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190612-BR	1.2	0.30 - 0.80	3.0 - 9.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 190616-BR	1.6	0.30 - 0.80	3.0 - 9.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing 	KR CNMG 120408-KR	0.8	0.30 - 0.60	1.0 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-KR	1.2	0.30 - 0.60	1.5 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160612-KR	1.2	0.30 - 0.60	1.5 - 6.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160616-KR	1.6	0.30 - 0.60	2.0 - 6.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing 	MR CNMG 120408-MR	0.8	0.30 - 0.55	1.0 - 5.5	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-MR	1.2	0.30 - 0.55	1.5 - 5.5	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120416-MR	1.6	0.30 - 0.55	2.0 - 5.5	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 160616-MR	1.6	0.30 - 0.55	2.0 - 5.5	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing 	SR CNMG 120408-SR	0.8	0.10 - 0.40	1.0 - 4.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120412-SR	1.2	0.10 - 0.40	1.5 - 4.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
	CNMG 120416-SR	1.6	0.10 - 0.40	2.0 - 4.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



CNMM 80° RHOMBIC TYPE

► EDP Code TI..... Example: CNMM 120408-BH ET32C = TI01741

		INSERT	LE	IC	S	P	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMM 1204	12	12.7	4.76	M				●	●	●	○	○	○	○	○	○	○	○	○	○	○
		CNMM 1606	16	15.88	6.35	K	●	●															●
	CNMM 1906	19	19.05	6.35	N																		●
					S					○	○	○	●										○
					H		○																

CNMM	DESIGNATION	RE (mm)	fn (mm/rev)	ap (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Heavy Roughing Single side 	BH CNMM 120408-BH	0.8	0.30 - 0.50	1.5 - 5.0				●	●									
	CNMM 160612-BH	1.2	0.35 - 0.60	2.0 - 5.5				●	●									
	CNMM 160616-BH	1.6	0.35 - 0.60	2.5 - 5.5				●	●									
	CNMM 190612-BH	1.2	0.35 - 0.70	1.5 - 9.0	● 01747			●	●									
	CNMM 190616-BH	1.6	0.35 - 0.70	2.0 - 9.0	● 01751			●	●									
	CNMM 190624-BH	2.4	0.35 - 0.70	3.0 - 9.0	● 01755			●	●									

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

DNGG 55° DIAMOND TYPE

▶ EDP Code TI..... Example: DNGG 150604-SF ET41P = TI01040

		<table border="1"> <tr> <th>INSERT</th> <th>LE</th> <th>IC</th> <th>S</th> </tr> <tr> <td>DNGG 1506</td> <td>14</td> <td>12.7</td> <td>6.35</td> </tr> </table>	INSERT	LE	IC	S	DNGG 1506	14	12.7	6.35	<table border="1"> <tr> <th>P</th><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td>●</td> </tr> <tr> <th>M</th><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td>●</td> </tr> <tr> <th>K</th><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td> </tr> <tr> <th>N</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td> </tr> <tr> <th>S</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td> </tr> <tr> <th>H</th><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td> </tr> </table>														P	●	●	●	●	○					●				●	M				●	●	●	●	○	○					●	K	●	●											●	●	N													●	●	S								○	○	○	●				H		○										○		
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DNGG 1506	14	12.7	6.35																																																																																																															
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DNGG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																
Finishing SF 	DNGG 150604-SF	0.4	0.10 - 0.30	0.2 - 3.0										● 01040																																																																																																				
	DNGG 150608-SF	0.8	0.10 - 0.30	0.5 - 3.0										● 01041																																																																																																				

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



DNMA 55° DIAMOND TYPE

▶ EDP Code TI..... Example: DNMA 150408 ET31C = T100691

	<table border="1"> <tr> <th>INSERT</th> <th>LE</th> <th>IC</th> <th>S</th> </tr> <tr> <td>DNMA 1506</td> <td>14</td> <td>12.7</td> <td>6.35</td> </tr> </table>	INSERT	LE	IC	S	DNMA 1506	14	12.7	6.35	<table border="1"> <tr> <th>P</th><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td> </tr> <tr> <th>M</th><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td> </tr> <tr> <th>K</th><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td> </tr> <tr> <th>N</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td> </tr> <tr> <th>S</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <th>H</th><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td><td></td> </tr> </table>													P	●	●	●	●	○								●			●	M				●	●	●	●	○	○							●	K	●	●											●			●	N														●	●		S								○	○	○	●						H		○											○			
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DNMA 1506	14	12.7	6.35																																																																																																																									
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DNMA	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																										
Heavy Roughing 	DNMA 150604	0.4	0.10 - 0.50	0.5 - 5.0	● 01479																																																																																																																							
	DNMA 150608	0.8	0.15 - 0.50	1.0 - 5.0	● 01480																																																																																																																							
	DNMA 150612	1.2	0.15 - 0.50	1.5 - 5.0	● 01481																																																																																																																							

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



DNMG 55° DIAMOND TYPE

► EDP Code TI..... Example: DNMG 150404-BF ET31C = T100412

					P	M	K	N	S	H									
					●	●	●	●	○	○	●	●	●	●	●	●	●		
					○	○	○	○	○	○	○	○	○	○	○	○	○		
		INSERT	LE	IC	S														
		DNMG 1104	10	9.53	4.76														
		DNMG 1504	14	12.7	4.76														
		DNMG 1506	14	12.7	6.35														
DNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
	Finishing BF	DNMG 150404-BF	0.4	0.05 - 0.25	0.5 - 2.5				●	●					●				
		DNMG 150604-BF	0.4	0.05 - 0.25	0.5 - 2.0		■	●	●	●						●			
		DNMG 150608-BF	0.8	0.05 - 0.25	1.0 - 2.5		■	●	●	●						●			
		DNMG 150612-BF	1.2	0.05 - 0.25	1.5 - 3.5		■	●	●	●						●			
	Finishing MF	DNMG 150604-MF	0.4	0.07 - 0.30	0.2 - 1.5				●	●	●	●	●	●	●				
		DNMG 150608-MF	0.8	0.07 - 0.30	0.2 - 1.5				●	●	●	●	●	●	●	●			
	Finishing to Medium Cermet PSF	DNMG 150404-PSF	0.4	0.10 - 0.30	0.5 - 3.0													●	
		DNMG 150408-PSF	0.8	0.10 - 0.30	0.5 - 3.0														●
		DNMG 150604-PSF	0.4	0.10 - 0.30	0.5 - 3.5														●
		DNMG 150608-PSF	0.8	0.10 - 0.30	0.5 - 3.5														●
	Light cuts to Medium BL	DNMG 110404-BL	0.4	0.10 - 0.30	0.5 - 2.5		■	●	●	●									
		DNMG 110408-BL	0.8	0.10 - 0.30	1.0 - 2.5		■	●	●	●									
		DNMG 150604-BL	0.4	0.10 - 0.30	0.5 - 3.0			●	●	●									
		DNMG 150608-BL	0.8	0.10 - 0.30	1.0 - 3.0		■	●	●	●						●			
		DNMG 150612-BL	1.2	0.10 - 0.30	1.5 - 3.0			●	●	●						●			

■ = Available while stocks last

ISO	P			M	K	N	S	H		
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	



TURNING INSERTS



DNMG 55° DIAMOND TYPE

► EDP Code TI..... Example: DNMG 150404-MM ET33C = T100344

		INSERT				Material Matrix																					
		LE	IC	S		P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
		10	9.53	4.76		●	●	●	●	○																	
	DNMG 1104	10	9.53	4.76																							
	DNMG 1504	14	12.7	4.76		●	●																●			●	
	DNMG 1506	14	12.7	6.35															○	○	○	●					
DNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)		ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U								
	Medium BG	DNMG 150408-BG	0.8	0.20 - 0.40	1.0 - 3.0					●	●												●				
		DNMG 150604-BG	0.4	0.20 - 0.40	0.5 - 3.0	●	■	●		●	●																
		DNMG 150608-BG	0.8	0.20 - 0.40	1.0 - 3.0	●	■	●		●	●													●			
		DNMG 150612-BG	1.2	0.20 - 0.40	1.5 - 3.0	●	■	●		●	●																
	Medium MM	DNMG 150404-MM	0.4	0.20 - 0.35	0.5 - 3.5						●							●	●	●							
		DNMG 150408-MM	0.8	0.20 - 0.35	1.0 - 3.5						●							●	●	●							
		DNMG 150604-MM	0.4	0.20 - 0.35	0.5 - 3.5						●								●	●	●						
		DNMG 150608-MM	0.8	0.20 - 0.35	1.0 - 3.5						●								●	●	●						
		DNMG 150612-MM	1.2	0.20 - 0.35	1.5 - 3.5						●								●	●	●						
	Medium SM	DNMG 150608-SM	0.8	0.10 - 0.25	0.5 - 4.0													●	●	●							
		DNMG 150612-SM	1.2	0.10 - 0.25	0.5 - 4.0														●	●	●						
	Medium & Unstable BM	DNMG 150604-BM	0.4	0.15 - 0.30	0.5 - 3.0			●	●	●																	
		DNMG 150608-BM	0.8	0.15 - 0.30	1.0 - 3.0			●	●	●																	
		DNMG 150612-BM	1.2	0.15 - 0.30	1.5 - 3.0			●	●	●																	

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	


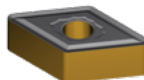
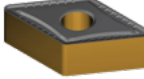

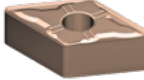


TURNING INSERTS



DNMG 55° DIAMOND TYPE

► EDP Code TI..... Example: DNMG 150608-BR ET101C = TI01493

DNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility																			
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U						
MG Medium & Unstable 	DNMG 150604-MG	0.4	0.20 - 0.40	0.5 - 4.0																				
	DNMG 150608-MG	0.8	0.20 - 0.40	1.0 - 4.0									01945											
	DNMG 150612-MG	1.2	0.20 - 0.40	1.5 - 4.0									01946	01348	01349	01350	01351							
BC Semi-Roughing 	DNMG 150608-BC	0.8	0.20 - 0.40	1.0 - 4.0	01491		00969	00369	00370															
	DNMG 150612-BC	1.2	0.20 - 0.40	1.5 - 4.0	01494		01849	00372	00373															
BR Roughing 	DNMG 150608-BR	0.8	0.30 - 0.50	1.0 - 5.0	01493		01848	00725	00957															
	DNMG 150612-BR	1.2	0.30 - 0.50	1.5 - 5.0	01496	00596	01851	00597	00144												00036			
MR Roughing 	DNMG 150608-MR	0.8	0.30 - 0.55	2.0 - 5.5						00895	01948	00874	00731	00732										
	DNMG 150612-MR	1.2	0.30 - 0.55	2.0 - 5.5							02130	01090	01091	00733										
SR Roughing 	DNMG 150608-SR	0.8	0.10 - 0.40	0.5 - 4.0																	01047			
	DNMG 150612-SR	1.2	0.10 - 0.40	0.5 - 4.0																	01049			

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



DNMM 55° DIAMOND TYPE

► EDP Code TI..... Example: DNMG 150404-MM ET33C = T100344

	<table border="1"> <tr> <th>INSERT</th> <th>LE</th> <th>IC</th> <th>S</th> </tr> <tr> <td>DNMM 1506</td> <td>14</td> <td>12.7</td> <td>6.35</td> </tr> </table>	INSERT	LE	IC	S	DNMM 1506	14	12.7	6.35	<table border="1"> <tr><td>P</td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr> <tr><td>M</td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr> <tr><td>K</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>N</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><td>S</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>H</td><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td><td></td></tr> </table>														P	●	●	●	●	○															●	M				●	●	●	●	●	○	○										●	K	●	●																	●	●	N																		●	●		S									○	○	○	●									H		○															○			
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DNMM	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																																																			
Heavy Roughing Single side	BH DNMM 150612-BH	1.2	0.30 - 0.50	2.0 - 7.0			● 02131	● 02024	● 02025																																																																																																																																												

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

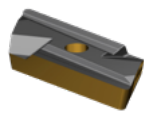
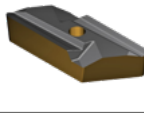


TURNING INSERTS



KNUX COPY TURNING TYPE

▶ EDP Code TI..... Example: KNUX 160405L ET31C = T100623

KNUX	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Matrix														
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
Copy Turning Left 	KNUX 160405L	0.5	0.10 - 0.40	0.5 - 6.0		■	●	●	●	●	○					●			●
	KNUX 160410L	1.0	0.30 - 0.60	1.0 - 6.0			●	●	●	●									
Copy Turning Right 	KNUX 160405R	0.5	0.10 - 0.40	0.5 - 6.0		■	●	●	●	●						●			
	KNUX 160410R	1.0	0.30 - 0.60	1.0 - 6.0			●	●	●	●									

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



SNMA 90° SQUARE TYPE

▶ EDP Code TI..... Example: SNMA 120408 ET31C = T100980

	INSERT	LE	IC	S	P	●	●	●	●	○				●				●		
	SNMA 1204	-	12.7	4.76	M				●	●	○	○							●	
	SNMA 1506	-	15.88	6.35	K	●	●								●				●	
	SNMA 1906	-	19.05	6.35	N										●	●				
						S					○	○	○	●						
					H		○								○					
SNMA	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
Heavy Roughing 	SNMA 120408	0.8	0.15 - 0.50	1.0 - 5.0	● 01501															
	SNMA 120412	1.2	0.15 - 0.50	1.5 - 5.0	● 01502															
	SNMA 120416	1.6	0.15 - 0.70	2.0 - 6.0	● 02026															
	SNMA 150612	1.2	0.15 - 0.50	1.5 - 5.0	● 01503	■ 00982														
	SNMA 190616	1.6	0.15 - 1.00	3.0 - 10.0	● 01504															

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



SNMG 90° SQUARE TYPE

► EDP Code TI..... Example: SNMG 120404-BF ET31C = TI00913

SNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility Matrix																	
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U				
	BF Finishing	SNMG 090308-BF	0.8	0.05 - 0.20	1.0 - 2.0																	
		SNMG 120404-BF	0.4	0.05 - 0.25	0.5 - 1.5																	
		SNMG 120408-BF	0.8	0.05 - 0.25	1.0 - 2.5																	
	MF Finishing	SNMG 120404-MF	0.4	0.07 - 0.30	0.2 - 1.5																	
		SNMG 120408-MF	0.8	0.07 - 0.30	0.2 - 1.5																	
		SNMG 120412-MF	1.2	0.07 - 0.30	0.2 - 1.5																	
	BL Light cuts to Medium	SNMG 120404-BL	0.4	0.10 - 0.30	0.5 - 3.0																	
		SNMG 120408-BL	0.8	0.10 - 0.30	1.0 - 3.0																	
	BG Medium	SNMG 120408-BG	0.8	0.20 - 0.40	1.0 - 3.0																	
		SNMG 120412-BG	1.2	0.20 - 0.40	1.5 - 3.0																	
		SNMG 120416-BG	1.6	0.20 - 0.40	2.0 - 3.0																	
	MM Medium	SNMG 120408-MM	0.8	0.20 - 0.35	1.0 - 3.5																	
		SNMG 120412-MM	1.2	0.20 - 0.35	1.5 - 3.5																	

■ = Available while stocks last

ISO	P			M	K	N	S	H			
	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

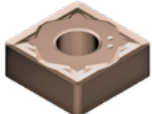
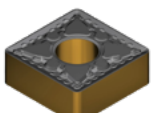
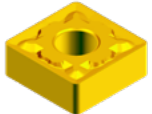
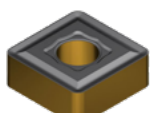


TURNING INSERTS



SNMG 90° SQUARE TYPE

► EDP Code TI..... Example: SNMG 120408-BM ET31C = TI00736

SNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility																		
					P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U
Medium SM 	SNMG 090304-SM	0.4	0.08 - 0.20	0.5 - 3.0																			
	SNMG 120408-SM	0.8	0.10 - 0.25	0.5 - 4.0																			
Medium & Unstable BM 	SNMG 120408-BM	0.8	0.15 - 0.30	1.0 - 3.0			02033	00737	00738														
Medium & Unstable MG 	SNMG 120404-MG	0.4	0.20 - 0.40	0.5 - 4.0									01951										
	SNMG 120408-MG	0.8	0.20 - 0.40	1.0 - 4.0									01952	01352	01353	01354	01355						
	SNMG 120412-MG	1.2	0.20 - 0.40	1.5 - 4.0									01953										
Semi-Roughing BC 	SNMG 120408-BC	0.8	0.20 - 0.40	1.0 - 4.0	01505		01855	00375	00376														
	SNMG 120412-BC	1.2	0.20 - 0.40	1.5 - 4.0	01508		01858	00989	00740														

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



SNMG 90° SQUARE TYPE

► EDP Code TI..... Example: SNMG 120408-MR ET33C = T100909

		INSERT	LE	IC	S	EDP Code TI..... Example: SNMG 120408-MR ET33C = T100909																				
			-	9.53	3.18	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
			-	12.7	4.76	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			-	19.05	6.35	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)																						
Roughing 	BR SNMG 120408-BR	0.8	0.30 - 0.50	1.0 - 5.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	SNMG 120412-BR	1.2	0.30 - 0.50	1.5 - 5.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 120416-BR	1.6	0.30 - 0.50	2.0 - 5.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 190612-BR	1.2	0.30 - 0.80	3.0 - 9.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 190616-BR	1.6	0.30 - 0.80	3.0 - 9.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing 	KR SNMG 120412-KR	1.2	0.30 - 0.60	1.5 - 5.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 120416-KR	1.6	0.30 - 0.60	2.0 - 5.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing 	MR SNMG 120408-MR	0.8	0.30 - 0.55	2.0 - 5.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 120412-MR	1.2	0.30 - 0.55	2.0 - 5.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 120416-MR	1.6	0.30 - 0.55	2.0 - 5.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing 	SR SNMG 120408-SR	0.8	0.10 - 0.40	0.5 - 4.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNMG 120412-SR	1.2	0.10 - 0.40	0.5 - 4.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

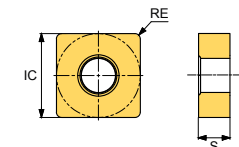


TURNING INSERTS



SNMM 90° SQUARE TYPE

▶ EDP Code TI..... Example: SNMM 150612-BH ET32C = TI01771

SNMM	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Groups													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Heavy Roughing Single side 	BH SNMM 150612-BH	1.2	0.35 - 0.60	2.0 - 5.5			●	●	●	●	○				●			●
	SNMM 190612-BH	1.2	0.35 - 0.70	1.5 - 9.0	● 01773		●	●	●									
	SNMM 190616-BH	1.6	0.35 - 0.70	2.0 - 9.0	● 01777		●	●	●									
	SNMM 190624-BH	2.4	0.35 - 0.70	3.0 - 9.0	● 01781		●	●	●									

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

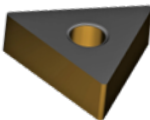


TURNING INSERTS



TNMA 60° TRIANGULAR TYPE

▶ EDP Code TI..... Example: TNMA 160404 ET101C = TI01520

TNMA	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility															
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
Heavy Roughing 	TNMA 160404	0.4	0.15 - 0.50	0.5 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	TNMA 160408	0.8	0.15 - 0.50	1.0 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	TNMA 160412	1.2	0.15 - 0.50	1.5 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

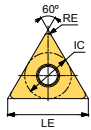


TURNING INSERTS



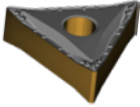
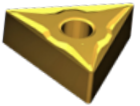
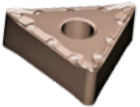
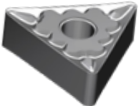
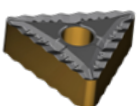
TNMG 60° TRIANGULAR TYPE

► EDP Code TI..... Example: TNMG 160404-BF ET31C = TI00423



INSERT	LE	IC	S
TNMG 1604	15.7	9.53	4.76
TNMG 2204	22	12.7	4.76

	P	M	K	N	S	H
●	●	●	●	○	○	○
○	○	○	○	○	○	○
■	■	■	■	■	■	■

TNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Finishing 	BF TNMG 160404-BF	0.4	0.05 - 0.25	0.5 - 2.5			● 01867	● 00424	● 00425						● 00048			
	TNMG 160408-BF	0.8	0.05 - 0.25	1.0 - 2.5			● 01870	● 00427	● 00428									
	TNMG 160412-BF	1.2	0.05 - 0.25	1.5 - 2.5			● 02101	● 00762	● 01004									
	TNMG 220404-BF	0.4	0.10 - 0.35	0.5 - 4.0	■ 00429	● 01873	● 01006	● 01007								● 00051		
Finishing 	MF TNMG 160404-MF	0.4	0.07 - 0.30	0.2 - 1.5					● 00956	● 02158	● 00776	● 00777	● 01230	● 01231				
	TNMG 160408-MF	0.8	0.07 - 0.30	0.2 - 1.5						● 01957	● 00778	● 00779	● 00780	● 01232				
Finishing 	SF TNMG 160408-SF	0.8	0.10 - 0.25	0.5 - 3.0											● 01237			
Finishing to Medium Cermet 	PSF TNMG 160404-PSF	0.4	0.07 - 0.30	0.4 - 2.5														● 01907
	TNMG 160408-PSF	0.8	0.10 - 0.30	0.6 - 2.5														● 01908
Light cuts to Medium 	BL TNMG 160404-BL	0.4	0.10 - 0.30	0.5 - 3.0			● 02046	● 01786	● 01787									
	TNMG 160408-BL	0.8	0.10 - 0.30	1.0 - 3.0			● 00930	● 00560	● 00561									
	TNMG 160412-BL	1.2	0.10 - 0.30	1.5 - 3.0	■ 01093	● 02047	● 00763	● 01005										

■ = Available while stocks last

ISO	P			M	M	K	N	S	H	
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	

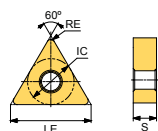


TURNING INSERTS



TNMG 60° TRIANGULAR TYPE

► EDP Code TI..... Example: TNMG 160404-BG ET101C = TI01524



INSERT	LE	IC	S
TNMG 1604	16	9.53	4.76
TNMG 2204	22	12.7	4.76

	P	M	K	N	S	H
●	●	●	●	○	○	○
○	○	○	○	○	○	○
■	■	■	■	■	■	■

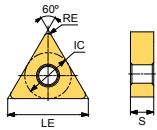
TNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
Medium BG 	TNMG 160404-BG	0.4	0.20 - 0.40	0.5 - 3.0	● 01524	● 01868	● 00517	● 00518											
	TNMG 160408-BG	0.8	0.20 - 0.40	1.0 - 3.0	● 01527	■ 00520	● 00932	● 00521	● 00522							● 00049			
	TNMG 160412-BG	1.2	0.20 - 0.40	1.5 - 3.0	● 01531		● 00935	● 00769	● 00869										
	TNMG 220408-BG	0.8	0.25 - 0.60	1.0 - 6.0	● 01534	■ 00523	● 01874	● 00524	● 00525							● 00052			
	TNMG 220412-BG	1.2	0.25 - 0.60	1.5 - 6.0	● 01535		● 02050	● 01629	● 01630										
	TNMG 220416-BG	1.6	0.25 - 0.60	2.0 - 6.0	● 01537		● 02051	● 01120	● 01009										
Medium MM 	TNMG 160404-MM	0.4	0.20 - 0.35	0.5 - 3.5							● 00781	● 00782	● 01233	● 01788					
	TNMG 160408-MM	0.8	0.20 - 0.35	1.0 - 3.5							● 00642	● 00783	● 00871	● 01234					
	TNMG 160412-MM	1.2	0.20 - 0.35	1.5 - 3.5							● 00784	● 00785	● 01235	● 01236					
Medium SM 	TNMG 160408-SM	0.8	0.10 - 0.25	0.5 - 4.0							● 01238	● 01239	● 01240	● 01241					
	TNMG 160412-SM	1.2	0.10 - 0.25	0.5 - 4.0							● 01242	● 01243	● 01244	● 01245					
Medium & Unstable BM 	TNMG 160404-BM	0.4	0.15 - 0.30	0.5 - 3.0	● 01527	■ 00863	● 02048	● 00850	● 00851										
	TNMG 160408-BM	0.8	0.15 - 0.30	1.0 - 3.0	● 01528		● 00931	● 00578	● 00579										
	TNMG 160412-BM	1.2	0.15 - 0.30	1.5 - 3.0	● 01532		● 02049	● 00765	● 00766										

■ = Available while stocks last

ISO	P			M	K	N	S	H		
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-

TNMG 60° TRIANGULAR TYPE

► EDP Code TI..... Example: TNMG 160404-MG ET225C = TI01958



INSERT	LE	IC	S
TNMG 1604	16	9.53	4.76
TNMG 2204	22	12.7	4.76

	P	M	K	N	S	H
●	●	●	●	○	○	○
○	○	○	○	○	○	○
■	■	■	■	■	■	■

TNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Medium & Unstable 	MG TNMG 160404-MG	0.4	0.20 - 0.40	0.5 - 4.0						●	●	●	●	●				
	TNMG 160408-MG	0.8	0.20 - 0.40	1.0 - 4.0						●	●	●	●	●				
	TNMG 160412-MG	1.2	0.20 - 0.40	1.5 - 4.0						●	●	●	●	●				
Semi-Roughing 	BC TNMG 160404-BC	0.4	0.20 - 0.40	0.5 - 4.0	●		●	●	●									
	TNMG 160408-BC	0.8	0.20 - 0.40	1.0 - 4.0	●	■	●	●	●									
	TNMG 160412-BC	1.2	0.20 - 0.40	1.5 - 4.0	●	■	●	●	●									
	TNMG 220416-BC	1.6	0.20 - 0.40	2.0 - 6.0					●									
Roughing 	BR TNMG 160408-BR	0.8	0.30 - 0.50	1.0 - 5.0	●		●	●	●									
	TNMG 160412-BR	1.2	0.30 - 0.50	1.5 - 5.0	●	■	●	●	●								●	
	TNMG 220412-BR	1.2	0.30 - 0.65	1.5 - 7.0	●		●	●	●								●	
	TNMG 220416-BR	1.6	0.30 - 0.65	2.0 - 7.0	●				●								●	
Roughing 	MR TNMG 160408-MR	0.8	0.30 - 0.55	2.0 - 5.5					●	●	●	●	●					
	TNMG 160412-MR	1.2	0.30 - 0.55	2.0 - 5.5					●	●	●	●	●					
Roughing 	SR TNMG 160408-SR	0.8	0.10 - 0.40	0.5 - 4.0														●
	TNMG 160412-SR	1.2	0.10 - 0.40	0.5 - 4.0														●

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

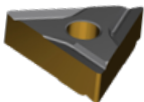
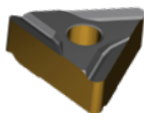


TURNING INSERTS



TNUX 60° TRIANGULAR TYPE

▶ EDP Code TI..... Example: TNUX 160404L ET31C = T100629

TNUX	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Copy turning Left 	TNUX 160404L	0.4	0.10 - 0.30	0.5 - 4.0			●	●	●	●	○				●			●
	TNUX 160408L	0.8	0.10 - 0.40	1.0 - 5.0		■	●	●	●	●	○				●			●
Copy Turning Right 	TNUX 160404R	0.4	0.10 - 0.30	0.5 - 4.0			●	●	●	●					●			●
	TNUX 160408R	0.8	0.10 - 0.40	1.0 - 5.0			●	●	●	●					●			●

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



VNMA 35° DIAMOND TYPE

▶ EDP Code TI..... Example: VNMA 160408 ET31C = TI01017

	<table border="1"> <tr> <th>INSERT</th> <th>LE</th> <th>IC</th> <th>S</th> </tr> <tr> <td>VNMA 1604</td> <td>16</td> <td>9.53</td> <td>4.76</td> </tr> </table>	INSERT	LE	IC	S	VNMA 1604	16	9.53	4.76	<table border="1"> <tr> <th>P</th><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td> </tr> <tr> <th>M</th><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td> </tr> <tr> <th>K</th><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td> </tr> <tr> <th>N</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td> </tr> <tr> <th>S</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <th>H</th><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td><td></td> </tr> </table>													P	●	●	●	●	○								●			●	M				●	●	●	●	○	○							●	K	●	●											●			●	N														●	●		S								○	○	○	●						H		○											○			
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VNMA	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																										
Heavy Roughing	VNMA 160408	0.8	0.15 - 0.40	1.0 - 5.0	● 01541																																																																																																																							

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



VNMG 35° DIAMOND TYPE

► EDP Code TI..... Example: VNMG 160404-BF ET31C = TI00435

VNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility												
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U
Finishing BF	VNMG 160404-BF	0.4	0.05 - 0.25	0.5 - 2.5		●	●	●	●	○				●			●
	VNMG 160408-BF	0.8	0.05 - 0.25	1.0 - 2.5		●	●	●	●	○				●			●
Finishing MF	VNMG 160404-MF	0.4	0.07 - 0.30	0.2 - 1.5						●	●	●	●	●			
	VNMG 160408-MF	0.8	0.07 - 0.30	0.2 - 1.5						●	●	●	●	●			
Finishing to Medium Cermet PSF	VNMG 160404-PSF	0.4	0.07 - 0.30	0.3 - 2.0													●
	VNMG 160408-PSF	0.8	0.10 - 0.30	0.5 - 2.0													●
Light cuts to Medium BL	VNMG 160404-BL	0.4	0.10 - 0.30	0.5 - 3.0		●	●	●									
	VNMG 160408-BL	0.8	0.10 - 0.30	1.0 - 3.0		●	●	●									
Medium BG	VNMG 160404-BG	0.4	0.20 - 0.40	0.5 - 3.0	●	●	●	●	●								
	VNMG 160408-BG	0.8	0.20 - 0.40	1.0 - 3.0	●	●	●	●	●						●		
	VNMG 160412-BG	1.2	0.20 - 0.40	1.5 - 3.0	●	●	●	●	●								

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

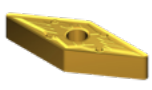
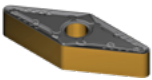
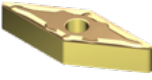
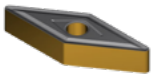
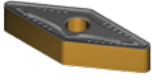


TURNING INSERTS



VNMG 35° DIAMOND TYPE

► EDP Code TI..... Example: VNMG 160404-MM ET21P = TI00794

					P	M	K	N	S	H								
					●	●	●	●	○	○	○	○	○	○	○	○	○	
					●	●	●	●	○	○	○	○	○	○	○	○	○	
					●	●	●	●	○	○	○	○	○	○	○	○	○	
					○	○	○	○	○	○	○	○	○	○	○	○	○	
VNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Medium MM 	VNMG 160404-MM	0.4	0.20 - 0.35	0.5 - 3.5							●	●	●	●				
	VNMG 160408-MM	0.8	0.20 - 0.35	1.0 - 3.5							●	●	●	●				
Medium & Unstable BM 	VNMG 160408-BM	0.8	0.15 - 0.30	1.0 - 3.0		●	●	●										
	VNMG 160412-BM	1.2	0.15 - 0.30	1.5 - 3.0		●	●	●										
Medium & Unstable MG 	VNMG 160404-MG	0.4	0.20 - 0.40	0.5 - 4.0						●								
	VNMG 160408-MG	0.8	0.20 - 0.40	1.0 - 4.0						●								
	VNMG 160412-MG	1.2	0.20 - 0.40	1.5 - 4.0						●								
Semi-Roughing BC 	VNMG 160404-BC	0.4	0.20 - 0.40	0.5 - 3.5	●	■	●	●	●									
	VNMG 160408-BC	0.8	0.20 - 0.40	1.0 - 3.5	●	■	●	●	●									
	VNMG 160412-BC	1.2	0.20 - 0.40	1.5 - 3.5	●	■	●	●	●									
Roughing BR 	VNMG 160412-BR	1.2	0.30 - 0.50	1.5 - 4.0	●		●	●	●						●			

■ = Available while stocks last

ISO	P			M	K	N	S	H		
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	




TURNING INSERTS



VNMG 35° DIAMOND TYPE

► EDP Code TI..... Example: VNMG 160408-MR ET33C = T100798

VNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Roughing 	MR VNMG 160408-MR VNMG 160412-MR	0.8	0.30 - 0.55	2.0 - 5.5						●	●	●	●	○			●	●
		1.2	0.30 - 0.55	2.0 - 5.5						●	●	●	●	○				
	SR VNMG 160408-SR	0.8	0.10 - 0.40	0.5 - 4.0														●

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



WNGG 80° TRIGON TYPE

► EDP Code TI..... Example: WNGG 080408-SF ET41P = TI01054

	<table border="1"> <tr> <th>INSERT</th> <th>LE</th> <th>IC</th> <th>S</th> </tr> <tr> <td>WNGG 0804</td> <td>7.8</td> <td>12.7</td> <td>4.76</td> </tr> </table>	INSERT	LE	IC	S	WNGG 0804	7.8	12.7	4.76	<table border="1"> <tr><td>P</td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr> <tr><td>M</td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr> <tr><td>K</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>N</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><td>S</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>H</td><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td><td></td></tr> </table>														P	●	●	●	●	○										●	M				●	●	●	●	○	○						●	K	●	●												●	●	N													●	●		S								○	○	○	●					H		○										○			
	INSERT	LE	IC	S																																																																																																																			
WNGG 0804	7.8	12.7	4.76																																																																																																																				
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S								○	○	○	●																																																																																																												
H		○										○																																																																																																											
WNGG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																					
Finishing	SF WNGG 080408-SF	0.8	0.10 - 0.25	0.5 - 3.0										● 01054																																																																																																									

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

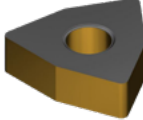


TURNING INSERTS



WNMA 80° TRIGON TYPE

▶ EDP Code TI..... Example: WNMA 080404 ET101C = TI01549

WNMA	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility														
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
Heavy Roughing 	WNMA 080404	0.4	0.15 - 0.50	0.5 - 5.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○
	WNMA 080408	0.8	0.15 - 0.50	1.0 - 5.0	●	■													
	WNMA 080412	1.2	0.15 - 0.50	1.5 - 5.0	●	■													

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-

WNMG 80° TRIGON TYPE

► EDP Code TI..... Example: WNMG 060404-BF ET31C = T100441

		INSERT	LE	IC	S																						
		WNMG 0604	5.7	12.7	4.76	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
		WNMG 0804	7.8	12.7	4.76	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
WNSMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)																							
Finishing 	BF WNMG 060404-BF	0.4	0.05 - 0.20	0.5 - 2.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	WNMG 080404-BF	0.4	0.05 - 0.25	0.5 - 2.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	WNMG 080408-BF	0.8	0.05 - 0.25	1.0 - 2.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	WNMG 080412-BF	1.2	0.05 - 0.25	1.0 - 2.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing 	MF WNMG 060404-MF	0.4	0.07 - 0.30	0.2 - 1.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	WNMG 060408-MF	0.8	0.07 - 0.30	0.2 - 1.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	WNMG 080404-MF	0.4	0.07 - 0.30	0.2 - 1.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	WNMG 080408-MF	0.8	0.07 - 0.30	0.2 - 1.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing to Medium Cermet 	PSF WNMG 080404-PSF	0.4	0.10 - 0.30	0.5 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	WNMG 080408-PSF	0.8	0.10 - 0.30	0.5 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Light cuts to Medium 	BL WNMG 060408-BL	0.8	0.10 - 0.30	1.0 - 2.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	WNMG 080404-BL	0.4	0.10 - 0.30	0.5 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	WNMG 080408-BL	0.8	0.10 - 0.30	1.0 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	WNMG 080412-BL	1.2	0.10 - 0.30	1.5 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing to Medium Wiper 	WM WNMG 080408-WM	0.8	0.10 - 0.50	0.8 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	WNMG 080412-WM	1.2	0.10 - 0.50	0.8 - 3.5	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

■ = Available while stocks last

ISO		P			M	K	N	S	H		
MATERIAL	P			M	K	N	S	H			
	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-

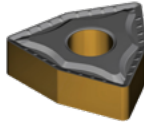
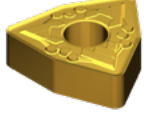
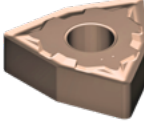
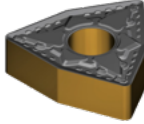


TURNING INSERTS



WNMG 80° TRIGON TYPE

► EDP Code TI..... Example: WNMG 060408-BG ET101C = TI01553

		INSERT				Material Matrix																				
		LE	IC	S	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
		5.7	12.7	4.76	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		7.8	12.7	4.76	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
WNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)																						
Medium 	BG WNMG 060408-BG	0.8	0.20 - 0.40	1.0 - 3.0	●						01553		●	●	●							●				
	WNMG 080404-BG	0.4	0.20 - 0.40	0.5 - 3.0	●	■					01556	00537	01897	00538	00214											
	WNMG 080408-BG	0.8	0.20 - 0.40	1.0 - 3.0	●	■					01558	00540	00815	00541	00217								●			
	WNMG 080412-BG	1.2	0.20 - 0.40	1.5 - 3.0	●	■					01562	00543	00943	00544	00870									●		
	WNMG 080416-BG	1.6	0.20 - 0.40	2.0 - 4.0	●	■					01566	01147	00945	00816	01149									○		
Medium 	MM WNMG 080404-MM	0.4	0.20 - 0.35	0.5 - 3.5													●	●	●	●						
	WNMG 080408-MM	0.8	0.20 - 0.35	1.0 - 3.5									●				●	●	●	●						
	WNMG 080412-MM	1.2	0.20 - 0.35	1.5 - 3.5													●	●	●	●						
Medium 	SM WNMG 080408-SM	0.8	0.10 - 0.25	0.5 - 4.0													●	●	●	●						
	WNMG 080412-SM	1.2	0.10 - 0.25	0.5 - 4.0													●	●	●	●						
Medium & Unstable 	BM WNMG 060404-BM	0.4	0.15 - 0.30	0.5 - 2.5	●						01818		●	●	●											
	WNMG 060408-BM	0.8	0.15 - 0.30	1.0 - 2.5	●						01646		●	●	●											
	WNMG 080404-BM	0.4	0.15 - 0.30	0.5 - 3.0		■						00808	02058	00809	00810											
	WNMG 080408-BM	0.8	0.15 - 0.30	1.0 - 3.0		■						00581	00941	00582	00211											
	WNMG 080412-BM	1.2	0.15 - 0.30	1.5 - 3.0									00942	00811	00812											
	WNMG 080416-BM	1.6	0.15 - 0.30	2.0 - 3.0									00904	00813	00814											

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



WNMG 80° TRIGON TYPE

▶ EDP Code TI..... Example: WNMG 060404-MG ET225C = TI01969

		INSERT	LE	IC	S	Material Matrix																					
		WNMG 0604	5.7	12.7	4.76	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
		WNMG 0604-MG	0.4	0.20 - 0.40	0.5 - 3.0	●	●	●	●	○							●								●		
		WNMG 060408-MG	0.8	0.20 - 0.40	1.0 - 3.0					●	●	●						●								●	
		WNMG 060412-MG	1.2	0.20 - 0.40	1.5 - 3.0														●								●
		WNMG 080404-MG	0.4	0.20 - 0.40	0.5 - 4.0														●								●
		WNMG 080408-MG	0.8	0.20 - 0.40	1.0 - 4.0														●	●	●	●	●				
		WNMG 080412-MG	1.2	0.20 - 0.40	1.5 - 4.0														●	●	●	●	●				
	Semi-Roughing	WNMG 060408-BC	0.8	0.20 - 0.40	1.0 - 3.0	●						●	●	●	●												
		WNMG 080404-BC	0.4	0.20 - 0.40	0.5 - 4.0	●	■						●	●	●	●											
		WNMG 080408-BC	0.8	0.20 - 0.40	1.0 - 4.0	●	■						●	●	●	●											
		WNMG 080412-BC	1.2	0.20 - 0.40	1.5 - 4.0	●	■						●	●	●	●											
		WNMG 080416-BC	1.6	0.20 - 0.40	2.0 - 4.0	●	■						●	●	●	●											
	Roughing	WNMG 060412-BR	1.2	0.30 - 0.50	1.5 - 4.0	●						●	●	●	●												
		WNMG 080408-BR	0.8	0.30 - 0.50	1.0 - 5.0	●	■						●	●	●	●											
		WNMG 080412-BR	1.2	0.30 - 0.50	1.5 - 5.0	●	■						●	●	●	●								●			
		WNMG 080416-BR	1.6	0.30 - 0.50	2.0 - 5.0	●	■						●	●	●	●											
	Roughing	WNMG 080408-KR	0.8	0.30 - 0.60	1.0 - 5.0	●						●	●														
		WNMG 080412-KR	1.2	0.30 - 0.60	1.5 - 5.0	●							●	●													

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



WNMG 80° TRIGON TYPE

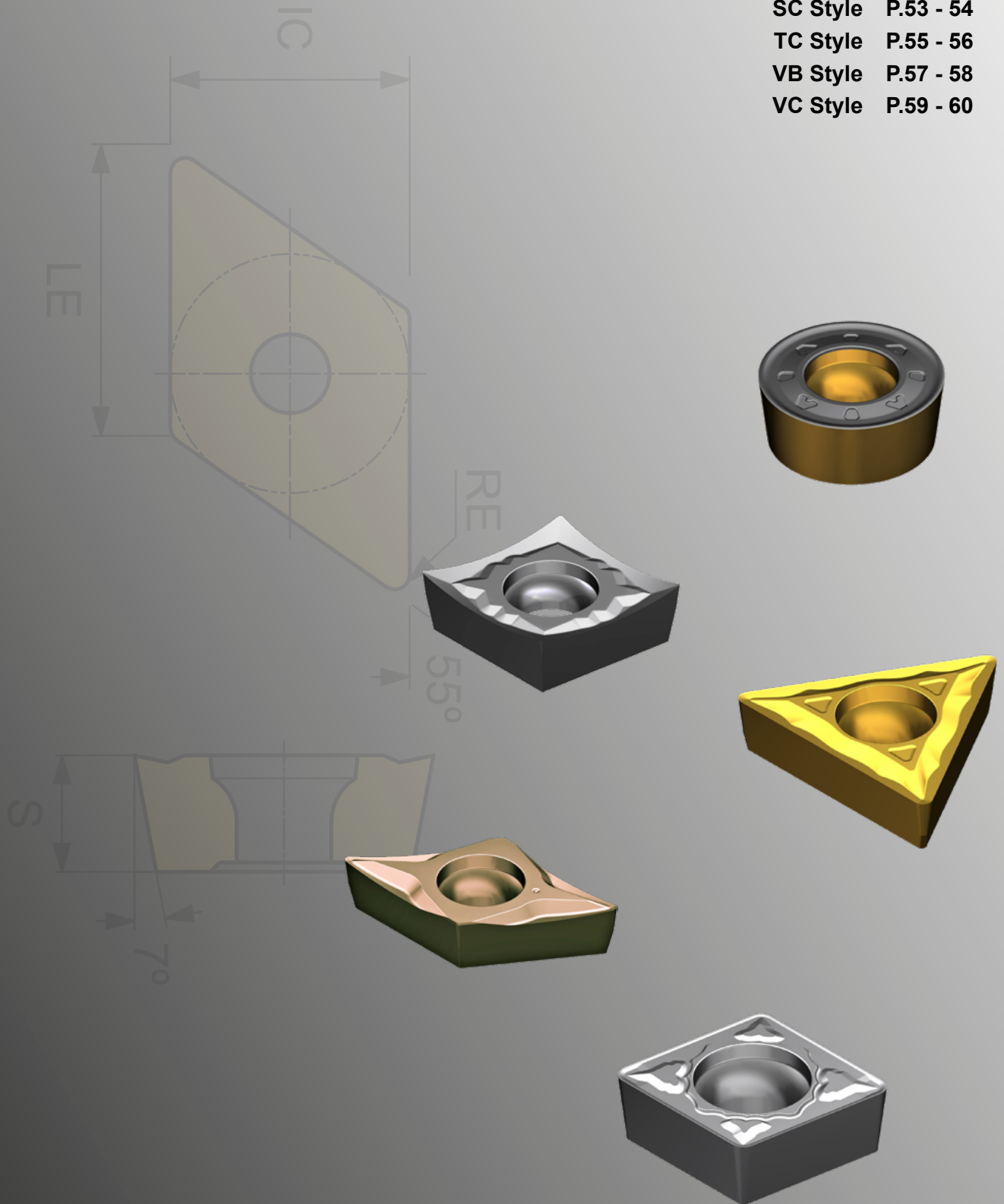
► EDP Code TI..... Example: WNMG 060412-MR ET33C = TI01257

		INSERT				Material Matrix																		
		LE	IC	S	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
WNMG	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)																				
	WNMG 0604	5.7	12.7	4.76																				
	WNMG 0804	7.8	12.7	4.76																				
	MR																							
	SR																							
Roughing	WNMG 060408-MR	0.8	0.30 - 0.55	1.0 - 3.5																				
	WNMG 060412-MR	1.2	0.30 - 0.55	1.5 - 4.0											02175									
	WNMG 080408-MR	0.8	0.30 - 0.55	1.0 - 5.5											01257	01972	00807	01255	01256					
	WNMG 080412-MR	1.2	0.30 - 0.55	1.5 - 5.5											00951	01978	00828	00829	00830					
	WNMG 080412-MR	1.2	0.30 - 0.55	1.5 - 5.5											00831	01979	00832	00833	00834					
	WNMG 060412-SR	1.2	0.10 - 0.40	0.5 - 3.0																				
	WNMG 080408-SR	0.8	0.10 - 0.40	0.5 - 4.0																				
	WNMG 080412-SR	1.2	0.10 - 0.40	0.5 - 4.0																				
	WNMG 080412-SR	1.2	0.10 - 0.40	0.5 - 4.0																				

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-

POSITIVE INSERTS

CC Style	P.46 - 48
DC Style	P.49 - 51
RC style	P.52
SC Style	P.53 - 54
TC Style	P.55 - 56
VB Style	P.57 - 58
VC Style	P.59 - 60



CCGT 80° RHOMBIC TYPE

▶ EDP Code TI..... Example: CCGT 060202-AL ET10U = T101163

		INSERT				EDP Code TI..... Example: CCGT 060202-AL ET10U = T101163																				
		LE	IC	S	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
Finishing to Roughing 	AL	6.2	6.35	2.38	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	CCGT 060202-AL	6.2	6.35	2.38																					●	
	CCGT 060204-AL	9.2	9.53	3.97																					●	01163
	CCGT 09T302-AL	12.4	12.7	4.76																				●	01671	01164
	CCGT 09T304-AL																							●	00222	00223
	CCGT 09T304-AL																							●	00224	00225
	CCGT 09T308-AL																							●	00226	00227
	CCGT 120402-AL																							●	00311	00310
CCGT 120404-AL																							●	00313	00312	
CCGT 120408-AL																							●	00315	00314	
Finishing to Medium 	MSF	6.2	6.35	2.38																●	●					
	CCGT 060201-MSF	6.2	6.35	2.38																02065	01576					
	CCGT 060202-MSF	9.2	9.53	3.97														01672	01673	01674	01436					
	CCGT 060204-MSF	12.4	12.7	4.76														01675	01676	01677	01437					
	CCGT 09T301-MSF																	01678	01679	02066	01658					
	CCGT 09T302-MSF																	01680	01681	02067	01577					
	CCGT 09T304-MSF																	01682	01683	01684	01578					
	CCGT 09T308-MSF																	01685	01686	01687	01579					

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-

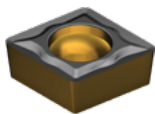
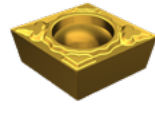
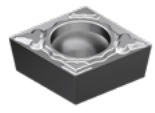


TURNING INSERTS



CCMT 80° RHOMBIC TYPE

► EDP Code TI..... Example: CCGT 060201-MSF ET41P = TI01576

		INSERT	LE	IC	S	Material Compatibility Matrix																			
		CC-- 0602	6.2	6.35	2.38	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Finishing 	BF	CCMT 060204-BF	0.4	0.05 - 0.20	0.5 - 2.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CCMT 09T304-BF	0.4	0.05 - 0.25	0.5 - 2.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CCMT 09T308-BF	0.8	0.05 - 0.25	1.0 - 2.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CCMT 120404-BF	0.4	0.10 - 0.25	1.5 - 3.0	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing 	MF	CCMT 060202-MF	0.2	0.04 - 0.15	0.1 - 2.0												●	●	●	●					
		CCMT 060204-MF	0.4	0.05 - 0.20	0.1 - 2.0												●	●	●	●		●			
		CCMT 060208-MF	0.8	0.05 - 0.20	0.1 - 2.0												●	●	●	●		●			
		CCMT 09T302-MF	0.2	0.04 - 0.15	0.1 - 2.0												●	●	●	●		●			
		CCMT 09T304-MF	0.4	0.06 - 0.25	0.1 - 2.0												●	●	●	●		●			
		CCMT 09T308-MF	0.8	0.08 - 0.30	0.1 - 2.0												●	●	●	●		●			
		CCMT 120404-MF	0.4	0.08 - 0.30	0.5 - 2.5												●	●	●	●		●			
Finishing Cermet 	PF	CCMT 060204-PF	0.4	0.04 - 0.15	0.1 - 1.5																			●	
		CCMT 09T302-PF	0.2	0.04 - 0.15	0.1 - 2.0																				●
		CCMT 09T304-PF	0.4	0.06 - 0.25	0.1 - 2.0																				●
		CCMT 09T308-PF	0.8	0.08 - 0.30	0.1 - 2.0																				●

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



CCMT 80° RHOMBIC TYPE

► EDP Code TI..... Example: CCMT 09T304-PM CT10U = T101916

		INSERT				P	M	K	N	S	H								
		LE	IC	S															
		CC-- 0602	6.2	6.35	2.38														
		CC-- 09T3	9.2	9.53	3.97														
		CC-- 1204	12.4	12.7	4.76														
CCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
Medium BG 	CCMT 060204-BG	0.4	0.10 - 0.25	0.5 - 2.0	●	■	●	●	●		●		●		●				
	CCMT 060208-BG	0.8	0.10 - 0.25	0.8 - 2.0	●	■	●	●	●		●		●		●				
	CCMT 09T304-BG	0.4	0.15 - 0.30	0.5 - 2.5	●	■	●	●	●				●		●				
	CCMT 09T308-BG	0.8	0.15 - 0.30	0.8 - 2.5	●	■	●	●	●		●		●		●				
	CCMT 120404-BG	0.4	0.15 - 0.35	0.5 - 3.0	●	■	●	●	●										
	CCMT 120408-BG	0.8	0.15 - 0.35	0.8 - 3.0	●	■	●	●	●				●		●				
	CCMT 120412-BG	1.2	0.15 - 0.35	1.2 - 3.0	●	■	●	●	●				●						
Medium MM 	CCMT 060204-MM	0.4	0.08 - 0.25	0.25 - 2.5						●									
	CCMT 060208-MM	0.8	0.10 - 0.30	0.5 - 2.5						●									
	CCMT 09T304-MM	0.4	0.08 - 0.25	0.25 - 3.0						●	●	●	●	●					
	CCMT 09T308-MM	0.8	0.10 - 0.30	0.5 - 3.0						●	●	●	●	●					
	CCMT 09T312-MM	1.2	0.10 - 0.35	0.8 - 3.0						●									
	CCMT 120408-MM	0.8	0.10 - 0.30	0.5 - 3.5						●									
	CCMT 120412-MM	1.2	0.10 - 0.35	0.8 - 3.5						●									
Medium Cermet PM 	CCMT 09T304-PM	0.4	0.08 - 0.25	0.25 - 3.0														●	
	CCMT 09T308-PM	0.8	0.10 - 0.30	0.5 - 3.0														●	

ISO	P			M	K	N	S	H		
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	

TURNING INSERTS

DCGT 55° DIAMOND TYPE

► EDP Code TI..... Example: DCGT 070202-AL ET10U = T101165

DCGT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	P	M	K	N	S	H																																																																																																																																															
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																																																							
<table border="1" style="margin-left: 20px;"> <tr><th>INSERT</th><th>LE</th><th>IC</th><th>S</th></tr> <tr><td>DC-- 0702</td><td>7.5</td><td>6.35</td><td>2.38</td></tr> <tr><td>DC-- 11T3</td><td>11.2</td><td>9.53</td><td>3.97</td></tr> </table>					INSERT	LE	IC	S	DC-- 0702	7.5	6.35	2.38	DC-- 11T3	11.2	9.53	3.97	<table border="1"> <tr><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr> <tr><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> </table>											●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
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DC-- 11T3	11.2	9.53	3.97																																																																																																																																																						
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Finishing to Roughing 	AL DCGT 070202-AL	0.2	0.01 - 0.08	0.5 - 1.0															●	01165																																																																																																																																					
	DCGT 070204-AL	0.4	0.02 - 0.15	0.5 - 2.0															●	01166																																																																																																																																					
	DCGT 11T301-AL	0.1	0.01 - 0.08	0.5 - 1.0														●	01693	01692																																																																																																																																					
	DCGT 11T302-AL	0.2	0.02 - 0.08	0.5 - 1.0														●	00241	00242																																																																																																																																					
	DCGT 11T304-AL	0.4	0.05 - 0.25	0.5 - 2.0														●	00243	00244																																																																																																																																					
	DCGT 11T308-AL	0.8	0.10 - 0.30	1.0 - 2.5														●	00245	00246																																																																																																																																					
Finishing to Medium 	MSF DCGT 070201-MSF	0.1	0.02 - 0.15	0.1 - 1.5											●	02072	01595																																																																																																																																								
	DCGT 070202-MSF	0.2	0.02 - 0.15	0.1 - 1.5										●	02125	02073	01596																																																																																																																																								
	DCGT 070204-MSF	0.4	0.03 - 0.20	0.1 - 1.5												●	02074	01597																																																																																																																																							
	DCGT 11T301-MSF	0.1	0.01 - 0.05	0.1 - 2.5												●	02075	01598																																																																																																																																							
	DCGT 11T302-MSF	0.2	0.02 - 0.15	0.1 - 2.5										●	01152	01159	01153	01154																																																																																																																																							
	DCGT 11T304-MSF	0.4	0.03 - 0.20	0.1 - 2.5										●	01160	01161	01155	01162																																																																																																																																							
	DCGT 11T308-MSF	0.8	0.03 - 0.20	0.1 - 2.5													●	02076	01599																																																																																																																																						

ISO	P			M		K		N	S	H	
	MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



DCMT 55° DIAMOND TYPE

► EDP Code TI..... Example: DCGT 070201-MSF ET41P = TI01595

DCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility																			
					P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Finishing 	BF DCMT 070204-BF	0.4	0.05 - 0.20	0.5 - 2.0	●	●	●	●	●	○	●	●	●	●	○	○	○	○	○	○	○	○	○	
	DCMT 11T304-BF	0.4	0.05 - 0.25	0.5 - 2.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	DCMT 11T308-BF	0.8	0.05 - 0.25	1.0 - 2.0	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing 	MF DCMT 070202-MF	0.2	0.05 - 0.17	0.1 - 1.5										●										
	DCMT 070204-MF	0.4	0.05 - 0.17	0.1 - 1.5										●	●	●	●	●	●	●	●	●	●	
	DCMT 11T302-MF	0.2	0.04 - 0.15	0.1 - 2.0										●	●	●	●	●	●	●	●	●	●	
	DCMT 11T304-MF	0.4	0.06 - 0.25	0.1 - 2.0										●	●	●	●	●	●	●	●	●	●	
	DCMT 11T308-MF	0.8	0.07 - 0.25	0.15 - 2.0										●	●	●	●	●	●	●	●	●	●	
Finishing Cermet 	PF DCMT 070204-PF	0.4	0.05 - 0.17	0.1 - 1.5																			●	
	DCMT 11T302-PF	0.2	0.04 - 0.15	0.1 - 2.0																			●	
	DCMT 11T304-PF	0.4	0.06 - 0.25	0.1 - 2.0																			●	
	DCMT 11T308-PF	0.8	0.07 - 0.25	0.15 - 2.0																			●	
Medium 	BG DCMT 070204-BG	0.4	0.10 - 0.25	0.5 - 2.0	●	●	●	●	●														●	
	DCMT 070208-BG	0.8	0.10 - 0.25	0.8 - 2.0	●	●	●	●	●															●
	DCMT 11T304-BG	0.4	0.15 - 0.30	0.5 - 2.5	●	●	●	●	●					●		●								●
	DCMT 11T308-BG	0.8	0.15 - 0.30	0.8 - 2.5	●	●	●	●	●															●
	DCMT 11T312-BG	1.2	0.15 - 0.35	1.5 - 3.0																				

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
ET10U	-	-	-	-	-	-	-	250 - 800	-	-	
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



DCMT 55° DIAMOND TYPE

► EDP Code TI..... Example: DCGT 070201-MSF ET41P = TI01595

		INSERT	LE	IC	S																					
		DC-- 0702	7.5	6.35	2.38	P	M	K	N	S	H	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
Medium MM 	DCMT 070204-MM	0.4	0.06 - 0.17	0.2 - 2.0													●	●	●	●	●					
	DCMT 070208-MM	0.8	0.08 - 0.25	0.2 - 2.5													●									
	DCMT 11T304-MM	0.4	0.06 - 0.17	0.25 - 3.0													●	●	●	●	●					
	DCMT 11T308-MM	0.8	0.08 - 0.25	0.5 - 2.5													●	●	●	●	●					
Medium Cermet PM 	DCMT 070204-PM	0.4	0.08 - 0.30	0.2 - 2.5																					●	
	DCMT 11T304-PM	0.4	0.06 - 0.17	0.25 - 3.0																						●
	DCMT 11T308-PM	0.8	0.08 - 0.25	0.5 - 2.5																						●

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
Vc (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
ET10U	-	-	-	-	-	-	-	250 - 800	-	-	
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	



TURNING INSERTS



RCMT ROUND TYPE

► EDP Code TI..... Example: RCMT 0602MO ET101C = TI01568

RCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility															
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
 	RCMT 0602MO	-	0.05 - 0.25	0.2 - 1.2	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	RCMT 0803MO	-	0.05 - 0.30	0.5 - 1.5	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	RCMT 10T3MO	-	0.10 - 0.35	0.5 - 2.5	●	■	●	●	●	○	○	○	○	○	○	○	○	○	○	○
	RCMT 1204MO	-	0.15 - 0.45	0.5 - 3.0	●	■	●	●	●	○	○	○	○	○	○	○	○	○	○	○

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

SCGT/SCMT 90° SQUARE TYPE

► EDP Code TI..... Example: SCGT 09T304-AL ET10U = TI01333

		<table border="1"> <tr><th>INSERT</th><th>LE</th><th>IC</th><th>S</th></tr> <tr><td>SC-- 09T3</td><td>-</td><td>9.53</td><td>3.97</td></tr> <tr><td>SCMT 1204</td><td>-</td><td>12.7</td><td>4.76</td></tr> </table>				INSERT	LE	IC	S	SC-- 09T3	-	9.53	3.97	SCMT 1204	-	12.7	4.76	<table border="1"> <tr><th>P</th><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td></tr> <tr><th>M</th><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td>○</td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr> <tr><th>K</th><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td></tr> <tr><th>N</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><th>S</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td>○</td><td>○</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><th>H</th><td></td><td>○</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>○</td><td></td><td></td><td></td></tr> </table>														P	●	●	●	●	○									●			●	M				●	●	●	●	○	○								●	K	●	●												●			●	N															●	●		S									○	○	○	●						H		○												○			
INSERT	LE	IC	S																																																																																																																																								
SC-- 09T3	-	9.53	3.97																																																																																																																																								
SCMT 1204	-	12.7	4.76																																																																																																																																								
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N															●	●																																																																																																																											
S									○	○	○	●																																																																																																																															
H		○												○																																																																																																																													
SCGT SCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U																																																																																																																									
Finishing to Roughing 	AL SCGT 09T304-AL	0.4	0.05 - 0.25	0.5 - 2.0														●	01333																																																																																																																								
	SCGT 09T308-AL	0.8	0.10 - 0.35	1.0 - 3.0														●	01334																																																																																																																								
Finishing 	BF SCMT 09T304-BF	0.4	0.05 - 0.25	0.5 - 2.0			● 02083	● 00307	● 01109		● 01702				● 00013																																																																																																																												
	SCMT 09T308-BF	0.8	0.05 - 0.25	1.0 - 2.0	● 01614		● 02084	● 01111	● 00887																																																																																																																																		
Finishing 	MF SCMT 09T304-MF	0.4	0.09 - 0.35	0.3 - 2.0						● 02137																																																																																																																																	
	SCMT 09T308-MF	0.8	0.09 - 0.35	0.3 - 2.0						● 02139				● 02085																																																																																																																													
	SCMT 120404-MF	0.4	0.09 - 0.35	0.35 - 2.5						● 02142																																																																																																																																	
Medium 	BG SCMT 09T304-BG	0.4	0.15 - 0.30	0.5 - 2.5	● 01498		● 01852	● 00977	● 00978		● 01703	● 01704				● 01216																																																																																																																											
	SCMT 09T308-BG	0.8	0.15 - 0.30	0.8 - 2.5	● 01499	■ 00498	● 01853	● 00499	● 00979		● 01705		● 01217			● 00014																																																																																																																											
	SCMT 120408-BG	0.8	0.15 - 0.35	0.8 - 3.0	● 01500	■ 00500	● 01854	● 00501	● 00502				● 01218																																																																																																																														

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

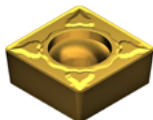
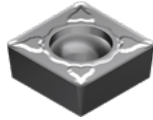


TURNING INSERTS



SCGT/SCMT 90° SQUARE TYPE

► EDP Code TI..... Example: SCGT 09T304-AL ET10U = TI01333

SCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility Matrix																				
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U							
Medium MM 	SCMT 09T304-MM	0.4	0.10 - 0.30	0.6 - 3.0							●														
	SCMT 09T308-MM	0.8	0.10 - 0.30	0.6 - 3.0							●														
	SCMT 120404-MM	0.4	0.10 - 0.30	0.6 - 4.0							●														
	SCMT 120408-MM	0.8	0.10 - 0.30	0.6 - 4.0							●	●	●	●	●										
	SCMT 120412-MM	1.2	0.10 - 0.30	0.6 - 4.5							●														
Medium Cermet PM 	SCMT 09T308-PM	0.8	0.13 - 0.30	0.6 - 3.0																				●	
	SCMT 120408-PM	0.8	0.13 - 0.30	0.6 - 4.0																					●

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	

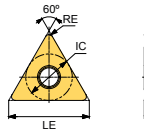
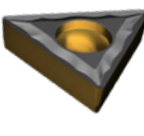

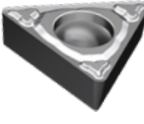


TURNING INSERTS



TCGT/TCMT 60° TRIANGULAR TYPE

► EDP Code TI..... Example: TCGT 110204-AL ET10U = TI01335

TCGT TCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility Matrix														
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U	
Finishing to Roughing 	AL TCGT 110204-AL	0.4	0.03 - 0.25	0.5 - 2.0	●	●	●	●	●	○									●
	TCGT 16T302-AL	0.2	0.02 - 0.05	0.5 - 1.0					●	●	●	○	○					●	●
	TCGT 16T304-AL	0.4	0.05 - 0.25	0.5 - 2.0														●	●
	TCGT 16T308-AL	0.8	0.10 - 0.35	1.0 - 3.0														●	●
Finishing 	BF TCMT 110204-BF	0.4	0.05 - 0.20	0.5 - 2.0	■	●	●	●	●		●	●	●	●					
	TCMT 16T304-BF	0.4	0.05 - 0.25	0.5 - 2.0	■	●	●	●	●		●	●	●	●					
	TCMT 16T308-BF	0.8	0.05 - 0.25	0.8 - 2.0	■	●	●	●	●										
Finishing 	MF TCMT 110202-MF	0.2	0.07 - 0.20	0.2 - 2.0						●									
	TCMT 110204-MF	0.4	0.07 - 0.20	0.2 - 2.0						●				●					
	TCMT 110208-MF	0.8	0.07 - 0.20	0.3 - 2.0						●				●					
	TCMT 16T304-MF	0.4	0.06 - 0.25	0.1 - 2.0						●	●	●	●	●					
	TCMT 16T308-MF	0.8	0.08 - 0.30	0.15 - 2.0						●	●	●	●	●					
Finishing Cermet 	PF TCMT 110204-PF	0.4	0.06 - 0.25	0.1 - 2.0															●
	TCMT 16T304-PF	0.4	0.06 - 0.25	0.1 - 2.0															●
	TCMT 16T308-PF	0.8	0.08 - 0.30	0.15 - 2.0															●

■ = Available while stocks last

ISO	P			M	M	K	K	N	S	H
MATERIAL	Non-alloy steel <25 HRc	Low alloy steel 25-35 HRc	High alloy steel, Tool steel 35-45 HRc	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRc
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



TCGT/TCMT 60° TRIANGULAR TYPE

▶ EDP Code TI..... Example: TCMT 110204-BG ET101C = TI01516

TCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Medium BG 	TCMT 110204-BG	0.4	0.10 - 0.25	0.5 - 2.0	●	●	●	●	●	○					●			●
	TCMT 110208-BG	0.8	0.10 - 0.25	0.8 - 2.0	●	●	●	●	●	○					○			●
	TCMT 16T304-BG	0.4	0.15 - 0.30	0.5 - 2.5	●	●	●	●	●									●
	TCMT 16T308-BG	0.8	0.15 - 0.30	0.8 - 2.5	●	●	●	●	●									●
Medium MM 	TCMT 110204-MM	0.4	0.08 - 0.25	0.25 - 3.0						●								
	TCMT 110208-MM	0.8	0.10 - 0.30	0.5 - 3.0						●								
	TCMT 16T304-MM	0.4	0.08 - 0.25	0.25 - 3.0						●	●	●	●	●				
	TCMT 16T308-MM	0.8	0.10 - 0.30	0.5 - 3.0						●	●	●	●	●				
	TCMT 16T312-MM	1.2	0.10 - 0.30	0.5 - 3.5						●								
Medium Cermet PM 	TCMT 16T304-PM	0.4	0.08 - 0.25	0.25 - 3.0														●
	TCMT 16T308-PM	0.8	0.10 - 0.30	0.5 - 3.0														●

■ = Available while stocks last

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



VBGT/VBMT 35° DIAMOND TYPE

▶ EDP Code TI..... Example: VBMT 110304-BF ET31C = TI01712

VBGT VBMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Matrix															
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U		
 Finishing to Medium MSF	VBGT 110301-MSF	0.1	0.01 - 0.20	0.1 - 1.5																
	VBGT 110302-MSF	0.2	0.02 - 0.20	0.1 - 1.5																
	VBGT 110304-MSF	0.4	0.05 - 0.20	0.2 - 1.5																
	VBGT 160404-MSF	0.4	0.05 - 0.20	0.2 - 2.0																
 Finishing BF	VBMT 110304-BF	0.4	0.04 - 0.16	0.1 - 1.0																
	VBMT 110308-BF	0.8	0.04 - 0.20	0.2 - 1.0																
	VBMT 160404-BF	0.4	0.05 - 0.25	0.5 - 2.0																
	VBMT 160408-BF	0.8	0.05 - 0.25	0.8 - 2.0																
 Finishing MF	VBMT 110304-MF	0.4	0.04 - 0.15	0.1 - 2.0																
	VBMT 110308-MF	0.8	0.05 - 0.20	0.2 - 2.0																
	VBMT 160402-MF	0.2	0.04 - 0.15	0.1 - 2.0																
	VBMT 160404-MF	0.4	0.05 - 0.20	0.2 - 2.0																
	VBMT 160408-MF	0.8	0.07 - 0.27	0.3 - 2.0																
 Finishing Cermet PF	VBMT 160402-PF	0.2	0.04 - 0.15	0.1 - 2.0																
	VBMT 160404-PF	0.4	0.05 - 0.20	0.2 - 2.0																
	VBMT 160408-PF	0.8	0.07 - 0.27	0.3 - 2.0																

■ = Available while stocks last

ISO	P			M		K		N	S	H
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-

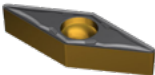
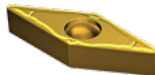
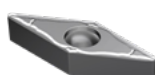


TURNING INSERTS



VBMT 35° DIAMOND TYPE

► EDP Code TI..... Example: VBMT 160404-MM ET225C = TI02000

VBMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
	BG VBMT 160404-BG	0.4	0.15 - 0.30	0.5 - 2.5	●	■	●	●	●	○					●			●
	VBMT 160408-BG	0.8	0.15 - 0.30	0.8 - 2.5	●	■	●	●	●	○					●			●
	MM VBMT 110304-MM	0.4	0.07 - 0.21	0.25 - 2.0						●								
	VBMT 110308-MM	0.8	0.08 - 0.27	0.5 - 2.0						●								
	VBMT 160404-MM	0.4	0.07 - 0.21	0.25 - 2.7						●	●	●	●	●				
	VBMT 160408-MM	0.8	0.08 - 0.27	0.5 - 2.7						●	●	●	●	●				
	PM VBMT 160404-PM	0.4	0.07 - 0.21	0.25 - 2.7														●
	VBMT 160408-PM	0.8	0.08 - 0.27	0.5 - 2.7														●

■ = Available while stocks last

ISO	P			M	K	N	S	H			
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-	





TURNING INSERTS



VCGT 35° DIAMOND TYPE

▶ EDP Code TI..... Example: VCGT 110301-AL ET10D = TI01717

VCGT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)	Material Compatibility Matrix													
					ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
Finishing to Roughing 	AL VCGT 110301-AL	0.1	0.02 - 0.20	0.2 - 2.0	●	●	●	●	●	○					●			●
	VCGT 110302-AL	0.2	0.02 - 0.20	0.2 - 2.0					●	●	●	○	○					●
	VCGT 110304-AL	0.4	0.05 - 0.25	0.2 - 3.0														●
	VCGT 160402-AL	0.2	0.02 - 0.05	0.5 - 1.0														●
	VCGT 160404-AL	0.4	0.05 - 0.25	0.5 - 2.0														●
	VCGT 160408-AL	0.8	0.10 - 0.35	1.0 - 3.0														●
	VCGT 160412-AL	1.2	0.10 - 0.35	1.2 - 3.0														●
Finishing to Medium 	MSF VCGT 110301-MSF	0.1	0.01 - 0.20	0.1 - 1.5								●	●					
	VCGT 110302-MSF	0.2	0.02 - 0.20	0.1 - 1.5						●	●	●	●					
	VCGT 110304-MSF	0.4	0.05 - 0.20	0.2 - 1.5								●	●					
	VCGT 110308-MSF	0.8	0.05 - 0.20	0.4 - 1.5								●	●					

ISO	P			M		K		N	S	H	
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41	
V _c (m/min)	ET101C	-	-	-	-	170 - 420	120 - 410	-	-	-	
	ET31C	170 - 450	180 - 380	100 - 330	-	120 - 300	120 - 280	-	-	40 - 80	
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	30 - 90	-	
	ET23P	-	-	-	110 - 180	40 - 130	-	-	20 - 40	-	
	ET24P	-	-	-	80 - 150	30 - 120	-	-	20 - 40	-	
	ET41P	-	-	-	95 - 290	90 - 210	-	-	35 - 90	-	
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



TURNING INSERTS



VCMT 35° DIAMOND TYPE

► EDP Code TI..... Example: VCGT 110301-MSF ET24P = TI02004

		INSERT	LE	IC	S														
		VC-- 1103	10.67	6.35	3.18														
		VC-- 1604	15.8	9.53	4.76														
						P	M	K	N	S	H								
						ET101C	ET31C	ET315C	ET32C	ET33C	ET225C	ET21P	ET23P	ET24P	ET41P	ET801	ET10D	ET10U	CT10U
VCMT	DESIGNATION	RE (mm)	f _n (mm/rev)	a _p (mm)															
Finishing 	BF VCMT 160404-BF	0.4	0.05 - 0.25	0.5 - 2.0		■	●	●	●										
	VCMT 160408-BF	0.8	0.05 - 0.25	1.0 - 2.0		■	●	●	●										
Finishing 	MF VCMT 110304-MF	0.4	0.05 - 0.20	0.1 - 1.7							●	●	●	●					
	VCMT 160408-MF	0.8	0.07 - 0.27	0.3 - 2.0							●								
Finishing Cermet 	PF VCMT 110304-PF	0.4	0.05 - 0.20	0.1 - 1.7															●
Medium 	BG VCMT 160404-BG	0.4	0.10 - 0.20	0.3 - 2.5	●						●								
	VCMT 160408-BG	0.8	0.15 - 0.30	0.8 - 2.5	●	■	●	●	●		●								
Medium 	MM VCMT 110304-MM	0.4	0.07 - 0.21	0.25 - 2.0							●								
	VCMT 160404-MM	0.4	0.07 - 0.21	0.25 - 2.7							●								
	VCMT 160408-MM	0.8	0.08 - 0.27	0.5 - 2.7							●								

■ = Available while stocks last

ISO		P			M	K	N	S	H		
MATERIAL	Non-alloy steel <25 HRC	Low alloy steel 25-35 HRC	High alloy steel, Tool steel 35-45 HRC	Ferritic / Martensitic Stainless steel	Austenitic Stainless steel	Grey Cast iron	Nodular Cast iron	Aluminium & Non-ferrous material	Heat Resistant and Super Alloys	Hardened steel <55 HRC	
	VDI GROUP	1-5	6-9	10-11	12-13	14	15-16	17-20	21-30	31-37	38-41
V _c (m/min)	ET101C	-	-	-	-	-	170 - 420	120 - 410	-	-	-
	ET31C	170 - 450	180 - 380	100 - 330	-	-	120 - 300	120 - 280	-	-	40 - 80
	ET315C	180 - 500	170 - 450	60 - 180	-	-	-	-	-	-	-
	ET32C	180 - 380	110 - 350	60 - 300	-	-	-	-	-	-	-
	ET33C	150 - 350	90 - 300	70 - 250	120 - 220	50 - 180	-	-	-	-	-
	ET225C	-	-	-	160 - 220	100 - 200	-	-	-	-	-
	ET21P	135 - 405	120 - 350	95 - 280	130 - 230	100 - 200	-	-	-	30 - 90	-
	ET23P	-	-	-	110 - 180	40 - 130	-	-	-	20 - 40	-
	ET24P	-	-	-	80 - 150	30 - 120	-	-	-	20 - 40	-
	ET41P	-	-	-	95 - 290	90 - 210	-	-	-	35 - 90	-
	ET801	120 - 200	70 - 230	70 - 180	70 - 180	-	60 - 160	60 - 120	-	-	40 - 80
	ET10D	-	-	-	-	-	-	-	350 - 1200	-	-
	ET10U	-	-	-	-	-	-	-	250 - 800	-	-
	CT10U	150 - 480	160 - 420	100 - 360	130 - 260	110 - 240	130 - 450	130 - 400	-	-	-



CODE	PAGE	CODE	PAGE	CODE	PAGE	CODE	PAGE
CCGT-AL	46	DNMA	19	SNMG-SM	27	VCMT-BF	60
CCGT-MSF	46	DNMG-BC	22	SNMG-SR	28	VCMT-BG	60
CCMT-BF	47	DNMG-BF	20	SNMM	29	VCMT-MF	60
CCMT-BG	48	DNMG-BG	21	TCGT-AL	55	VCMT-MM	60
CCMT-MF	47	DNMG-BL	20	TCMT-BF	55	VCMT-PF	60
CCMT-MM	48	DNMG-BM	21	TCMT-BG	56	VNMA	35
CCMT-PF	47	DNMG-BR	22	TCMT-MF	55	VNMG-BC	37
CCMT-PM	48	DNMG-MF	20	TCMT-MM	56	VNMG-BF	36
CNGG-SF	11	DNMG-MG	22	TCMT-PF	55	VNMG-BG	36
CNMA	12	DNMG-MM	21	TCMT-PM	56	VNMG-BL	36
CNMG-BC	15	DNMG-MR	22	TNMA	30	VNMG-BM	37
CNMG-BF	13	DNMG-PSF	20	TNMG-BC	33	VNMG-BR	37
CNMG-BG	14	DNMG-SM	21	TNMG-BF	31	VNMG-MF	36
CNMG-BL	13	DNMG-SR	22	TNMG-BG	32	VNMG-MG	37
CNMG-BM	15	DNMM	23	TNMG-BL	31	VNMG-MM	37
CNMG-BR	16	KNUX	24	TNMG-BM	32	VNMG-MR	38
CNMG-KR	16	RCMT	52	TNMG-BR	33	VNMG-PSF	36
CNMG-MF	13	SCGT-AL	53	TNMG-MF	31	VNMG-SR	38
CNMG-MG	15	SCMT-BF	53	TNMG-MG	33	WNGG-SF	39
CNMG-MM	14	SCMT-BG	53	TNMG-MM	32	WNMA	40
CNMG-MR	16	SCMT-MF	53	TNMG-MR	33	WNMG-BC	43
CNMG-PSF	13	SCMT-MM	54	TNMG-PSF	31	WNMG-BF	41
CNMG-SM	15	SCMT-PM	54	TNMG-SF	31	WNMG-BG	42
CNMG-SR	16	SNMA	25	TNMG-SM	32	WNMG-BL	41
CNMG-WM	14	SNMG-BC	27	TNMG-SR	33	WNMG-BM	42
CNMM	17	SNMG-BF	26	TNMX	34	WNMG-BR	43
DCGT-AL	49	SNMG-BG	26	VBGT-MSF	57	WNMG-KR	43
DCGT-MSF	49	SNMG-BL	26	VBMT-BF	57	WNMG-MF	41
DCMT-BF	50	SNMG-BM	27	VBMT-BG	58	WNMG-MG	43
DCMT-BG	50	SNMG-BR	28	VBMT-MF	57	WNMG-MM	42
DCMT-MF	50	SNMG-KR	28	VBMT-MM	58	WNMG-MR	44
DCMT-MM	51	SNMG-MF	26	VBMT-PF	57	WNMG-PSF	41
DCMT-PF	50	SNMG-MG	27	VBMT-PM	58	WNMG-SM	42
DCMT-PM	51	SNMG-MM	26	VCGT-AL	59	WNMG-SR	44
DNGG-SF	18	SNMG-MR	28	VCGT-MSF	59	WNMG-WM	41