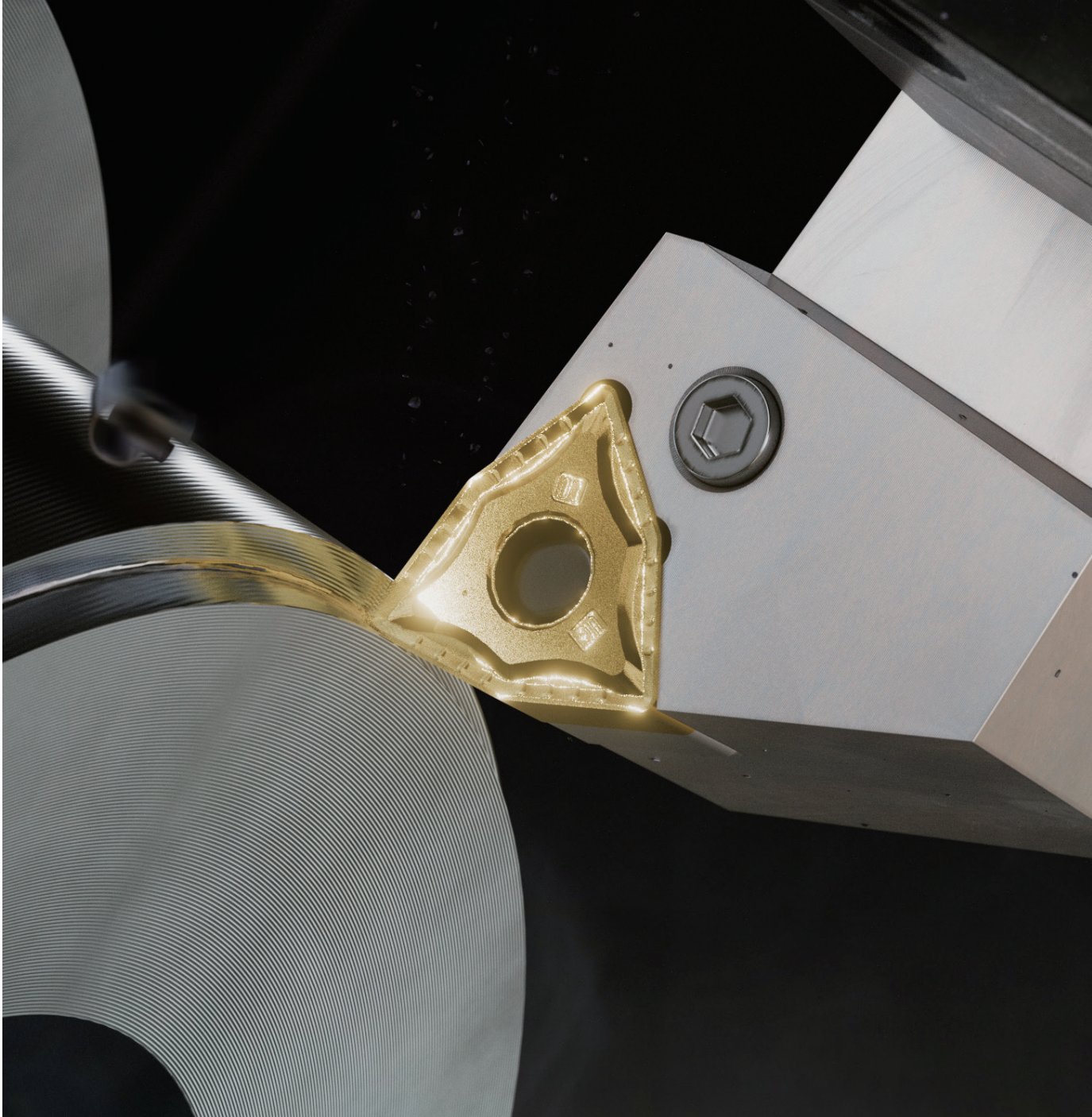


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ISO TURNING

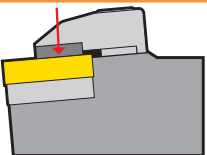
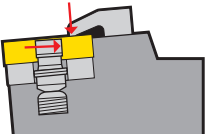
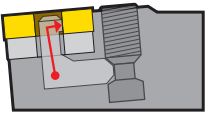
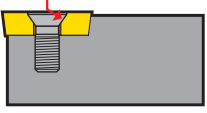
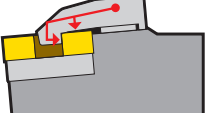
- Product Overview
- Application Guide
- Turning Inserts Overview
- Turning Inserts
- Turning Holders Overview
- Turning Holders

External Turning Holder Code (Inch)

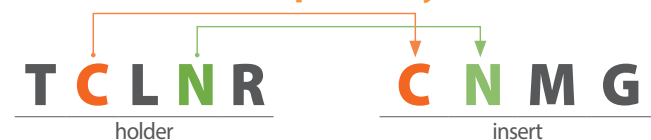
*Inch

1	2	3	4	5	6	7	8
M	C	L	N	R	12	4	B
Clamping System	Insert Shape (1st Letter of Insert)	Tool Style	Insert Clearance (2nd Letter of Insert)	Tool Hand	Shank Width(B) & Height(H)	Insert Size	Length (LF)

1 - Clamping System

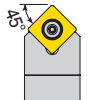
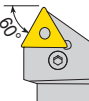
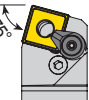
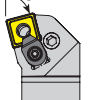
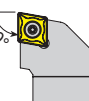
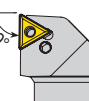
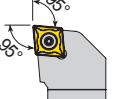
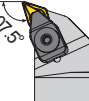
Symbol	System
C	 Top Clamp (No Clamping Hole Insert)
M	 Multi lock (Straight Clamping Hole Insert)
P	 Lever Lock (Straight Clamping Hole Insert)
S	 Screw Clamp (Screw Clamping Hole Insert)
D	 Double Clamp (Straight Clamping Hole Insert)

2, 4 — Insert Compatibility *



* Related to Insert Designation to check compatibility

3 - Tool Style

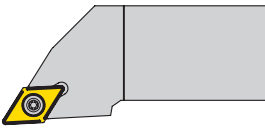
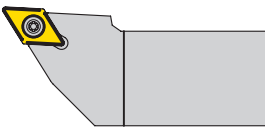
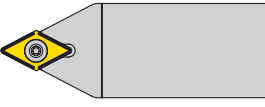
Approach Angle (KAPR)	Side Direction		End Direction
	Straight Shank	Offset Shank	
45°	D 	S 	
60°		T 	
62.5°	N 		
72.5°	V 		
75°	B 		K 
90°	A 	G 	F 
93°		J 	U
95°		L (Both Directions) 	
107.5°		H 	

External Turning Holder Code (Inch)

*Inch

1	2	3	4	5	6	7	8
M	W	L	N	R	16	3	D
Clamping System	Insert Shape (1st Letter of Insert)	Tool Style	Insert Clearance (2nd Letter of Insert)	Tool Hand	Shank Width(B) & Height(H)	Insert Size	Length (LF)

5 - Hand Direction

Symbol	Hand Direction
R	Right Hand 
L	Left Hand 
N	Neutral 

7 - Insert Size *

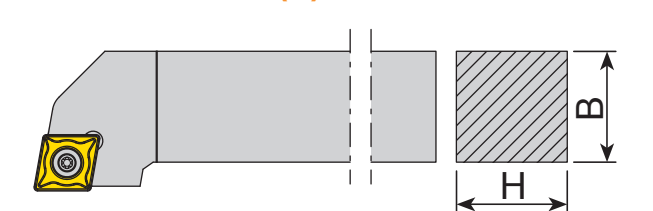
Example	is Compatible with...
MCLNR 12 4B	CNMG432
MTJNR 16 3B	TNMG331

* Related to Insert Designation to check compatibility

8 - Length (LF)

Symbol	Length (Inch)	Symbol	Length (Inch)
A	4.000	M	4.000
B	4.500	N	4.500
C	5.000	P	5.000
D	6.000	R	6.000
E	7.000	S	7.000
F	8.000	T	8.000
G	5.500	U	5.500
H	5.625	V	3.500
J	5.300	W	3.500
K	14.000	Y	3.750
L	6.800	X	Special

6 - Shank Height (H)
Shank Width (B)



Number	Hight (H)	Width (B)	Number	Hight (H)	Width (B)
05	.3125	.3125	24	1.500	1.500
06	.375	.375	32	2.000	2.000
08	.500	.500	64	1.000	.750
10	.625	.625	66	1.500	1.750
12	.750	.750	85	1.250	1.000
16	1.000	1.000	86	1.500	1.000
20	1.250	1.250	91	1.500	1.250

Insert ISO Code System

*Metric : According to ISO 1832

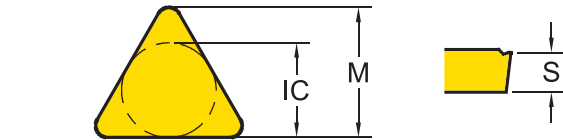
1 C Shape	2 N Clearance	3 M Tolerance	4 G Clamping & Chipbreaker	5 12 Insert Size	6 04 Insert Thickness	7 08 Corner Radius	8 -UG Chipbreaker Geometry	9 YG3115 Grade
------------------------	----------------------------	----------------------------	---	-------------------------------	------------------------------------	---------------------------------	---	-----------------------------

1 - Shape

Symbol	Shape	
H	Hexagonal	
O	Octagonal	
P	Pentagonal	
S	Square	
T	Triangular	
C	Rhombic 80°	
D	Rhombic 55°	
V	Rhombic 35°	
W	Trigon	
L	Rectangular	
K	Parallelogram 55°	
R	Round	

2 - Relief Angle (AN)

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



3 - Tolerance Class

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

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

4 - Clamping & Chip breaker

Symbol	Clamping	Chipbreaker	Figure
N	No clamping hole	X	
R		One Face	
A	Cylindrical clamping hole	X	
M		One Face	
G		Both Faces	
W	Screw hole	X	
T		One Face	
U		Both Faces	
X	Special		

Insert ISO Code System

*Inch

1 C Shape	2 N Clearance	3 M Tolerance	4 G Clamping & Chipbreaker	5 4 Insert Size	6 3 Insert Thickness	7 2 Corner Radius	8 -UG Chipbreaker Geometry	9 YG3115 Grade
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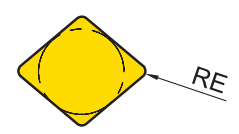
5 - Insert Size

Metric							Inner Circle IC (inch)	Inch
06	11	06	07	11			1/4	2
07	13	08	09	13	15		5/16	2.5
09	16	09	11	16	06	09 (00)	3/8	3
12	22	12	15	22	08	12 (00)	1/2	4
15	27	16	19	27	10		5/8	5
19	33	19	23	33	13		3/4	6
25		25					1	8
						06 (M0)	.236	
						08 (M0)	.315	
						10 (M0)	.394	
						12 (M0)	.472	
						16 (M0)	.630	



6 - Insert Thickness (S)

Metric	Thickness - S (inch)	Inch
T1	5/64	1.2
02	3/32	1.5
03	1/8	2
T3	5/32	2.5
04	3/16	3
05	7/32	3.5
06	1/4	4
07	5/16	5
09	3/8	6



7 - Corner Radius (RE)

Metric	Corner Radius - RE (inch)	Inch
01	.004	0
02	.008	.5
04	1/64	1
08	1/32	2
12	3/64	3
16	1/16	4
20	5/64	5
24	3/32	6

Grade Naming System

1	2	3	4	5	(6)
YG	3	1	1	5	(G)
YG Brand	Workpiece Material	Grade Version	Application Range (1st Digit)	Application Range (2nd Digit)	Minor Variation
Carbide CVD (4 Digits)	●	●	●	●	YG3115
Carbide PVD (3 Digits)	●	●	●		YG211
Carbide Uncoated (2 Digits)	●	●			YG10

1 - YG Brand

2 - Workpiece Material

Symbol	Workpiece Material	Turning	Milling	Drilling	Parting
1	K Cast Iron or N Non-Ferrous	●			
2	M Stainless Steel	●			
3	P Steel	●			
4	S Superalloys	●			
5	K Cast Iron or N Non-Ferrous		●	●	●
6	M Stainless Steel or Universal		●	●	●
7	P Steel		●	●	●
8	Universal	●			
9	Exotic Material		●		
0	Hardened Steel		●		

3 - Grade Version

4 & 5 - Application Range

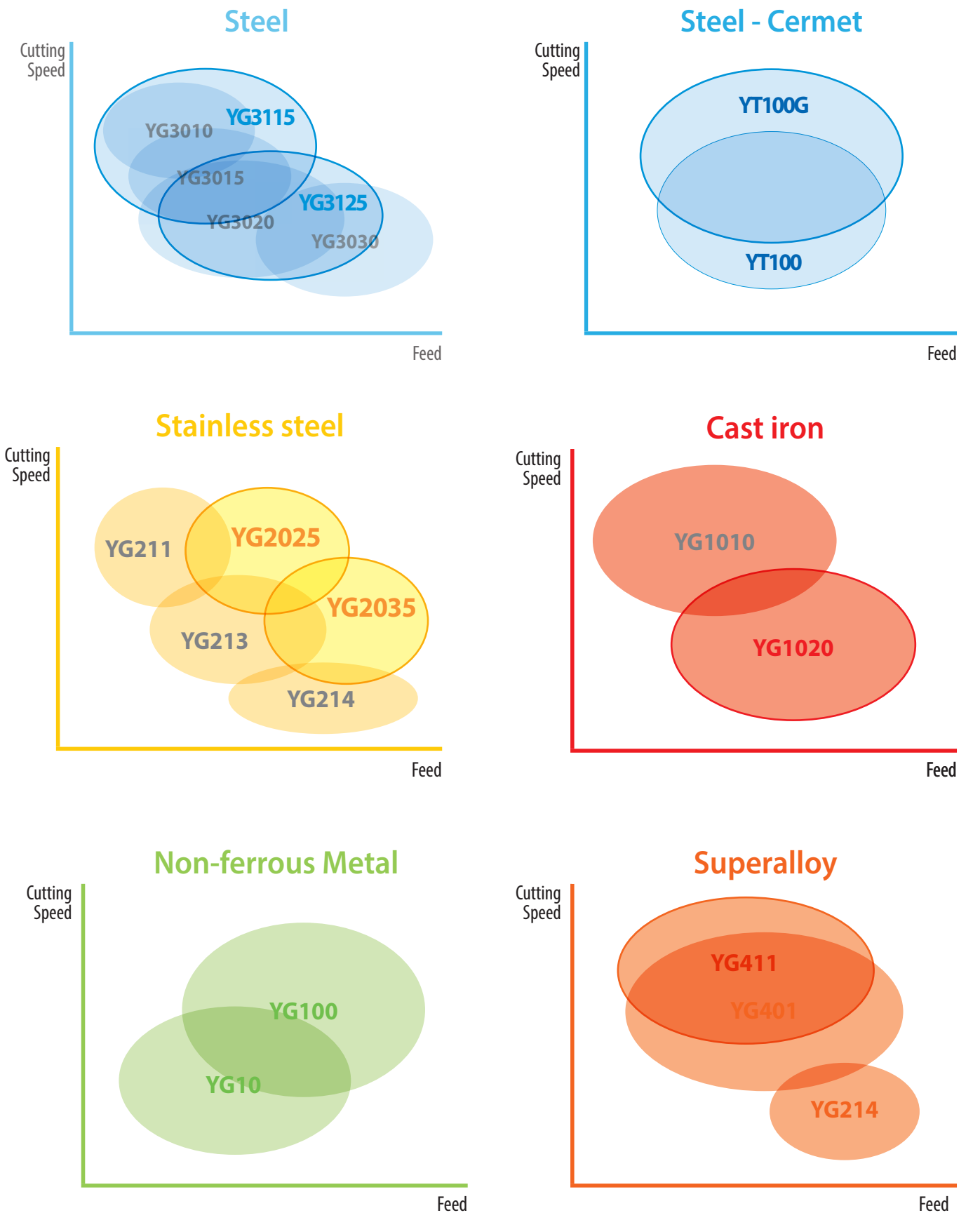
Symbol	
05	Stable Wear Resistant Grade Stable Application Continuous Cut Finishing
10	
15	
20	
25	
30	General Balanced Grade High Versatility General Application
35	
40	
45	
	Unstable Tougher Grade Unstable Application Interrupted Cut Chipping Resistance Roughing

(6) - (Minor Variation)

G - Gold Coated Version

Product Overview

Turning Grades Map

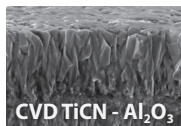


Product Overview
Turning Grades

Turning Grades		P Steel				M Stainless steel			K Cast iron			N Non-ferrous		S Superalloys	
		P10	P20	P30	P40	M10	M20	M30	K10	K20	K30	N10	N20	S10	S20
CVD	YG1010								1010						
	YG1001	1001							1001						
	YG1020								1020						
	YG3010	3010							3010						
	YG3015	3015													
	YG3115	3115													
	YG3125		3125												
	YG3020		3020												
	YG3030		3030												
	YG2025					2025									
PVD	YG2035							2035							
	YG801		801												
	YG211					211									
	YG213						213								
	YG214							214							214
	YG401													401	
Cermet	YG411													411	
	YT100		YT100			YT100			YT100						
DLC	YT100G		YT100G			YT100G			YT100G						
	YG100											100			
-	YG10											10			

YG1010

K05 - K15



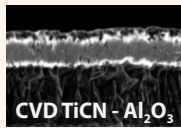
First Choice for Cast Iron

- Effective coating structure enables high speed machining
- Special post treatment for improved chipping resistance

YG1001

P01 - P10

K10 - K25

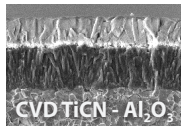


Stable Machining of Cast Iron

- Substrate especially designed for high wear resistance
- Thick Al₂O₃ layer ensures good wear resistance at high cutting speeds including dry machining

NEW YG1020

K15 - K25



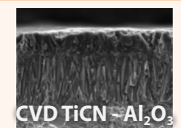
First choice for ductile cast iron

- Excellent wear and fracture resistance when machining ductile cast iron
- New coating ensures outstanding resistance to abrasion wear

YG3010

P05 - P20

K15 - K35

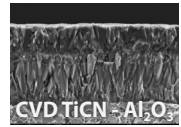


First choice for Finishing Steels, and Ductile Cast iron

- Finishing and light machining of steel under in stable condition
- New Al₂O₃ coating technology and excellent surface smoothness increase wear resistance and chipping resistance

YG3015

P10 - P25

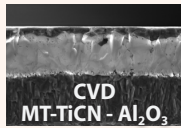


Balanced Productivity for Continuous cut

- High wear resistance and improved toughness ensures high productivity with less trouble

YG3115

P15 - P25

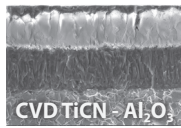


First choice grade for high cutting speed in Steels

- Suitable for mass production due to stable and predictable tool life
- Minimizing built up edge due to new post surface treatment in mild steels, low carbon steel and low carbon alloy steel.
- Best choice for both continuous as well as interrupted cuts

NEW YG3125

P20 - P30



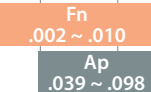
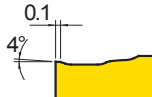
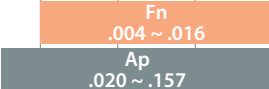
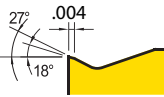
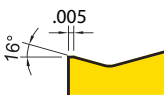
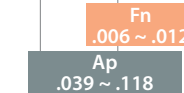
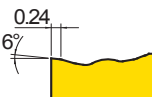
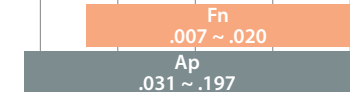
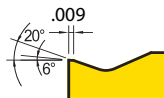
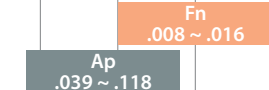
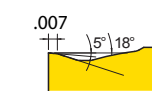
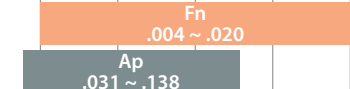
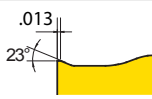
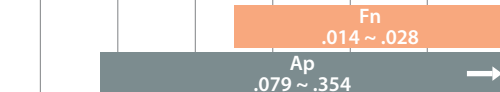
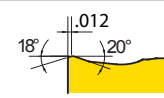
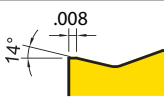
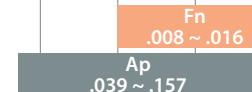
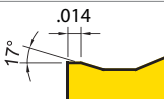
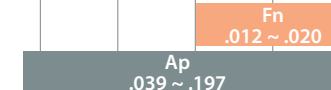
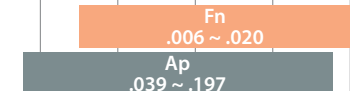
Recommended first grade for steel

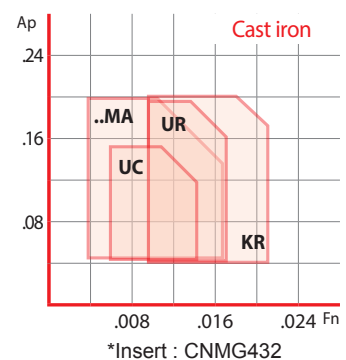
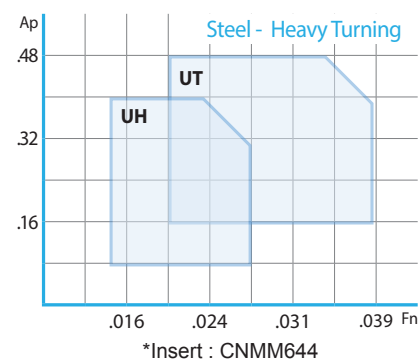
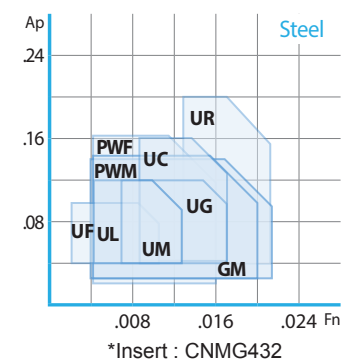
- New substrates with a unique combination of good toughness and plastic deformation resistance
- General Machining on steel

Product Overview
Turning Grades

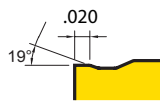
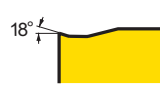
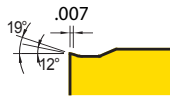
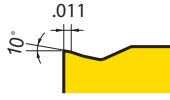
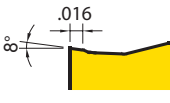
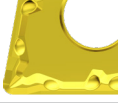
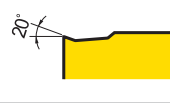
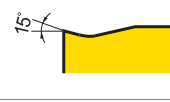
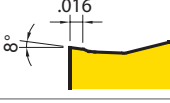
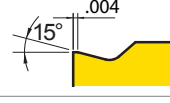
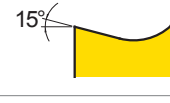
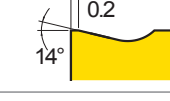
YG3020 P15 - P30		First Choice Grade for General Steel Application • Substrate especially designed for good toughness • Excellent surface smoothness increases wear resistance and reliability
YG3030 P20 - P35		Interrupted Cutting of Steel and Stainless steel • Substrate for heavy roughing in mild steel and low carbon alloy steel • New Al₂O₃ technology and optimized surface treatment achieves a good balance between wear resistance and chipping resistance
YG801 P10 - P30		for Carbon Steel with Low Cutting Speed • Recommended for mild steel and boring application • Substrate and special PVD coating for excellent wear resistance
YG2025 M15 - M35		CVD grade for High Cutting Speed for Stainless steel • Utilizing a new carbide substrate and new coating • Excellent combination of wear resistance and chipping resistance • Minimized built up edge due to post surface treatment
NEW YG2035 M30 - M40		CVD Coated Grade for stainless steel at Low Cutting Speed • Substrate withstands heavy interruption, while the coating provides the wear resistance needed for a long tool life • Smooth surface resists build-up edge, even at low cutting speeds
YG211 M05 - M25		High wear Resistance Grade for Stainless steel • Finishing Stainless steel
YG213 M20 - M35		First Choice Grade on Low Cutting Speed of Stainless steel • First choice on Stainless steel for Low cutting speed • For Medium to low cutting speed
YG214 M30 - M40 S25 - S30		Heavy Interrupted cut for Stainless steel • For Heavy Interrupted cut on Stainless steel • Minimize risk of Mechanical fracture or Chipping
YG401 S10 - S20		PVD Turning Grade for HRSA • Highly heat-resistant TiAlSiN structure for excellent wear resistance • Greatly improved film coating realizes excellent boundary defect resistance • Top coating layer provides a smooth surface and lubricant effect
NEW YG411 S05 - S15		PVD Turning Grade on High Cutting Speed for HRSA • Specialized cemented carbide substrate with excellent resistance to plastic deformation • Strong edge stability provides reliable tool life when machining heat-resistant alloys at high speeds • High-Al content coating provides superior oxidation resistance when machining heat-resistant alloys
YT100 P10 - P20 M10 - M20 K10 - K20		New Generation Cermet Grade • Enhanced wear resistance & chipping resistance • Excellent fracture resistance • Superior surface finish with special edge preparation
NEW YT100G P5 - P20 M5 - M20 K5 - K20		PVD-coated Cermet grade for turning • Outstanding wear resistance and a low coefficient of friction enable high-speed turning of steels, stainless steels, and cast irons with extended tool life
YG100 N05 - N25		First Choice Grade for Aluminum with DLC Coating • Submicron carbide for high wear resistance • DLC coating minimizes Built Up Edge tendency. • Improve tool life in sticky non-ferrous alloy
YG10 N05 - N25		Uncoated Grade for General Aluminum • Substrate consisted of submicron carbide for high wear resistance • Shining surface to prevent built up edge

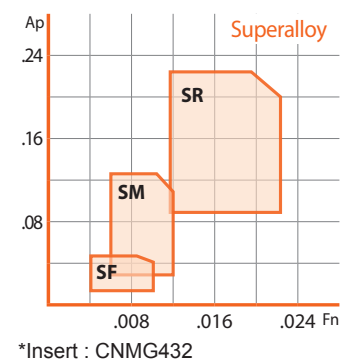
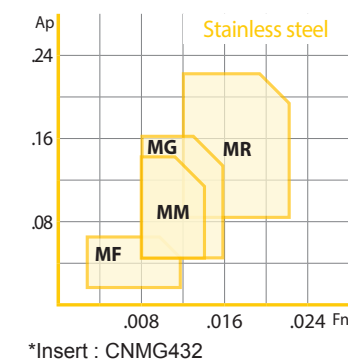
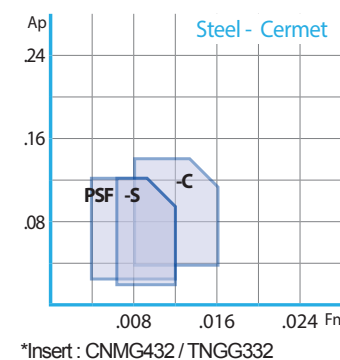
Turning Chipbreakers - Negative

P	M	K	N	S			Feed	Fn (inch/rev.)							
								0	.004	.008	.012	.016	.020	.024	
P					UF		Finishing 								
P					NEW PWF		Wiper-Finishing 								
P					UL		Semi Finishing and sticky materials 								
P					UM		Medium & Unstable conditions 								
P					NEW GM		Medium machining for steel & Stainless steel 								
P					UG		First Choice for Medium (Stable conditions) 								
P					PWM		Wiper-Medium 								
P					UH		Low cutting force 								
P					UT		Heavy roughing 								
P		K			UC		Medium Roughing and First choice for Cast iron 								
P		K			UR		Roughing and Heavy interrupted cut 								
		K			..MA		Cast iron Heavy Roughing 								
								0	.04	.08	.12	.16	.20	.24	
								Depth of Cut						Ap (inch)	



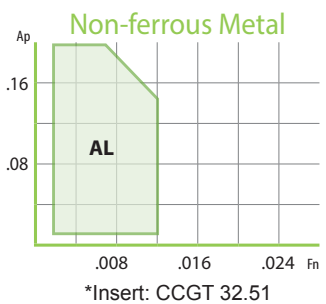
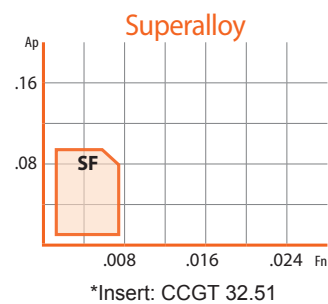
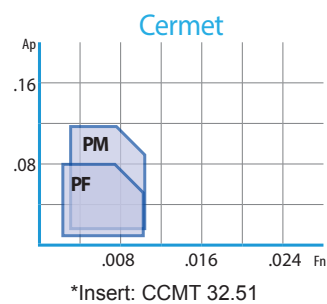
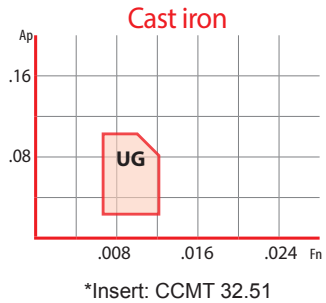
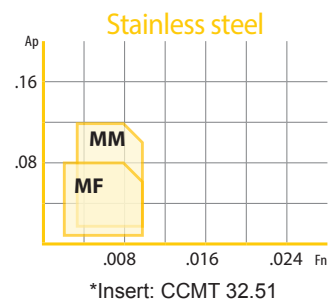
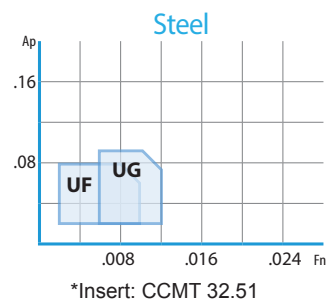
Turning Chipbreakers - Negative

P	M	K	N	S				Feed	Fn (inch/rev.)								
									0	.004	.008	.012	.016	.020	.024		
		K			KR		Cast Iron Heavy Roughing					Fn .012 ~ .024					
									Ap .039 ~ .197								
	M			S	MF		Stainless steel Finishing			Fn .003 ~ .012							
									Ap .008 ~ .059								
P	M			S	MM		Stainless steel Medium and Low Carbon Steel				Fn .008 ~ .014						
									Ap .039 ~ .138								
	M			S	MG		Stainless steel General				Fn .008 ~ .016						
									Ap .039 ~ .157								
	M			S	MR		Stainless steel Roughing				Fn .012 ~ .022						
									Ap .079 ~ .217								
				S	SF		HRSA Finishing			Fn .004 ~ .010							
									Ap .008 ~ .039								
				S	SM		HRSA Medium				Fn .006 ~ .012						
									Ap .020 ~ .118								
				S	SR		Roughing for HRSA				Fn .012 ~ .022						
									Ap .079 ~ .217								
P	M	K			PSF		Cermet Finishing to Semi medium			Fn .004 ~ .012							
									Ap .024 ~ .118								
P	M	K			NEW -S		Cermet Finishing			Fn .004 ~ .008							
									Ap .016 ~ .079								
P	M	K			-C		Cermet Medium				Fn .008 ~ .016						
									Ap .039 ~ .138								
									0	.04	.08	.12	.16	.20	.24		
									Depth of Cut							Ap (inch)	



Product Overview
Turning Chipbreakers - Positive

P	M	K	N	S			Feed						Fn (inch/rev.)
							0	.004	.008	.012	.016	.020	.024
			N		AL	Aluminum application 	Fn .001 ~ .012						Ap .004 ~ .197
P	M				UF	Finishing application 	Fn .002 ~ .010						Ap .020 ~ .079
P		K			UG	Medium application 	Fn .006 ~ .012						Ap .020 ~ .098
	M				MF	Stainless steel Finishing 	Fn .002 ~ .012						Ap .004 ~ .079
	M				MM	Stainless steel Medium 	Fn .002 ~ .014						Ap .010 ~ .118
				S	SF	HRSA Finishing 	Fn .001 ~ .008						Ap .004 ~ .098
P	M	K			PF	Finishing 	Fn .002 ~ .010						Ap .004 ~ .079
P	M	K			PM	Medium 	Fn .003 ~ .010						Ap .010 ~ .118
						Depth of Cut	0	.04	.08	.12	.16	.20	.24
							Ap (inch)						



Turning Inserts Overview

Negative Inserts

Recommended Cutting Conditions : p.190

Shape	Series	Size & Thickness						Page
		32	33	43	54	64	86	
C	CNMA			43	54	64		26
	CNMG			43	54	64	86	
	CNGG			43				
	CNMM			43	54	64	85 86	
D	DNMA			43	44			31
	DNMG		33	43	44			
	DNGG			43	44			
	DNMM				44			
	DNUX			43	44			36
K	KNUX				1604 (mm)			37
S	SNMA			43	54	64		38
	SNMG	32		43	54	64	86	
	SNMM				54	64	85 86	
T	TNMA		33					42
	TNMG		33	43				
	TNGG		33					
	TNMM		33	43				
	TNUX		33					48
V	VNMA		33					49
	VNMG		33					
	VNGG		33					
W	WNMA		33	43				51
	WNMG		33	43				
	WNGG			43				

Positive Inserts

Shape	Series	Size & Thickness						Page
		21.5		32.5		43		
C	CCGT							55
	CCMT							
D	DCGT							58
	DCMT							
R	RCMT	0602	0803		10T3	1204	1606	60
	RCMX				1606	2006	2507 3209	61
S	SCGT			32.5				62
	SCMT			32.5			43	
T	TCGT	21.5		32.5				64
	TCMT	1.81	21.5	32.5				
V	VBGT / VBMT		22		33			66
	VCGT / VCMT		22		33			67

Turning Inserts - Negative CNMA / CNMG (80° Rhombic)

Refer to
Turning holder
p. 87

Turning Inserts - Negative CNMG (80° Rhombic)

Refer to
Turning holder
p. 87

					Series	IC	S	Series	IC	S
					CN.. 32	.375	.125	CN.. 54	.625	.250
					CN.. 33	.375	.187	CN.. 64	.750	.250
					CN.. 43	.500	.187			

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

CNMA CNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
..MA Cast iron	CNMA431	.016	.006 ~ .020	.020 ~ .197	●	○	●	○																	
	CNMA432	.031	.006 ~ .020	.039 ~ .197	●	○	●	○																	
	CNMA433	.047	.006 ~ .020	.059 ~ .197	●	○	●	○																	
	CNMA434	.063	.006 ~ .020	.079 ~ .197	●	○	●	○																	
	CNMA543	.047	.006 ~ .020	.059 ~ .197	●	○	●	○																	
	CNMA544	.063	.006 ~ .020	.079 ~ .197	●	○	●	○																	
	CNMA643	.047	.006 ~ .020	.059 ~ .354	●	○	●	○																	
	CNMA644	.063	.006 ~ .039	.118 ~ .394	●	○	●	○																	
-UF Finishing	CNMG431-UF	.016	.002 ~ .010	.020 ~ .098			○			●	●	●	○			○									
	CNMG432-UF	.031	.002 ~ .010	.039 ~ .098			○			●	●	●	○												
	CNMG433-UF	.047	.002 ~ .010	.059 ~ .098			○			●	●	●	○												
NEW -PWF Wiper-Finishing	CNMG431-PWF	.016	.003 ~ .012	.012 ~ .157	●					●	●		●												
	CNMG432-PWF	.031	.004 ~ .016	.020 ~ .157	●					●	●		●												
-UL Light Machining and Sticky Material	CNMG322-UL	.031	.004 ~ .012	.039 ~ .098			○			●	●	●	●												
	CNMG323-UL	.047	.004 ~ .012	.059 ~ .098			○			●	●	●	●												
	CNMG332-UL	.031	.004 ~ .012	.039 ~ .098			○			●	●	●	●												
	CNMG333-UL	.047	.004 ~ .012	.059 ~ .098			○			●	●	●	●												
	CNMG431-UL	.016	.004 ~ .012	.020 ~ .118			○			●	●	●	●												
	CNMG432-UL	.031	.004 ~ .012	.039 ~ .118			○			●	●	●	●												
	CNMG433-UL	.047	.004 ~ .012	.059 ~ .118			○			●	●	●	●												
-UM Medium Machining Unstable condition	CNMG431-UM	.016	.006 ~ .012	.020 ~ .118	●	○				●	●	●	●												
	CNMG432-UM	.031	.006 ~ .012	.039 ~ .118	●	○				●	●	●	●												
	CNMG433-UM	.047	.006 ~ .012	.059 ~ .118	●	○				●	●	●	●												
NEW -GM Medium machining for steel & Stainless steel	CNMG431-GM	.016	.004 ~ .016	.000 ~ .000						●	●				●										
	CNMG432-GM	.031	.004 ~ .020	.000 ~ .000						●	●				●										
	CNMG433-GM	.047	.008 ~ .022	.039 ~ .000						●	●				●										

					Series	IC	S	Series	IC	S
					CN.. 43	.500	.187	CN.. 64	.750	.250
					CN.. 54	.625	.250	CN.. 86	1.000	.375

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

CNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-UG Medium Machining at stable condition	CNMG431-UG	.016	.008 ~ .016	.020 ~ .118	●	○	●	○																	
	CNMG432-UG	.031	.008 ~ .016	.039 ~ .118	●	○	●	○																	
	CNMG433-UG	.047	.008 ~ .016	.059 ~ .118	●	○	●	○																	
	CNMG542-UG	.031	.008 ~ .016	.039 ~ .197	●	○	●	○																	
	CNMG543-UG	.047	.008 ~ .016	.059 ~ .197	●	○	●	○																	
	CNMG544-UG	.063	.012 ~ .020	.079 ~ .197	●	○	●	○																	
	CNMG642-UG	.031	.008 ~ .024	.039 ~ .236	●	○	●	○																	
	CNMG643-UG	.047	.008 ~ .024	.059 ~ .236	●	○	●	○																	
-PWM Wiper-Medium	CNMG431-PWM	.016	.004 ~ .020	.020 ~ .138	●	○				●	●	●	○												
	CNMG432-PWM	.031	.004 ~ .020	.031 ~ .138	●	○				●	●	●	○												
	CNMG433-PWM	.047	.004 ~ .020	.039 ~ .138	●	○				●	●	●	○												
-UC Cast iron and Medium roughing	CNMG431-UC	.016	.008 ~ .016	.020 ~ .157	●	○	●	○			●	●	●	○											
	CNMG432-UC	.031	.008 ~ .016	.039 ~ .157	●	○	●	○			●	●	●	○											
	CNMG433-UC	.047	.008 ~ .016	.059 ~ .157	●	○	●	○			●	●	●	○											
-UR Roughing	CNMG432-UR	.031	.012 ~ .020	.039 ~ .197	●	○	●	○			●	●	●	○											
	CNMG433-UR	.047	.012 ~ .020	.059 ~ .197	●	○	●	○			●	●	●	○											
	CNMG434-UR	.063	.012 ~ .020	.079 ~ .197	●	○	●	○			●	●	●	○											
	CNMG542-UR	.031	.012 ~ .020	.039 ~ .197	●	○	●	○			●	●	●	○											
	CNMG543-UR	.047	.012 ~ .020	.059 ~ .197	●	○	●	○			●	●	●	○											
	CNMG544-UR	.063	.012 ~ .020	.079 ~ .197	●	○	●	○			●	●	●	○											
	CNMG642-UR	.031	.012 ~ .031	.118 ~ .354	●	○	●	○			●	●	●	○											
	CNMG643-UR	.047	.012 ~ .031	.118 ~ .354	●	○	●	○			●	●	●	○											
-KR Cast Iron Heavy Roughing	CNMG432-KR	.031	.012 ~ .024	.039 ~ .197	●	○	●	○			●	●	●	○											
	CNMG433-KR	.047	.012 ~ .024	.059 ~ .197	●	○	●	○			●	●	●	○											
	CNMG543-KR	.047	.012 ~ .024	.059 ~ .236	●	○	●	○			●	●	●	○											

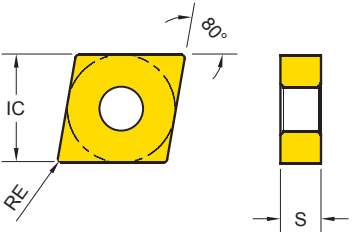
Turning Inserts - Negative
CNMG (80° Rhombic)

Refer to
Turning holder
p.87

Turning Inserts - Negative
CNGG / CNMG (80° Rhombic)

Refer to
Turning holder
p.87

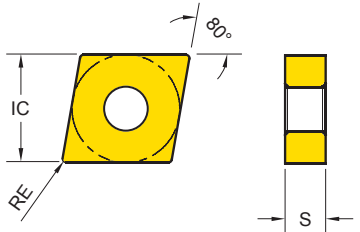
					Series	IC	S
					CN.. 43	.500	.187
					CN.. 54	.625	.250
					CN.. 64	.750	.250



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

CNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
-MF 	CNMG431-MF	.016	.003 ~ .012	.008 ~ .059																				
	CNMG432-MF	.031	.003 ~ .012	.008 ~ .059																				
	CNMG433-MF	.047	.003 ~ .012	.008 ~ .059																				
-MM 	CNMG431-MM	.016	.008 ~ .014	.020 ~ .138																				
	CNMG432-MM	.031	.008 ~ .014	.039 ~ .138																				
	CNMG433-MM	.047	.008 ~ .014	.059 ~ .138																				
	CNMG642-MM	.031	.008 ~ .020	.079 ~ .217																				
-MG 	CNMG431-MG	.016	.008 ~ .016	.020 ~ .157																				
	CNMG432-MG	.031	.008 ~ .016	.039 ~ .157																				
	CNMG433-MG	.047	.008 ~ .016	.059 ~ .157																				
	CNMG542-MG	.031	.008 ~ .018	.039 ~ .157																				
	CNMG543-MG	.047	.008 ~ .020	.079 ~ .157																				
	CNMG544-MG	.063	.008 ~ .020	.079 ~ .157																				
	CNMG644-MG	.063	.008 ~ .020	.079 ~ .197																				
-MR 	CNMG432-MR	.031	.012 ~ .022	.079 ~ .217																				
	CNMG433-MR	.047	.012 ~ .022	.079 ~ .217																				
	CNMG434-MR	.063	.012 ~ .022	.079 ~ .217																				
	CNMG544-MR	.063	.012 ~ .022	.079 ~ .000																				

					Series	IC	S
					CN.. 43	.500	.187

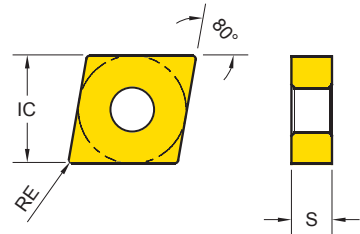


EDP 2200.. ● : Stock item ○ : Order made item

CNGG CNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
-SF 	CNGG430-SF	.004	.004 ~ .010	.004 ~ .039																				
	CNGG430.5-SF	.008	.004 ~ .010	.004 ~ .039																				
	CNGG431-SF	.016	.004 ~ .010	.008 ~ .039																				
	CNGG432-SF	.031	.004 ~ .010	.008 ~ .039																				
-SF 	CNMG431-SF	.016	.004 ~ .010	.008 ~ .039																				
	CNMG432-SF	.031	.004 ~ .010	.016 ~ .039																				
-SM 	CNMG431-SM	.016	.006 ~ .012	.020 ~ .118																				
	CNMG432-SM	.031	.006 ~ .012	.020 ~ .118																				
	CNMG433-SM	.047	.006 ~ .012	.020 ~ .118																				
-SR 	CNMG432-SR	.031	.012 ~ .022	.079 ~ .217																				
	CNMG433-SR	.047	.012 ~ .022	.079 ~ .217																				
	CNMG434-SR	.063	.012 ~ .022	.079 ~ .217																				
-PSF 	CNMG431-PSF	.016	.003 ~ .012	.016 ~ .118																				
	CNMG432-PSF	.031	.004 ~ .014	.024 ~ .118																				

Turning Inserts - Negative CNMM - Heavy Turning (80° Rhombic)

Refer to
Turning holder
p. 87



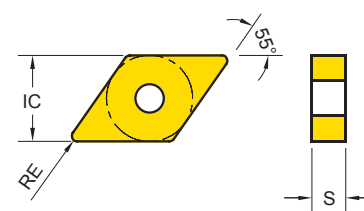
Series	IC	S	Series	IC	S
CN.. 43	.500	.187	CN.. 64	.750	.250
CN.. 54	.625	.250	CN.. 85	1.000	.313
			CN.. 86	1.000	.375

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

CNMM	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
- UH  Low cutting force	CNMM432-UH	.031	.012 ~ .020	.059 ~ .197						●	●	●	●	●	●										
	CNMM433-UH	.047	.012 ~ .022	.063 ~ .197						●					●										
	CNMM434-UH	.063	.012 ~ .024	.079 ~ .197						●					●										
	CNMM543-UH	.047	.014 ~ .024	.079 ~ .217						●	●	●	●	●	●										
	CNMM544-UH	.063	.014 ~ .024	.098 ~ .217						●	●	●	●	●	●										
	CNMM643-UH	.047	.014 ~ .028	.059 ~ .354	●		●			●	●	●	●	●	●										
	CNMM644-UH	.063	.014 ~ .028	.079 ~ .354	●		●			●	●	●	●	●	●										
	CNMM646-UH	.094	.014 ~ .028	.118 ~ .354	●		●			●	●	●	●	●	●										
	CNMM856-UH	.094	.016 ~ .031	.118 ~ .394						●					●										
	CNMM866-UH	.094	.016 ~ .031	.118 ~ .394	●		●			●	●	●	●	●	●										
- UT  Heavy Roughing	CNMM432-UT	.031	.016 ~ .028	.059 ~ .236						●	●	●	●	●	●										
	CNMM543-UT	.047	.018 ~ .028	.079 ~ .236						●	●	●	●	●	●										
	CNMM544-UT	.063	.018 ~ .028	.098 ~ .236						●	●	●	●	●	●										
	CNMM643-UT	.047	.020 ~ .039	.118 ~ .472	●	○	●			●	●	●	●	●	●										
	CNMM644-UT	.063	.020 ~ .039	.157 ~ .472	●	○	●			●	●	●	●	●	●										
	CNMM646-UT	.094	.020 ~ .039	.236 ~ .472	●	○	●			●	●	●	●	●	●										
	CNMM856-UT	.094	.016 ~ .031	.118 ~ .394						●					●										
	CNMM866-UT	.094	.022 ~ .047	.236 ~ .512	●	○	●			●	●	●	●	●	●										

Turning Inserts - Negative DNMA / DNMG (55° Rhombic)

Refer to
Turning holder
p. 88



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

DNMA DNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
..MA  Cast iron	DNMA431	.016	.004 ~ .020	.020 ~ .197	●	○	○	○																	
	DNMA432	.031	.006 ~ .020	.039 ~ .197	●	○	○	○																	
	DNMA433	.047	.006 ~ .020	.059 ~ .197	●	○	○	○																	
	DNMA441	.016	.004 ~ .020	.020 ~ .197	●	○	○	○																	
	DNMA442	.031	.006 ~ .020	.039 ~ .197	●	○	○	○																	
-UF  Finishing	DNMA443	.047	.006 ~ .020	.059 ~ .197	●	○	○	○																	
	DNMG431-UF	.016	.002 ~ .010	.020 ~ .098			○	○	●	●	●	●	○		○										
	DNMG432-UF	.031	.002 ~ .010	.039 ~ .098			○	○	●	●	●	●	○		○										
	DNMG433-UF	.047	.002 ~ .010	.059 ~ .098			○	○	●	●	●	●	○		○										
	DNMG441-UF	.016	.002 ~ .010	.020 ~ .098			○	○	●	●	●	●	○		○										
NEW -PWF  Wiper-Finishing	DNMG442-UF	.031	.002 ~ .010	.039 ~ .098			○	○	●	●	●	●	○		○										
	DNMG443-UF	.047	.002 ~ .010	.059 ~ .098			○	○	●	●	●	●	○		○										
	DNMG331-PWF	.016	.003 ~ .012	.012 ~ .098	●				●	●	●	●	●		●										
	DNMG332-PWF	.031	.004 ~ .016	.020 ~ .098	●				●	●	●	●	●		●										
	DNMG432-PWF	.031	.004 ~ .016	.020 ~ .138	●				●	●	●	●	●		●										
-UL  Light Machining and Sticky Material	DNMG442-PWF	.031	.004 ~ .016	.020 ~ .138	●				●	●	●	●	●		●										
	DNMG331-UL	.016	.004 ~ .012	.020 ~ .098			○	○	●	●	●	●	○		○										
	DNMG332-UL	.031	.004 ~ .012	.039 ~ .098			○	○	●	●	●	●	○		○										
	DNMG431-UL	.016	.004 ~ .012	.020 ~ .118			○	○	●	●	●	●	○		○										
	DNMG432-UL	.031	.004 ~ .012	.039 ~ .118			○	○	●	●	●	●	○		○										
	DNMG433-UL	.047	.004 ~ .012	.059 ~ .118			○	○	●	●	●	●	○		○										
	DNMG441-UL	.016	.004 ~ .012	.020 ~ .118			○	○	●	●	●	●	○		○										
	DNMG442-UL	.031	.004 ~ .012	.039 ~ .118			○	○	●	●	●	●	○		○										
	DNMG443-UL	.047	.004 ~ .012	.059 ~ .118			○	○	●	●	●	●	○		○										

Turning Inserts - Negative DNMG (55° Rhombic)

Refer to
Turning holder
p.88

Turning Inserts - Negative DNMG (55° Rhombic)

Refer to
Turning holder
p.88

					Series		IC	S
					DN.. 33		.375	.187
					DN.. 43		.500	.187
					DN.. 44		.500	.250

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

DNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-UM Medium Machining Unstable condition	DNMG431-UM	.016	.006 ~ .012	.020 ~ .118	○	○	○	○	●	●	●	●	●												
	DNMG432-UM	.031	.006 ~ .012	.039 ~ .118	○	○	○	○	●	●	●	●	●												
	DNMG433-UM	.047	.006 ~ .012	.059 ~ .118	○	○	○	○	●	●	●	●	●												
	DNMG441-UM	.016	.006 ~ .012	.020 ~ .118	○	○	○	○	●	●	●	●	●												
	DNMG442-UM	.031	.006 ~ .012	.039 ~ .118	○	○	○	○	●	●	●	●	●												
-GM Medium machining for steel & Stainless steel	DNMG431-GM	.016	.006 ~ .016	.020 ~ .157	○	○	○	○	●	●	●	●	●												
	DNMG432-GM	.031	.007 ~ .020	.031 ~ .157	○	○	○	○	●	●	●	●	●												
	DNMG433-GM	.047	.008 ~ .022	.039 ~ .157	○	○	○	○	●	●	●	●	●												
	DNMG442-GM	.031	.007 ~ .020	.031 ~ .157	○	○	○	○	●	●	●	●	●												
	DNMG443-GM	.047	.008 ~ .022	.039 ~ .157	○	○	○	○	●	●	●	●	●												
-UG Medium Machining at stable condition	DNMG332-UG	.031	.008 ~ .016	.039 ~ .098					●	●	●	●	●												
	DNMG333-UG	.047	.008 ~ .016	.059 ~ .098					●	●	●	●	●												
	DNMG431-UG	.016	.008 ~ .016	.020 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG432-UG	.031	.008 ~ .016	.039 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG433-UG	.047	.008 ~ .016	.059 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG441-UG	.016	.008 ~ .016	.020 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG442-UG	.031	.008 ~ .016	.039 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG443-UG	.047	.008 ~ .016	.059 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG444-UG	.063	.008 ~ .016	.071 ~ .118	●	○	●	○	●	●	●	●	●												
	DNMG431-UC	.016	.008 ~ .016	.020 ~ .157	●	○	●	○	●	●	●	●	●												
	DNMG432-UC	.031	.008 ~ .016	.039 ~ .157	●	○	●	○	●	●	●	●	●												
-UC Cast iron and Medium roughing	DNMG433-UC	.047	.008 ~ .016	.059 ~ .157	●	○	●	○	●	●	●	●	●												
	DNMG441-UC	.016	.008 ~ .016	.020 ~ .157	●	○	●	○	●	●	●	●	●												
	DNMG442-UC	.031	.008 ~ .016	.039 ~ .157	●	○	●	○	●	●	●	●	●												
	DNMG443-UC	.047	.008 ~ .016	.059 ~ .157	●	○	●	○	●	●	●	●	●												
	DNMG432-UR	.031	.012 ~ .020	.039 ~ .197	●	○	●	○	●	●	●	●	●												
-UR Roughing	DNMG433-UR	.047	.012 ~ .020	.059 ~ .197	●	○	●	○	●	●	●	●	●												
	DNMG442-UR	.031	.012 ~ .020	.039 ~ .197	●	○	●	○	●	●	●	●	●												
	DNMG443-UR	.047	.012 ~ .020	.059 ~ .197	●	○	●	○	●	●	●	●	●												
	DNMG444-UR	.063	.012 ~ .020	.071 ~ .197	●	○	●	○	●	●	●	●	●												
	DNMG444-UR	.063	.012 ~ .020	.071 ~ .197	●	○	●	○	●	●	●	●	●												

					Series		IC	S
					DN.. 33		.375	.187
					DN.. 43		.500	.187
					DN.. 44		.500	.250

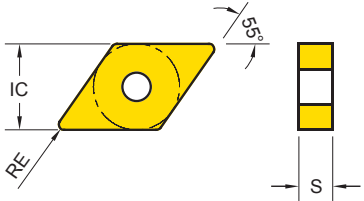
EDP 2200.. ● : Stock item ○ : Order made item

DNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-MF Stainless steel Finishing	DNMG431-MF	.016	.003 ~ .012	.008 ~ .059					●	●	●	●	●												
	DNMG432-MF	.031	.003 ~ .012	.008 ~ .059					●	●	●	●	●												
	DNMG441-MF	.016	.003 ~ .012	.008 ~ .059					●	●	●	●	●												
	DNMG442-MF	.031	.003 ~ .012	.008 ~ .059					●	●	●	●	●												
-MM Stainless steel Medium	DNMG431-MM	.016	.008 ~ .014	.020 ~ .138					○	○	○	○	○												
	DNMG432-MM	.031	.008 ~ .014	.039 ~ .138					○	○	○	○	○												
	DNMG433-MM	.047	.008 ~ .014	.059 ~ .138					○	○	○	○	○												
	DNMG441-MM	.016	.008 ~ .014	.020 ~ .138					○	○	○	○	○												
	DNMG442-MM	.031	.008 ~ .014	.039 ~ .138					○	○	○	○	○												
	DNMG443-MM	.047	.008 ~ .014	.059 ~ .138					○	○	○	○	○												
-MG Stainless steel General	DNMG331-MG	.016	.008 ~ .016	.020 ~ .118					●	●	●	●	●												
	DNMG332-MG	.031	.008 ~ .016	.031 ~ .118					●	●	●	●	●												
	DNMG431-MG	.016	.008 ~ .016	.020 ~ .157					●	●	●	●	●												
	DNMG432-MG	.031	.008 ~ .016	.039 ~ .157					●	●	●	●	●												
	DNMG433-MG	.047	.008 ~ .016	.059 ~ .157					●	●	●	●	●												
	DNMG441-MG	.016	.008 ~ .016	.020 ~ .157					●	●	●	●	●												
	DNMG442-MG	.031	.008 ~ .016	.039 ~ .157					●	●	●	●	●												
	DNMG443-MG	.047	.008 ~ .016	.059 ~ .157					●	●	●	●	●												
	DNMG432-MR	.031	.012 ~ .022	.079 ~ .217					○	○	○	○	○												
	DNMG433-MR	.047	.012 ~ .022	.079 ~ .217					○	○	○	○	○												
	DNMG442-MR	.031	.012 ~ .022	.079 ~ .217					○	○	○	○	○												
-MR Stainless steel Roughing	DNMG443-MR	.047	.012 ~ .022	.079 ~ .217					○	○	○	○	○												
	DNMG432-MR	.031	.012 ~ .022	.079 ~ .217					○	○	○	○	○												
	DNMG433-MR	.047	.012 ~ .022	.079 ~ .217					○	○	○	○	○												
	DNMG442-MR	.031	.012 ~ .022	.079 ~ .217					○	○	○	○	○												

Turning Inserts - Negative
DNGG / DNMG (55° Rhombic)

Refer to
Turning holder
p.88

Refer to
Turning holder
p.88

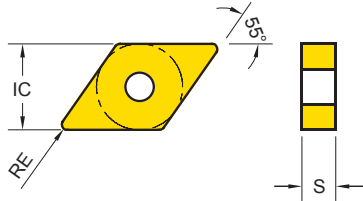


Series	IC	S
DN.. 43	.500	.187
DN.. 44	.500	.250

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

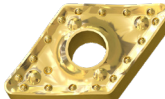
						K10	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20			
DNGG DNMG		Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10		
-SF  HRSA Finishing	DNGG431-SF	.016	.004 ~ .010	.008 ~ .039																	●	●						
	DNGG432-SF	.031	.004 ~ .010	.008 ~ .039																		●	●					
	DNGG441-SF	.016	.004 ~ .010	.008 ~ .039																		●	●					
	DNGG442-SF	.031	.004 ~ .010	.008 ~ .039																			●	●				
-SF  HRSA Finishing	DNMG431-SF	.016	.004 ~ .010	.008 ~ .039																		●						
	DNMG432-SF	.031	.004 ~ .010	.016 ~ .039																			●					
	DNMG441-SF	.016	.004 ~ .010	.008 ~ .039																			●					
	DNMG442-SF	.031	.004 ~ .010	.016 ~ .039																				●				
-SM  HRSA Medium	DNMG432-SM	.031	.006 ~ .012	.020 ~ .118						○ 3148								○	○	○	●	●						
	DNMG433-SM	.047	.006 ~ .012	.020 ~ .118															○	○	○	●	●					
	DNMG442-SM	.031	.006 ~ .012	.020 ~ .118							● 2716								○	○	○	●	●					
	DNMG443-SM	.047	.006 ~ .012	.020 ~ .118															○	○	○	●	●					
-SR  HRSA Roughing	DNMG432-SR	.031	.012 ~ .022	.079 ~ .217																	●	●						
	DNMG433-SR	.047	.012 ~ .022	.079 ~ .217																		●	●					
	DNMG442-SR	.031	.012 ~ .022	.079 ~ .217																		●	●					
	DNMG443-SR	.047	.012 ~ .022	.079 ~ .217																			●	●				
-PSF  Cermet Finishing	DNMG431-PSF	.016	.003 ~ .012	.016 ~ .118																		●	○					
	DNMG432-PSF	.031	.004 ~ .014	.024 ~ .118																			●	○				
	DNMG441-PSF	.016	.003 ~ .012	.016 ~ .118																			●	○				
	DNMG442-PSF	.031	.004 ~ .014	.024 ~ .118																				●	○			

Turning Inserts - Negative
DNMM - Heavy Turning (55° Rhombic)



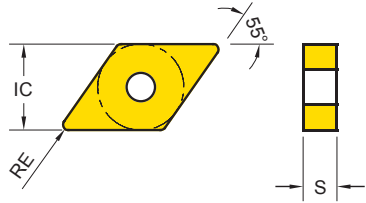
Series	IC	S
DN.. 44	.500	.250

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

						S																			
DNMM	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
 -UH Low cutting force	DNMM443-UH	.047	.012 ~ .020	.079 ~ .276						● 2731	● 3414	● 2327	● 2328		● 2769										
 -UT Heavy Roughing	DNMM443-UT	.047	.016 ~ .028	.079 ~ .315						● 2732	● 3415	● 2329	● 2330												

Turning Inserts - Negative
DNUX (4 Corners 55° Rhombic)

Refer to
Turning holder
p.88

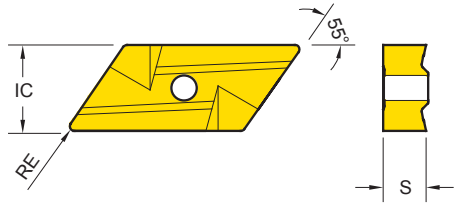


Series	IC	S
DNUX.. 43	.500	.187
DNUX.. 44	.500	.250

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

					K10	P05 K20	P10 K30	P15	P20	P25	P30	P20	M25	M35	M15	M30 S30	M40 S10	S10	P15 K15	P10 K10	N20	N20			
DNUX	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
 Left Hand Shown	DNUX431L	.016	.004 ~ .014	.028 ~ .157				○		●	●	●	●												
	DNUX432L	.031	.004 ~ .014	.039 ~ .157				○		●	●	●	●												
	DNUX441L	.016	.004 ~ .014	.028 ~ .157				○		●	●	●	●					●							
	DNUX442L	.031	.004 ~ .014	.039 ~ .157				○		●	●	●	●					●							
 Right Hand Shown	DNUX431R	.016	.004 ~ .014	.028 ~ .157				○		●	●	●	●									●	○		
	DNUX432R	.031	.004 ~ .014	.039 ~ .157				○		●	●	●	●									2734	3612		
	DNUX441R	.016	.004 ~ .014	.028 ~ .157				○		●	●	●	●					●	●	●					
	DNUX442R	.031	.004 ~ .014	.039 ~ .157				○		●	●	●	●					●	●	●					

Turning Inserts - Negative
KNUX (2 Corners 55° Parallelogram)



Series	IC	S
KN.. 1604	.375	.187

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

					K10	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	P15	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
KNUX					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
..UX		Left Hand Shown	KNUX160405L	.020	.004 ~ .016	.020 ~ .236			○ 0249	● 2621	● 3223	● 0250	● 0251	○ 0079											
			KNUX160410L	.039	.012 ~ .024	.039 ~ .236			○ 1785	● 2622	● 3384	● 1786	● 1315												
..UX		Right Hand Shown	KNUX160405R	.020	.004 ~ .016	.020 ~ .236			○ 0252	● 2408	● 3224	● 0253	● 0254	○ 0080											
			KNUX160410R	.039	.012 ~ .024	.039 ~ .236			○ 1358	● 2623	● 3344	● 1155	● 1156												

Turning Inserts - Negative
SNMA / SNMG (90° Square)

Refer to
Turning holder
p. 89

Refer to
Turning holder
p. 89

	Series	IC	S	Series	IC	S
	SN.. 32	.375	.125	SN.. 54	.625	.250
	SN.. 43	.500	.187	SN.. 64	.750	.250

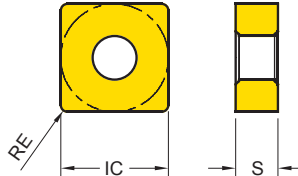
EDP 2200.. ● : Stock item ○ : Order made item

K10	P05 K20	K20 K30	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
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SNMA SNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
..MA  Cast iron	SNMA432	.031	.006 ~ .020	.039 ~ .197	●	○	●	○																	
	SNMA433	.047	.006 ~ .020	.059 ~ .197	●	○	●	○																	
	SNMA434	.063	.006 ~ .020	.071 ~ .197	●																				
	SNMA543	.047	.006 ~ .020	.059 ~ .197	●	○	●	○																	
	SNMA644	.063	.006 ~ .020	.079 ~ .354	●	○	●	○																	
-UF  Finishing	SNMG322-UF	.031	.002 ~ .008	.039 ~ .079					●	●	●														
	SNMG431-UF	.016	.002 ~ .010	.020 ~ .098			○		●	●	●	●	○				○								
	SNMG432-UF	.031	.002 ~ .010	.039 ~ .098			○		●	●	●	○													
-UL  Light Machining and Sticky Material	SNMG431-UL	.016	.004 ~ .012	.020 ~ .118			○		●	●	●	●													
	SNMG432-UL	.031	.004 ~ .012	.039 ~ .118			○		●	●	●	○													
-UM  Medium Machining Unstable condition	SNMG432-UM	.031	.006 ~ .012	.039 ~ .118	○	○			●	●	●	●													

Turning Inserts - Negative
SNMG (90° Square)

					Series	IC	S	Series	IC	S
					SN.. 43	.500	.187	SN.. 64	.750	.250
					SN.. 54	.625	.250	SN.. 86	1.000	.375



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

	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100
-UG  Medium Machining at stable condition	SNMG432-UG	.031	.008 ~ .016	.039 ~ .118	●	○	●	○																
	SNMG433-UG	.047	.008 ~ .016	.059 ~ .118	●	○	●	○																
	SNMG434-UG	.063	.008 ~ .016	.079 ~ .118	●	○		○																
-UC  Cast iron and Medium roughing	SNMG431-UC	.016	.008 ~ .016	.020 ~ .157	●					●														
	SNMG432-UC	.031	.008 ~ .016	.039 ~ .157	●	○	●	○		●	●	●	●											
	SNMG433-UC	.047	.008 ~ .016	.059 ~ .157	●	○	●	○		●	●	●	○											
-UR  Roughing	SNMG432-UR	.031	.012 ~ .020	.039 ~ .197	●	○	●	○		●	●	●	●											
	SNMG433-UR	.047	.012 ~ .020	.059 ~ .197	●	○	●	○		●	●	●	○											
	SNMG434-UR	.063	.012 ~ .020	.079 ~ .197	●	○		○		●	●	●	●											
	SNMG544-UR	.063	.012 ~ .024	.079 ~ .276						●														
	SNMG643-UR	.047	.012 ~ .031	.118 ~ .354						●	○	●	●											
	SNMG644-UR	.063	.012 ~ .031	.118 ~ .354	●	○	●			●	●	●	○											
	SNMG866-UR	.094	.016 ~ .039	.197 ~ .472						●	●	●	○											
-KR  Cast Iron Heavy Roughing	SNMG433-KR	.047	.012 ~ .024	.059 ~ .197	●	○	●	○		●														
	SNMG434-KR	.063	.012 ~ .024	.079 ~ .197	●	○	●	○		●														

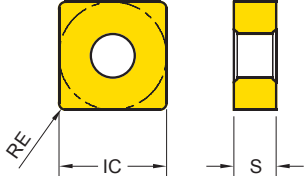
Turning Inserts - Negative
SNMG (90° Square)

Refer to
Turning holder
p.89

Turning Inserts - Negative
SNMM - Heavy Turning (90° Square)

Refer to
Turning holder
p.89

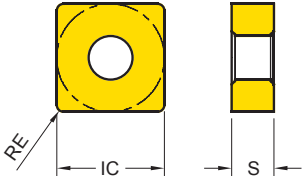
					Series	IC	S
					SN.. 32	.375	.125
					SN.. 43	.500	.187



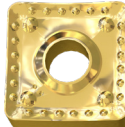
EDP 2200.. ● : Stock item ○ : Order made item

	SNMG	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	P10 K20 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
						YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-MF		SNMG431-MF	.016	.003 ~ .012	.008 ~ .059													●	●	○					
		SNMG432-MF	.031	.003 ~ .012	.008 ~ .059					●			○			●	●	●	○						
		SNMG433-MF	.047	.003 ~ .012	.008 ~ .059					●						●	●	●	○						
-MM		SNMG432-MM	.031	.008 ~ .014	.039 ~ .138												●	●	○						
		SNMG433-MM	.047	.008 ~ .014	.059 ~ .138												●	●	○						
																	●	●	○						
-MG		SNMG431-MG	.016	.008 ~ .016	.020 ~ .157											●	●								
		SNMG432-MG	.031	.008 ~ .016	.039 ~ .157											●	●	●	○						
		SNMG433-MG	.047	.008 ~ .016	.059 ~ .157											●	●	●	○						
-MR		SNMG432-MR	.031	.012 ~ .022	.079 ~ .217											●	●	●	○						
		SNMG433-MR	.047	.012 ~ .022	.079 ~ .217											●	●	●	○						
		SNMG434-MR	.063	.012 ~ .022	.079 ~ .217											●	●	●	○						
-SM		SNMG321-SM	.016	.006 ~ .012	.020 ~ .118												○		●	●					
		SNMG432-SM	.031	.006 ~ .012	.020 ~ .118												○	○	○	●	●				
-SR		SNMG432-SR	.031	.012 ~ .022	.079 ~ .217														●	●					
		SNMG433-SR	.047	.012 ~ .022	.079 ~ .217														●	●					

						Series	IC	S	Series	IC	S
						SN.. 54	.625	.250	SN.. 85	1.000	.313
						SN.. 64	.750	.250	SN.. 86	1.000	.375

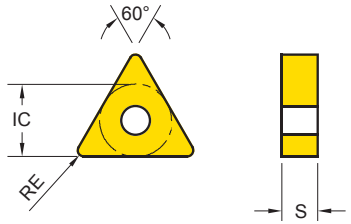


EDP 2200.. ● : Stock item ○ : Order made item

	SNMM	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
						YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100
-UH		SNMM543-UH	.047	.014 ~ .024	.079 ~ .217											●	●	●	○						
		SNMM643-UH	.047	.014 ~ .028	.059 ~ .354	●		●		●	●	●	●	●	●	●	●	●	○						
		SNMM644-UH	.063	.014 ~ .028	.079 ~ .354	2123		2124		2743	3398	2125	2126			●	●	●	○						
		SNMM646-UH	.094	.014 ~ .028	.118 ~ .354	2127		2128		2744	3399	2129	2130			●	●	●	○						
		SNMM856-UH	.094	.016 ~ .031	.118 ~ .394	2131		2132		2745	3400	2133	2134			●	●	●	○						
-UT		SNMM866-UH	.094	.016 ~ .031	.118 ~ .394	2135		2136		2747	3401	2137	2138			●	●	●	○						
		SNMM543-UT	.047	.018 ~ .028	.079 ~ .236												●	●	●	○					
		SNMM643-UT	.047	.020 ~ .039	.118 ~ .472	2153	○	3556	2154	2755	3405	2155	2156			●	●	●	○						
		SNMM644-UT	.063	.020 ~ .039	.157 ~ .472	2157	○	3557	2158	2756	3406	2159	2160			●	●	●	○						
		SNMM646-UT	.094	.020 ~ .039	.236 ~ .472	2161	○	3558	2018	2757	3407	2162	2163			●	●	●	○						
Heavy Roughing		SNMM856-UT	.094	.022 ~ .047	.236 ~ .512	2850	●	1330	1255	2758	3324	0841	0842			●	●	●	○						
		SNMM866-UT	.094	.022 ~ .047	.236 ~ .512	2164	●	1334	3559	1626	2759	3380	1627	1213		●	●	●	○						

Turning Inserts - Negative
TNMA / TNMG (60° Triangle)

Refer to
Turning holder
p.90



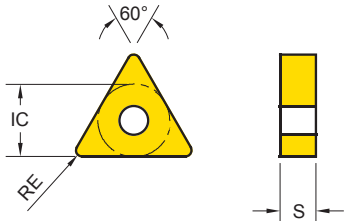
Series	IC	S
TN.. 33	.375	.187
TN.. 43	.500	.187

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

					K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
TNMA TNMG					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
..MA  Cast iron	TNMA331	.016	.006 ~ .020	.020 ~ .197	● 1582	○ 1446	● 3496	○ 1448																	
	TNMA332	.031	.006 ~ .020	.039 ~ .197	● 1486	○ 0035	● 3475	○ 1191																	
	TNMA333	.047	.006 ~ .020	.059 ~ .197	● 1485	○ 0036	● 3474	○ 1192																	
-UF  Finishing	TNMG331-UF	.016	.002 ~ .010	.020 ~ .098				○ 0270		● 2363	● 3230	● 0271	● 0272	○ 0039											
	TNMG332-UF	.031	.002 ~ .010	.039 ~ .098				○ 0276		● 2217	● 3232	● 0277	● 0278												
	TNMG333-UF	.047	.002 ~ .010	.059 ~ .098				○ 0721		● 2645	● 3294	● 0588	● 1197												
	TNMG431-UF	.016	.004 ~ .014	.020 ~ .157				○ 0407		● 2409	● 3350	● 1203	● 1205	○ 0042											
NEW -PWF  Wiper-Finishing	TNMG331-PWF	.016	.003 ~ .010	.012 ~ .098	● 3854					● 3858	● 3865		● 3872									○ 3873			
-UL  Light Machining and Sticky Material	TNMG331-UL	.016	.004 ~ .012	.020 ~ .118				○ 1605		● 2643	● 3379	● 1606	● 1607												
	TNMG332-UL	.031	.004 ~ .012	.039 ~ .118				○ 0279	○ 0752	● 2374	● 3233	● 0280	● 0281												
	TNMG333-UL	.047	.004 ~ .012	.059 ~ .118				○ 0884	○ 0868	● 2586	● 3297	● 0621	● 1198												
-UM  Medium Machining Unstable condition	TNMG331-UM	.016	.006 ~ .012	.020 ~ .118	○ 1669	○ 0949		○ 0948	○ 0844	● 2644	● 3334	● 0952	● 0954												
	TNMG332-UM	.031	.006 ~ .012	.039 ~ .118	○ 1141	○ 1053		○ 0282	○ 0758	● 2195	● 3234	● 0283	● 0284												
	TNMG333-UM	.047	.006 ~ .012	.059 ~ .118	○ 1143	○ 0596		○ 0597	○ 0760	● 2587	● 3292	● 0586	● 0710												
NEW -GM  Medium machining for steel & Stainless steel	TNMG331-GM	.016	.006 ~ .016	.020 ~ .177						● 3638	● 3659				● 3767										
	TNMG332-GM	.031	.007 ~ .020	.031 ~ .177						● 3639	● 3660				● 3771										
	TNMG333-GM	.047	.008 ~ .022	.039 ~ .177						● 3640	● 3661				● 3774										

Turning Inserts - Negative
TNMG (60° Triangle)

Refer to
Turning holder
p.90



Series	IC	S
TN.. 33	.375	.187
TN.. 43	.500	.187

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

					→ S ←																				
					K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
TNMG					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
RE  -UG Medium Machining at stable condition	TNMG331-UG	.016	.008 ~ .016	.020 ~ .118	●	○	●	○		●	●	●	●												
	TNMG332-UG	.031	.008 ~ .016	.039 ~ .118	●	○	●	○	○	●	2182	3189	0145	0146	0037			○	2242						
	TNMG333-UG	.047	.008 ~ .016	.059 ~ .118	●	○	●	○	○	●	2200	3293	0587	0939											
	TNMG432-UG	.031	.010 ~ .024	.039 ~ .236	1641	1061	3518	0285		2394	3235	0286	0287	0040											
	TNMG433-UG	.047	.010 ~ .024	.059 ~ .236	1642	1526	3519	1527		2694	3375	1528	1529												
	TNMG434-UG	.063	.010 ~ .024	.079 ~ .236	1647	1209	3520	0851	0863	2695	3325	0852	1263												
 -UC Cast iron and Medium roughing	TNMG331-UC	.016	.008 ~ .016	.020 ~ .157	●	○	●	○		●	●	●	●												
	TNMG332-UC	.031	.008 ~ .016	.039 ~ .157	0901	0075	3440	0129		2382	3183	0108	0130												
	TNMG333-UC	.047	.008 ~ .016	.059 ~ .157	0902	0076	3441	0131		2413	3184	0109	0132												
	TNMG434-UC	.063	.008 ~ .016	.079 ~ .157						3374	1507														
 -UR Roughing	TNMG332-UR	.031	.012 ~ .020	.039 ~ .197	0880	0680	3432	0669		2395	3300	0670	1054												
	TNMG333-UR	.047	.012 ~ .020	.059 ~ .197	1657	0602	3523	0404	0888	2406	3266	0405	0406	0038			○	2243							
	TNMG433-UR	.047	.012 ~ .026	.059 ~ .276	1639	0408	3516	0409		2403	3267	0410	0411	0041											
	TNMG434-UR	.063	.012 ~ .026	.079 ~ .276	1658	0460	3524	0461		2696	3306	0696	0711												

Turning Inserts - Negative
TNMG (60° Triangle)

Refer to
Turning holder
p.90

					Series		IC		S																
					TN.. 33		.375		.187																
60° IC RE S					EDP 2200.. ● : Stock item ○ : Order made item																				
TNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
-MF  Stainless steel Finishing	TNMG331-MF	.016	.003 ~ .012	.008 ~ .059						●			●		●	●	●	●	●	○		●	○		
	TNMG332-MF	.031	.003 ~ .012	.008 ~ .059						2889			2952		2788	3765	0824	0775	1457	1343		3141	3621		
										2871	3335	0963			2458	3768	0589	0776	0825	1285					
-MM  Stainless steel Medium	TNMG331-MM	.016	.008 ~ .014	.020 ~ .138												●	●	●	○						
	TNMG332-MM	.031	.008 ~ .014	.039 ~ .138												0567	0568	1790	2297						
	TNMG333-MM	.047	.008 ~ .014	.059 ~ .138												0569	0570	0913	1281						
-MG  Stainless steel General	TNMG331-MG	.016	.008 ~ .016	.020 ~ .157											2472	3766	1455	1456	1219	1515					
	TNMG332-MG	.031	.008 ~ .016	.039 ~ .157											2473	3769	1568	1569	1713	1660					
	TNMG333-MG	.047	.008 ~ .020	.079 ~ .157											2474	3772	2104	2105	2103	2054					
-MR  Stainless steel Roughing	TNMG332-MR	.031	.012 ~ .022	.079 ~ .217								○	0727		2493	3770	0826	0985	0726						
	TNMG333-MR	.047	.012 ~ .022	.079 ~ .217									○	1062		2494	3773	0995	0827	0828					

Turning Inserts - Negative
TNGG / TNMG (60° Triangle)

Refer to
Turning holder
p.90

					Series		IC		S	
					TN.. 33		.375		.187	
					TN.. 43		.500		.187	

60°

IC

RE

S

EDP 2200..

● : Stock item

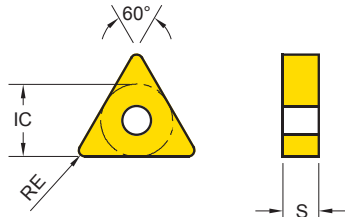
○ : Order made item

TNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	K10	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 M10 K10	N20	N20
-SF HRSA Finishing	TNMG332-SF	.031	.004 ~ .010	.008 ~ .039																	●	●			
																					1427	4022			
-SM HRSA Medium	TNMG332-SM	.031	.006 ~ .012	.020 ~ .118															○	○	○	●	●		
	TNMG333-SM	.047	.006 ~ .012	.020 ~ .118															○	○	○	●	●		
	TNMG433-SM	.047	.007 ~ .013	.039 ~ .236																1635	1636	1858	1508	4025	
-SR HRSA Roughing	TNMG332-SR	.031	.012 ~ .022	.079 ~ .217																	●	●			
	TNMG333-SR	.047	.012 ~ .022	.079 ~ .217																		●	●		
																						1306	4026		

Turning Inserts - Negative
TNGG / TNMG (60° Triangle)

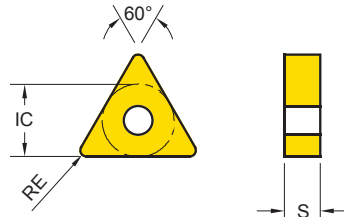
Refer to
Turning holder
p.90

Refer to
Turning holder
p.90

					Series																IC		S		
					TN.. 33																.375		.187		
					EDP 2200.. ● : Stock item ○ : Order made item																				
					K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
 -PSF Cermet Finishing	TNMG331-PSF	.016	.003 ~ .012	.016 ~ .098	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	●	○		
	TNMG332-PSF	.031	.004 ~ .014	.024 ~ .098																		2535	3580		
																						2536	3581		
 -S Cermet Finishing Left Hand Shown	TNGG330.5L-S	.008	.004 ~ .008	.012 ~ .079																		●	○		
	TNGG331L-S	.016	.004 ~ .008	.016 ~ .079																		2859			
	TNGG332L-S	.031	.005 ~ .009	.024 ~ .079																		2860			
 -S Cermet Finishing Right Hand Shown	TNGG330.5R-S	.008	.004 ~ .008	.012 ~ .079																		●	○		
	TNGG331R-S	.016	.004 ~ .008	.016 ~ .079																		2856			
	TNGG332R-S	.031	.005 ~ .009	.024 ~ .079																		2857			
 -C Cermet Medium Left Hand Shown	TNGG330.5L-C	.008	.008 ~ .016	.012 ~ .138																		○	○		
	TNGG331L-C	.016	.008 ~ .016	.020 ~ .138																		2524	2526		
	TNGG332L-C	.031	.008 ~ .016	.039 ~ .138																		2528			
 -C Cermet Medium Right Hand Shown	TNGG330.5R-C	.008	.008 ~ .016	.012 ~ .138																		○	○		
	TNGG331R-C	.016	.008 ~ .016	.020 ~ .138																		2525	2527		
	TNGG332R-C	.031	.008 ~ .016	.039 ~ .138																		2529			

Turning Inserts - Negative
TNMM - Heavy Turning (60° Triangle)

					Series		IC	S
					TN.. 33		.375	.187
					TN.. 43		.500	.187



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

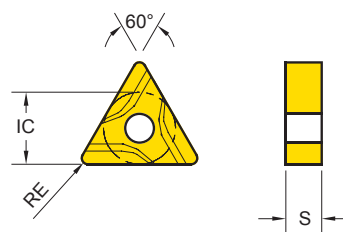
TNMM	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-UH	TNMM333-UH	.047	.012 ~ .020	.079 ~ .197						●	2846														
	TNMM433-UH	.047	.012 ~ .020	.079 ~ .276						●	2848														



Low cutting force

Turning Inserts - Negative
TNUX (60° Triangle)

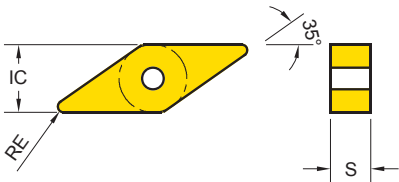
Refer to
Turning holder
p.90

					Series												IC		S						
					TNUX 33												.375		.187						
					EDP 2200.. ● : Stock item ○ : Order made item																				
TNUX	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
..UX  Left Hand Shown	TNUX331L	.016	.004 ~ .012	.020 ~ .157				○ 0412		● 2425	● 3268	● 0413	● 1264	○ 0043			● 2248								
	TNUX332L	.031	.004 ~ .016	.039 ~ .197				○ 0414		● 2198	● 3269	● 0415	● 0675	○ 0045			○ 0731								
..UX  Right Hand Shown	TNUX331R	.016	.004 ~ .012	.020 ~ .157				○ 0288		● 2390	● 3236	● 0289	● 0290	● 0044			● 2249		● 3144			● 2733	○ 3611		
	TNUX332R	.031	.004 ~ .016	.039 ~ .197				○ 0291		● 2354	● 3237	● 0292	● 0293	● 0046			● 2250		● 3145						

Turning Inserts - Negative
VNMA / VNMG (35° Rhombic)

Refer to
Turning holder
p.91

					Series	IC	S
					VN.. 33	.375	.187



EDP 2200..

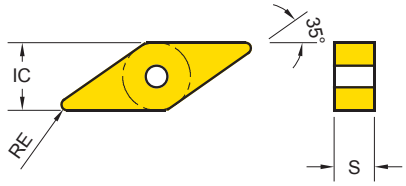
● : Stock item ○ : Order made item

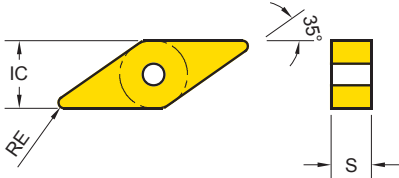
VNMA VNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	K10	P05 K20	P10 K30	P15	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 M10 K10	N20	N20
..MA 	VNMA332	.031	.006 ~ .016	.039 ~ .197	● 1573		○ 0162	● 3491	○ 1275															
-UF 	VNMG331-UF	.016	.002 ~ .010	.020 ~ .098				○ 0306		● 2205	● 3242	● 0307	● 0308	○ 0049										
	VNMG332-UF	.031	.002 ~ .010	.039 ~ .098				○ 0309		● 2207	● 3243	● 0310	● 0311											
-UL 	VNMG331-UL	.016	.004 ~ .012	.020 ~ .118				○ 0886		● 2412	● 3327	● 0912	● 0723											
	VNMG332-UL	.031	.004 ~ .012	.039 ~ .118				○ 0428	○ 0790	● 2202	● 3273	● 0429	● 0853											
	VNMG333-UL	.047	.004 ~ .012	.059 ~ .118						● 2431														
-UM 	VNMG332-UM	.031	.006 ~ .012	.039 ~ .118		○ 1357		○ 1359		● 2424	● 3363	● 1361	● 1362											
	VNMG333-UM	.047	.006 ~ .012	.059 ~ .118		○ 1230		○ 0736	○ 0870	● 2701	● 3312	● 0737	● 1214											
NEW -GM 	VNMG331-GM	.016	.004 ~ .014	.000 ~ .000						● 3641	● 3662				● 3792									
	VNMG332-GM	.031	.004 ~ .014	.000 ~ .000						● 3642	● 3663				● 3796									
	VNMG333-GM	.047	.008 ~ .016	.039 ~ .000						● 3643	● 3664				● 3799									
-UG 	VNMG331-UG	.016	.008 ~ .016	.020 ~ .118	● 1648	○ 1331	● 3521	○ 0993		● 2420	● 3332	● 0940	● 0994											
	VNMG332-UG	.031	.008 ~ .016	.039 ~ .118	● 1000	○ 0462	● 3455	○ 0312		● 2176	● 3244	● 0313	● 0314	○ 0050										
	VNMG333-UG	.047	.008 ~ .016	.059 ~ .118	● 1659	○ 1345	● 3525	○ 0931		● 2407	● 3331	● 0927	● 0917											
-UC 	VNMG331-UC	.016	.008 ~ .016	.020 ~ .138	● 1612	○ 0885	● 3503	○ 0423		● 2366	● 3356	● 1276	● 1277											
	VNMG332-UC	.031	.008 ~ .016	.039 ~ .138	● 0980	○ 0094	● 3454	○ 0424		● 2210	● 3272	● 0425	● 0426											
	VNMG333-UC	.047	.008 ~ .016	.059 ~ .138	● 1587	○ 1381	● 3497	○ 1392		● 2700	● 3367	● 1382	● 1384											
-UR 	VNMG333-UR	.047	.012 ~ .018	.059 ~ .157	● 1638	○ 1231	○ 3515	○ 0430	○ 0871	● 2380	● 3274	● 0431	○ 0432	○ 0051										

Turning Inserts - Negative
VNGG / VNMG (35° Rhombic)

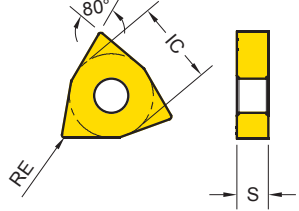
Refer to
Turning holder
p.91

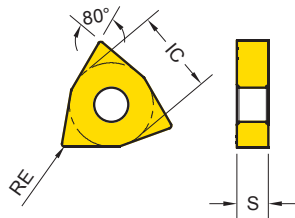
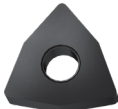
Refer to
Turning holder
p.92



					Series		IC		S																
					VN.. 33		.375		.187																
					EDP 2200.. ● : Stock item ○ : Order made item																				
					K10	P05 K20	K20	P10 K30	P15	P10	P25	P30	P20	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
VNGG VNMG	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-MF 	VNMG331-MF	.016	.003 ~ .012	.008 ~ .059					●				●		2790	3790	0782	1019	2267	2019					
	VNMG332-MF	.031	.003 ~ .012	.008 ~ .059					○				○		2464	3793	0829	0947	2283	2099					
-MM 	VNMG331-MM	.016	.008 ~ .014	.020 ~ .138											●	0661	0662	1792	2298	○					
	VNMG332-MM	.031	.008 ~ .014	.039 ~ .138											●	0663	0664	1793	2299	○					
-MG 	VNMG331-MG	.016	.008 ~ .016	.020 ~ .157											●	2489	3791								
	VNMG332-MG	.031	.008 ~ .016	.039 ~ .157											●	2490	3794								
-MR 	VNMG332-MR	.031	.012 ~ .022	.079 ~ .217								○			●	2500	3795	1020	0831	2304					
	VNMG333-MR	.047	.012 ~ .022	.079 ~ .217											●	2794	3798								
-SF 	VNGG333-SF	.047	.004 ~ .010	.016 ~ .059																	●	3158	4027		
-SR 	VNMG332-SR	.031	.012 ~ .022	.079 ~ .217																	●	1449	4044		
-PSF 	VNMG331-PSF	.016	.003 ~ .012	.012 ~ .079																		●	2537	3582	
	VNMG332-PSF	.031	.004 ~ .014	.020 ~ .079																		●	2538	3583	

Turning Inserts - Negative
WNMA / WNMG (80° Trigon)



					Series				IC				S											
					WN.. 33				.375				.187											
					WN.. 43				.500				.187											
					EDP 2200.. ● : Stock item ○ : Order made item																			
WNMA WNMG					K10	P05 K20	P20 K30	P10	P15	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
..MA  Cast iron	WNMA333	.047	.006 ~ .020	.059 ~ .157	● 2714																			
	WNMA431	.016	.006 ~ .020	.020 ~ .197	● 0903	○ 0052	● 3442	○ 1262																
	WNMA432	.031	.006 ~ .020	.039 ~ .197	● 0904	○ 0053	● 3443	○ 0433																
	WNMA433	.047	.006 ~ .020	.059 ~ .197	● 0905	○ 0054	○ 3444	○ 0434																
-UF  Finishing	WNMG331-UF	.016	.002 ~ .008	.020 ~ .079			○ 0435		● 2415	● 3275	● 0436	○ 0437	○ 0058											
	WNMG431-UF	.016	.002 ~ .010	.020 ~ .098			○ 0315		● 2389	● 3245	● 0316	○ 0317	○ 0055											
	WNMG432-UF	.031	.002 ~ .010	.039 ~ .098			○ 0321		● 2173	● 3247	● 0322	○ 0323												
	WNMG433-UF	.047	.002 ~ .010	.059 ~ .098			○ 1424		● 2708	● 3369	● 1410	○ 1411												
-UL  Light Machining and Sticky Material	WNMG332-UL	.031	.004 ~ .012	.039 ~ .098			○ 0439		● 2588	● 3277	● 0440	○ 0441												
	WNMG431-UL	.016	.004 ~ .012	.020 ~ .118			○ 1431		● 2703	● 3371	● 1434	○ 1438												
	WNMG432-UL	.031	.004 ~ .012	.039 ~ .118			○ 0324		● 2177	● 3248	● 0325	○ 0326												
	WNMG433-UL	.047	.004 ~ .012	.059 ~ .118					● 2448	● 3372	● 1435													
-UM  Medium Machining Unstable condition	WNMG331-UM	.016	.006 ~ .012	.020 ~ .098	○ 2106	○ 1259	○ 0741		● 2418	● 3319	● 0785	○ 0742												
	WNMG332-UM	.031	.006 ~ .012	.039 ~ .098	○ 1554	○ 1260	○ 0600		● 2402	● 3296	● 0601	○ 1271												
	WNMG431-UM	.016	.006 ~ .012	.020 ~ .118		○ 1313	○ 0786		● 2704	● 3320	● 0787	○ 0788												
	WNMG432-UM	.031	.006 ~ .012	.039 ~ .118		○ 0470	○ 0327	○ 0761	● 2170	● 3249	● 0328	○ 0329												
	WNMG433-UM	.047	.006 ~ .012	.059 ~ .118		○ 1210	○ 0649	○ 0762	● 2417	● 3295	● 0598	○ 0712												
	WNMG434-UM	.063	.006 ~ .012	.079 ~ .118		○ 1234	○ 0593	○ 0763	● 2574	● 3291	● 0584	○ 0713												
NEW -GM  Medium machining for steel & Stainless steel	WNMG331-GM	.016	.004 ~ .016	.000 ~ .000					● 3644	● 3665				● 3802										
	WNMG332-GM	.031	.004 ~ .020	.000 ~ .000					● 3645	● 3666				● 3806										
	WNMG333-GM	.047	.008 ~ .022	.039 ~ .000					● 3646	● 3667				● 3809										
	WNMG431-GM	.016	.004 ~ .016	.000 ~ .000					● 3647	● 3668				● 3812										
	WNMG432-GM	.031	.004 ~ .020	.000 ~ .000					● 3648	● 3669				● 3816										
	WNMG433-GM	.047	.008 ~ .022	.039 ~ .000					● 3649	● 3670				● 3819										
WNMG434-GM	.063	.008 ~ .022	.039 ~ .000					● 3650	● 3671				● 3820											

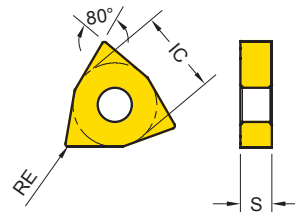
Turning Inserts - Negative
WNMG (80° Trigon)

Refer to
Turning holder
p. 92

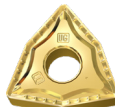
Turning Inserts - Negative
WNMG (80° Trigon)

Refer to
Turning holder
p. 92

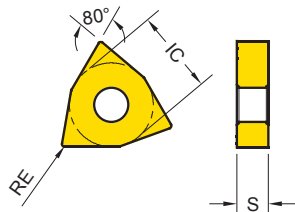
					Series										IC		S	
					WN.. 33										.375		.187	
					WN.. 43										.500		.187	



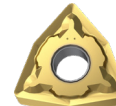
EDP 2200.. ● : Stock item ○ : Order made item

WNGM	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
-UG  Medium Machining at stable condition	WNGM332-UG	.031	.008 ~ .016	.039 ~ .098	●	○	●	○				2428	3276	0438	0874	0059									
	WNGM431-UG	.016	.008 ~ .016	.020 ~ .118	●	○	○					2392	3246	0319	0320										
	WNGM432-UG	.031	.008 ~ .016	.039 ~ .118	●	○	●	○	○	●	●	●	●	○				○	○						
	WNGM433-UG	.047	.008 ~ .016	.059 ~ .118	●	○	○	○	○	●	●	●	○	○											
	WNGM434-UG	.063	.008 ~ .016	.079 ~ .118	●	○		○	○	●	●	●	●												
-PWM  Wiper-Medium	WNGM332-PWM	.031	.004 ~ .016	.031 ~ .098										2051											
	WNGM432-PWM	.031	.004 ~ .020	.031 ~ .138						2706															
	WNGM433-PWM	.047	.004 ~ .020	.039 ~ .138	●					2712			2064												
-UC  Cast iron and Medium roughing	WNGM332-UC	.031	.008 ~ .016	.039 ~ .118	●	○	●	○		●	●	●	●												
	WNGM431-UC	.016	.008 ~ .016	.020 ~ .157	●	○	○			2367	3185	0110	0134												
	WNGM432-UC	.031	.008 ~ .016	.039 ~ .157	●	○	○	○	○	2186	3186	0111	0136												
	WNGM433-UC	.047	.008 ~ .016	.059 ~ .157	●	○	○	○	○	2168	3187	0112	0138												
	WNGM434-UC	.063	.008 ~ .016	.079 ~ .157	●	○	○			2709	3351	1236	0743												
-UR  Roughing	WNGM333-UR	.047	.012 ~ .020	.059 ~ .157	●	○		1057		2702		1058	1060												
	WNGM333-UR	.047	.012 ~ .020	.059 ~ .157		●				3340															
	WNGM432-UR	.031	.012 ~ .020	.039 ~ .197	●	○	○	○		2353	3279	0471	0472												
	WNGM433-UR	.047	.012 ~ .020	.059 ~ .197	●	○	○	○	○	2184	3278	0443	0444	0057											
	WNGM434-UR	.063	.012 ~ .020	.079 ~ .197	●	○	○	○	○	●	●	●	○												
-KR  Cast Iron Heavy Roughing	WNGM333-KR	.047	.012 ~ .024	.059 ~ .157	●																				
	WNGM432-KR	.031	.012 ~ .024	.039 ~ .197	●	○	○	○		2705															
	WNGM433-KR	.047	.012 ~ .024	.059 ~ .197	●	○	○	○		2707															

					Series																IC		S	
					WN.. 33																.375		.187	
					WN.. 43																.500		.187	

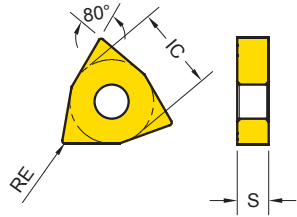


EDP 2200.. ● : Stock item ○ : Order made item

WNGM	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	K10	P05	K20	P10	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40	S10	S10	M15	M10	N20	N20		
					YG1001	K20	K30	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10			
-MF  Stainless steel Finishing	WNGM331-MF	.016	.003 ~ .012	.016 ~ .079					○	0833	2874			○	0996	●	2461	3800	1215	1217	2284	2279	○					
	WNGM332-MF	.031	.003 ~ .012	.031 ~ .079							●	2890			●	2789	3803	1216	1218	2285	2280	○						
	WNGM431-MF	.016	.003 ~ .012	.016 ~ .098							●	2875			○	0834	2462	3810	0667	0668	0970	2281	○					
	WNGM432-MF	.031	.003 ~ .012	.031 ~ .098							●	2876			○	1098	2463	3813	0617	0618	2268	2282	○					
-MM  Stainless steel Medium	WNGM431-MM	.016	.008 ~ .014	.020 ~ .138															●	0571	0572	2300	2301	○				
	WNGM432-MM	.031	.008 ~ .014	.039 ~ .138										○	0491				●	0497	0498	0633	2302	○				
	WNGM433-MM	.047	.008 ~ .014	.059 ~ .138															●	0612	0615	1926	2303	○				
-MG  Stainless steel General	WNGM331-MG	.016	.008 ~ .016	.020 ~ .118												●	2487	3801										
	WNGM332-MG	.031	.008 ~ .016	.039 ~ .118													●	2476	3804									
	WNGM333-MG	.047	.008 ~ .016	.059 ~ .118													●	2477	3807									
	WNGM431-MG	.016	.008 ~ .016	.020 ~ .157													●	2488	3811									
	WNGM432-MG	.031	.008 ~ .016	.039 ~ .157													●	2478	3814	1496	1497	1160	1498	●				
	WNGM433-MG	.047	.008 ~ .016	.059 ~ .157													●	2479	3817	1499	1500	1161	1501	●				
-MR  Stainless steel Roughing	WNGM332-MR	.031	.012 ~ .022	.047 ~ .157												●	2793	3805										
	WNGM333-MR	.047	.012 ~ .022	.047 ~ .157										○	1154	2498	3808	0616	1787	1896								
	WNGM432-MR	.031	.012 ~ .022	.079 ~ .217										○	1099	2499	3815	0619	0620	0835								
	WNGM433-MR	.047	.012 ~ .022	.079 ~ .217										○	0837	2482	3818	0665	0666	0836								

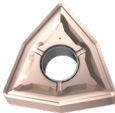
Turning Inserts - Negative WNGG / WNMG (80° Trigon)

Refer to
Turning holder
p.92

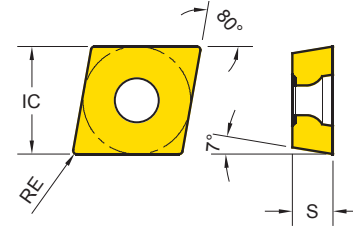


Series	IC	S
WN.. 33	.375	.187
WN.. 43	.500	.187

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

						K10	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20	
WNGG WNMG		Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-SF		WNGG432-SF	.031	.004 ~ .010	.008 ~ .039																● 1308	● 4028				
-SF		WNMG431-SF	.016	.004 ~ .010	.008 ~ .039																	● 4041				
		WNMG432-SF	.031	.004 ~ .010	.016 ~ .039																	● 4042				
-SM		WNMG432-SM	.031	.006 ~ .012	.020 ~ .118														○ 1199	○ 1206	○ 1859	● 1311	● 4030			
		WNMG433-SM	.047	.006 ~ .012	.020 ~ .118															○ 1374	○ 1416	○ 1860	● 1312	● 4032		
-SR		WNMG333-SR	.047	.012 ~ .022	.079 ~ .157																● 1439	● 4029				
		WNMG432-SR	.031	.012 ~ .022	.079 ~ .217																	● 1310	● 4031			
		WNMG433-SR	.047	.012 ~ .022	.079 ~ .217																	● 1309	● 4033			
		WNMG434-SR	.063	.012 ~ .022	.079 ~ .217																	● 2843	● 4034			
-PSF		WNMG431-PSF	.016	.003 ~ .012	.016 ~ .098																	● 2539	○ 3584			
		WNMG432-PSF	.031	.004 ~ .014	.024 ~ .098																	● 2540	○ 3585			

Turning Inserts - Positive CCGT / CCMT (80° Rhombic)

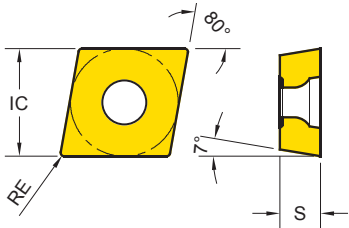


Series	IC	S
CC.. 21.5	.250	.094
CC.. 32.5	.375	.156
CC.. 43	.500	.187

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

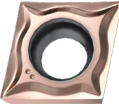
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Turning Inserts - Positive
CCGT / CCMT (80° Rhombic)

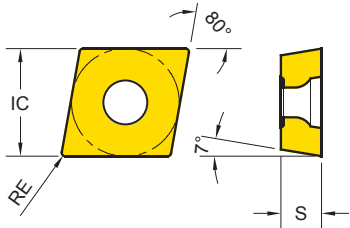


Series	IC	S
CC.. 21.5	.250	.094
CC.. 32.5	.375	.156
CC.. 43	.500	.187

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

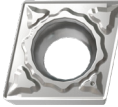
CCGT CCMT	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-SF  HRSA Finishing	CCGT21.50-SF	.004	.001 ~ .006	.004 ~ .059																					
	CCGT21.50.5-SF	.008	.001 ~ .006	.004 ~ .059																					
	CCGT21.51-SF	.016	.001 ~ .008	.004 ~ .094																					
	CCGT32.50-SF	.004	.001 ~ .006	.004 ~ .098																					
	CCGT32.50.5-SF	.008	.001 ~ .006	.004 ~ .098																					
	CCGT32.51-SF	.016	.001 ~ .008	.004 ~ .098																					
	CCGT32.52-SF	.031	.001 ~ .010	.004 ~ .098																					
-MF  Stainless steel Finishing	CCMT21.50.5-MF	.008	.002 ~ .006	.003 ~ .079											●	●	●	●	●	●					
	CCMT21.51-MF	.016	.002 ~ .010	.004 ~ .079											●	●	●	●	●	●					
	CCMT21.52-MF	.031	.003 ~ .011	.005 ~ .079											●	●	●	●	●	●					
	CCMT32.50.5-MF	.008	.002 ~ .006	.003 ~ .079											●	●	●	●	●	●					
	CCMT32.51-MF	.016	.002 ~ .010	.004 ~ .079											●	●	●	●	●	●					
	CCMT32.52-MF	.031	.003 ~ .012	.006 ~ .079						○					●	●	●	●	●	●					
	CCMT32.53-MF	.047	.004 ~ .013	.008 ~ .079											●	●	●	●	●	●					
-MM  Stainless steel Medium	CCMT431-MF	.016	.003 ~ .010	.008 ~ .094											●	●									
	CCMT432-MF	.031	.003 ~ .012	.020 ~ .094											●	●									
	CCMT21.51-MM	.016	.002 ~ .007	.012 ~ .094											●	●									
	CCMT21.52-MM	.031	.003 ~ .009	.031 ~ .094											●	●									
	CCMT32.51-MM	.016	.003 ~ .010	.010 ~ .118											●	●	●	●	●	●					
	CCMT32.52-MM	.031	.004 ~ .012	.020 ~ .118											●	●	●	●	●	●					
	CCMT32.53-MM	.047	.005 ~ .014	.039 ~ .118											●	●	●	●	●	●					

Turning Inserts - Positive
CCMT (80° Rhombic)



Series	IC	S
CC.. 21.5	.250	.094
CC.. 32.5	.375	.156
CC.. 43	.500	.187

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

CCMT	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-PF  Finishing	CCMT21.50.5-PF	.008	.002 ~ .006	.003 ~ .079																					
	CCMT21.51-PF	.016	.002 ~ .010	.004 ~ .079																					
	CCMT32.50.5-PF	.008	.002 ~ .006	.003 ~ .079																					
	CCMT32.51-PF	.016	.002 ~ .010	.004 ~ .079																					
	CCMT32.52-PF	.031	.003 ~ .012	.006 ~ .079																					
	CCMT32.53-PF	.047	.004 ~ .013	.008 ~ .079																					
	CCMT431-PF	.016	.003 ~ .010	.008 ~ .094																					
-PM  Medium	CCMT432-PF	.031	.003 ~ .012	.020 ~ .094																					
	CCMT21.51-PM	.016	.002 ~ .007	.010 ~ .094																					
	CCMT21.52-PM	.031	.003 ~ .009	.031 ~ .094																					
	CCMT32.51-PM	.016	.003 ~ .010	.010 ~ .118																					
	CCMT32.52-PM	.031	.004 ~ .012	.020 ~ .118																					
	CCMT32.53-PM	.047	.005 ~ .014	.039 ~ .118																					
	CCMT431-PM	.016	.004 ~ .011	.016 ~ .165																					

Turning Inserts - Positive
DCGT / DCMT (55° Rhombic)

Turning Inserts - Positive
DCGT / DCMT (55° Rhombic)

					Series		IC	S
					DC.. 21.5		.250	.094
					DC.. 32.5		.375	.156

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

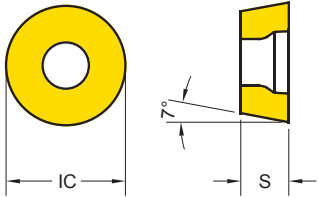
DCGT DCMT	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
-AL Aluminum	DCGT21.50.5-AL	.008	.000 ~ .008	.002 ~ .118																			●	1399
	DCGT21.51-AL	.016	.001 ~ .012	.004 ~ .157																			●	1400
	DCGT32.50-AL	.004	.000 ~ .012	.002 ~ .157																			●	2101 2100
	DCGT32.50.5-AL	.008	.001 ~ .012	.002 ~ .157																			●	0342 0341
	DCGT32.51-AL	.016	.001 ~ .020	.004 ~ .197																			●	0332 0083
	DCGT32.52-AL	.031	.001 ~ .020	.004 ~ .197																			●	0333 0084
-UF Finishing	DCMT21.51-UF	.016	.002 ~ .008	.020 ~ .079			○	0207	●	●	●	●					○		○					
	DCMT32.51-UF	.016	.002 ~ .010	.020 ~ .079		○	0213	2208 3211	0214 0215								○	1044 1043	1910					
	DCMT32.52-UF	.031	.002 ~ .010	.039 ~ .079	●		○	1897 3213	0220 0221															
-UG General	DCMT21.51-UG	.016	.004 ~ .010	.020 ~ .079	●	○	0210	2391 3210	0211 0212	0013														
	DCMT21.52-UG	.031	.004 ~ .010	.031 ~ .079	●	○	0484	2386 3309	0717 1136															
	DCMT32.51-UG	.016	.006 ~ .012	.020 ~ .098	●	○	0216	2209 3212	0217 0218	0014							○	1520 1522	1521					
	DCMT32.52-UG	.031	.006 ~ .012	.031 ~ .098	●	○	0222	2215 3214	0223 0224	0015														
	DCMT32.53-UG	.047	.006 ~ .014	.059 ~ .118				2605 3393	2056															

					Series																IC	S
					DC.. 21.5																.250	.094
					DC.. 32.5																.375	.156

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

DCGT DCMT	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	P05 K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
-SF HRSA Finishing	DCGT21.50-SF	.004	.001 ~ .006	.004 ~ .059																			●	2342 2068 4055
	DCGT21.50.5-SF	.008	.001 ~ .006	.004 ~ .059																			●	2343 2069 4056
	DCGT21.51-SF	.016	.001 ~ .008	.004 ~ .059													○						●	2338 2344 2070 4057
	DCGT32.50-SF	.004	.000 ~ .002	.004 ~ .098																			●	2345 2075 4058
	DCGT32.50.5-SF	.008	.001 ~ .006	.004 ~ .098													○	0559 0560	1478 1474	4059			●	1460 1473 1479 1463 4060
	DCGT32.51-SF	.016	.001 ~ .008	.004 ~ .098													○	1460 1473	1479 1463	4060			●	2346 2076 4061
-MF Stainless steel Finishing	DCMT21.50.5-MF	.008	.002 ~ .006	.002 ~ .059													●	2799 3703					●	4093
	DCMT21.51-MF	.016	.002 ~ .007	.003 ~ .059													●	2504 3704	1978 1979	1980 2030	4094		●	
	DCMT32.50.5-MF	.008	.002 ~ .006	.003 ~ .079													●	2505 3707	2005 2006	2007 2031	4095		●	
	DCMT32.51-MF	.016	.002 ~ .010	.004 ~ .079													●	2506 3708	1885 1886	1927 2032	4096		●	
	DCMT32.52-MF	.031	.003 ~ .012	.006 ~ .079													●	2507 3710	1963 1964	1965 2033	4097		●	
-MM Stainless steel Medium	DCMT21.51-MM	.016	.002 ~ .007	.008 ~ .091													●	2516 3705	1999 2000	2001 2040	4062		●	
	DCMT21.52-MM	.031	.003 ~ .010	.020 ~ .091													●	2817 3706					●	
	DCMT32.51-MM	.016	.002 ~ .007	.010 ~ .118													●	2517 3709	1990 1991	1992 2041	4063		●	
	DCMT32.52-MM	.031	.003 ~ .010	.020 ~ .118													●	2518 3711	1984 1985	1986 2042	4064		●	
	DCMT32.53-MM	.047	.005 ~ .014	.047 ~ .118													●	2818 3712					●	
-PF Finishing	DCMT21.50.5-PF	.008	.002 ~ .006	.002 ~ .059																			●	2783 3614
	DCMT21.51-PF	.016	.002 ~ .007	.003 ~ .059																			●	2544 3589
	DCMT32.50.5-PF	.008	.002 ~ .006	.003 ~ .079																			●	2545 3005
	DCMT32.51-PF	.016	.002 ~ .010	.004 ~ .079																			●	2546 3590
	DCMT32.52-PF	.031	.003 ~ .008	.006 ~ .079																			●	2547 3591
-PM Medium	DCMT21.51-PM	.016	.003 ~ .012	.008 ~ .091																			●	2556 3600
	DCMT21.52-PM	.031	.003 ~ .010	.020 ~ .091																			●	2557 3601
	DCMT32.51-PM	.016	.002 ~ .007	.010 ~ .118																			●	2558 3602
	DCMT32.52-PM	.031	.003 ~ .010	.020 ~ .118																			●	
	DCMT32.53-PM	.047	.005 ~ .014	.047 ~ .118																			●	

Turning Inserts - Positive
RCMT (Round)

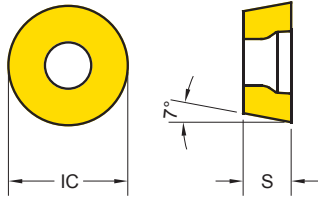


Series	IC	S	Series	IC	S
RC** 0602	.236	.094	RC** 10T3	.394	.156
RC** 0803	.315	.125	RC** 1204	.472	.187
			RC.. 1606	.630	.250

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

RCMT	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
 General	RCMT0602M0	.118	.002 ~ .010	.008 ~ .047	●	○	●	○		●	●	●	●	○				○							
	RCMT0803M0	.157	.002 ~ .012	.020 ~ .059	●	○	●	○		●	●	●	●	○				○							
	RCMT10T3M0	.197	.004 ~ .014	.020 ~ .098	●	○	●	○		●	●	●	●	○				○							
	RCMT1204M0	.236	.006 ~ .018	.020 ~ .118	●	○	●	○		●	●	●	●	○				○							
 General -SM	RCMT0602M0-SM	.118	.005 ~ .013	.012 ~ .063															●	●					
	RCMT0803M0-SM	.157	.006 ~ .016	.012 ~ .079															●	●					
	RCMT10T3M0-SM	.197	.007 ~ .018	.016 ~ .098															●	●					
	RCMT1204M0-SM	.236	.008 ~ .022	.020 ~ .118	●				●					●					●	●					
	RCMT1606M0-SM	.315	.010 ~ .030	.028 ~ .157															●	●					

Turning Inserts - Positive
RCMX - Heavy Turning (Round)



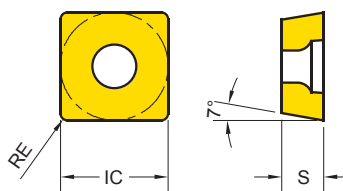
Series	IC	S	Series	IC	S
RC** 1606	.630	.250	RC.. 2507	.984	.313
RC** 2006	.787	.250	RC.. 3209	1.260	.375

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

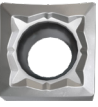
					K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
RCMX	Designation	RE	Fn (In/rev.)	Ap (In)	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
 Heavy Roughing -UT	RCMX1606M0-UT	.315	.012 ~ .031	.039 ~ .276	● 2441					● 2719					● 3160	● 3734									
	RCMX2006M0-UT	.394	.016 ~ .035	.059 ~ .354	● 3564			● 1928		● 2169	● 3423	● 2844	● 2845												
	RCMX2507M0-UT	.492	.020 ~ .047	.098 ~ .472	● 3837		● 3838			● 3146	● 3840		● 3839												
	RCMX3209M0-UT	.630	.024 ~ .059	.138 ~ .591	● 3841		● 3842			● 3147	● 3844		● 3843												

Turning Inserts - Positive
SCGT / SCMT (Square)

					Series		IC	S
					SC.. 32.5		.375	.156
					SC.. 43		.500	.187

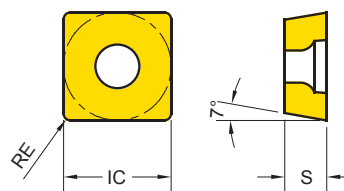


EDP 2200.. ● : Stock item ○ : Order made item

SCGT SCMT	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-AL  Aluminium	SCGT32.51-AL	.016	.001 ~ .016	.004 ~ .197																				●	1516
	SCGT32.52-AL	.031	.002 ~ .016	.004 ~ .197																				●	1517
-UF  Finishing	SCMT32.51-UF	.016	.002 ~ .010	.020 ~ .079				○		●	●	●	●												
	SCMT32.52-UF	.031	.002 ~ .010	.039 ~ .079	●			○		●	●	●	●												
-UG  General	SCMT32.51-UG	.016	.006 ~ .012	.020 ~ .098	●	○	●	○		●	●	●	●	○				○							
	SCMT32.52-UG	.031	.006 ~ .012	.031 ~ .098	●	○	●	○		●	●	●	●	○				○							
	SCMT432-UG	.031	.006 ~ .014	.031 ~ .118	●	○	●	○		●	●	●	●												
	SCMT433-UG	.047	.006 ~ .014	.059 ~ .118	●					●	●	●	●												
-MF  Stainless steel Finishing	SCMT32.51-MF	.016	.002 ~ .009	.004 ~ .079											●	●									
	SCMT32.52-MF	.031	.004 ~ .012	.012 ~ .079											●	●									
	SCMT431-MF	.016	.004 ~ .011	.012 ~ .165											●	●									
	SCMT432-MF	.031	.004 ~ .012	.024 ~ .165											●	●									
-MM  Stainless steel Medium	SCMT32.51-MM	.016	.003 ~ .009	.016 ~ .126											●	●									
	SCMT32.52-MM	.031	.004 ~ .012	.031 ~ .126											●	●									
	SCMT32.53-MM	.047	.005 ~ .014	.035 ~ .126											●	●									
	SCMT431-MM	.016	.004 ~ .011	.012 ~ .165											●	●									
	SCMT432-MM	.031	.004 ~ .012	.024 ~ .165											●	●	●	●	●	●	●	●			
	SCMT433-MM	.047	.006 ~ .018	.047 ~ .165											●	●									

Turning Inserts - Positive
SCMT (Square)

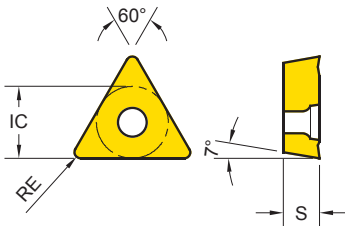
					Series		IC	S
					SC.. 32.5		.375	.156
					SC.. 43		.500	.187



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

SCMT	Designation	RE	Fn (In/rev.)	Ap (In)	K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 M15 K15	P10 M10 K10	N20	N20
					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-PF  Finishing	SCMT32.51-PF	.016	.002 ~ .009	.004 ~ .079																					
	SCMT32.52-PF	.031	.004 ~ .012	.012 ~ .079																					
	SCMT431-PF	.016	.004 ~ .011	.012 ~ .165																					
	SCMT432-PF	.031	.004 ~ .012	.024 ~ .165																					
-PM  Medium	SCMT32.51-PM	.016	.003 ~ .009	.016 ~ .126																					
	SCMT32.52-PM	.031	.004 ~ .012	.031 ~ .126																					
	SCMT32.53-PM	.047	.005 ~ .014	.035 ~ .126																					
	SCMT431-PM	.016	.004 ~ .011	.012 ~ .165																					
	SCMT432-PM	.031	.004 ~ .012	.024 ~ .165																					
	SCMT433-PM	.047	.006 ~ .018	.047 ~ .165																					

Turning Inserts - Positive
TCGT / TCMT (Triangle)

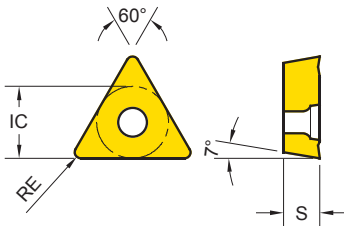


Series	IC	S
TC.. 1.81.5	.219	.094
TC.. 21.5	.250	.094
TC.. 32.5	.375	.156

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

					→ S ←																					
TCGT TCMT	Designation	RE	Fn (In/rev.)	Ap (In)	P05	P10	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40	S10	S10	P15	P10	N20	N20			
					K10	K20	K30	K20	K30	K30	K30	K30	K30	K30	K30	K30	K30	K30	K30	K30	K30	K30	K15	K10	K15	K10
 Aluminum	TCGT21.51-AL	.016	.001 ~ .012	.004 ~ .157	YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10	
	TCGT32.50.5-AL	.008	.001 ~ .012	.002 ~ .197																					● 1333	
	TCGT32.51-AL	.016	.001 ~ .016	.004 ~ .217																					● 0334 0085	
	TCGT32.52-AL	.031	.001 ~ .020	.004 ~ .217																					● 0335 0086	
 Finishing	TCMT1.81.51-UF	.016	.002 ~ .008	.020 ~ .059	● 3163					● 3162			● 3164													
	TCMT21.51-UF	.016	.002 ~ .008	.020 ~ .079			○ 0395			● 2384	● 3263	● 0396	● 1196				○ 1033	○ 1034	○ 1645							
	TCMT32.51-UF	.016	.002 ~ .010	.020 ~ .079			○ 0397			● 2377	● 3264	● 0398	● 1046	○ 0033				○ 1906	○ 1905							
	TCMT32.52-UF	.031	.002 ~ .010	.031 ~ .079			○ 0624			● 2369	● 3299	● 0625	● 1045													
 General	TCMT1.81.51-UG	.016	.004 ~ .010	.020 ~ .059	● 3166					● 3165			● 3167													
	TCMT1.81.52-UG	.031	.004 ~ .010	.031 ~ .059	● 3169					● 3168			● 3170													
	TCMT21.51-UG	.016	.004 ~ .010	.020 ~ .079	● 1839	○ 0728	● 3536	○ 0264		● 2642	● 3228	● 0265	○ 0266	○ 0032			○ 2240									
	TCMT21.52-UG	.031	.004 ~ .010	.031 ~ .079	● 1851	○ 1814	○ 3547	○ 0485		● 2362	● 3308	● 0715	● 1204													
	TCMT32.51-UG	.016	.006 ~ .012	.020 ~ .098	● 1840	○ 0679	● 3537	○ 0267		● 2379	● 3229	● 0268	○ 0269													
	TCMT32.52-UG	.031	.006 ~ .012	.031 ~ .098	● 1841	○ 0457	● 3538	○ 0156		● 2175	● 3193	● 0157	○ 0158	○ 0034			○ 2241	○ 1907								

Turning Inserts - Positive
TCMT (Triangle)

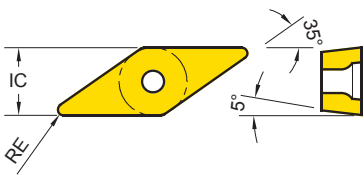


Series	IC	S
TC.. 21.5	.250	.094
TC.. 32.5	.375	.156

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

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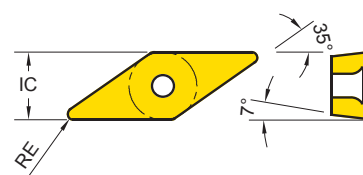
Turning Inserts - Positive
VBGT / VBMT (35° Rhombic)



Series	IC	S
VB.. 22	.250	.125
VB.. 33	.375	.187

					EDP 2200..																● : Stock item ○ : Order made item							
					K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 M10 K10	N20	N20			
VBGT VBMT					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10			
-SF	 HRSA Finishing	VBGT220-SF	.004	.000 ~ .008	.004 ~ .059														●	●								
		VBGT220.5-SF	.008	.001 ~ .008	.004 ~ .059														●	●								
		VBGT221-SF	.016	.002 ~ .008	.008 ~ .059														●	●								
		VBGT331-SF	.016	.002 ~ .008	.008 ~ .079														●	●								
		VBGT332-SF	.031	.002 ~ .008	.016 ~ .079														●	●								
-UF	 Finishing	VBMT221-UF	.016	.002 ~ .006	.004 ~ .031					●																		
		VBMT222-UF	.016	.002 ~ .006	.016 ~ .039					●																		
		VBMT331-UF	.016	.002 ~ .010	.020 ~ .079			○		●	●	●	●															
		VBMT332-UF	.031	.002 ~ .010	.031 ~ .079			○		●	●	●	●	●														
-UG	 General	VBMT331-UG	.016	.006 ~ .012	.020 ~ .098	●	○	●	○	●	●	●	●	○														
		VBMT332-UG	.031	.006 ~ .012	.031 ~ .098	●	○	●	○	●	●	●	●	○														
-MF	 Stainless steel Finishing	VBMT221-MF	.016	.002 ~ .008	.004 ~ .067										●	●					●							
		VBMT222-MF	.031	.003 ~ .009	.012 ~ .067											●	●											
		VBMT330.5-MF	.008	.002 ~ .006	.004 ~ .079											●	●	●	●	●	●	●						
		VBMT331-MF	.016	.002 ~ .008	.008 ~ .079				○		●	●	●	●		●	●	●	●	●	●	●						
		VBMT332-MF	.031	.003 ~ .011	.012 ~ .079											●	●	●	●	●	●	●						
-MM	 Stainless steel Medium	VBMT221-MM	.016	.002 ~ .007	.010 ~ .087										●	●												
		VBMT222-MM	.031	.003 ~ .009	.020 ~ .087											●	●				●							
		VBMT331-MM	.016	.003 ~ .008	.010 ~ .106											●	●	●	●	●	●	●						
		VBMT332-MM	.031	.003 ~ .011	.020 ~ .106											●	●	●	●	●	●	●						
-PF	 Cermet Medium	VBMT221-PF	.016	.002 ~ .008	.004 ~ .067					●			●									●	○					
		VBMT222-PF	.031	.003 ~ .009	.012 ~ .067					●				●														
		VBMT330.5-PF	.008	.002 ~ .006	.004 ~ .079					●				●									●	○				
		VBMT331-PF	.016	.002 ~ .008	.008 ~ .079					●				●									●	○				
		VBMT332-PF	.031	.003 ~ .011	.012 ~ .079					●				●									●	○				
-PM	 Cermet Medium	VBMT211-PM	.016	.002 ~ .007	.010 ~ .087					●			●															
		VBMT222-PM	.031	.003 ~ .009	.020 ~ .087					●				●									●	○				
		VBMT331-PM	.016	.003 ~ .008	.010 ~ .106					●				●									●	○				
		VBMT332-PM	.031	.003 ~ .011	.020 ~ .106					●				●									●	○				

Turning Inserts - Positive
VCGT / VCMT (35° Rhombic)



Series	IC	S
VC.. 22	.250	.125
VC.. 33	.375	.187

					EDP 2200..																				
					● : Stock item ○ : Order made item																				
					K10	P05 K20	K20	P10 K30	P15	P10	P25	P20	P30	P20	M25	M35	M15	M30	M40 S30	S10	S10	P15 K15	P10 K10	N20	N20
VCGT VCMT					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10
-AL  Aluminum	VCGT220-AL	.004	.001 ~ .006	.002 ~ .118																				●	●
	VCGT220.5-AL	.008	.001 ~ .008	.002 ~ .118																				●	●
	VCGT221-AL	.016	.001 ~ .010	.004 ~ .157																				●	●
	VCGT330.5-AL	.008	.001 ~ .012	.002 ~ .197																				●	●
	VCGT331-AL	.016	.001 ~ .016	.004 ~ .197																				●	●
	VCGT332-AL	.031	.001 ~ .020	.004 ~ .197																				●	●
	VCGT333-AL	.047	.001 ~ .020	.004 ~ .197																				●	●
-SF  HRSF Finishing	VCGT220-SF	.004	.000 ~ .008	.004 ~ .059														●	●	●					
	VCGT220.5-SF	.008	.001 ~ .008	.004 ~ .059													○	○	2347	2077	4082				
	VCGT221-SF	.016	.002 ~ .008	.008 ~ .059															1475	1476	1480	1481	4083		
	VCGT222-SF	.031	.002 ~ .008	.016 ~ .059																2348	2078	4084			
-UF  Finishing	VCMT331-UF	.016	.002 ~ .010	.020 ~ .079			○	0716	2385	3270	0421	0955													
	VCMT332-UF	.031	.002 ~ .010	.039 ~ .079			○	0557	2699	3289	0558														
-UG  General	VCMT331-UG	.016	.004 ~ .008	.012 ~ .098										○				0060							
	VCMT332-UG	.031	.006 ~ .012	.031 ~ .098	●	●	○	3548	0946	2422	3271	0422	0956	0061											

Turning Inserts - Positive
VCMT (35° Rhombic)

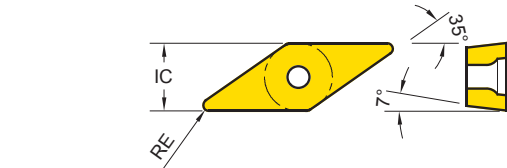
TURNING

PARTING & GROOVING

MILLING

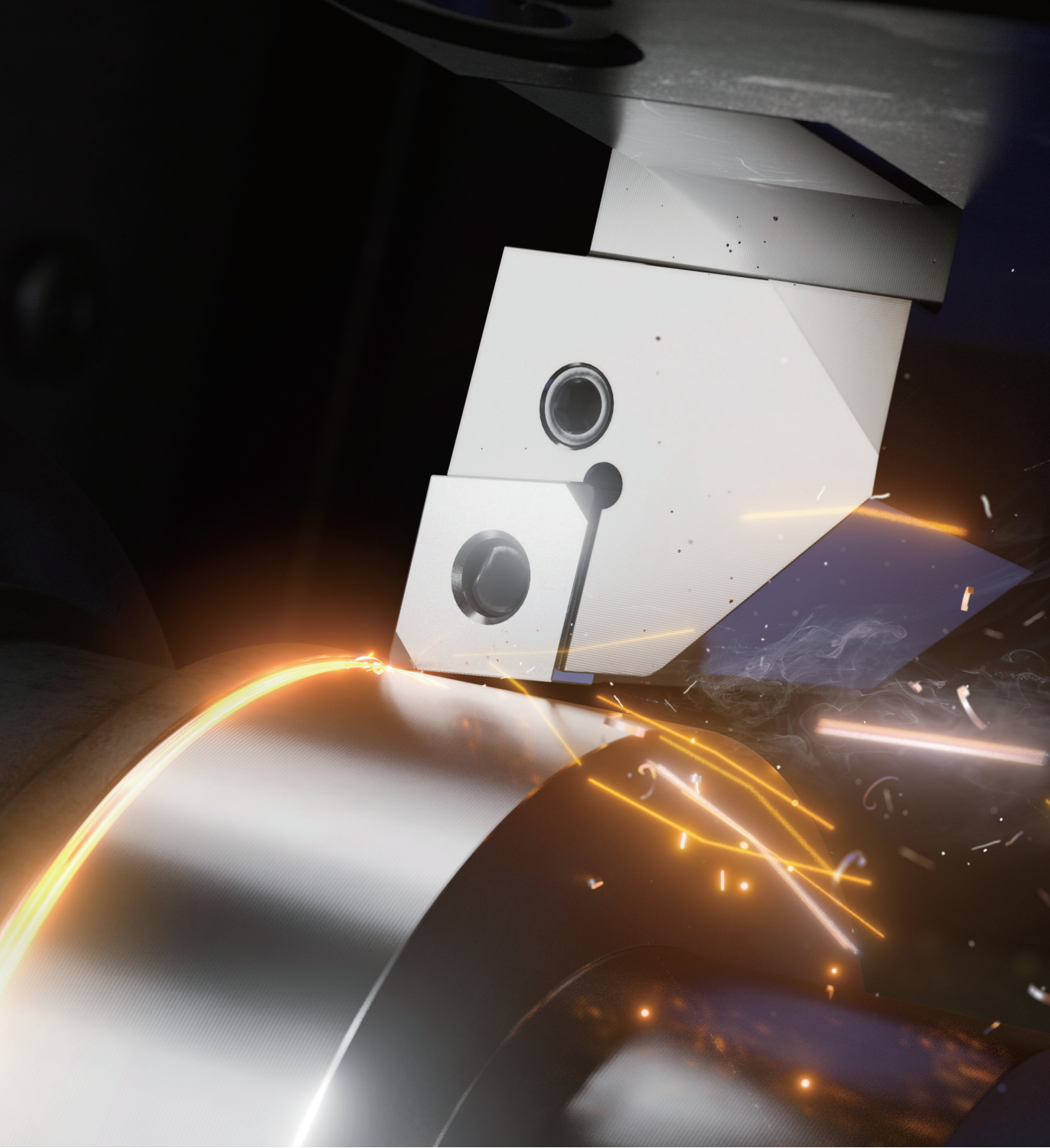
DRILLING

TECHNICAL INFORMATION



Series	IC	S
VC.. 22	.250	.125
VC.. 33	.375	.187

					EDP 2200..																																									
					K10		P05 K20		K20 K30		P10		P15		P10		P25		P20		P30		P20		M25		M35		M15		M30		M40 S30		S10		S10		P15 M15 K15		P10 M10 K10		N20		N20	
VCMT					YG1010	YG1001	YG1020	YG3010	YG3015	YG3115	YG3125	YG3020	YG3030	YG801	YG2025	YG2035	YG211	YG213	YG214	YG401	YG411	YT100	YT100G	YG100	YG10																					
-MF		VCMT221-MF	.016	.002 ~ .008	.004 ~ .067										●	●	●	●	●	●	●																									
	Stainless steel Finishing	VCMT331-MF	.016	.002 ~ .008	.008 ~ .079										●	●	●	●	●	●	●																									
		VCMT332-MF	.031	.003 ~ .011	.012 ~ .079											●	●	●	●	●	●	●																								
-MM		VCMT221-MM	.016	.002 ~ .007	.010 ~ .087										●	●	●	●	●	●	●																									
	Stainless steel Medium	VCMT331-MM	.016	.003 ~ .008	.010 ~ .106										●	●	●	●	●	●	●																									
		VCMT332-MM	.031	.003 ~ .011	.020 ~ .106											●	●	●	●	●	●	●																								
-PF		VCMT221-PF	.016	.002 ~ .008	.004 ~ .067						●		●									●	○																							
	Finishing	VCMT331-PF	.016	.002 ~ .008	.008 ~ .079						●		●																																	
		VCMT332-PF	.031	.003 ~ .011	.012 ~ .079						●		●																																	
-PM		VCMT221-PM	.016	.002 ~ .007	.010 ~ .087						●		●																																	
	Medium	VCMT331-PM	.016	.003 ~ .008	.010 ~ .106						●		●																																	
		VCMT332-PM	.031	.003 ~ .011	.020 ~ .106						●		●																																	

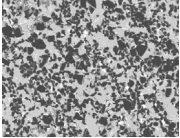
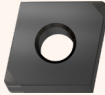
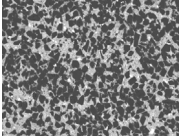
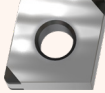
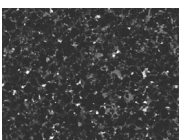


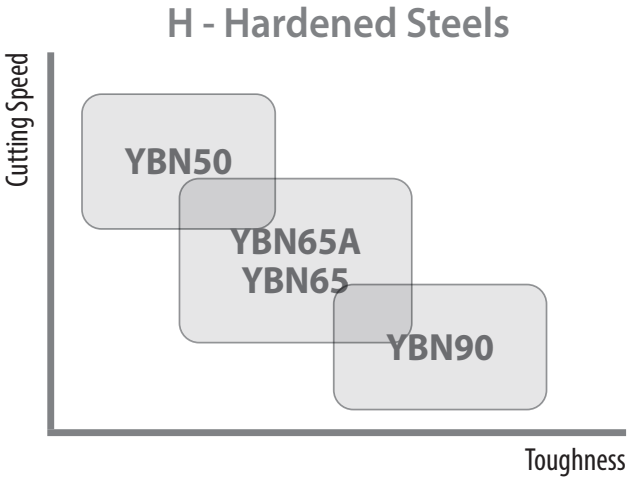
PCBN TURNING

- Product Overview
- PCBN - Turning Inserts Overview
- PCBN Turning Inserts

PCBN - Turning Grades

Turning Grades		K Cast iron				H Hardened Steel			
		K10	K20	K30		H10	H20	H30	
PCBN	YBN50					YBN50			
	YBN65						YBN65		
	YBN65A						YBN65A		
	YBN90		YBN90					YBN90	

NEW YBN50 H5 - H15			Uncoated PCBN grade for Continuous to light interrupted turning of hardened steels Low content PCBN with excellent chemical wear resistance
NEW YBN65A H10 - H25			Coated PCBN Grade for Continuous to Medium interrupted turning of hardened steels - A coated(AITiSiN Multi layer) PCBN grade for higher cutting speed - Medium content PCBN with superior edge toughness, Good flank and crater wear resistance - Suitable for both roughing and finishing
NEW YBN65 H10 - H25			Uncoated PCBN grade for Continuous to Medium interrupted turning of hardened steels - Medium content PCBN with superior edge toughness, good flank and crater wear resistance - Suitable for both roughing and finishing
NEW YBN90 H20 - H35 K05 - K20			Uncoated PCBN grade of Severe interrupted turning of hardened steels, and the Stable machining of Gray Cast iron, Sintered alloy steel - High content PCBN with high wear resistance, superior impact strength - Excellent edge quality and retention

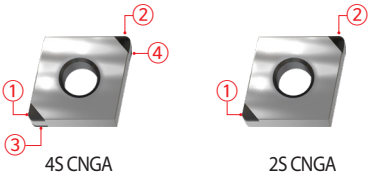


PCBN - Turning Insert Code System

1 2 Number of PCBN corner	2 S PCBN Length	3 CNGA432 Insert ISO Code System	4 S Edge preparation	5 004 ① Chamfer width	20 ② Chamfer angel	6 WG Special shape
--	------------------------------	---	-----------------------------------	------------------------------------	------------------------------	---------------------------------

1 - Number of PCBN corner

1	One corner PCBN
2	Two corner PCBN



2 - PCBN Length

N	Normal PCBN tip length, Regrindable
S	Small PCBN tip length One time use
SD	Solid PCBN
FT	Full Top PCBN

3 - Insert ISO Code System

Refer to Page. 16

4 - Edge preparation

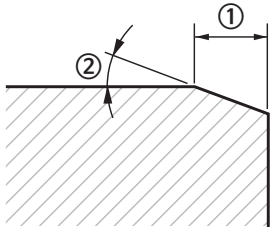
T	T-Land, None Honing
S	T-Land with Honed
X	Special land shape

5 - Chamfer

①	Chamfer width (004 means .004inch)
②	Chamfer angle (20 means 20°)

6 - Special shape

WG	Wiper
None	No Wiper



Grade Name Code System

1 Y Company Name	2 BN Materials	3 65 Contents of PCBN	4 A Kind of Coating
-------------------------------	-----------------------------	------------------------------------	----------------------------------

1 - Company Name

Y	YG-1
---	------

2 - Materials

BN	PCBN
----	------

3 - Contents of PCBN

50	50%
65	65%
90	90%

4 - Kind of Coating

None	Uncoated
A	AITiSiN multi-layer
B	TiAlN-TiN

PCBN - Turning Inserts Overview

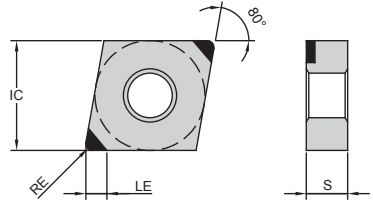
Negative Inserts

Shape	Series	No. of PCBN Eege	Size & Thickness							Page
C	CNGA	2							43	73
		4							43	
D	DNGA	2							43	74
		4							43	
S	SNGA	4							43	75
T	TNGA	3						33		76
		6						33		
V	VNGA	2						33		77
W	WNGA	3							43	78
		6							43	

Positive Inserts

Shape	Series	No. of PCBN Eege	Size & Thickness							Page
C	CCGW	2		21.5		32.5				79
D	DCGW	2		21.5		32.5				80
S	SCGW	2				32.5				81
T	TCGW	3	1.81.5	21.5		32.5				82
	TPGW	3	1.81.5		22		33			83
V	VBGW	2			22		33			84
	VCGW	2			22		33			85

Turning Inserts - Negative
CNGA - PCBN (80° Rhombic)



Series	IC	S
CN.. 43	.500	.187

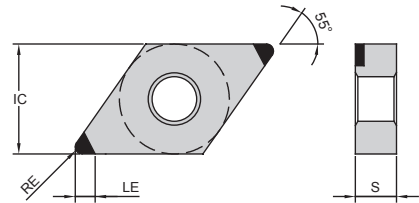
EDP 2200..

● : Stock item ○ : Order made item

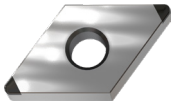
							H05 - H15	H10- H25	H10- H25	H20- H35 K05 - K20
CNGA	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	YBN50	YBN65	YBN65A	YBN90
	2S CNGA431 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3008		
	2S CNGA432 S00525	.031	.094	.001 ~ .008	.002 ~ .012	2	● 3009	● 3010	● 3011	
	2S CNGA432 T00420	.031	.094	.001 ~ .008	.002 ~ .012	2				● 3065
	4S CNGA432 S00525	.031	.094	.001 ~ .008	.002 ~ .012	4		● 3012	● 3013	
	2S CNGA433 S00525	.047	.091	.001 ~ .008	.002 ~ .012	2		● 3014		
	2S CNGA431 S00515WG	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3015		
	2S CNGA432 S00515WG	.031	.094	.001 ~ .008	.002 ~ .012	2	● 3016	● 3017	● 3018	
	2S CNGA432 T00420 WG	.031	.094	.001 ~ .008	.002 ~ .012	2				● 3066
	4S CNGA432 S00515 WG	.031	.094	.001 ~ .008	.002 ~ .012	4	● 3019	● 3020	● 3021	
	4S CNGA432 T00420 WG	.031	.094	.001 ~ .008	.002 ~ .012	4				● 3067
	2S CNGA433 S00515 WG	.047	.091	.001 ~ .008	.002 ~ .012	2		● 3022		

Turning Inserts - Negative
DNGA - PCBN (55° Rhombic)

Refer to
Turning holder
p.88

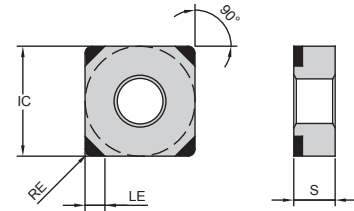


Series	IC	S
DN.. 43	.500	.187
DN.. 44	.500	.250

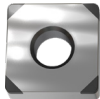
DNGA	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	2S DNGA431 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3023		
	2S DNGA432 S00525	.031	.091	.001 ~ .008	.002 ~ .012	2	● 3024	● 3025	● 3026	
	2S DNGA432 T00420	.031	.091	.001 ~ .008	.002 ~ .012	2				● 3068
	4S DNGA432 S00525	.031	.091	.001 ~ .008	.002 ~ .012	4		● 3027	● 3028	
	2S DNGA433 S00525	.047	.079	.001 ~ .008	.002 ~ .012	2		● 3029		
	2S DNGA441 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3030		
	2S DNGA442 S00525	.031	.091	.001 ~ .008	.002 ~ .012	2	● 3031	● 3032	● 3033	
	2S DNGA442 T00420	.031	.091	.001 ~ .008	.002 ~ .012	2				● 3069
	2S DNGA443 S00525	.047	.079	.001 ~ .008	.002 ~ .012	2		● 3034		

Turning Inserts - Negative
SNGA - PCBN (Square)

Refer to
Turning holder
p.89

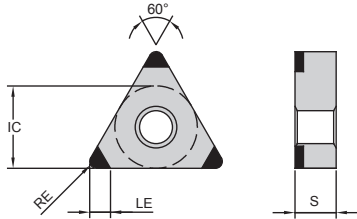


Series	IC	S
SN.. 43	.500	.187

SNGA	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	4S SNGA431 S00525	.016	.091	.001 ~ .008	.002 ~ .012	4		● 3035		
	4S SNGA432 S00525	.031	.091	.001 ~ .008	.002 ~ .012	4	● 3036	● 3037	● 3038	
	4S SNGA432 T00420	.031	.091	.001 ~ .008	.002 ~ .012	4				● 3070
	4S SNGA433 S00525	.047	.091	.001 ~ .008	.002 ~ .012	4		● 3039		

Turning Inserts - Negative
TNGA - PCBN (60° Triangle)

Refer to
Turning holder
p.90



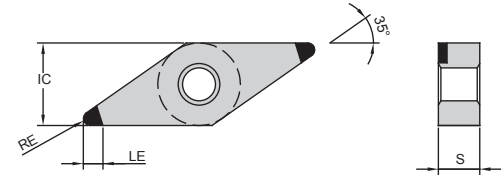
Series	IC	S
TN.. 33	.375	.187

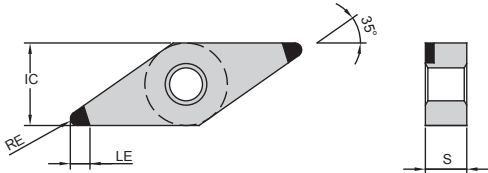
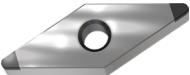
TNGA	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	3S TNGA331 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3040		
	3S TNGA332 S00525	.031	.091	.001 ~ .008	.002 ~ .012	3	● 3041	● 3042	● 3043	
	3S TNGA332 T00420	.031	.091	.001 ~ .008	.002 ~ .012	3				● 3071
	6S TNGA332 S00525	.031	.091	.001 ~ .008	.002 ~ .012	6		● 3044	● 3045	
	3S TNGA333 S00525	.047	.079	.001 ~ .008	.002 ~ .012	3		● 3046		

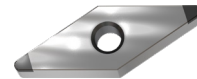


Refer to
Turning holder
p.91

Turning Inserts - Negative
VNGA - PCBN (35° Rhombic)

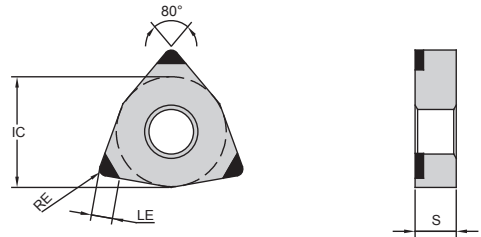


							Series		IC	S
							VN.. 33		.375	.187
										
VNGA	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
										K05 - K20
							YBN50	YBN65	YBN65A	YBN90
	2SVNGA331 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3047		
	2SVNGA332 S00525	.031	.079	.001 ~ .008	.002 ~ .012	2	● 3048	● 3049	● 3050	
										● 3072



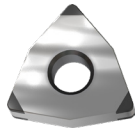
Turning Inserts - Negative
WNGA - PCBN (80° Trigon)

Refer to
Turning holder
p.92

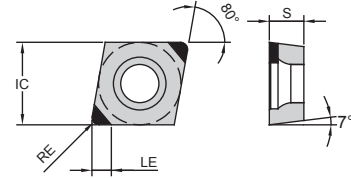


Series	IC	S
WN.. 43	.500	.187

WNGA	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	3S WNGA431 S00525	.016	.098	.001 ~ .008	.002 ~ .012	3		● 3051		
	3S WNGA432 S00525	.031	.094	.001 ~ .008	.002 ~ .012	3	● 3052	● 3053	● 3054	
	3S WNGA432 T00420	.031	.094	.001 ~ .008	.002 ~ .012	3				● 3073
	6S WNGA432 S00525	.031	.094	.001 ~ .008	.002 ~ .012	6		● 3055	● 3056	
	3S WNGA433 S00525	.047	.091	.001 ~ .008	.002 ~ .012	3		● 3057		
	3S WNGA431 S00515 WG	.016	.098	.001 ~ .008	.002 ~ .012	3		● 3058		
	3S WNGA432 S00515 WG	.031	.094	.001 ~ .008	.002 ~ .012	3	● 3059	● 3060	● 3061	
	3S WNGA432 T00420 WG	.031	.094	.001 ~ .008	.002 ~ .012	3				● 3074
	6S WNGA432 S00515 WG	.031	.094	.001 ~ .008	.002 ~ .012	6		● 3062	● 3063	
	3S WNGA433 S00515 WG	.047	.091	.001 ~ .008	.002 ~ .012	3		● 3064		



Turning Inserts - Positive
CCGW - PCBN (80° Rhombic)

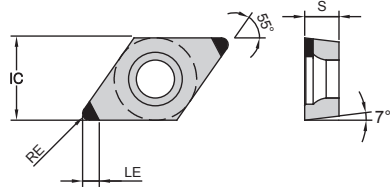


Series	IC	S
CC.. 21.5	.250	.094
CC.. 32.5	.375	.156

CCGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	2S CCGW21.50.5 S00525	.008	.102	.001 ~ .008	.002 ~ .012	2		● 3075		
	2S CCGW21.51 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2	● 3076	● 3077	● 3078	
	2S CCGW21.51 T00420	.016	.098	.001 ~ .008	.002 ~ .012	2				● 3133
	2S CCGW21.52 S00525	.031	.094	.001 ~ .008	.002 ~ .012	2		● 3079	● 3080	
	2S CCGW32.50.5 S00525	.008	.102	.001 ~ .008	.002 ~ .012	2		● 3081		
	2S CCGW32.51 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3082	● 3083	
	2S CCGW32.52 S00525	.031	.094	.001 ~ .008	.002 ~ .012	2	● 3084	● 3085	● 3086	
	2S CCGW32.52 T00420	.031	.094	.001 ~ .008	.002 ~ .012	2				● 3134
	2S CCGW32.51 S00515 WG	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3087	● 3088	
	2S CCGW32.52 S00515 WG	.031	.094	.001 ~ .008	.002 ~ .012	2		● 3089	● 3090	



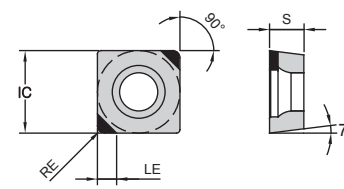
Turning Inserts - Positive
DCGW - PCBN (55° Rhombic)



Series	IC	S
DC.. 21.5	.250	.094
DC.. 32.5	.375	.156

DCGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	2S DCGW21.50.5 S00525	.008	.106	.001 ~ .008	.002 ~ .012	2		● 3091		
	2S DCGW21.51 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3092	● 3093	
	2S DCGW21.52 S00525	.031	.091	.001 ~ .008	.002 ~ .012	2	● 3094	● 3095	● 3096	
	2S DCGW21.52 T00420	.031	.091	.001 ~ .008	.002 ~ .012	2				● 3135
	2S DCGW32.50.5 S00525	.008	.106	.001 ~ .008	.002 ~ .012	2		● 3097	● 3098	
	2S DCGW32.51 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3099	● 3100	
	2S DCGW32.52 S00525	.031	.091	.001 ~ .008	.002 ~ .012	2	● 3101	● 3102	● 3103	
	2S DCGW32.52 T00420	.031	.091	.001 ~ .008	.002 ~ .012	2				● 3136

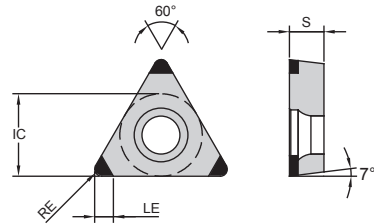
Turning Inserts - Positive
SCGW - PCBN (Square)



Series	IC	S
SC.. 32.5	.375	.156

SCGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	2S SCGW32.51 S00525	.016	.091	.001 ~ .008	.002 ~ .012	2		● 3104		
	2S SCGW32.52 S00525	.031	.091	.001 ~ .008	.002 ~ .012	2		● 3105		

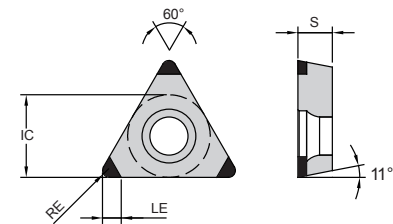
Turning Inserts - Positive
TCGW - PCBN (Triangle)



Series	IC	S
TC.. 1.81.5	.219	.094
TC.. 21.5	.250	.094
TC.. 32.5	.375	.156

TCGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20
	3S TCGW1.81.51 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3106		
	3S TCGW21.51 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3107	● 3108	
	3S TCGW21.52 S00525	.031	.091	.001 ~ .008	.002 ~ .012	3		● 3109	● 3110	
	3S TCGW32.51 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3111	● 3112	
	3S TCGW32.52 S00525	.031	.091	.001 ~ .008	.002 ~ .012	3	● 3113	● 3114	● 3115	
	3S TCGW32.52 T00420	.031	.091	.001 ~ .008	.002 ~ .012	3				● 3137

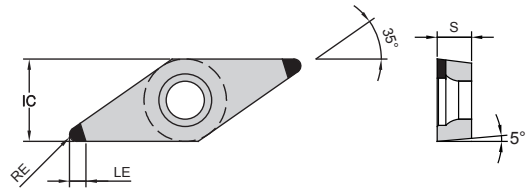
Turning Inserts - Positive
TPGW - PCBN (Triangle)



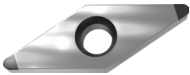
Series	IC	S
TP.. 1.81.5	.219	.094
TP.. 22	.250	.125
TP.. 33	.375	.187

TPGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20
	3STPGW1.81.51 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3116		
	3STPGW1.81.52 S00525	.031	.091	.001 ~ .008	.002 ~ .012	3		● 3117		
	3STPGW221 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3118		
	3STPGW222 S00525	.031	.091	.001 ~ .008	.002 ~ .012	3		● 3119		
	3STPGW331 S00525	.016	.102	.001 ~ .008	.002 ~ .012	3		● 3120		
	3STPGW332 S00525	.031	.091	.001 ~ .008	.002 ~ .012	3		● 3121		

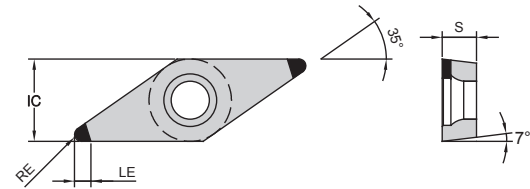
Turning Inserts - Positive
VBGW - PCBN (35° Rhombic)



Series	IC	S
VB.. 22	.250	.125
VB.. 33	.375	.187

VBGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20
	2S VBGW221 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3122		
	2S VBGW222 S00525	.031	.079	.001 ~ .008	.002 ~ .012	2		● 3123		
	2S VBGW331 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3124	● 3125	
	2S VBGW332 S00525	.031	.079	.001 ~ .008	.002 ~ .012	2	● 3126	● 3127	● 3128	
	2S VBGW332 T00420	.031	.079	.001 ~ .008	.002 ~ .012	2				● 3138

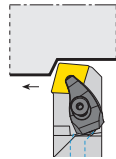
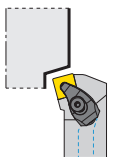
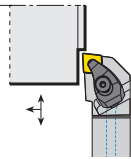
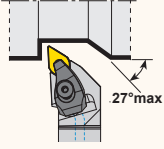
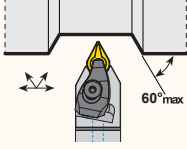
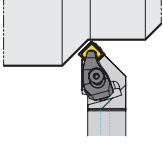
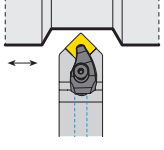
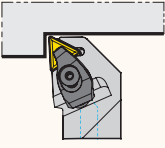
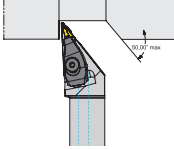
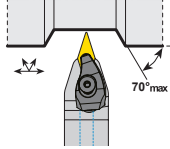
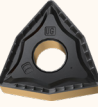
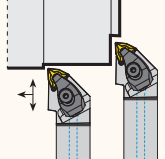
Turning Inserts - Positive
VCGW - PCBN (35° Rhombic)



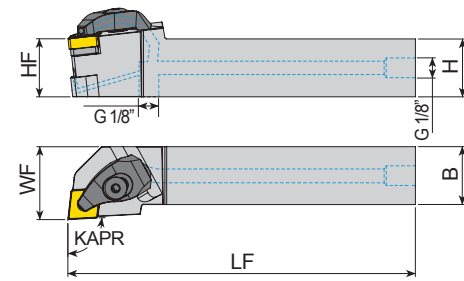
Series	IC	S
VC.. 22	.250	.125
VC.. 33	.375	.187

VCGW	Designation	RE	LE	Fn (In/rev.)	Ap (In)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20
	2S VCGW221 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3129		
	2S VCGW222 S00525	.031	.079	.001 ~ .008	.002 ~ .012	2		● 3130		
	2S VCGW331 S00525	.016	.098	.001 ~ .008	.002 ~ .012	2		● 3131		
	2S VCGW332 S00525	.031	.079	.001 ~ .008	.002 ~ .012	2		● 3132		

External Holders Overview

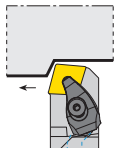
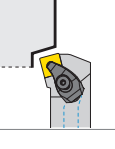
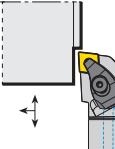
Series		Turning Holder			
	CNMA CNMG CNGG CNMM		DCBNR/L Double Clamp		
			DCKNR/L Double Clamp		
			DCLNR/L Double Clamp		
		p. 26	p. 87	p. 87	p. 87
	DNMA DNMG DNGG DNMM DNUX		DDJNR/L Double Clamp		
			DDNNN Double Clamp		
		p. 31	p. 88	p. 88	
	SNMA SNMG SNMM		DSBNR/L Double Clamp		
			DSDNN Double Clamp		
		p. 38	p. 89	p. 89	p. 89
	TNMA TNMG TNGG TNMM TNUX		DTJNR/L Double Clamp		
		p. 42	p. 90		
	VNMA VNMG VNGG		DVJNR/L Double Clamp		
			DVVNN Double Clamp		
		p. 49	p. 91	p. 91	
	WNMA WNMG WNGG		DWLNR/L Double Clamp		
		p. 51	p. 92		

Double Clamp with Internal coolant type for CN** Insert



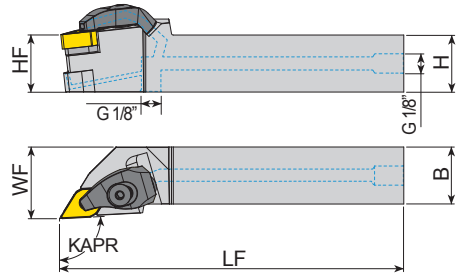
* 'C' Letter at Last : Optional Clamp Included

Unit: inch

Series	Designation	EDP 2700.. R L	H (= HF)	B	WF	LF	Insert
	DCBNR/L 124B - C	2337 2336	.75	.75	.79	4.5	CNMG43
	DCBNR/L 164D - C	1520 1521	1	1	.79	6	
	DCBNR/L 204D - C	1522 1523	1.25	1.25	.99	6	
	DCKNR/L 124B - C	2339 2338	.75	.75	1	4.5	CNMG43
	DCKNR/L 164D - C	1516 1517	1	1	1.25	6	
	DCKNR/L 204D - C	1518 1519	1.25	1.25	1.5	6	
	DCLNR/L 164D - C	1502 1503	1	1	1.25	6	CNMG54
	DCLNR/L 165D - C	1506 1507	1	1	1.25	6	
	DCLNR/L 204D - C	1504 1505	1.25	1.25	1.5	6	CNMG43
	DCLNR/L 205D - C	1508 1509	1.25	1.25	1.5	6	CNMG54
	DCLNR/L 206D - C	1512 1513	1.25	1.25	1.5	6	CNMG64
	DCLNR/L 245E - C	2342 2340	1.5	1.5	2	7	CNMG54
	DCLNR/L 246E - C	2343 2341	1.5	1.5	2	7	CNMG64
	DCLNR/L 124B - C	1500 1501	.75	.75	1	4.5	CNMG43

Series	information	Shim	Shim Screw	Clamp	Clamp Screw	Spring	O-RING	Tork Wrench
DC..4	Description	YAACN-3-0001	YAAV-02-M5x12	YATKH-01-R YATKH-02-L	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000137	18000156	18000220 18000221	18000222	28000044	18000223	18000061
DC..5	Description	YAACN-3-0002	YAAV-05-M6x10	YATKH-07-R YATKH-08-L	YAKV-39-M7X21	YAKY-01 YAKY-02	YAXR-01	YAAL-05-4
	EDP	18000138	28000046	28000051 28000052	28000056	28000044 18000164	18000223	18000062
DC..6	Description	YAACN-3-0003	YAAV-17-M6x14	YATKH-09-R YATKH-10-L	YAKV-39-M7X21	YAKY-02	YAXR-01	YAAL-05-4
	EDP	18000139	28000057	28000053 28000054	28000056	18000164	18000223	18000062

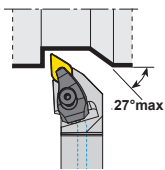
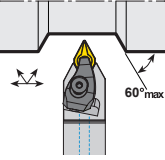
Double Clamp with Internal coolant type for DN** Insert



* 'C' Letter at Last : Optional Clamp Included

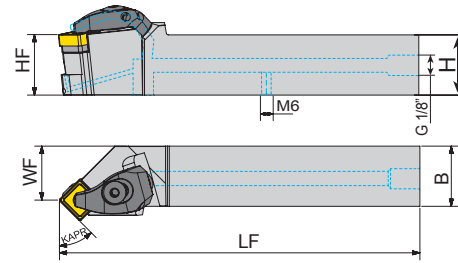
□ : p.31

Unit:inch

Series	Designation	EDP 2700.. R L	H (= HF)	B	WF	LF	Insert
 DDJNR/L Approach angle 93°	DDJNR/L 124B - C	1524 1525	.75	.75	1	4.5	DNMG43
	DDJNR/L 164D - C	1526 1527	1	1	1.25	6	
	DDJNR/L 204D - C	1528 1529	1.25	1.25	1.5	6	
 DDNNN Approach angle 62.5°	DDNNN 164D - C	1530	1	1	.5	6	DNMG43
	DDNNN 204D - C	1531	1.25	1.25	.625	6	

Series	information	Shim	Shim Screw	Clamp	Clamp Screw	Spring	O-RING	Tork Wrench
DDJ.4	Description	YAADN-3-0001	YAAV-13-M5x8	YATKH-01-R YATKH-02-L	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000142	18000163	18000220 18000221	18000222	28000044	18000223	18000061
DDN.4	Description	YAADN-3-0001	YAAV-13-M5x8	YATKH-01-R	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000142	18000163	18000220	18000222	28000044	18000223	18000061

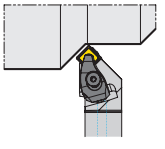
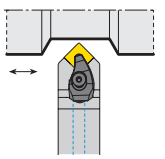
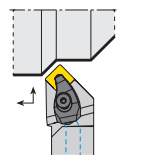
Double Clamp with Internal coolant type for SN** Insert



* 'C' Letter at Last : Optional Clamp Included

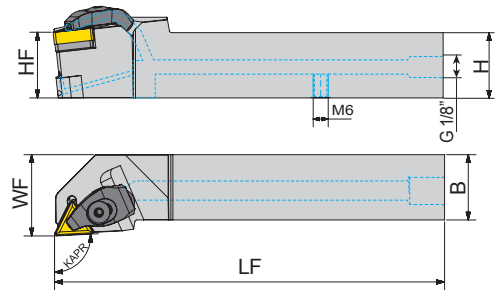
□ : p.38

Unit:inch

Series	Designation	EDP 2700.. R L	H (= HF)	B	WF	LF	Insert
 DSBNR/L Approach angle 75°	DSBNR/L 164D - C	1532 1533	1	1	.79	6	SNMG43
	DSBNR/L 165D - C	1536 1537	1	1	.79	6	SNMG54
	DSBNR/L 204D - C	1534 1535	1.25	1.25	.99	6	SNMG43
	DSBNR/L 205D - C	1538 1539	1.25	1.25	.99	6	SNMG54
 DSDNN Approach angle 45°	DSDNN 164D - C	1550	1	1	.5	6	SNMG43
	DSDNN 165D - C	1552	1	1	.5	6	SNMG54
	DSDNN 204D - C	1551	1.25	1.25	.625	6	SNMG43
	DSDNN 205D - C	1553	1.25	1.25	.625	6	SNMG54
	DSDNN 245E - C	2344	1.5	1.5	.75	7	SNMG54
 DSSNR/L Approach angle 45°	DSSNR/L 164D - C	1540 1541	1	1	1.25	6	SNMG43
	DSSNR/L 165D - C	1544 1545	1	1	1.25	6	SNMG54
	DSSNR/L 204D - C	1542 1543	1.25	1.25	1.5	6	SNMG43
	DSSNR/L 205D - C	1546 1547	1.25	1.25	1.5	6	SNMG54
	DSSNR/L 245E - C	2346 2345	1.5	1.5	2	5	SNMG54

Series	information	Shim	Shim Screw	Clamp	Clamp Screw	Spring	O-RING	Tork Wrench
DSB.4 DSS.4	Description	YAASN-3-0004	YAAV-02-M5x12	YATKH-01-R YATKH-02-L	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000145	18000156	18000220 18000221	18000222	28000044	18000223	18000061
DSB.5 DSS.5	Description	YAASN-3-0023	YAAV-05-M6x10	YATKH-07-R YATKH-08-L	YAKV-39-M7X21	YAKY-02	YAXR-01	YAAL-05-4
	EDP	18000219	28000046	28000051 28000052	28000056	18000164	18000223	18000062
DSD.4	Description	YAASN-3-0004	YAAV-02-M5x12	YATKH-01-R	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000145	18000156	18000220	18000222	28000044	18000223	18000061
DSD.5	Description	YAASN-3-0023	YAAV-05-M6x10	YATKH-07-R	YAKV-39-M7X21	YAKY-02	YAXR-01	YAAL-05-4
	EDP	18000219	28000046	28000051	28000056	18000164	18000223	18000062

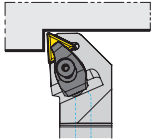
Double Clamp with Internal coolant type for TN** Insert



* 'C' Letter at Last : Optional Clamp Included

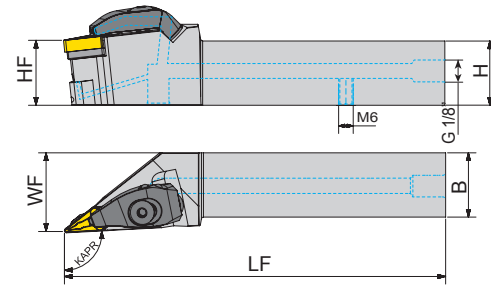
□: p.42

Unit:inch

Series	Designation	EDP 2700.. R L		H (= HF)	B	WF	LF	Insert
 DTJNR/L Approach angle 93°	DTJNR/L 163D - C	1555	2347	1	1	1.25	6	TNMG33
	DTJNR/L 164D - C	1559	2348	1	1	1.25	6	TNMG43
	DTJNR/L 203D - C	1557	2349	1.25	1.25	1.5	6	TNMG33
	DTJNR/L 204D - C	1561	2350	1.25	1.25	1.5	6	TNMG43

Series	information	Shim	Shim Screw	Clamp	Clamp Screw	Spring	O-RING	Tork Wrench
DT.3	Description	YAATN-2-0002	YAAV-03-M5x12	YATKH-03-R YATKH-04-L	YAKV-37-M5X18	YAKY-03	YAXR-02	YAAL-02-2.5
	EDP	18000147	18000157	28000047 28000048	28000055	28000045	28000078	18000060
DT.4	Description	YAATN-3-0015	YAAV-02-M5x12	YATKH-01-R YATKH-02-L	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000148	18000156	18000220 18000221	18000222	28000044	18000223	18000061

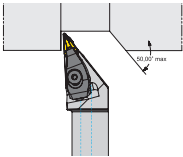
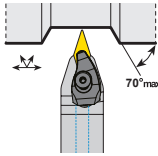
Double Clamp with Internal coolant type for VN** Insert



* 'C' Letter at Last : Optional Clamp Included

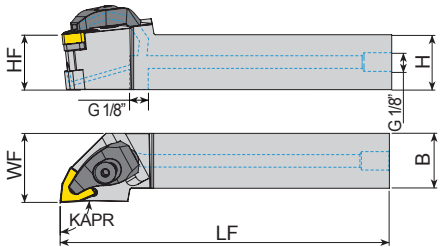
□: p.49

Unit:inch

Series	Designation	EDP 2700.. R L		H (= HF)	B	WF	LF	Insert
 DVJNR/L Approach angle 93°  DVVNN Approach angle 72.5°	DVJNR/L 123B - C	1563	1564	.75	.75	1	4	VNMG33
	DVJNR/L 163D - C	1565	1566	1	1	1.25	6	
	DVJNR/L 203D - C	1567	1568	1.25	1.25	1.25	6	
	DVVNN 123B - C	1569		.75	.75	.375	4	
	DVVNN 163D - C	1570		1	1	.5	6	

Series	information	Shim	Shim Screw	Clamp	Clamp Screw	Spring	O-RING	Tork Wrench
DVJ.3	Description	YAAVN-2-0002	YAAV-04-M5x12	YATKH-05-R YATKH-06-L	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000150	18000158	28000049 28000050	18000222	28000044	18000223	18000061
DVV.3	Description	YAAVN-2-0002	YAAV-04-M5x12	YATKH-05-R	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000150	18000158	28000049	18000222	28000044	18000223	18000061

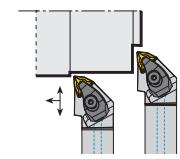
Double Clamp with Internal coolant type for WN** Insert



* 'C' Letter at Last : Optional Clamp Included

 : p. 51

Unit: inch

Series		Designation	EDP 2700.. R L		H (= HF)	B	WF	LF	Insert
 DWLNLR/L Approach angle 95°	●	DWLNLR/L 123B - C	1571	1572	.75	.75	1	4.5	WNMG33
		DWLNLR/L 124B - C	1575	1576	.75	.75	1	4.5	WNMG43
		DWLNLR/L 163D - C	1573	1574	1	1	1.25	6	WNMG33
		DWLNLR/L 164D - C	1577	1578	1	1	1.25	6	WNMG43
		DWLNLR/L 204D - C	1579	1580	1.25	1.25	1.5	6	



PARTING & GROOVING

Parting & Grooving Inserts Overview

Parting & Grooving Inserts

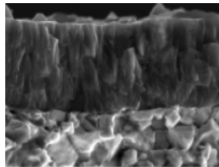
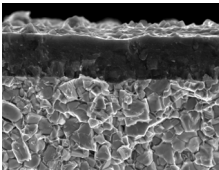
Parting & Grooving Holders

Series	information	Shim	Shim Screw	Clamp	Clamp Screw	Spring	O-RING	Tork Wrench
DW.3	Description	YAAWN-SW317	YAAV-01-M3x10	YATKH-01-R YATKH-02-L	YAKV-37-MSX18	YAKY-03	YAXR-02	YAAL-02-2.5
	EDP	18000152	18000155	18000220 18000221	28000055	28000045	28000078	18000060
DW.4	Description	YAAWN-3-0001	YAAV-13-M5x8	YATKH-01-R YATKH-02-L	YAKV-33-M6X22	YAKY-01	YAXR-01	YAAL-03-3
	EDP	18000151	18000163	18000220 18000221	18000222	28000044	18000223	18000061

Parting & Grooving Overview

Parting & Groove Turn Grades

Parting and Grooving Grades		P Steel				M Stainless steel				K Cast iron			N Non Ferrous		S Super Alloy	
		P10	P20	P30	P40	M10	M20	M30	M40	K10	K20	K30	N10	N20	S10	S20
PVD	YG602G (YG602)		602G				602G			602G					602G	
	YG603							603								

YG602G (YG602) P20 - P35 M20 - M40 K20 - K40 S15 - S25	PVD - TiAlN 	Universal grade for Parting & Groove Turn - Ultra Dense PVD Coating with optimal thermal resistance & strength - Sub-Micron substrate designed for demanding application - YG602G : First Choice for Low Cutting Speed, Soft and Sticky Material with Low Hardness (Gold Color) - YG602 : First Choice for General Application (Violet Color)
YG603 M30 - M50	PVD - TiAlN 	PVD Parting & Grooving Grade for Stainless Steel - Ultra high toughness substrate and strong adhesion - Excellent cutting edge strength and chipping resistance - Stable machinability and tool life for stainless steel

Parting & Grooving Inserts

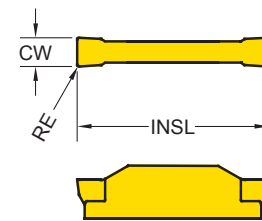
	TD. Series	Inserts	2, 3, 4, 5, 6, 8
		TDN, TDP, TDY	

Parting & Grooving Chipbreakers

Parting & Grooving	-P			- For Parting & Grooving - For Low Feed Rate and Difficult to Cut Materials
	-N			- For External Parting And Grooving - For General Use
Turning & Grooving	-Y			- For External Turning & Grooving - For Medium feed rate
	GL			- For External, Internal turning and Grooving - Face grooving and Face turning - For low feed rate
	GM			- For External, Internal turning and Grooving - First choice Face Grooving and Face turning - For Medium feed rate
	RG			- For External, Internal turning and Grooving - Full radius Insert for Profiling

Parting & Grooving Inserts

Recommended Cutting Conditions : p.190

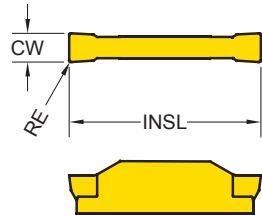


Series	INSL	CW	Series	INSL	CW
TD * 2	.787	.079	TD * 5	.984	.197
TD * 3	.787	.118	TD * 6	.984	.236
TD * 4	.787	.157	TD * 8	1.181	.315

* CDX : Cutting Depth Maximum

● : Stock item ○ : Order made item

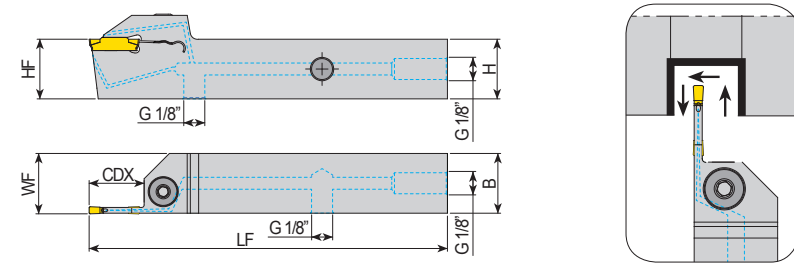
TD.	Designation	RE (In)	Parting & Grooving		Turning		EDP 5200..		
			Fn (In/rev.)	CDX (In)	Fn (In/rev.)	Ap	YG602	YG602G	YG603
-P	 Parting & Grooving (Sharp edge)	TDP 2002	.008	.002 ~ .005	.748	-	●	○	●
		TDP 3002	.008	.002 ~ .006	.748	-	●	○	●
		TDP 4003	.012	.002 ~ .007	.748	-	●	○	●
		TDP5003	.012	.002 ~ .008	.945	-	●	○	●
	 Parting & Grooving Right Hand Shown (Sharp edge) *  6° Angled Parting	TDP6003	.012	.002 ~ .009	.945	-	●	○	●
		* TDPR 2002 - 6	.008	.001 ~ .003	.748	-	●		●
		* TDPR 3002 - 6	.008	.002 ~ .005	.748	-	●		●
		* TDPL 2002 - 6	.008	.001 ~ .003	.748	-	●		●
		* TDPL 3002 - 6	.008	.002 ~ .005	.748	-	●		●
		TDN 2002	.008	.002 ~ .007	.748	-	●	○	●
		TDN 3002	.008	.003 ~ .009	.748	-	●	○	●
		TDN 4003	.012	.003 ~ .011	.748	-	●	○	●
-N	 Parting & Grooving (General)	TDN 5003	.012	.004 ~ .014	.945	-	●	○	●
		TDN6003	.012	.004 ~ .014	.945	-	●	○	●
		TDN8004	.016	.005 ~ .016	1.142	-	●	○	●
		* TDNR 2002 - 6	.008	.002 ~ .006	.748	-	●		●
	 Parting & Grooving Right Hand Shown (General) *  6° Angled Parting	* TDNR 3002 - 6	.008	.002 ~ .007	.748	-	●		●
		* TDNL 2002 - 6	.008	.002 ~ .006	.748	-	●		●
		* TDNL 3002 - 6	.008	.002 ~ .007	.748	-	●		●
		* TDNL 4003 - 6	.012	.002 ~ .009	.748	-	●		
							0096		



* CDX : Cutting Depth Maximum

● : Stock item ○ : Order made item

TD.	Designation	RE (In)	Parting & Grooving		Turning		EDP 5200..		
			Fn (In/rev.)	CDX (In)	Fn (In/rev.)	Ap	YG602	YG602G	YG603
	TDY3E - 0.4	.016	.002 ~ .009	.394	.005 ~ .009	.020 ~ .094	●	0027	
	TDY4E - 0.4	.016	.003 ~ .011	.394	.006 ~ .012	.020 ~ .110	●	0020	
	TDY5E - 0.4	.016	.003 ~ .009	.394	.006 ~ .012	.020 ~ .126	●	0082	
	TDY2E - 0.3 - GL	.012	.002 ~ .008	.394	.002 ~ .007	.016 ~ .059	●	0123	● 0124
	TDY3E - 0.3 - GL	.012	.002 ~ .009	.394	.003 ~ .008	.016 ~ .079	●	0125	● 0126
	TDY4E - 0.4 - GL	.016	.002 ~ .010	.394	.004 ~ .010	.020 ~ .091	●	0112	● 0127
	TDY5E - 0.4 - GL	.016	.003 ~ .012	.492	.004 ~ .012	.020 ~ .118	●	0157	● 0158
	TDY6E - 0.4 - GL	.016	.005 ~ .014	.492	.006 ~ .014	.020 ~ .138	●	0159	● 0160
	TDY8E - 0.8 - GL	.031	.006 ~ .020	.591	.008 ~ .020	.039 ~ .177	●	0164	● 0165
	TDY3E - 0.4 - GM	.016	.002 ~ .009	.394	.005 ~ .009	.020 ~ .094	●	0118	● 0119
	TDY4E - 0.4 - GM	.016	.003 ~ .011	.394	.006 ~ .012	.020 ~ .110	●	0113	● 0120
	TDY4E - 0.8 - GM	.031	.004 ~ .011	.394	.007 ~ .013	.031 ~ .110	●	0114	● 0122
	TDY5E - 0.4 - GM	.016	.003 ~ .011	.492	.007 ~ .014	.020 ~ .118	●	0134	● 0135
	TDY5E - 0.8 - GM	.031	.004 ~ .011	.492	.007 ~ .015	.031 ~ .118	●	0148	● 0149
	TDY6E - 0.4 - GM	.016	.005 ~ .012	.492	.007 ~ .016	.031 ~ .142	●	0150	● 0153
	TDY6E - 0.8 - GM	.031	.005 ~ .014	.492	.007 ~ .017	.039 ~ .142	●	0129	● 0154
	TDY8E - 0.8 - GM	.031	.004 ~ .010	.591	.008 ~ .020	.039 ~ .177	●	0155	● 0156
	TDY2E - 1.0 - RG	.039	.002 ~ .006	.394	.004 ~ .012	.004 ~ .031	●	0111	● 0115
	TDY3E - 1.5 - RG	.059	.003 ~ .007	.394	.006 ~ .014	.004 ~ .047	●	0108	● 0116
	TDY4E - 2.0 - RG	.079	.004 ~ .008	.394	.007 ~ .018	.004 ~ .063	●	0109	● 0117
	TDY5E - 2.5 - RG	.098	.005 ~ .009	.492	.008 ~ .020	.004 ~ .079	●	0166	● 0167
	TDY6E - 3.0 - RG	.118	.006 ~ .011	.492	.010 ~ .024	.004 ~ .094	●	0168	● 0169
	TDY8E - 4.0 - RG	.157	.007 ~ .012	.591	.010 ~ .028	.004 ~ .126	●	0170	● 0171

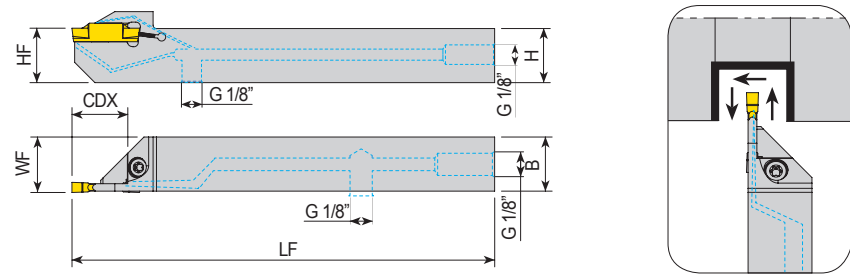


: p. 95~96 Unit : inch

Designation		EDP 5700..		CW	CDX	H (= HF)	B	LF	Insert
		R	L						
YTER/L 08 - 2T059 - C	●	0261	0238	.079	.591	.500	0.500	3.937	TD.2..
YTER/L 10 - 2T059 - C	●	0264	0241	.079	.591	.625	0.625	4.921	
YTER/L 12 - 2T035 - C	●	0271	0247	.079	.354	.750	0.750	4.921	
YTER/L 12 - 2T059 - C	●	0268	-	.079	.591	.750	0.750	4.921	
YTER/L 12 - 2T066 - C	●	0269	-	.079	.669	.750	0.750	4.921	
YTER/L 12 - 2T078 - C	●	0270	0246	.079	.787	.750	0.750	4.921	
YTER/L 16 - 2T066 - C	●	0275	0251	.079	.669	1.000	1.000	5.906	TD.3..
YTER/L 08 - 3T059 - C	●	0263	0240	.118	.591	.500	0.500	3.937	
YTER/L 10 - 3T059 - C	●	0266	0243	.118	.591	.625	0.625	4.921	
YTER/L 12 - 3T059 - C	●	-	0245	.118	.591	.750	0.750	4.921	
YTER/L 12 - 3T078 - C	●	0272	0248	.118	.787	.750	0.750	4.921	
YTER/L 12 - 3T098 - C	●	0273	0249	.118	.984	.750	0.750	4.921	
YTER/L 12 - 3T118 - C	●	0274	0250	.118	1.181	.750	0.750	4.921	
YTER/L 16 - 3T035 - C	●	0279	0255	.118	.354	1.000	1.000	5.906	
YTER/L 16 - 3T086 - C	●	0276	0252	.118	.866	1.000	1.000	5.906	
YTER/L 16 - 3T098 - C	●	0277	0253	.118	.984	1.000	1.000	5.906	TD.4..
YTER/L 16 - 3T118 - C	●	0278	0254	.118	1.181	1.000	1.000	5.906	
YTER/L 20 - 3T098 - C	●	0284	0259	.118	.984	1.250	1.250	6.693	
YTER/L 16 - 4T086 - C	●	0280	0256	.157	.866	1.000	1.000	5.906	TD.5..
YTER/L 16 - 4T098 - C	●	0281	-	.157	.984	1.000	1.000	5.906	
YTER/L 16 - 4T118 - C	●	0282	0257	.157	1.181	1.000	1.000	5.906	
YTER/L 16 - 5T098 - C	●	0283	0258	.197	.984	1.000	1.000	5.906	

Series	Designation	Infomation	Screw	Ring	Wrench
YTER/L	.. - 2..	Description	Y2505 - M6x30	YABPL - 01	YAAL - 03 - 3
		EDP	18000199	18000058	18000061
	.. - 3..	Description	Y2004 - M8x1x20	-	YAAL - 05 - 4 18000062
		EDP	18000196	-	
	.. - 4..	Description	Y2004 - M8x1x20	-	
		EDP	18000196	-	
	.. - 5..	Description	Y2004 - M8x1x20	-	
		EDP	18000196	-	

External holders with Internal coolant type for Swiss Lathe



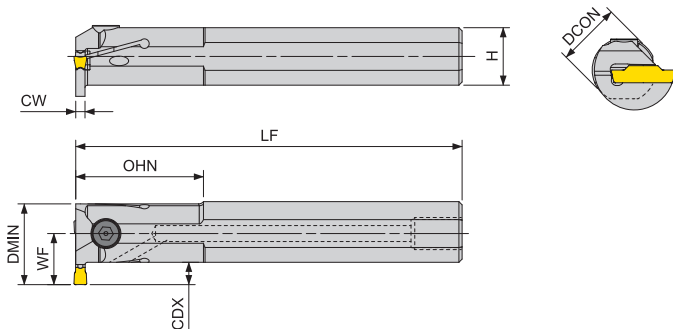
: p. 95~96

Unit : inch

Designation		EDP 5700.. R L	CW	CDX	H (= HF)	B	LF	Insert
YTER/L 08 - 2T047 - S - C	●	0260 0237	.079	.472	.500	.500	4.921	TD.2..
YTER/L 08 - 3T047 - S - C	●	0262 0239	.118	.472	.500	.500	4.921	TD.3..
YTER/L 10 - 2T063 - S - C	●	0265 0242	.079	.630	.625	.625	4.921	TD.2..
YTER/L 10 - 3T063 - S - C	●	0267 0244	.118	.630	.625	.625	4.921	TD.3..

Series	Designation	Infomation	Screw	Ring	Wrench
YTER/L	..-2../..-3..	Description	Y4015-M4x11	-	Y80-T15
		EDP	18000119	-	18000167

Internal holders

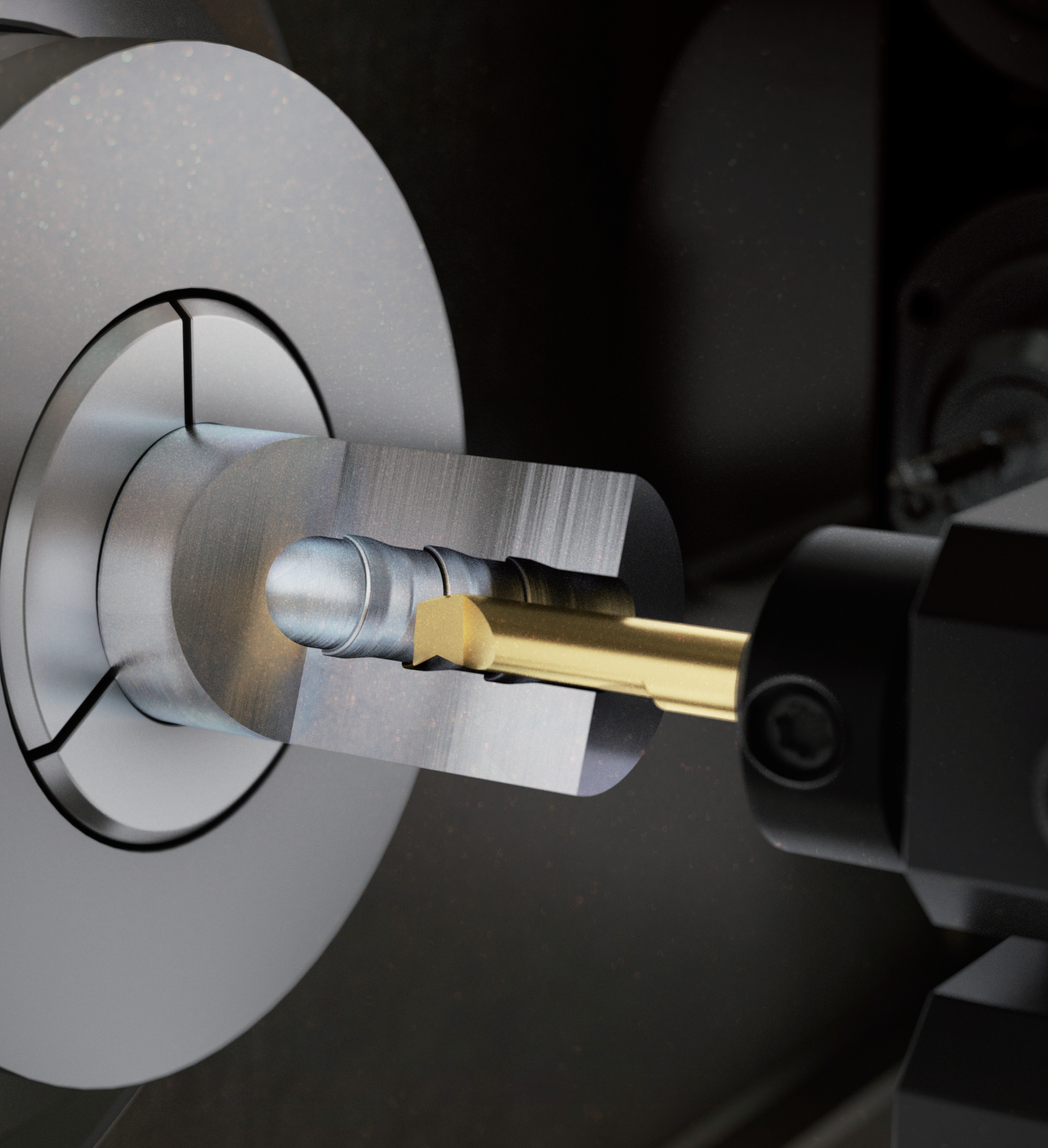


: p. 95~96

Unit : inch

Designation		EDP 5700.. R L	CW	DMIN	CDX	DCON	H	OHN	LF	Insert
YTIR/L 10 - 2T033 - C	●	0289 0285	.079	.984	.335	.625	.583	1.102	5.906	TD.2..
YTIR/L 12 - 3T023 - C	●	0290 0286	.118	.984	.236	.750	.720	1.575	6.693	TD.3..
YTIR/L 16 - 3T023 - C	●	0291 0287	.118	.984	.236	1.000	.906	1.575	7.874	
YTIR/L 20 - 3T019 - C	●	0292 0288	.118	1.220	.197	1.250	1.181	2.362	9.843	

Series	Designation	Infomation	Screw	Ring	Wrench
YTIR/L	10 - 2T..	Description	2503-M4x10	-	HL-05 58000041
		EDP	18000197	-	
	12 - 3T../16 - 3T..	Description	Y2504-M5X12	-	
		EDP	18000198	-	
	20 - 3T..	Description	Y2004-M8x1x20	-	
		EDP	18000196	-	



SOLID MINIATURE TURNING for SMALL BORE





Scan this QR code
to see our
Nanocut
at work.

Code Keys - Boring Tool & Holder

Boring Tool

Series
BP – Boring & Profiling

Tool Direction
R – Right Hand
L – Left Hand

Usable Length (LU)
(4 mm)

Grade

NC

BP

4

R

-

10.

04

-

005

-

YG812

Nanocut

Connection Diameter (DCON)
(4 mm)

Minimum Bore Diameter (DMIN)
(1.0 mm)

Corner Radius (RE)
(0.05 mm)

Holder

NC

HI

-

0500.

4

i

Nanocut

Holder Internal

Insert connection
(4 mm)

Success Story

Cutting Conditions

Size	Ø.236", R.008"
Work Material	4140 (Alloy Steel) (HRC 20)
Vc	328 ft/min
N (RPM)	637 rev/min
Fn	.004 in/rev
Ap	Axial: .390" Radial: .006"
Coolant	Wet Cut
Operation	Boring
Machine	Turn Mill

Less is better

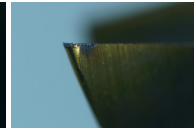
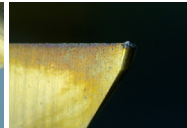
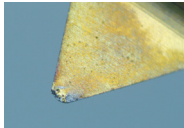


55µm

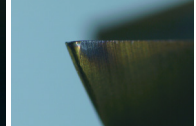
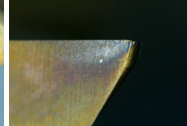
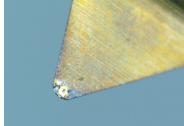
43µm

Edge wear (after 30 min.)





Competitor



Overview

At present, as demand for small parts (camera lens, mobile phone parts) and medical instruments (implants) increases, demand for small-diameter products capable of high-precision processing is increasing.

Application

- Turning of Small Bore Components
- Internal Turning(Boring), Grooving and Threading

Features

- Minimum Diameter(Boring & Profiling series) : Ø 1 mm (.039")
- Internal Coolant for Longer Tool life and Enhanced Chip Evacuation
- Secure Connection Design: Pin + Slant Positioning
- 10 Geometries for Various Applications

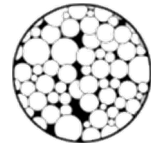
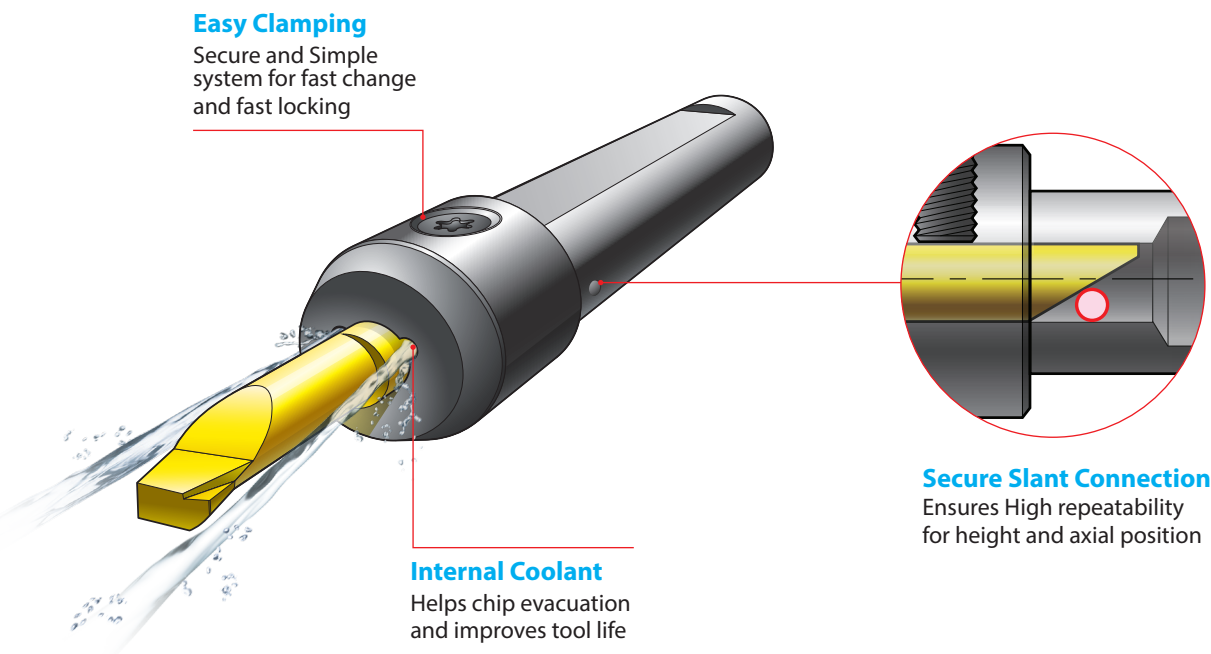
Benefits

- Reduced Machine Down Time
- Lower Machining Cost

YG812 - Micro Grain Carbide Grade

P10 - P20 **M20 - M30** Submicron Grade Carbide Substrate Material for high toughness
K20 - K30 **S10 - S25** and wear resistance realizes high precision machining

Advantages of Nanocut



Overview

Recommended Cutting Conditions : p.191

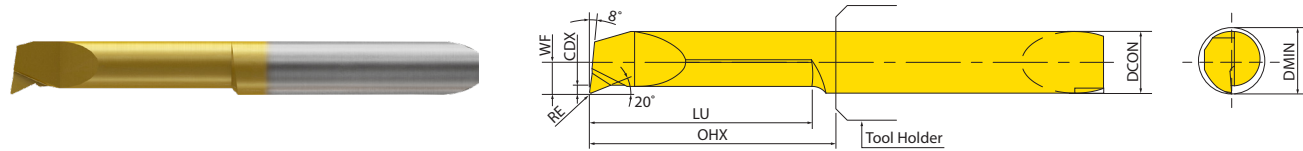
Series		KAPR (°)	DCON mm(inch)	Page
BP Boring & Profiling		98	4 (.157) 6 (.236)	104
		98		105
		90		106
		98		107

Series		CW (inch)	DCON mm(inch)	Page
GR Grooving Round		.039 - .079	4 (.157) 6 (.236)	108
		.031 - .079		109
FI Face Grooving Internal		.039 - .118		110
FE Face Grooving External		.039 - .118		110

Series		WF (inch)	DCON mm(inch)	Page
CH Chamfering		.020 - .043	4 (.157) 6 (.236)	111
		.079 - .116		112

Series		DCON _{WS} (inch)	DCON _{MS} (inch)	Page
Holder		4 (.157) 6 (.236)	.500 - 1.000	113

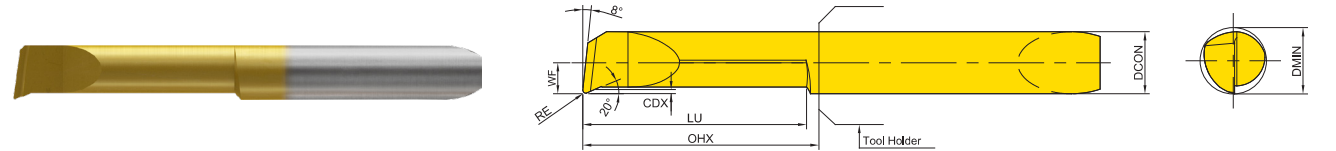
Boring Tool
BP - Boring & Profiling



●: Stock item
○: Order made item

KAPR	DCON mm(inch)	Designation	EDP	Inch ⁽ⁱⁿ⁾							YG812
				DMIN	LU	RE	CDX	WF	OHX	OAL	
98°	4 (.157)	NCBP4R - 10.04 - 005 - YG812	NCBP04R1004005T	.039	.16	.002	.004	.018	.51	1.10	●
		NCBP4R - 10.04 - 010 - YG812	NCBP04R1004010T	.039	.16	.004	.004	.018	.51	1.10	●
		NCBP4R - 10.06 - 005 - YG812	NCBP04R1006005T	.039	.24	.002	.004	.018	.51	1.10	●
		NCBP4R - 10.06 - 010 - YG812	NCBP04R1006010T	.039	.24	.004	.004	.018	.51	1.10	●
		NCBP4R - 17.06 - 005 - YG812	NCBP04R1706005T	.067	.24	.002	.008	.028	.51	1.10	○
		NCBP4R - 17.06 - 010 - YG812	NCBP04R1706010T	.067	.24	.004	.008	.028	.51	1.10	●
		NCBP4R - 17.09 - 005 - YG812	NCBP04R1709005T	.067	.35	.002	.008	.028	.51	1.10	○
		NCBP4R - 17.09 - 010 - YG812	NCBP04R1709010T	.067	.35	.004	.008	.028	.51	1.10	●
		NCBP4R - 22.06 - 005 - YG812	NCBP04R2206005T	.087	.24	.002	.008	.037	.51	1.10	○
		NCBP4R - 22.06 - 010 - YG812	NCBP04R2206010T	.087	.24	.004	.008	.037	.51	1.10	●
		NCBP4R - 22.09 - 005 - YG812	NCBP04R2209005T	.087	.35	.002	.008	.037	.51	1.10	○
		NCBP4R - 22.09 - 010 - YG812	NCBP04R2209010T	.087	.35	.004	.008	.037	.51	1.10	●
		NCBP4R - 22.13 - 010 - YG812	NCBP04R2213010T	.087	.51	.004	.008	.037	.71	1.30	●
		NCBP4R - 27.10 - 005 - YG812	NCBP04R2710005T	.106	.39	.002	.008	.047	.51	1.10	○
		NCBP4R - 27.10 - 015 - YG812	NCBP04R2710015T	.106	.39	.006	.008	.047	.51	1.10	●
		NCBP4R - 27.15 - 005 - YG812	NCBP04R2715005T	.106	.59	.002	.008	.047	.71	1.30	○
		NCBP4R - 27.15 - 015 - YG812	NCBP04R2715015T	.106	.59	.006	.008	.047	.71	1.30	●
		NCBP4R - 32.10 - 015 - YG812	NCBP04R3210015T	.126	.39	.006	.008	.057	.51	1.10	●
		NCBP4R - 32.15 - 015 - YG812	NCBP04R3215015T	.126	.59	.006	.008	.057	.71	1.30	●
		NCBP4R - 32.20 - 005 - YG812	NCBP04R3220005T	.126	.79	.002	.008	.057	.91	1.50	○
		NCBP4R - 32.20 - 015 - YG812	NCBP04R3220015T	.126	.79	.006	.008	.057	.91	1.50	●
		NCBP4R - 42.10 - 015 - YG812	NCBP04R4210015T	.165	.39	.006	.012	.077	.51	1.10	●
		NCBP4R - 42.15 - 005 - YG812	NCBP04R4215005T	.165	.59	.002	.012	.077	.71	1.30	○
		NCBP4R - 42.15 - 015 - YG812	NCBP04R4215015T	.165	.59	.006	.012	.077	.71	1.30	●
		NCBP4R - 42.20 - 005 - YG812	NCBP04R4220005T	.165	.79	.002	.012	.077	.91	1.50	○
		NCBP4R - 42.20 - 015 - YG812	NCBP04R4220015T	.165	.79	.006	.012	.077	.91	1.50	●
		NCBP4R - 42.25 - 005 - YG812	NCBP04R4225005T	.165	.98	.002	.012	.077	1.10	1.69	○
		NCBP4R - 42.25 - 015 - YG812	NCBP04R4225015T	.165	.98	.006	.012	.077	1.10	1.69	●
	6 (.236)	NCBP6R - 62.15 - 020 - YG812	NCBP06R6215020T	.244	.59	.008	.020	.116	.71	1.69	●
		NCBP6R - 62.20 - 020 - YG812	NCBP06R6220020T	.244	.79	.008	.020	.116	.91	1.89	●
		NCBP6R - 62.25 - 020 - YG812	NCBP06R6225020T	.244	.98	.008	.020	.116	1.10	2.09	●
		NCBP6R - 62.30 - 020 - YG812	NCBP06R6230020T	.244	1.18	.008	.020	.116	1.30	2.28	●
		NCBP6R - 62.35 - 020 - YG812	NCBP06R6235020T	.244	1.38	.008	.020	.116	1.50	2.48	●
		NCBP6R - 62.40 - 020 - YG812	NCBP06R6240020T	.244	1.57	.008	.020	.116	1.69	2.68	●

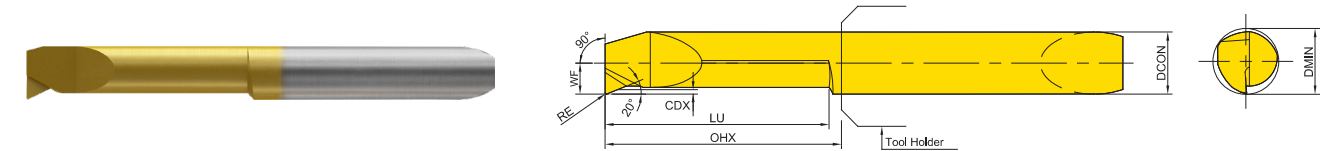
Boring Tool
BO - Boring with Chip Breaker



●: Stock item
○: Order made item

KAPR	DCON mm(inch)	Designation	EDP	Inch ⁽ⁱⁿ⁾							YG812
				DMIN	LU	RE	CDX	WF	OHX	OAL	
98°	4 (.157)	NCBO4R - 10.06 - 005 - YG812	NCBO04R1006005T	.039	.24	.002	.004	.018	.51	1.10	○
		NCBO4R - 10.06 - 010 - YG812	NCBO04R1006010T	.039	.24	.004	.004	.018	.51	1.10	●
		NCBO4R - 17.09 - 005 - YG812	NCBO04R1709005T	.067	.35	.002	.008	.028	.51	1.10	○
		NCBO4R - 17.09 - 010 - YG812	NCBO04R1709010T	.067	.35	.004	.008	.028	.51	1.10	○
		NCBO4R - 22.09 - 005 - YG812	NCBO04R2209005T	.087	.35	.002	.008	.037	.51	1.10	○
		NCBO4R - 22.09 - 010 - YG812	NCBO04R2209010T	.087	.35	.004	.008	.037	.51	1.10	●
		NCBO4R - 22.13 - 010 - YG812	NCBO04R2213010T	.087	.51	.004	.008	.037	.71	1.30	○
		NCBO4R - 27.15 - 005 - YG812	NCBO04R2715005T	.106	.59	.002	.008	.047	.71	1.30	○
		NCBO4R - 27.15 - 015 - YG812	NCBO04R2715015T	.106	.59	.006	.008	.047	.71	1.30	○
		NCBO4R - 32.15 - 015 - YG812	NCBO04R3215015T	.126	.59	.006	.008	.057	.71	1.30	●
		NCBO4R - 32.20 - 005 - YG812	NCBO04R3220005T	.126	.79	.002	.008	.057	.91	1.50	○
		NCBO4R - 32.20 - 015 - YG812	NCBO04R3220015T	.126	.79	.006	.008	.057	.91	1.50	●
		NCBO4R - 42.20 - 005 - YG812	NCBO04R4220005T	.165	.79	.002	.012	.077	.91	1.50	○
		NCBO4R - 42.20 - 015 - YG812	NCBO04R4220015T	.165	.79	.006	.012	.077	.91	1.50	●
		NCBO4R - 42.25 - 005 - YG812	NCBO04R4225005T	.165	.98	.002	.012	.077	1.10	1.69	○
		NCBO4R - 42.25 - 015 - YG812	NCBO04R4225015T	.165	.98	.006	.012	.077	1.10	1.69	●
	6 (.236)	NCBO6R - 62.15 - 020 - YG812	NCBO06R6215020T	.244	.59	.008	.020	.116	.81	1.69	●
		NCBO6R - 62.25 - 020 - YG812	NCBO06R6225020T	.244	.98	.008	.020	.116	1.10	2.09	●
		NCBO6R - 62.30 - 020 - YG812	NCBO06R6230020T	.244	1.18	.008	.020	.116	1.30	2.28	●
		NCBO6R - 62.35 - 020 - YG812	NCBO06R6235020T	.244	1.38	.008	.020	.116	1.50	2.48	●
		NCBO6R - 62.40 - 020 - YG812	NCBO06R6240020T	.244	1.57	.008	.020	.116	1.69	2.68	○

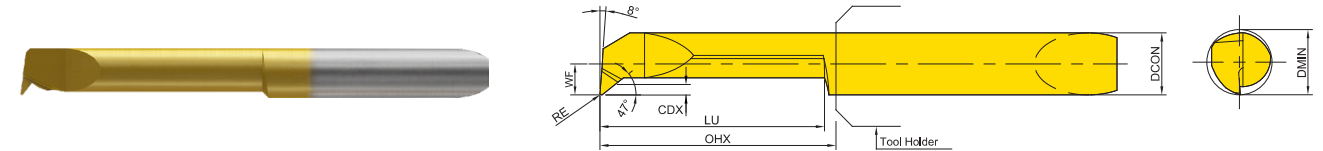
Boring Tool
BF - 90° Boring



●: Stock item
○: Order made item

KAPR	DCON mm(inch)	Designation	EDP	Inch ⁽ⁱⁿ⁾							YG812
				DMIN	LU	RE	CDX	WF	OHX	OAL	
90°	4 (.157)	NCBF4R - 10.04 - 010 - YG812	NCBF04R1004010T	.039	.16	.004	.004	.018	.51	1.10	○
		NCBF4R - 10.06 - 010 - YG812	NCBF04R1006010T	.039	.24	.004	.004	.018	.51	1.10	○
		NCBF4R - 17.06 - 010 - YG812	NCBF04R1706010T	.067	.24	.004	.008	.028	.51	1.10	○
		NCBF4R - 17.09 - 010 - YG812	NCBF04R1709010T	.067	.35	.004	.008	.028	.51	1.10	○
		NCBF4R - 22.06 - 010 - YG812	NCBF04R2206010T	.087	.24	.004	.008	.037	.51	1.10	○
		NCBF4R - 22.09 - 010 - YG812	NCBF04R2209010T	.087	.35	.004	.008	.037	.51	1.10	○
		NCBF4R - 22.13 - 010 - YG812	NCBF04R2213010T	.087	.51	.004	.008	.037	.71	1.30	○
		NCBF4R - 27.10 - 015 - YG812	NCBF04R2710015T	.106	.39	.006	.008	.047	.51	1.10	○
		NCBF4R - 27.15 - 015 - YG812	NCBF04R2715015T	.106	.59	.006	.008	.047	.71	1.30	○
		NCBF4R - 32.10 - 015 - YG812	NCBF04R3210015T	.126	.39	.006	.008	.057	.51	1.10	○
		NCBF4R - 32.15 - 015 - YG812	NCBF04R3215015T	.126	.59	.006	.008	.057	.71	1.30	○
		NCBF4R - 32.20 - 015 - YG812	NCBF04R3220015T	.126	.79	.006	.008	.057	.91	1.50	○
		NCBF4R - 42.10 - 015 - YG812	NCBF04R4210015T	.165	.39	.006	.012	.077	.51	1.10	○
		NCBF4R - 42.15 - 015 - YG812	NCBF04R4215015T	.165	.59	.006	.012	.077	.71	1.30	○
		NCBF4R - 42.20 - 015 - YG812	NCBF04R4220015T	.165	.79	.006	.012	.077	.91	1.50	○
		NCBF4R - 42.25 - 015 - YG812	NCBF04R4225015T	.165	.98	.006	.012	.077	1.10	1.69	○
	6 (.236)	NCBF6R - 62.15 - 020 - YG812	NCBF06R6215020T	.244	.59	.008	.020	.116	.71	1.69	○
		NCBF6R - 62.20 - 020 - YG812	NCBF06R6220020T	.244	.79	.008	.020	.116	.91	1.89	○
		NCBF6R - 62.25 - 020 - YG812	NCBF06R6225020T	.244	.98	.008	.020	.116	1.10	2.09	○
		NCBF6R - 62.30 - 020 - YG812	NCBF06R6230020T	.244	1.18	.008	.020	.116	1.30	2.28	○
		NCBF6R - 62.35 - 020 - YG812	NCBF06R6235020T	.244	1.38	.008	.020	.116	1.50	2.48	○
		NCBF6R - 62.40 - 020 - YG812	NCBF06R6240020T	.244	1.57	.008	.020	.116	1.69	2.68	○

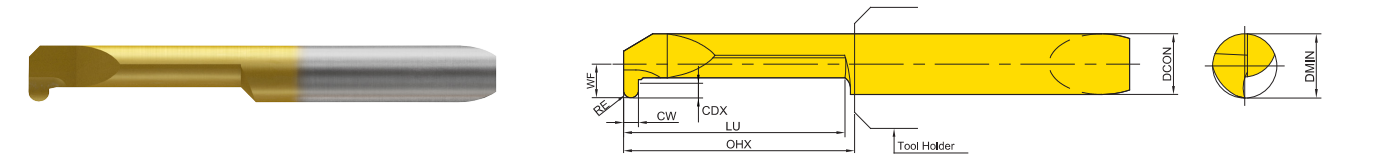
Boring Tool
PR - Profiling



●: Stock item
○: Order made item

KAPR	DCON mm(inch)	Designation	EDP	Inch ⁽ⁱⁿ⁾							YG812
				DMIN	LU	RE	CDX	WF	OHX	OAL	
98°	4 (.157)	NCPR4R - 10.04 - 010 - YG812	NCPR04R1004010T	.039	.16	.004	.004	.018	.51	1.10	○
		NCPR4R - 10.06 - 010 - YG812	NCPR04R1006010T	.039	.24	.004	.004	.018	.51	1.10	○
		NCPR4R - 17.06 - 010 - YG812	NCPR04R1706010T	.067	.24	.004	.008	.028	.51	1.10	○
		NCPR4R - 17.09 - 010 - YG812	NCPR04R1709010T	.067	.35	.004	.008	.028	.51	1.10	○
		NCPR4R - 22.06 - 010 - YG812	NCPR04R2206010T	.087	.24	.004	.016	.037	.51	1.10	○
		NCPR4R - 22.09 - 010 - YG812	NCPR04R2209010T	.087	.35	.004	.016	.037	.51	1.10	○
		NCPR4R - 22.13 - 010 - YG812	NCPR04R2213010T	.087	.51	.004	.016	.037	.71	1.30	○
		NCPR4R - 27.10 - 015 - YG812	NCPR04R2710015T	.106	.39	.006	.020	.047	.51	1.10	○
		NCPR4R - 27.15 - 015 - YG812	NCPR04R2715015T	.106	.59	.006	.020	.047	.71	1.30	○
		NCPR4R - 32.10 - 015 - YG812	NCPR04R3210015T	.126	.39	.006	.024	.057	.51	1.10	○
		NCPR4R - 32.15 - 015 - YG812	NCPR04R3215015T	.126	.59	.006	.024	.057	.71	1.30	○
		NCPR4R - 32.20 - 015 - YG812	NCPR04R3220015T	.126	.79	.006	.024	.057	.91	1.50	○
		NCPR4R - 42.10 - 015 - YG812	NCPR04R4210015T	.165	.39	.006	.031	.077	.51	1.10	●
		NCPR4R - 42.15 - 015 - YG812	NCPR04R4215015T	.165	.59	.006	.031	.077	.71	1.30	●
		NCPR4R - 42.20 - 015 - YG812	NCPR04R4220015T	.165	.79	.006	.031	.077	.91	1.50	●
		NCPR4R - 42.25 - 015 - YG812	NCPR04R4225015T	.165	.98	.006	.031	.077	1.10	1.69	○
	6 (.236)	NCPR6R - 62.15 - 020 - YG812	NCPR06R6215020T	.244	.59	.008	.071	.116	.71	1.69	●
		NCPR6R - 62.20 - 020 - YG812	NCPR06R6220020T	.244	.79	.008	.071	.116	.91	1.89	●
		NCPR6R - 62.25 - 020 - YG812	NCPR06R6225020T	.244	.98	.008	.071	.116	1.10	2.09	○
		NCPR6R - 62.30 - 015 - YG812	NCPR06R6230015T	.244	1.18	.006	.071	.116	1.30	2.28	●
		NCPR6R - 62.30 - 020 - YG812	NCPR06R6230020T	.244	1.18	.008	.071	.116	1.30	2.28	○
		NCPR6R - 62.35 - 020 - YG812	NCPR06R6235020T	.244	1.38	.008	.071	.116	1.50	2.48	○
		NCPR6R - 62.40 - 020 - YG812	NCPR06R6240020T	.244	1.57	.008	.071	.116	1.69	2.68	○

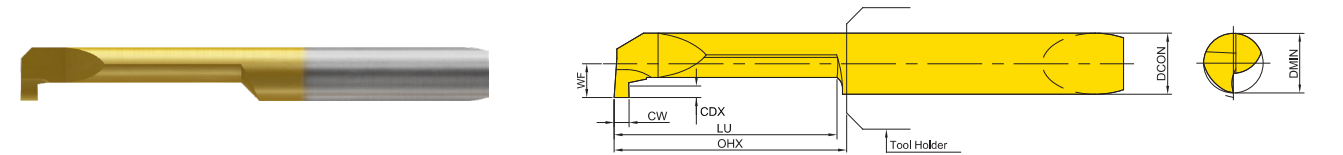
Boring Tool
GR - Grooving Round



●: Stock item
○: Order made item

DCON (mm)	Designation	EDP	Inch ⁽ⁱⁿ⁾								YG812
			DMIN	LU	RE	CW	CDX	WF	OHX	OAL	
4 (.157)	NCGR4R - 42.15 - 10x08 - YG812	NCGR04R4215100T	.165	.59	.020	.039	.031	.077	.71	1.30	○
	NCGR4R - 42.15 - 12x08 - YG812	NCGR04R4215120T	.165	.59	.023	.046	.031	.077	.71	1.30	○
	NCGR4R - 42.15 - 15x08 - YG812	NCGR04R4215150T	.165	.59	.030	.059	.039	.077	.71	1.30	○
	NCGR4R - 42.15 - 16x08 - YG812	NCGR04R4215160T	.165	.59	.032	.064	.039	.077	.71	1.30	○
6 (.236)	NCGR6R - 62.25 - 10x18 - YG812	NCGR06R6225100T	.244	.98	.020	.039	.071	.116	1.10	2.09	○
	NCGR6R - 62.25 - 15x18 - YG812	NCGR06R6225150T	.244	.98	.030	.059	.071	.116	1.10	2.09	○
	NCGR6R - 62.25 - 16x18 - YG812	NCGR06R6225160T	.244	.98	.030	.064	.031	.116	1.10	2.09	○
	NCGR6R - 62.25 - 20x18 - YG812	NCGR06R6225200T	.244	.98	.039	.079	.071	.116	1.10	2.09	○

Boring Tool
GS - Grooving Square

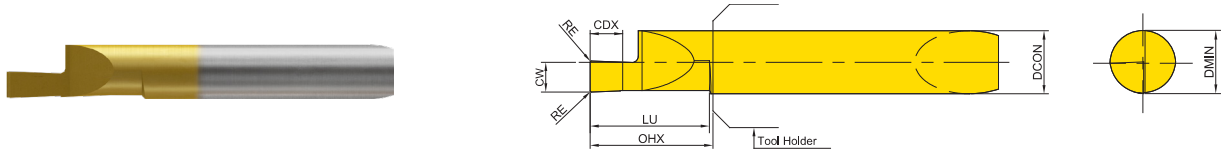


●: Stock item

○: Order made item

DCON (mm)	Designation	EDP	Inch(in)							YG812
			DMIN	LU	CW	CDX	WF	OHX	OAL	
4 (.157)	NCGS4R - 42.10 - 079x08 - YG812	NCGS04R4210079T	.165	.39	.031	.031	.077	.51	1.50	○
	NCGS4R - 42.15 - 079x08 - YG812	NCGS04R4215079T	.165	.59	.031	.031	.077	.71	1.69	○
	NCGS4R - 42.20 - 079x08 - YG812	NCGS04R4220079T	.165	.79	.031	.031	.077	.91	1.89	○
	NCGS4R - 42.10 - 100x08 - YG812	NCGS04R4210100T	.165	.39	.039	.031	.077	.51	1.50	●
	NCGS4R - 42.15 - 100x08 - YG812	NCGS04R4215100T	.165	.59	.039	.031	.077	.71	1.69	●
	NCGS4R - 42.20 - 100x08 - YG812	NCGS04R4220100T	.165	.79	.039	.031	.077	.91	1.89	○
6 (.236)	NCGS6R - 62.10 - 079x18 - YG812	NCGS06R6210079T	.244	.39	.031	.071	.116	.51	1.50	○
	NCGS6R - 62.15 - 079x18 - YG812	NCGS06R6215079T	.244	.59	.031	.071	.116	.71	1.69	○
	NCGS6R - 62.25 - 079x18 - YG812	NCGS06R6225079T	.244	.98	.031	.071	.116	1.10	2.09	○
	NCGS6R - 62.35 - 079x18 - YG812	NCGS06R6235079T	.244	1.38	.031	.071	.116	1.50	2.48	○
	NCGS6R - 62.10 - 100x18 - YG812	NCGS06R6210100T	.244	.39	.039	.071	.116	.51	1.50	○
	NCGS6R - 62.15 - 100x18 - YG812	NCGS06R6215100T	.244	.59	.039	.071	.116	.71	1.69	●
	NCGS6R - 62.25 - 100x18 - YG812	NCGS06R6225100T	.244	.98	.039	.071	.116	1.10	2.09	●
	NCGS6R - 62.35 - 100x18 - YG812	NCGS06R6235100T	.244	1.38	.039	.071	.116	1.50	2.48	○
	NCGS6R - 62.10 - 117x18 - YG812	NCGS06R6210117T	.244	.39	.046	.071	.116	.51	1.50	○
	NCGS6R - 62.15 - 117x18 - YG812	NCGS06R6215117T	.244	.59	.046	.071	.116	.71	1.69	○
	NCGS6R - 62.25 - 117x18 - YG812	NCGS06R6225117T	.244	.98	.046	.071	.116	1.10	2.09	○
	NCGS6R - 62.35 - 117x18 - YG812	NCGS06R6235117T	.244	1.38	.046	.071	.116	1.50	2.48	○
	NCGS6R - 62.10 - 150x18 - YG812	NCGS06R6210150T	.244	.39	.059	.071	.116	.51	1.50	●
	NCGS6R - 62.15 - 150x18 - YG812	NCGS06R6215150T	.244	.59	.059	.071	.116	.71	1.69	●
	NCGS6R - 62.25 - 150x18 - YG812	NCGS06R6225150T	.244	.98	.059	.071	.116	1.10	2.09	●
	NCGS6R - 62.35 - 150x18 - YG812	NCGS06R6235150T	.244	1.38	.059	.071	.116	1.50	2.48	○
	NCGS6R - 62.10 - 157x18 - YG812	NCGS06R6210157T	.244	.39	.062	.071	.116	.51	1.50	○
	NCGS6R - 62.15 - 157x18 - YG812	NCGS06R6215157T	.244	.59	.062	.071	.116	.71	1.69	○
	NCGS6R - 62.25 - 157x18 - YG812	NCGS06R6225157T	.244	.98	.062	.071	.116	1.10	2.09	○
	NCGS6R - 62.35 - 157x18 - YG812	NCGS06R6235157T	.244	1.38	.062	.071	.116	1.50	2.48	○
	NCGS6R - 62.10 - 198x18 - YG812	NCGS06R6210198T	.244	.39	.078	.071	.116	.51	1.50	○
	NCGS6R - 62.15 - 198x18 - YG812	NCGS06R6215198T	.244	.59	.078	.071	.116	.71	1.69	○
	NCGS6R - 62.25 - 198x18 - YG812	NCGS06R6225198T	.244	.98	.078	.071	.116	1.10	2.09	○
	NCGS6R - 62.30 - 198x18 - YG812	NCGS06R6230198T	.244	1.18	.078	.071	.116	1.30	2.28	○
	NCGS6R - 62.10 - 200x18 - YG812	NCGS06R6210200T	.244	.39	.079	.071	.116	.51	1.50	●
	NCGS6R - 62.15 - 200x18 - YG812	NCGS06R6215200T	.244	.59	.079	.071	.116	.71	1.69	●
	NCGS6R - 62.25 - 200x18 - YG812	NCGS06R6225200T	.244	.98	.079	.071	.116	1.10	2.09	●

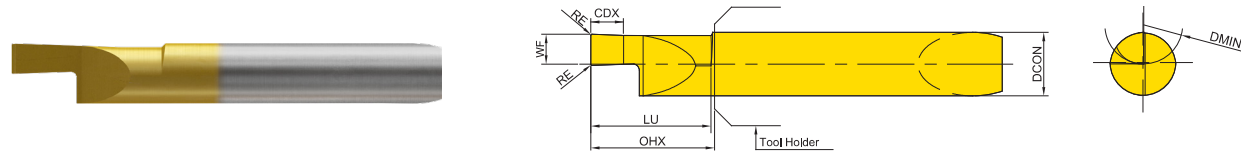
Boring Tool
FI - Face Grooving Internal



●: Stock item
○: Order made item

DCON (mm)	Designation	EDP	Inch ⁽ⁱⁿ⁾								YG812
			DMIN	LU	RE	CW	CDX	WF	OHX	OAL	
6 (.236)	NCFI6R - 62.15 - 10x20 - YG812	NCFI06R6215010T	.244	.59	.004	.039	.079	.116	.71	1.69	●
	NCFI6R - 62.15 - 15x30 - YG812	NCFI06R6215015T	.244	.59	.004	.059	.118	.116	.71	1.69	●
	NCFI6R - 62.15 - 20x40 - YG812	NCFI06R6215020T	.244	.59	.004	.079	.157	.116	.71	1.69	●
	NCFI6R - 62.15 - 25x50 - YG812	NCFI06R6215025T	.244	.59	.004	.098	.197	.116	.71	1.69	●
	NCFI6R - 62.15 - 30x60 - YG812	NCFI06R6215030T	.244	.59	.004	.118	.236	.116	.71	1.69	●

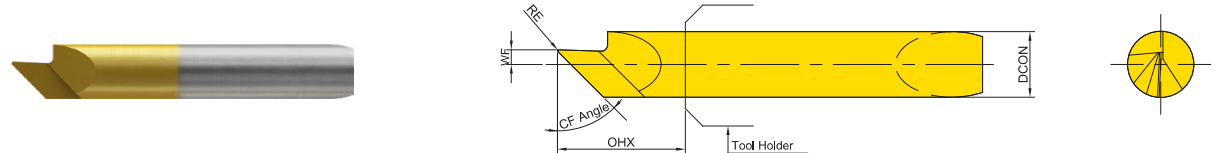
Boring Tool
FE - Face Grooving External



●: Stock item
○: Order made item

DCON (mm)	Designation	EDP	Inch ⁽ⁱⁿ⁾								YG812
			DMIN	LU	RE	CW	CDX	WF	OHX	OAL	
6 (.236)	NCFE6R - 62.15 - 10x20 - YG812	NCFE06R6215010T	.244	.59	.004	.039	.079	.116	.71	1.69	●
	NCFE6R - 62.15 - 15x30 - YG812	NCFE06R6215015T	.244	.59	.004	.059	.118	.116	.71	1.69	●
	NCFE6R - 62.15 - 20x40 - YG812	NCFE06R6215020T	.244	.59	.004	.079	.157	.116	.71	1.69	●
	NCFE6R - 62.15 - 25x50 - YG812	NCFE06R6215025T	.244	.59	.004	.098	.197	.116	.71	1.69	●
	NCFE6R - 62.15 - 30x60 - YG812	NCFE06R6215030T	.244	.59	.004	.118	.236	.116	.71	1.69	●

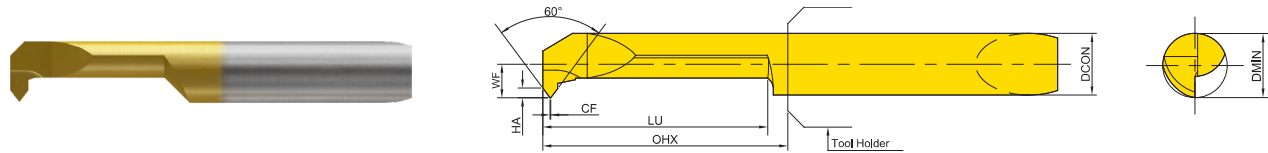
Boring Tool
CH - Chamfering



●: Stock item
○: Order made item

KAPR	DCON mm(inch)	Designation	EDP	Inch ⁽ⁱⁿ⁾						YG812
				DMIN	RE	CDX	WF	OHX	OAL	
45°	6 (.236)	NCCH6R - 10.03 - 45 - YG812	NCCH06R103045T	.039	.008	.14	.043	.51	1.50	○
60°		NCCH6R - 10.04 - 60 - YG812	NCCH06R103060T	.039	.008	.16	.020	.51	1.50	○

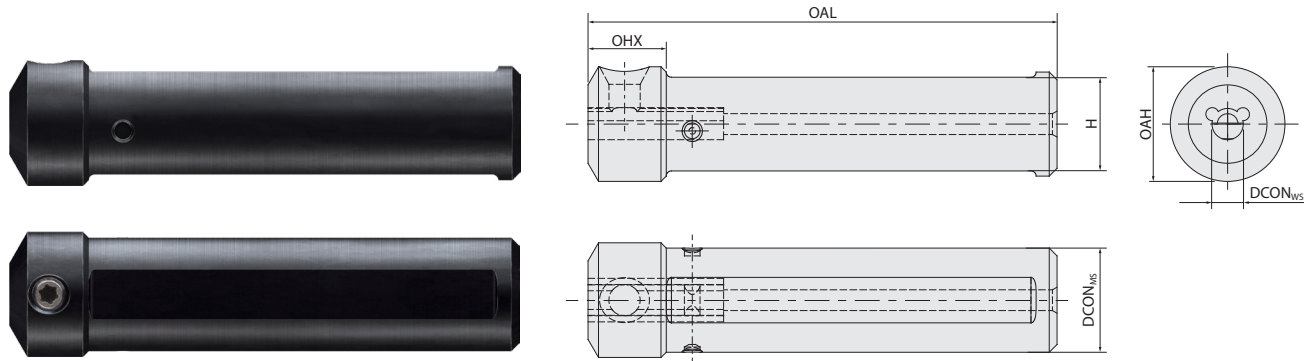
Boring Tool
TH - Threading



* P-60 : Partial Profile, 60°

DCON mm(inch)	Designation	EDP	Inch ⁽ⁱⁿ⁾									YG812
			DMIN	LU	TPIN	TPIX	WF	HA	CF	OHX	OAL	
4 (.157)	NCTH04R-42.15-050-P-60-YG812	NCTV04R4215050T	.165	.591	36.0	48.0	.079	.018	.002	.709	1.299	○
	NCTH04R-42.15-075-P-60-YG812	NCTV04R4215075T	.165	.591	24.0	36.0	.093	.026	.003	.709	1.299	○
	NCTH04R-42.15-100-P-60-YG812	NCTV04R4215100T	.165	.591	20.0	24.0	.089	.031	.004	.709	1.299	○
6 (.236)	NCTH06R-62.15-100-P-60-YG812	NCTV06R6215100T	.244	.591	20.0	24.0	.116	.031	.004	.807	1.693	○
	NCTH06R-62.15-125-P-60-YG812	NCTV06R6215125T	.244	.591	16.0	20.0	.091	.038	.005	.807	1.693	○
	NCTH06R-62.15-150-P-60-YG812	NCTV06R6215150T	.244	.591	14.0	16.0	.116	.045	.006	.807	1.693	○

Boring ToolHolder
Holder



Scale	Insert Size (DCON _{ws})	Designation	EDP	DCON _{MS}	OAL	H	OAH	OHX
Metric / Inch	4 (.157)	NCHI-0500.4i	ZBR0400500	.500	2.756	.421	.624	.551
		NCHI-0625.4i	ZBR0400625	.625	2.953	.546	.687	
		NCHI-0750.4i	ZBR0400750	.750	4.331	.671	.750	
	6 (.236)	NCHI-1000.4i	ZBR0401000	1.000	4.331	.906	1.000	
		NCHI-0500.6i	ZBR0600500	.500	2.756	.421	.663	
		NCHI-0625.6i	ZBR0600625	.625	2.953	.546	.726	
		NCHI-0750.6i	ZBR0600750	.750	4.331	.671	.827	
		NCHI-1000.6i	ZBR0601000	1.000	4.331	.906	1.000	

Infomation	Screw	Wrench
Description	-	TPWFTP15
EDP	TP156075	18000003