TURNING TOOLS



GESAC

About GESAC

Xiamen Golden Egret Special Alloy Co., Ltd. (GESAC), founded in 1989, is a Sino-foreign joint venture with national high-tech, affiliated with XTC, which is one of six major rare earth groups in China. GESAC is committed to research & development, production and professional solutions providing of high-quality tungsten powder materials, cemented carbide, precision cutting tools and other tungsten products. Up to now, GESAC has become world-famous manufacturer and supplier of tungsten powder, cemented carbide and precision cutting tools products.

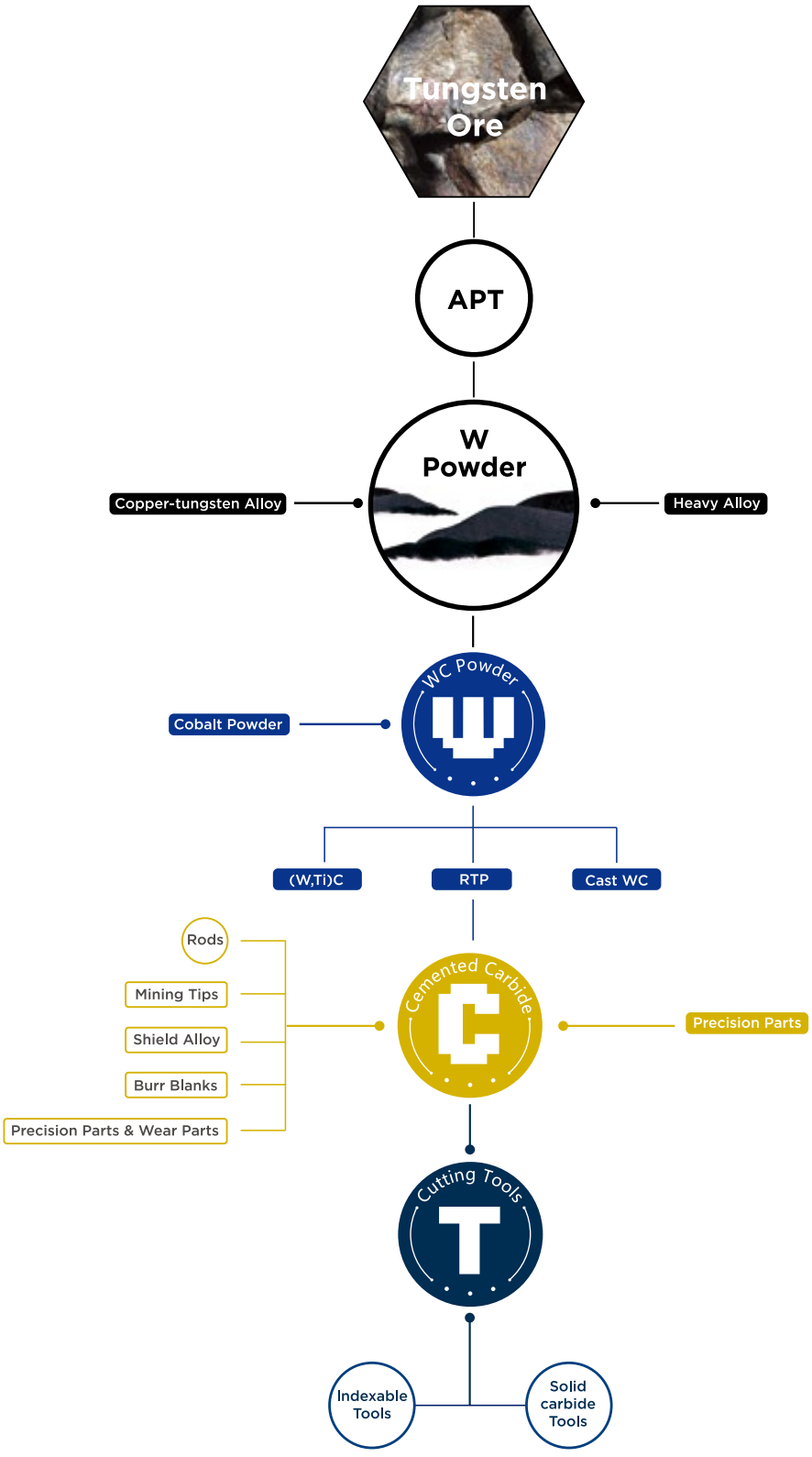
With the Integrated Product Development of complete tungsten industry chain, as well as a pragmatic and innovative management concept, GESAC has always maintained a strong momentum of development, providing the cost effective tungsten powder products and services for global users, offering the excellent products and perfect solutions for solving high hardness, high temperature resistance and wear resistance topics. Our brand "Golden Egret" has become one of the leading brand in the market, enjoying famous reputation in more than 40 countries and regions.

GESAC owns three production bases, three overseas sales branches and one R&D center. We undertook and completed several development programs independently, including the “National Science and Technology Support Programs”, the “National Torch Program Projects”, and the “National Key Projects” and so on. GESAC was awarded as "Key Enterprise for Strategic Emerging Industry ", “Innovative Enterprise" and "Enterprise with Advanced Technology ".



Product Chain

GESAC has a complete tungsten product chain from tungsten ore to tungsten powder, cemented carbide products and cutting tools.



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A

General Turning

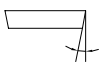


ISO Turning Indexable Inserts Identification System

Symbol	Shape	Corner Angle	Shape
H	Hexagon	120°	
O	Octagon	135°	
P	Pentagon	108°	
S	Square	90°	
T	Triangle	60°	
C	Rhombic	80°	
D		55°	
E		75°	
F		50°	
M		86°	
V		35°	
W	Trigon	80°	
L	Rectangle	90°	
A	Parallelogram	85°	
B		82°	
K		55°	
R	Round	——	

①Shape Symbol

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	其他



②Relief Angle Symbol

Symbol	Tolerance（mm）			Tolerance（inch）		
	Corner Height (m)	Thickness (s)	I.C.dia. (Ød)	Corner Height (m)	Thickness (s)	I.C.dia. (Ød)
A	±0.005	±0.025	±0.025	±0.0002	±0.001	±0.001
F	±0.005	±0.025	±0.013	±0.0002	±0.001	±0.0005
C	±0.013	±0.025	±0.025	±0.0005	±0.001	±0.001
H	±0.013	±0.025	±0.013	±0.0005	±0.001	±0.0005
E	±0.025	±0.025	±0.025	±0.001	±0.001	±0.001
G	±0.025	±0.13	±0.025	±0.001	±0.005	±0.001
J	±0.005	±0.025	±0.05~ ±0.13	±0.0002	±0.001	±0.002~ ±0.005
K	±0.013	±0.025	±0.05~ ±0.13	±0.0005	±0.001	±0.002~ ±0.005
L	±0.025	±0.025	±0.05~ ±0.13	±0.001	±0.001	±0.002~ ±0.005
M	±0.08~ ±0.18	±0.13	±0.05~ ±0.13	±0.003~ ±0.007	±0.005	±0.002~ ±0.005
N	±0.08~ ±0.18	±0.025	±0.05~ ±0.13	±0.003~ ±0.007	±0.001	±0.002~ ±0.005
U	±0.13~ ±0.38	±0.13	±0.08~ ±0.25	±0.005~ ±0.015	±0.005	±0.003~ ±0.01

③Tolerance Symbol

①	②	③	④	⑤
T	N	M	G	22
T	N	M	G	22

①	②	③	④	⑤

④Hole/Chipbreaker Symbol

Symbol	Hole	Hole Shape	Chipbreaker	Shape
N	Without	—	Without	
R			Single-sided	
F			Double-sided	
A	With	With Hole	Without	
M			Single-sided	
G			Double-sided	
W		With Hole and One Countersink 40-60°	Without	
T			Single-sided	
Q		With Hole and Two Countersink 40-60°C	Without	
U			Double-sided	
B		With Hole and One Countersink 70-90°C	Without	
H			Double-sided	
C		With Hole and Two Countersink 70-90°C	Without	
J			Double-sided	
X	—	—	—	

⑤Edge Length Symbol （ISO） （mm）

P		S		C		W		T		D		V		K		I. C. Size (mm)
Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	
		03	3.97	03	4.0			06	6.9	4	4.8					3.97
		04	4.76	04	4.8			08	8.2	5	5.8					4.76
05	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
		05	5.56	05	5.6	03	3.8	09	9.6	6	6.8					5.56
06	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6
		06	6.35	06	6.5	04	4.3	11	11	7	7.8	11	11.2			6.35
		07	7.94	08	8.1	05	5.4	13	13.8	9	9.7					7.94
08	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8
09	9.525	09	9.525	09	9.7	06	6.5	16	16.5	11	11.6	16	16.6	16	19.7	9.525
10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10
12	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
12	12.7	12	12.7	12	12.9	08	8.7	22	22	15	15.5	22	22.1			12.7
15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4					15.875
16	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16
19	19.05	19	19.05	19	19.3	13	13	33	33	23	23.3					19.05
20	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20
		22	22.225	22	22.6			38	38.5	27	27.1					22.225
25	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25
25	25.4	25	25.4	25	25.8			44	44	31	31					25.4
31	31.75	31	31.75	32	32.2			55	55	38	38.8					31.75
31	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32

Insert Shape：H,O,P,S,T,C,E,M,W,R									
I. C. Size (mm)	Tolerance of I. C. Size(Ød) (mm)		Tolerance of Corner Height (mm)		I. C. Size (inch)	Tolerance of I. C. Size(Ød) (mm)		Tolerance of corner Height (mm)	
	J,K,L, M,N	U	M,N	U		ClassJ,K, L,M,N	Class U	ClassJ,K, L,M,N	Class U
6.35	±0.05	±0.08	±0.08	±0.13	0.250	±0.002	±0.003	±0.003	±0.005
9.525					0.375				
12.7	±0.08	±0.13	±0.13	±0.2	0.500	±0.003	±0.005	±0.005	±0.008
15.875	±0.1	±0.18	±0.15	±0.27	0.625	±0.004	±0.007	±0.006	±0.011
19.05					0.750				
25.4	±0.13	±0.25	±0.18	±0.38	1.000	±0.005	±0.010	±0.007	±0.015
31.75	±0.15	±0.25	±0.2	±0.38	1.250	±0.006	±0.010	±0.008	±0.015
32					1.260				

Insert Shape：D					
Inscribed Circle Size		Tolerance of I. C. Size		Tolerance of Corner Height	
mm	in	mm	in	mm	in
6.35	0.250	±0.05	±0.002	±0.11	±0.004
9.525	0.375	±0.05	±0.002	±0.11	±0.004
12.7	0.500	±0.08	±0.003	±0.15	±0.006
15.875	0.625	±0.10	±0.004	±0.18	±0.007
19.05	0.750	±0.10	±0.004	±0.18	±0.007

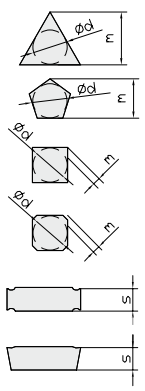
Insert Shape：V					
Inscribed Circle Size		Tolerance of I. C. Size		Tolerance of Corner Height	
mm	in	mm	in	mm	in
6.35	0.250	±0.05	±0.002	±0.15	±0.006
9.525	0.375	±0.05	±0.002	±0.15	±0.006
12.7	0.500	±0.08	±0.003	±0.20	±0.008
15.875	0.625	±0.10	±0.004	±0.27	±0.011
19.05	0.750	±0.10	±0.004	±0.27	±0.011

Symbol	Thickness (mm)
01	1.59
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

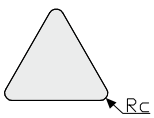
⑥Thickness Symble

⑥	⑦		⑧
04	08	-	HK
04	08	-	HK

Inscribed Circle Size（mm）
Insert Thickness(S)
Corner Height(m)



⑦Corner Ro Symbol

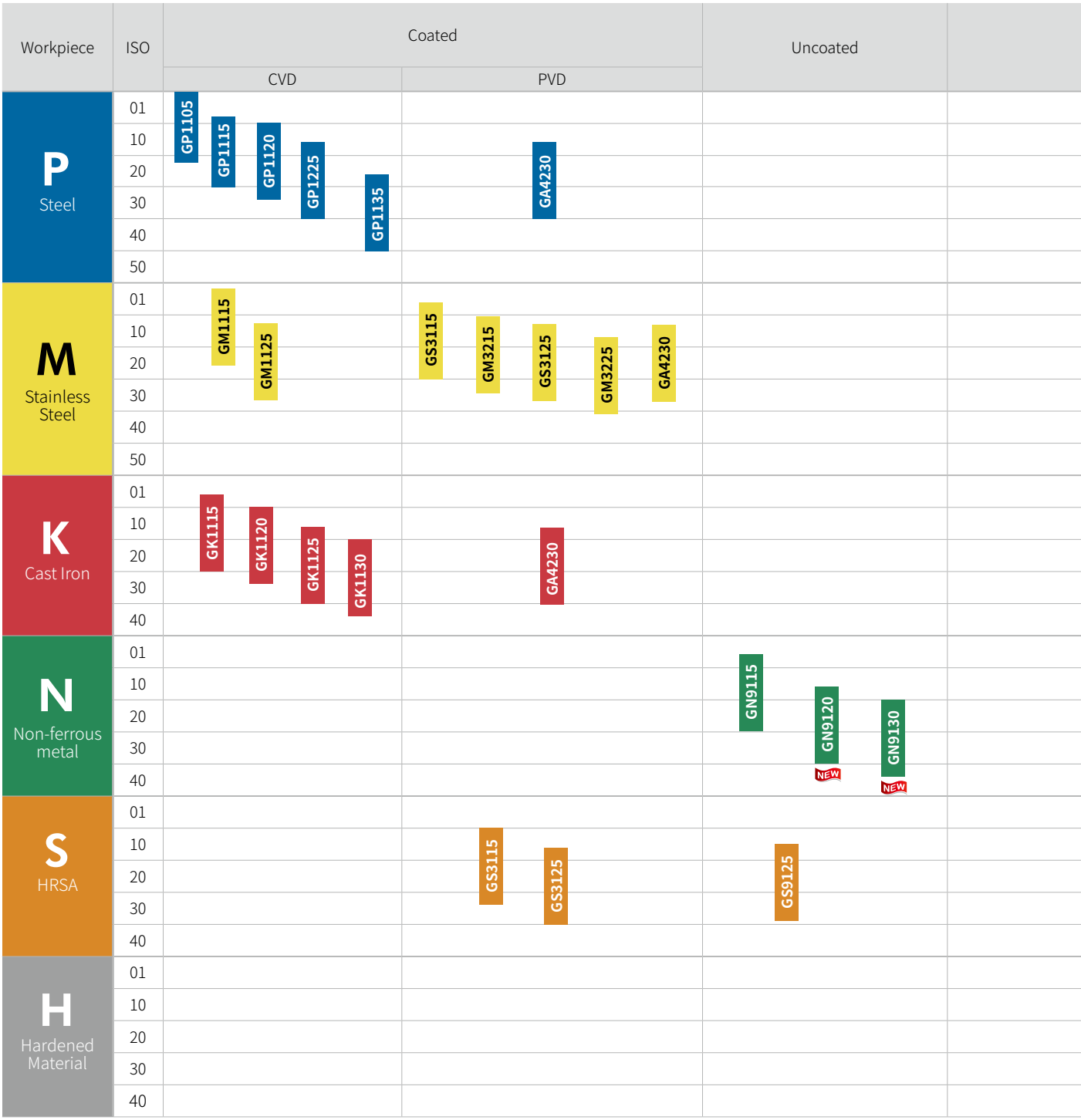


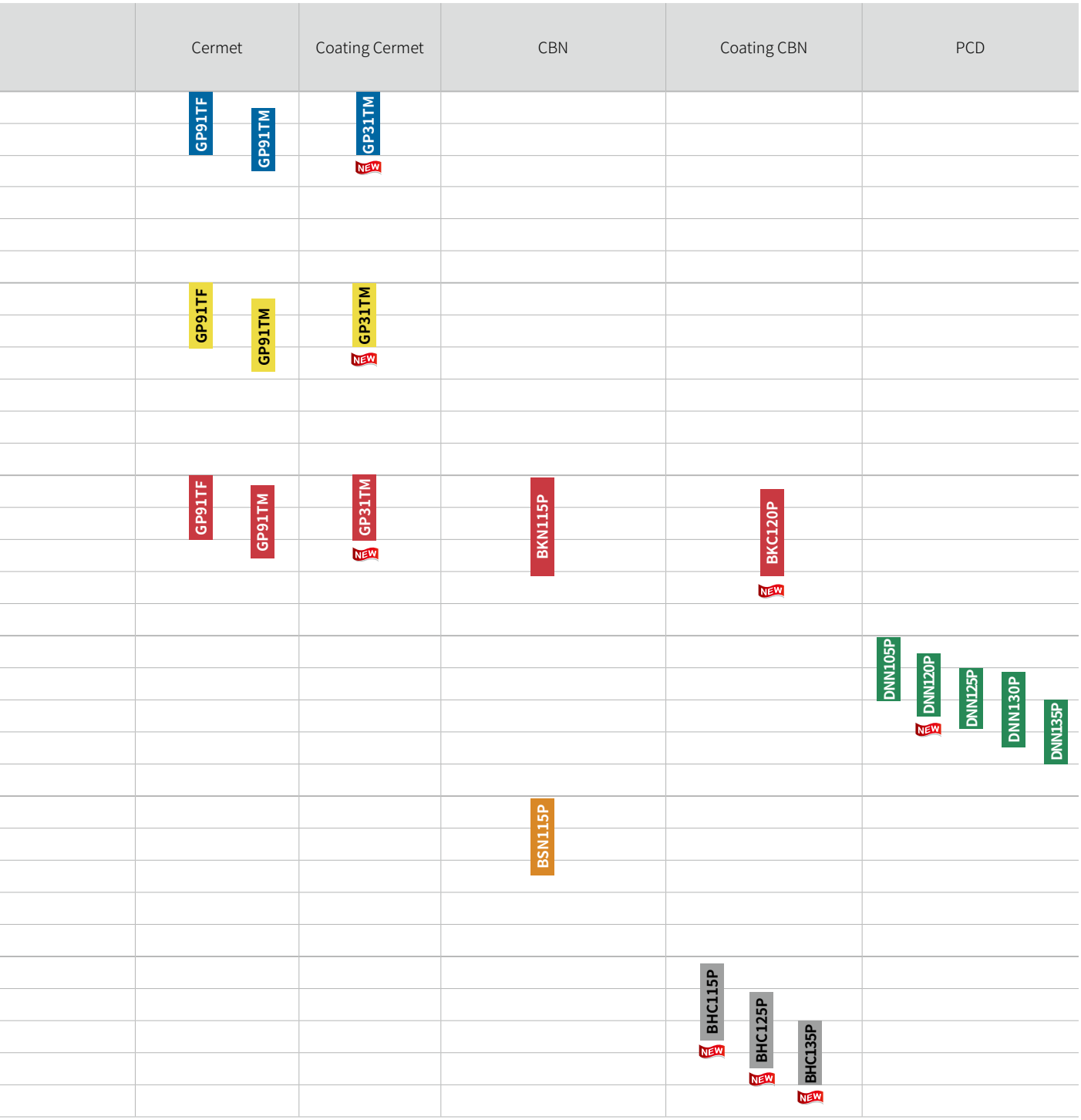
Symbol	Corner-R（mm）
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2

⑧Chipbreaker Symbol

Indicates the cutting properties and chipbreakers

Application Summary of Turning Grades



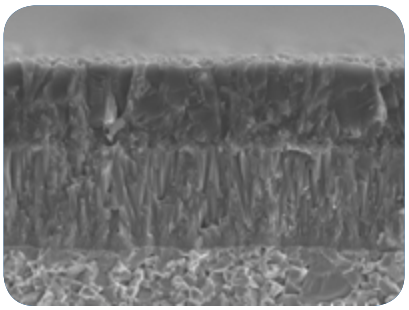

Cermet
Coating Cermet
CBN
Coating CBN
PCD
GP91TF
GP91TM
GP31TM
NEW
GP91TF
GP91TM
GP31TM
NEW
GP91TF
GP91TM
GP31TM
NEW
BKN115P
BKC120P
NEW
DNN105P
DNN120P
NEW
DNN125P
DNN130P
DNN135P
BSN115P
BHC115P
NEW
BHC125P
NEW
BHC135P
NEW

COATED CARBIDE(CVD)

• Fine grain Al2O3 coating improve wear-resistance and breakage failure resistance

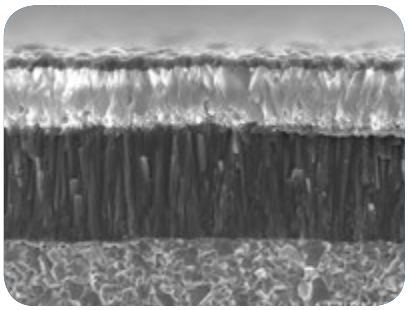
Workpiece		Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
P	Steel	Continuous Cutting	GP1105	200-380	P01	GP1105
			GP1115	150-360	P10	GP1115
			GP1120	150-360	P20	GP1120
		Interrupted Cutting	GP1225	120-280	P30	GP1225
			GP1135	80-180	P40	GP1135
M	Stainless Steel	Continuous Cutting	GM1115	200-300	M01	GM1115
					M10	
					M20	GM1125
		Interrupted Cutting	GM1125	180-280	M30	
					M40	
K	Cast Iron	Continuous Cutting	GK1115	200-400	K01	GK1115
			GK1120		K10	GK1120
		Interrupted Cutting	GK1125	150-300	K20	GK1125
			GK1130		K30	GK1130
					K40	

Extremely wear-resistance Steel Turning CVD Grade-GP1105



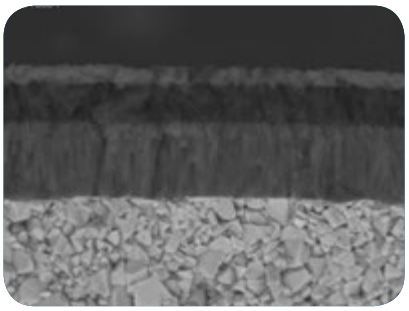
• Superfine Al2O3 and MT-TiCN coating on gradient carbide substrate provide excellent wear resistance.
• Suitable for finishing of steel & alloy steel under stable condition.

High versatility Steel Turning CVD Grade-GP1120



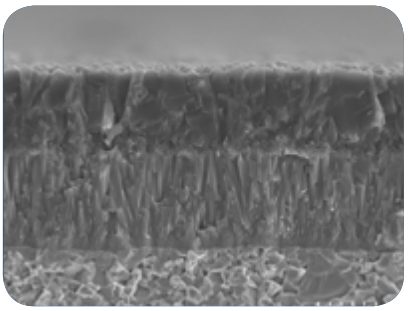
• Perfect combination with nano columnar MT-TiCN and Al2O3, TiN coating.
• Special edge treatment technology.
• Suitable for continuous to light interrupted cutting of steel & alloy steel.

High abrasive wear resistance Stainless Steel Turning CVD Grade-GM1115



• New thinner Al2O3 and Nano MT-TiCN coating, including bright yellow TiN coating, on good toughness gradient carbide substrate, with good wear resistance, superior adhesion resistance and longer tool life.
• Application: Suitable for machining of stainless finishing Conditions.

High versatility Cast Iron Turning CVD Grade-GK1120



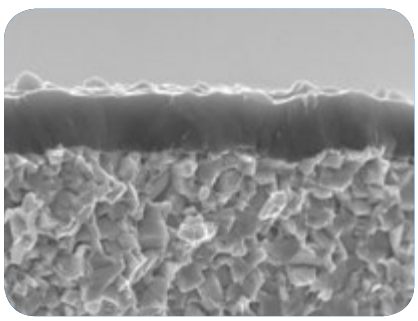
• MT-TiCN and thick Al2O3 coated on micrograin carbide substrate. Special postprocessing with excellent edge strength and ensure the stability of cutting.
• Application: Suitable for continuous and light interrupted cutting action of nodular cast iron.

COATED CARBIDE(CVD)

• Exclusive PVD nano-coating improve comprehensive properties of cutting insert.

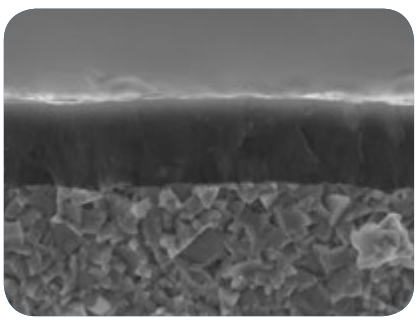
Workpiece		Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
M	Stainless Steel	Continuous Cutting	GS3115	120-200	M01	GS3115
			GM3215	120-200	M10	GM3215
		Interrupted Cutting	GS3125	80-180	M20	GS3125
			GM3225	80-180	M30	GM3225
S	Heat Resistance Alloy	Continuous Cutting	GS3115	40-70	S01	GS3115
					S10	
		Interrupted Cutting	GS3125	45-65	S20	GS3125
					S30	

High abrasive wear resistance Stainless Steel Turning PVD Grade-GM3215



• New TiAlN coating on submicron substrate with strong adhesion, superior wear resistance and good heat resistance.
• Application: Suitable for finishing stainless steel and high-temperature alloy on stable conditions.

High versatility Stainless Steel Turning PVD Grade-GM3225



• Optimized combination of TiAlN coating and micro-grain carbide substrate with high Co cotent provide superior adhesion resistance and toughness.
• Application: Suitable for semi-finishing of stainless steels and threading of general materials.

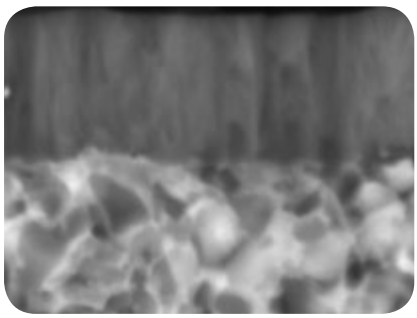
Cermet

- The specially optimized matrix largely improves wear resistance and anti-breakage property
- Great surface quality in high speed application.

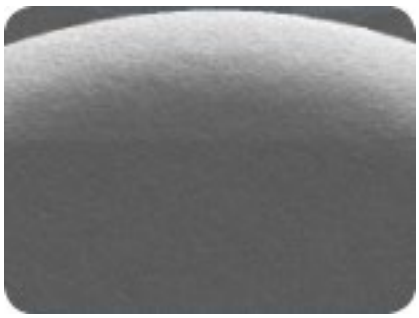
Workpiece		Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
P	Steel	Continuous Cutting	GP91TF	180-380	P01	GP91TF
			GP31TM	180-380	P10	GP91TM
			GP91TM	150-350	P20	GP31TM NEW
					P30	
M	Stainless Steel	Continuous Cutting	GP31TM	150-280	M01	GP91TM
			GP91TM	130-250	M10	GP31TM NEW
					M20	
K	Cast Iron	Continuous Cutting	GP31TM	130-330	K01	GP91TM
			GP91TM	100-300	K10	GP31TM NEW
					K20	

NEW

High wear-resistance coating cemet grade GP31TM



- Excellent PVD Coating
- High lubricant coating to promote its wear-resistance.



- Special Surface Leveling Technique
- Good control on chip breaker, realize good surface quality and extend tool life.

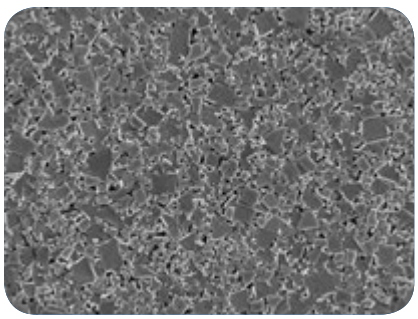
Cemented Carbide

• Cemented carbide substrate with special surface treatment suitable for cutting of copper, aluminum alloys and nonmetal materials

Workpiece		Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
N	Nonferrous Materials	Continuous Cutting	GN9115	800-1600	N01	GN9115
			GN9120	700-1500	N10	GN9120
		Interrupted Cutting			N20	GN9130
			GN9130	650-1400	N30	

NEW

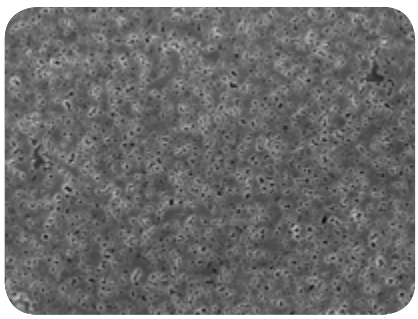
High versatility aluminum alloys Turning Grade-GN9120



• Fine grain cemented carbide substrate with special surface treatment have superior wear resistance and adhesion resistance.
• Application: Suitable for cutting of copper, aluminum alloys and non-ferrous materials in high speed conditions.

NEW

High toughness aluminum alloys Turning Grade-GN9130



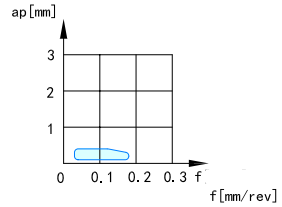
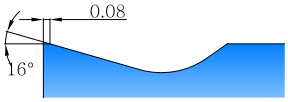
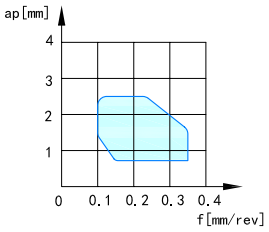
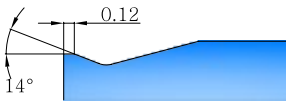
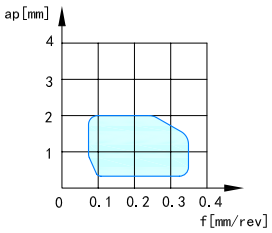
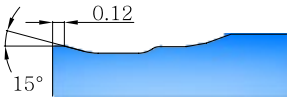
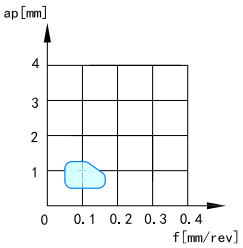
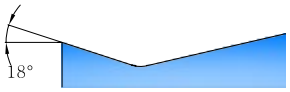
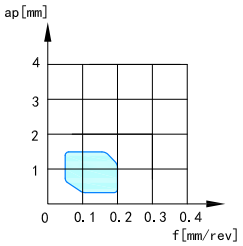
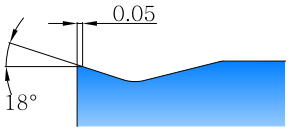
• Micro-fine grain cemented carbide substrate have balance between superior wear resistance and toughness.
• Application: Suitable for semi-finishing of copper, aluminum alloys And non-metallic material.

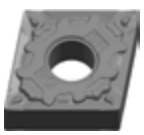
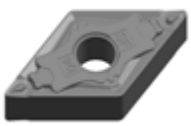
The Working Conditions of Turning Inserts

Workpiece	Geometry		Working Condition		
			●	◔	✣
			Continuous	Light Interrupted	Interruppted
P	Negative	PS	GP91TF		
		GF	GP1115/GP91TF	GP1115/GP1225	GP1225
		QF	GP1105/GP1115/GP91TF/ GP91TM/GP31TM	GP1115/GP1120/GP1225/GP91TM	GP1120/GP1225
		GM	GP1115	GP1115/GP1225	GP1225
		QM	GP1105/GP1115/GP91TF/ GP91TM/GP31TM	GP1115/GP1120/GP1225/GP91TM	GP1120/GP1225
		TS	GP91TM/GP31TM	GP91TM	
		TP	GP91TM/GP31TM	GP91TM	
		SV	GP1115/GP91TF/GP91TM/ GP31TM	GP1115//GP1120/GP1225/GP91TM	GP1120/GP1225
		QR	GP1105/GP1115	GP1225	GP1135
		QH	GP/1105/GP1115	GP1225	GP1135
	Postive	PS	GP91TF		
		GS	GP91TF		
		MM	GP1105/GP91TF/GP91TM/ GP31TM	GP1115/GP91TM	GP1225/GP3125
		GP	GP1115/GP91TF/GP91TM/ GP31TM	GP1115/GP1120/GP1225/GP3125/ GP91TM	GP1120/GP1225/GP3125
		TP	GP91TM/GP31TM	GP91TM	
		KM	GP1115	GP1115/GP1225	GP1225
M	Negative	PS	GS3115/GS3125		
		SF	GS3115		
		LF	GM3215	GM3225	GM3225
		SM	GM1115/GM3215/GP91TF/ GP91TM	GM1125/GM3225/GP91TM	GM3225
		LM	GM1115/GM3215	GM1125/GS3125/GM3225	GM3225
		LV	GM3215	GM3225	GM3225
		LR	GM1115/GM3215	GM1125/GM3225	GM3225
	Postive	PS	GS3115/GS3125	GS3125	
		GS	GS3125		
		MM	GM1115/GM3215	GM1125/GM3225	GM3225
		GP	GM1115/GM3215	GM1125/GM3225	GM3225
K	Negative	UK	GK1115	GK1115/GK1120	GK1125/GK1130
		HK	GK1115	GK1115/GK1120	GK1125/GK1130
		平板/FLAT	GK1115	GK1115/GK1120	GK1125/GK1130
	Postive	GP	GK1115	GK1115/GK1125	GK1125
		KM	GK1115	GK1115/GK1125	GK1125
N	Postive	AL	GN9115	GN9120/GN9130	GN9120/GN9130

Features of Turning Inserts

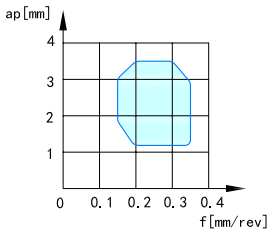
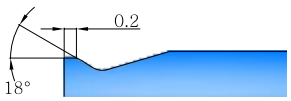
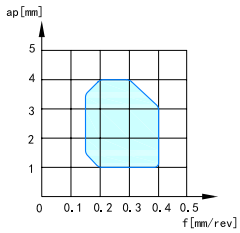
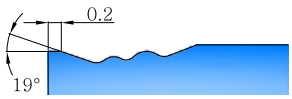
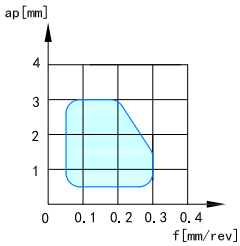
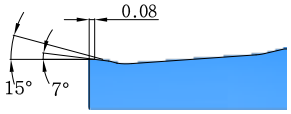
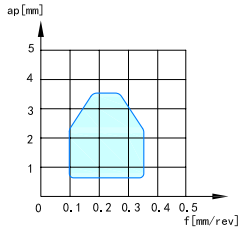
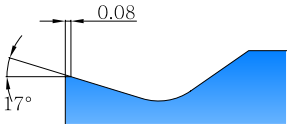
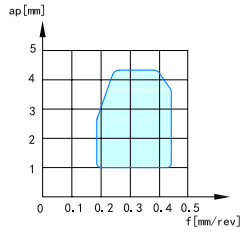
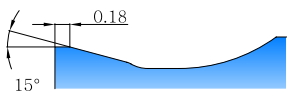
Turning Inserts（Negative）

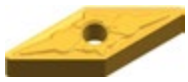
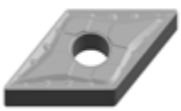
Geometry	Features	Application Range	Cross Section Geometry
PS	• PS for finishing of steel(mild steel) and stainless steel. • Sharp edge reduces cutting force, enables high quality surface. • Low feed,small cutting depth.		
GF	• GF for finishing of general steel and alloy steel. • Sharp tool nose and strong cutting edge. Good chip control under small cutting depth.		
QF	• QF for finishing of general steel and alloy steel. • Curved edge,sharp cutting edge,good chip control and fine surface finish due to curved edge.		
SF	• SF for stainless steel and Heat Resistance Super Alloy（HRSA） • Sharp edge due to results in low cutting forces particularly for thin wall structures and extended shafts.		
LF	• LF for Stainless Steel from finishing to semi-finishing. • Big cutting edge width and rake angle to promote its strength of nose. • Curve edge design to control chip removal direction well		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
				TNGG R/L-PS		
				P041		
						
	CNMG-GF	DNMG-GF	SNMG-GF	TNMG-GF	VNMG-GF	WNMG-GF
	P030	P034	P038	P042	P046	P048
						
	CNMG-QF	DNMG-QF	SNMG-QF	TNMG-QF	VNMG-QF	WNMG-QF
	P030	P034	P038	P042	P046	P048
						
	CNMG-SF	DNMG-SF	SNMG-SF	TNMG-SF	VNMG-SF	WNMG-SF
	P030	P034	P038	P042	P046	P048
						
				TNMG-LF		WNMG-LF
				P042		P048

Features of Turning Inserts

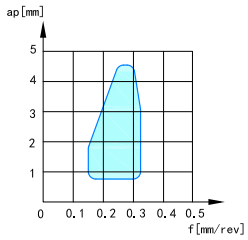
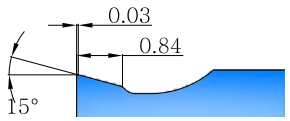
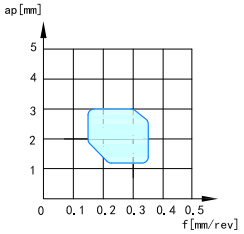
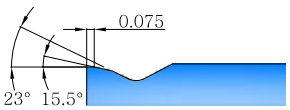
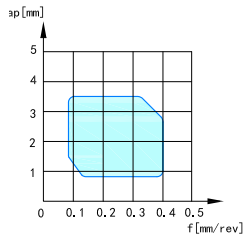
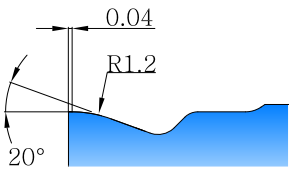
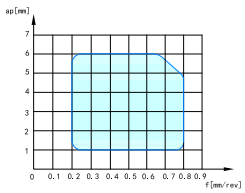
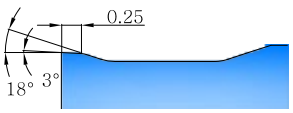
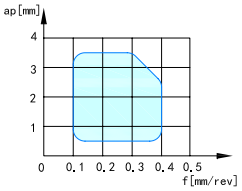
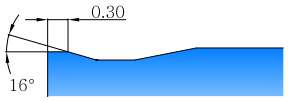
Turning Inserts（Negative）

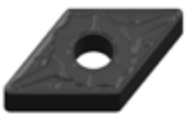
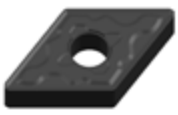
Geometry	Features	Application Range	Cross Section Geometry
GM	• GM for semi-finishing of general steel and alloy steel. • Strong flat cutting edge with good strength.		
QM	• QM for semi-finishing of general steel and alloy steel. • Gradient and waved hump wide applicable geometry range.		
TP	• TP for semi-finishing of general steel, alloy steel and cast iron • Dual rake angle and big cutting edge width design to promote its strength • Overall pattern design, table and reliable installation • Arrow chip breaker improves chip breaking performance during big cutting depth.		
TS	• TS for semi-finishing of general steel and alloy steel. • Big rake angle lower cutting force • Variable groove depth design, with super chip removal.		
SV	• SV for semi-finishing of general steel and alloy steel. • Throughout groove and wide chip groove make cutting available in unstable working conditions. • Long chip groove allows high depth of cuts.		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
	CNMG-GM	DNMG-GM	SNMG-GM	TNMG-GM	VNMG-GM	WNMG-GM
	P030	P034	P038	P043	P046	P048
						
	CNMG-QM	DNMG-QM	SNMG-QM	TNMG-QM	VNMG-QM	WNMG-QM
	P031	P035	P039	P043	P046	P048
						
	CNMG-TP	DNMG-TP	SNMG-TP	TNMG-TP	VNMG-TP	WNMG-TP
	P031	P035	P039	P043	P046	P049
						
		DNMG R/L-TS		TNMG R/L-TS		
		P035		P043		
						
	CNMG R/L-SV	DNMG R/L-SV	SNMG R/L-SV	TNMG R/L-SV		WNMG R/L-SV
	P031	P035	P039	P044		P049

Features of Turning Inserts

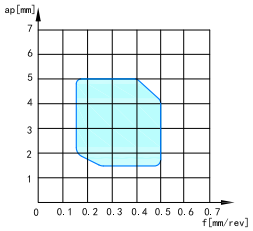
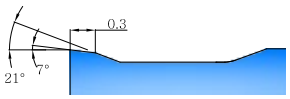
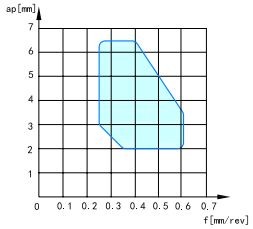
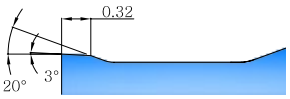
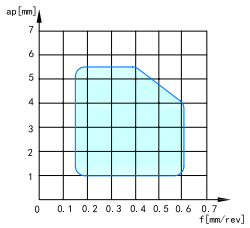
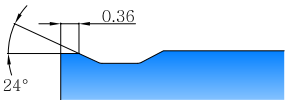
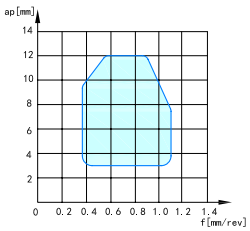
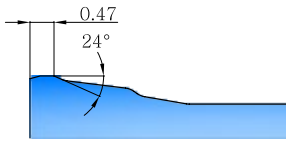
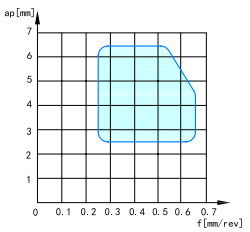
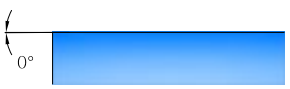
Turning Inserts（Negative）

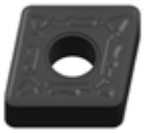
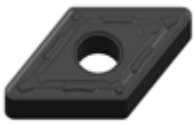
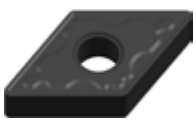
Geometry	Features	Application Range	Cross Section Geometry
LV	• LV for semi-finishing and roughing of stainless steel • No edge width and open chip breaker contribute to its sharp cutting edge and low cutting force. • Large chip breaker contribute to its big cutting depth and width.		
SM	• SM for medium cutting of stainless steel and mild steel. • Sharp cutting edge.		
LM	• LM for semi-finishing of stainless steel and high temperature alloy • Variable rake angle and cutting edge width to ensure its sharpness and strength • Heart-shaped chip breaker with good chip breaking.		
WMV	• WMV for general steel, alloy steel and cast iron • Large chip breaker with low chip removal resistance. • Excellent sharp cutting edge and strength • Good surface quality		
UK	• UK for machining cast iron. • Good Performance After Medium cutting for general conditions.		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
				TNMG R/L-LV		
				P044		
						
	CNMG-SM	DNMG- SM	SNMG- SM	TNMG- SM	VNMG- SM	WNMG-SM
	P031	P036	P039	P044	P046	P049
						
	CNMG-LM	DNMG- LM	SNMG- LM	TNMG- LM	VNMG- LM	WNMG-LM
	P032	P036	P040	P044	P047	P049
						
	CNMG-WMV	DNMX-WMV		TNMX-WMV		WNMG-WMV
	P032	P036		P044		P049
						
	CNMG-UK	DNMG-UK	SNMG-UK	TNMG-UK	VNMG-UK	WNMG-UK
	P032	P036	P040	P044	P047	P050

Features of Turning Inserts

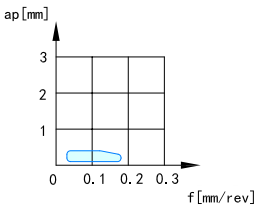
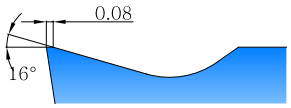
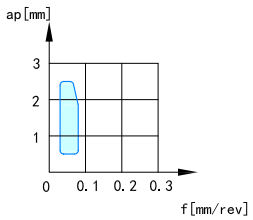
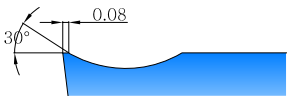
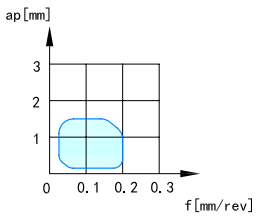
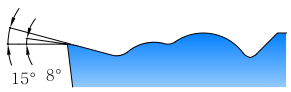
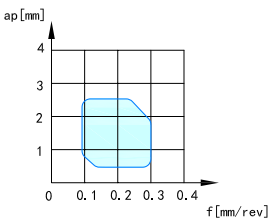
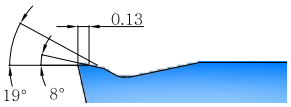
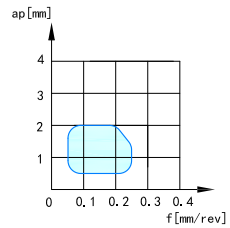
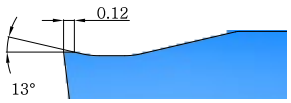
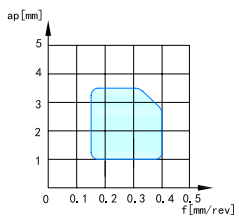
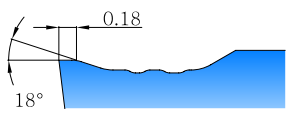
Turning Inserts（Negative）

Geometry	Features	Application Range	Cross Section Geometry
LR	• LR for stainless steel of roughing • Small rake angle and big cutting edge width with strong corner. • Big chip breaker width and shallow • chip breaker depth to ensure good chip removal.		
QR	• QR for rough cutting action of carbon steel,cast steel and alloy steel. • Variable rake angle and land provides enough edge sharpness and strength at different depth of cut.		
HK	• HK for cast iron heavy cutting. • Strong cutting edge, big chip pocket, good at big cutting depth and width.		
QH	• QH for heavy cutting action of carbon steel, cast steel and alloy steel. • Variable land and progressive chip breaker space, generating lower cutting force. • Straight edge line with reinforcement balances strength and cutting action.		
Flat	• Flat-top for cast iron used. • Stable placement. • Strong edge design for intermittent cutting conditions.		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
	CNMG-LR	DNMG-LR	SNMG-LR	TNMG-LR		WNMG-LR
	P032	P037	P040	P045		P050
						
	CNMG-QR	DNMG-QR	SNMG-QR	TNMG-QR		WNMG-QR
	P033	P037	P040	P045		P050
						
	CNMG-HK	DNMG-HK	SNMG-HK	TNMG- HK	VNMG- HK	WNMG- HK
	P033	P037	P041	P045	P047	P050
						
	CNMM-QH		SNMM-QH			
	P033		P041			
						
	CNMA	DNMA	SNMA	TNMA		WNMA
	P033	P037	P041	P045		P050

Features of Turning Inserts

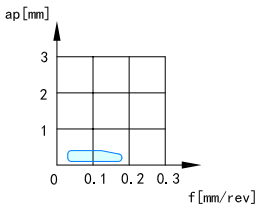
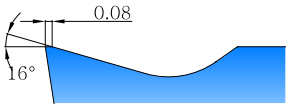
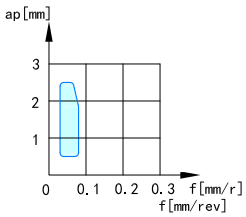
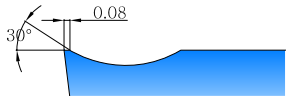
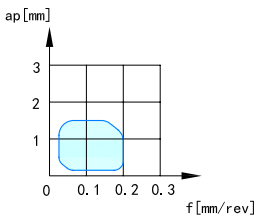
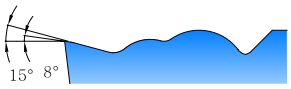
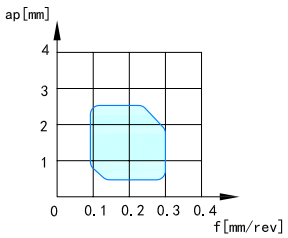
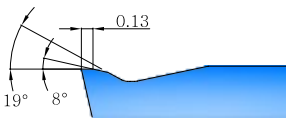
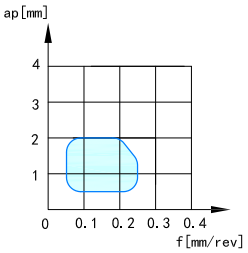
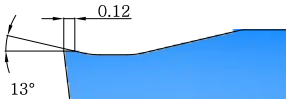
Turning Inserts（Positive）
5°Clearance Angle

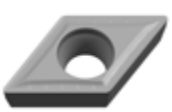
Geometry	Features	Application Range	Cross Section Geometry
PS	• PS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed, small cutting depth.		
GS	• GS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,large cutting depth		
MM	• MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality.		
GP	• GP for light cutting of general steel, alloy steel,stainless steel and cast iron. • Strong tool nose due to flat cutting edge Sharp cutting edge due to double rake angle.		
TP	• TP for light cutting of general steel, alloy steel and cast iron • Dual rake angle and big cutting edge width design to promote its strength • Overall pattern design, table and reliable installation • Arrow chip breaker improves chip breaking performance during big cutting depth.		
KM	• KM for Semi-finishing and roughing of general steel, alloy steel and cast iron. • Variable land design, combine sharpness with fracture resistance.		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
					VBET R/L-PS	
					P064	
						
					VBET R/L-GS	
					P064	
						
					VBMT-MM	
					P064	
						
					VBMT-GP	
					P064	
						
					VBMT-TP	
					P064	
						
					VBMT-KM	
					P064	

Features of Turning Inserts

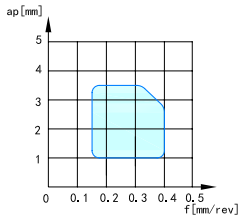
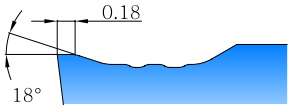
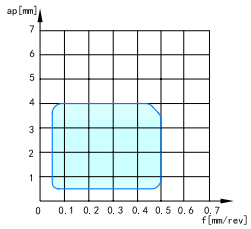
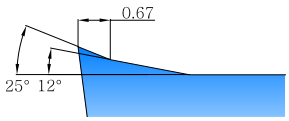
Turning Inserts（Positive）
7°Clearance Angle

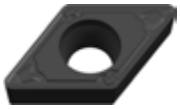
Geometry	Features	Application Range	Cross Section Geometry
PS	• PS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,small cutting depth.		
GS	• GS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,large cutting depth.		
MM	• MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality.		
GP	• GP for light cutting of general steel, alloy steel, stainless steel and cast iron. • Strong tool nose due to flat cutting edge and • Sharp cutting edge due to double rake angle.		
TP	• TP for light cutting of general steel, alloy steel and cast iron • Dual rake angle and big cutting edge width design to promote its strength • Overall pattern design, table and reliable installation • Arrow chip breaker improves chip breaking performance during big cutting depth.		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
	CCET R/L-PS	DCETR/L-PS		TCET R/L-PS	VCET R/L-PS	
	P051	P055		P059	P065	
						
	CCET R/L-GS	DCET R/L-GS		TCET R/L-GS	VCETR/L-GS	
	P051	P055		P059	P065	
						
	CCMT-MM	DCMT-MM	SCMT-MM	TCMT-MM		
	P052	P056	P057	P060		
						
	CCMT-GP	DCMT-GP	SCMT-GP	TCMT-GP	VCMT-GP	WCMT-GP
	P052	P056	P057	P060	P065	P067
						
	CCMT-TP	DCMT-TP	SCMT-TP	TCMT-TP		
	P052	P056	P057	P060		

Features of Turning Inserts

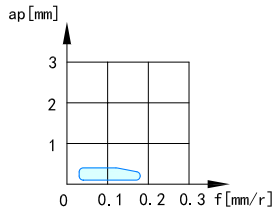
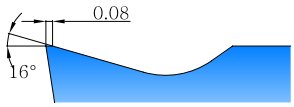
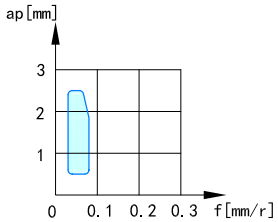
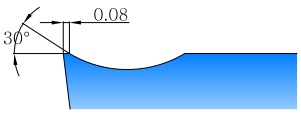
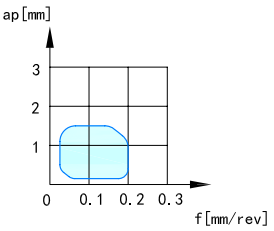
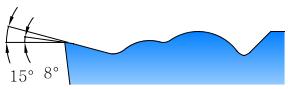
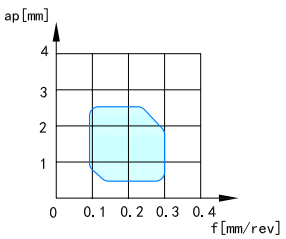
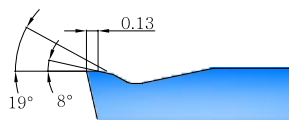
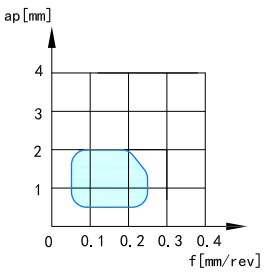
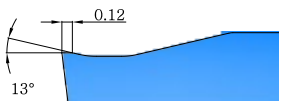
Turning Inserts（Positive）
7°Clearance Angle

Geometry	Features	Application Range	Cross Section Geometry	
KM	• KM for Semi-finishing and roughing of general steel, alloy steel and cast iron. • Variable land design, combine sharpness with fracture resistance.			
AL	• AL for aluminum alloy cutting. • Sharp tool nose due to large rake angle.			

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
	CCMT-KM	DCMT-KM	SCMT-KM	TCMT-KM	VCMT-KM	
	P053	P056	P057	P060	P065	
						
	CCGX-AL	DCGX-AL	SCGX-AL	TCGX-AL	VCGX-AL	
	P053	P056	P057	P061	P066	

Features of Turning Inserts

Turning Inserts（Positive）
11°Clearance Angle

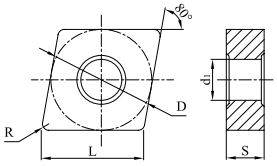
Geometry	Features	Application Range	Cross Section Geometry
PS	• PS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,small cutting depth.		
GS	• GS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,large cutting depth		
MM	• MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality.		
GP	• GP for light cutting of general steel, alloy steel,stainless steel and cast iron • Strong tool nosedue to flat cutting edge and sharp cutting edge due to double rake angle.		
TP	• TP for light cutting of general steel, alloy steel and cast iron • Dual rake angle and big cutting edge width design to promote its strength • Overall pattern design, table and reliable installation • Arrow chip breaker improves chip breaking performance during big cutting depth.		

	80° Rhombic	55° Rhombic	90° Square	60° Regular Triangle	35° Rhombic	80° Trigon
						
				TPET $_{R/L}$-PS TPEH $_{R/L}$-PS	VPET $_{R/L}$-PS	
				P062	P067	
						
				TPET $_{R/L}$-GS TPEH $_{R/L}$-GS	VPET $_{R/L}$-GS	
				P062	P067	
						
				TPMT-MM		
				P063		
						
	CPMT-GP CPGT-GP		SPMT-GP	TPMT-GP		
	P054		P058	P063		
						
				TPMT-TP		
				P063		

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



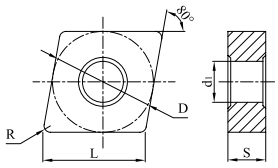
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CNMG090308-GF	9.7	9.525	3.18	3.81	0.8		○																			
	CNMG120404-GF	12.9	12.7	4.76	5.16	0.4		○																			
	CNMG120408-GF	12.9	12.7	4.76	5.16	0.8		○																			
	CNMG120412-GF	12.9	12.7	4.76	5.16	1.2																					
	CNMG090304-QF	9.7	9.525	3.18	3.81	0.4				○																	
	CNMG090308-QF	9.7	9.525	3.18	3.81	0.8				○																	
	CNMG120404-QF	12.9	12.7	4.76	5.16	0.4	○	●	○	○								○							○		○
	CNMG120408-QF	12.9	12.7	4.76	5.16	0.8	●	●	○	○								○							○		○
	CNMG120404-SF	12.9	12.7	4.76	5.16	0.4										●											
	CNMG120408-SF	12.9	12.7	4.76	5.16	0.8										●											
	CNMG090308-GM	9.7	9.525	3.18	3.81	0.8		○		○																	
	CNMG120404-GM	12.9	12.7	4.76	5.16	0.4		○		●																	
	CNMG120408-GM	12.9	12.7	4.76	5.16	0.8		●		●																	
	CNMG120412-GM	12.9	12.7	4.76	5.16	1.2		○		●																	
	CNMG120416-GM	12.9	12.7	4.76	5.16	1.6		○		○																	
	CNMG160608-GM	16.1	15.875	6.35	6.35	0.8		○																			
	CNMG160612-GM	16.1	15.875	6.35	6.35	1.2		○		○																	
	CNMG160616-GM	16.1	15.875	6.35	6.35	1.6		○		○																	
	CNMG190608-GM	19.3	19.05	6.35	7.94	0.8				○																	
	CNMG190612-GM	19.3	19.05	6.35	7.94	1.2		○		○																	
	CNMG190616-GM	19.3	19.05	6.35	7.94	1.6		○		●																	

● Stock ○ Available Upon Order

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



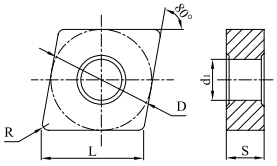
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CNMG090304-QM	9.7	9.525	3.18	3.81	0.4		○		○																	
	CNMG090308-QM	9.7	9.525	3.18	3.81	0.8		○		○																	
	CNMG120404-QM	12.9	12.7	4.76	5.16	0.4	●	●		●								○									○
	CNMG120408-QM	12.9	12.7	4.76	5.16	0.8	●	●	●	●								○									○
	CNMG120412-QM	12.9	12.7	4.76	5.16	1.2	●	●	●	●								○									
	CNMG120416-QM	12.9	12.7	4.76	5.16	1.6	○	○																			
	CNMG160608-QM	16.1	15.875	6.35	6.35	0.8		●		●																	
	CNMG160612-QM	16.1	15.875	6.35	6.35	1.2	○	●		○																	
	CNMG190608-QM	19.3	19.05	6.35	7.94	0.8		●		●																	
	CNMG190612-QM	19.3	19.05	6.35	7.94	1.2	○			○																	
	CNMG190616-QM	19.3	19.05	6.35	7.94	1.6		●		●																	
	CNMG120404-TP	12.9	12.7	4.76	5.16	0.4																			●		●
	CNMG120408-TP	12.9	12.7	4.76	5.16	0.8																			○		●
	CNMG120408R-SV	12.9	12.7	4.76	5.16	0.8				●																	○
	CNMG120408L-SV	12.9	12.7	4.76	5.16	0.8				●																	○
	CNMG090304-SM	9.7	9.525	3.18	3.81	0.4						○	○	○	○												
	CNMG09T304-SM	9.7	9.525	3.97	3.81	0.4						○	○	○	○												
	CNMG090308-SM	9.7	9.525	3.18	3.81	0.8						○	○	○	○												
	CNMG09T308-SM	9.7	9.525	3.97	3.81	0.8						○	○	○	○												
	CNMG120404-SM	12.9	12.7	4.76	5.16	0.4						○	●	○	●	○											○
	CNMG120408-SM	12.9	12.7	4.76	5.16	0.8						○	●	●	●	●											○
	CNMG120412-SM	12.9	12.7	4.76	5.16	1.2						○	●	○	●	○											
	CNMG120416-SM	12.9	12.7	4.76	5.16	1.6						○	○	○	○												
	CNMG160608-SM	16.1	15.875	6.35	6.35	0.8						○	○	○	○												
	CNMG160612-SM	16.1	15.875	6.35	6.35	1.2						○	○	○	●												
	CNMG160616-SM	16.1	15.875	6.35	6.35	1.6						○	○	○	●												
	CNMG190608-SM	19.3	19.05	6.35	7.94	0.8						○	○	○	●												
	CNMG190612-SM	19.3	19.05	6.35	7.94	1.2						○	○	○	●												
	CNMG190616-SM	19.3	19.05	6.35	7.94	1.6						○	○	○	●												

● Stock ○ Available Upon Order

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



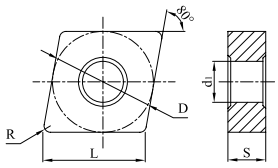
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CNMG120404-LM	12.9	12.7	4.76	5.16	0.4						○	●	○	●												
	CNMG120408-LM	12.9	12.7	4.76	5.16	0.8						○	●	○	●		●										
	CNMG120412-LM	12.9	12.7	4.76	5.16	1.2						○	○	●	●												
	CNMG120408-WMV	12.9	12.7	4.76	5.16	0.8	●			●								●	○	○							
	CNMG120412-WMV	12.9	12.7	4.76	5.16	1.2	●			●								●	○	○							
	CNMG120404-UK	12.9	12.7	4.76	5.16	0.4												●	●	●							
	CNMG120408-UK	12.9	12.7	4.76	5.16	0.8												●	●	●	○						
	CNMG120412-UK	12.9	12.7	4.76	5.16	1.2												●	○	●	○						
	CNMG120416-UK	12.9	12.7	4.76	5.16	1.6												●	○	○	○						
	CNMG160608-UK	16.1	15.875	6.35	6.35	0.8												●	○	○	○						
	CNMG160612-UK	16.1	15.875	6.35	6.35	1.2												●	○	○	○						
	CNMG160616-UK	16.1	15.875	6.35	6.35	1.6												○	○	○	○						
	CNMG190612-UK	19.3	19.05	6.35	7.94	1.2												○	○	○	○						
	CNMG190616-UK	19.3	19.05	6.35	7.94	1.6												●	○	○	○						
	CNMG120408-LR	12.9	12.7	4.76	5.16	0.8						●	●	○	●												
	CNMG120412-LR	12.9	12.7	4.76	5.16	1.2						○	○	○	○												
	CNMG160608-LR	16.1	15.875	6.35	6.35	0.8						○	○	○	●												
	CNMG160612-LR	16.1	15.875	6.35	6.35	1.2						○	○	●	●												
	CNMG190612-LR	19.3	19.05	6.35	7.94	1.2						○	○	●	●												
	CNMG190616-LR	19.3	19.05	6.35	7.94	1.6						○	○	○	●												

● Stock ○ Available Upon Order

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



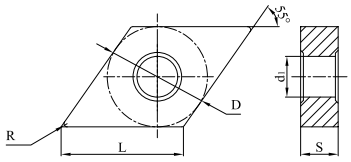
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CNMG120408-QR	12.9	12.7	4.76	5.16	0.8	○	●		●	●																
	CNMG120412-QR	12.9	12.7	4.76	5.16	1.2	●	●		●	○																
	CNMG120416-QR	12.9	12.7	4.76	5.16	1.6				●																	
	CNMG160608-QR	16.1	15.875	6.35	6.35	0.8				●																	
	CNMG160612-QR	16.1	15.875	6.35	6.35	1.2	●	●		●	○																
	CNMG160616-QR	16.1	15.875	6.35	6.35	1.6	○			○	○																
	CNMG190608-QR	19.3	19.3	6.35	7.94	0.8				○	○																
	CNMG190612-QR	19.3	19.3	6.35	7.94	1.2	○			●	●																
	CNMG190616-QR	19.3	19.3	6.35	7.94	1.6	○			○	○																
	CNMG190624-QR	19.3	19.3	6.35	7.94	2.4		○		○																	
	CNMG250924-QR	25.8	25.4	9.52	9.21	2.4				○																	
	CNMG120408-HK	12.9	12.7	4.76	5.16	0.8												●	●	●	○						
	CNMG120412-HK	12.9	12.7	4.76	5.16	1.2												●	●	●	○						
	CNMG120416-HK	12.9	12.7	4.76	5.16	1.6												●	●	●	○						
	CNMG160612-HK	16.1	15.875	6.35	6.35	1.2												●	○	○	○						
	CNMG160616-HK	16.1	15.875	6.35	6.35	1.6												●	○	●	○						
	CNMG190612-HK	19.3	19.05	6.35	7.94	1.2												●	○	○	○						
	CNMG190616-HK	19.3	19.05	6.35	7.94	1.6												○	○	○	○						
	CNMM190616-QH	19.3	19.05	6.35	7.94	1.6	○			○	○																
	CNMM190624-QH	19.3	19.05	6.35	7.94	2.4				○	○																
	CNMM250924-QH	25.8	25.4	9.52	9.12	2.4	○	●		●	○																
	CNMA120404	12.9	12.7	4.76	5.16	0.4												●		○							
	CNMA120408	12.9	12.7	4.76	5.16	0.8												●	●	●	○						
	CNMA120412	12.9	12.7	4.76	5.16	1.2												●	●	●	●						
	CNMA120416	12.9	12.7	4.76	5.16	1.6												●	●	○	○						
	CNMA160612	16.1	15.875	6.35	6.35	1.2												●	○	○	○						
	CNMA160616	16.1	15.875	6.35	6.35	1.6												●	○	○	○						
	CNMA160620	16.1	15.875	6.35	6.35	2.0												○	○	○	○						
	CNMA190612	19.3	19.05	6.35	7.94	1.2												●	○	○	○						
	CNMA190616	19.3	19.05	6.35	7.94	1.6												●	○	○	○						
	CNMA190624	19.3	19.05	6.35	7.94	2.4												○	○	○	○						

● Stock ○ Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



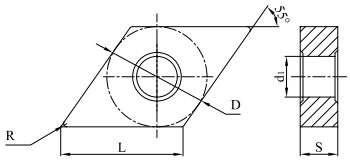
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	DNMG110404-GF	11.6	9.525	4.76	3.81	0.4		○																			
	DNMG110408-GF	11.6	9.525	4.76	3.81	0.8		○		○																	
	DNMG150404-GF	15.5	12.7	4.76	5.16	0.4		○																			
	DNMG150408-GF	15.5	12.7	4.76	5.16	0.8		●																			
	DNMG150604-GF	15.5	12.7	6.35	5.16	0.4		○																			
	DNMG150608-GF	15.5	12.7	6.35	5.16	0.8		○																			
	DNMG110404-QF	11.6	9.525	4.76	3.81	0.4		○		○																	
	DNMG110408-QF	11.6	9.525	4.76	3.81	0.8		○		○																	
	DNMG150404-QF	15.5	12.7	4.76	5.16	0.4	○	○		○															○		○
	DNMG150408-QF	15.5	12.7	4.76	5.16	0.8	○	●		○															○		○
	DNMG150604-QF	15.5	12.7	6.35	5.16	0.4		○		○																	○
	DNMG150608-QF	15.5	12.7	6.35	5.16	0.8	○	○		○																	○
	DNMG110404-SF	11.6	9.525	4.76	3.81	0.4										●											
	DNMG110408-SF	11.6	9.525	4.76	3.81	0.8										○											
	DNMG150404-SF	15.5	12.7	4.76	5.16	0.4										●											
	DNMG150408-SF	15.5	12.7	4.76	5.16	0.8										●											
	DNMG150604-SF	15.5	12.7	6.35	5.16	0.4										●											
	DNMG150608-SF	15.5	12.7	6.35	5.16	0.8										○											
	DNMG110404-GM	11.6	9.525	4.76	3.81	0.4				●																	
	DNMG110408-GM	11.6	9.525	4.76	3.81	0.8		●		●																	
	DNMG150404-GM	15.5	12.7	4.76	5.16	0.4		○		○																	
	DNMG150408-GM	15.5	12.7	4.76	5.16	0.8				●																	
	DNMG150412-GM	15.5	12.7	4.76	5.16	1.2		●		●																	
	DNMG150604-GM	15.5	12.7	6.35	5.16	0.4																					
	DNMG150608-GM	15.5	12.7	6.35	5.16	0.8		○		●																	
	DNMG150612-GM	15.5	12.7	6.35	5.16	1.2		○		○																	
	DNMG150616-GM	15.5	12.7	6.35	5.16	1.6																					

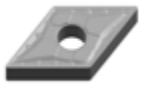
● Stock ○ Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



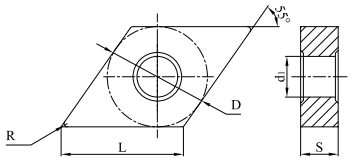
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	DNMG110404-QM	11.6	9.525	4.76	3.81	0.4		○		●																	
	DNMG110408-QM	11.6	9.525	4.76	3.81	0.8		●	○	●																	
	DNMG110412-QM	11.6	9.525	4.76	3.81	1.2		○																			
	DNMG150404-QM	15.5	12.7	4.76	5.16	0.4				●																	○
	DNMG150408-QM	15.5	12.7	4.76	5.16	0.8	●	●	○	●								●									○
	DNMG150412-QM	15.5	12.7	4.76	5.16	1.2		●	○	●																	
	DNMG150604-QM	15.5	12.7	6.35	5.16	0.4	●			●																	○
	DNMG150608-QM	15.5	12.7	6.35	5.16	0.8	●	●	●	●								○									○
	DNMG150612-QM	15.5	12.7	6.35	5.16	1.2	●			●								●									
	DNMG150404-TP	15.5	12.7	4.76	5.16	0.4																			●		●
	DNMG150408-TP	15.5	12.7	4.76	5.16	0.8																			○		○
	DNMG150604-TP	15.5	12.7	6.35	5.16	0.4																			○		○
	DNMG150608-TP	15.5	12.7	6.35	5.16	0.8																			○		○
	DNMG150404R -TS	15.5	12.7	6.35	5.16	0.4																			○		●
	DNMG150404L -TS	15.5	12.7	6.35	5.16	0.4																			○		○
	DNMG150408R -TS	15.5	12.7	6.35	5.16	0.8																			○		○
	DNMG150408L -TS	15.5	12.7	6.35	5.16	0.8																			○		○
	DNMG150604R-SV	15.5	12.7	6.35	5.16	0.4				●			○												○		○
	DNMG150604L-SV	15.5	12.7	6.35	5.16	0.4				○			○												○		○
	DNMG150608R-SV	15.5	12.7	6.35	5.16	0.8				●			○												○		○
	DNMG150608L-SV	15.5	12.7	6.35	5.16	0.8							○												○		○

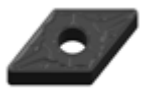
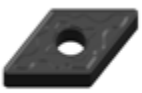
● Stock ○ Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



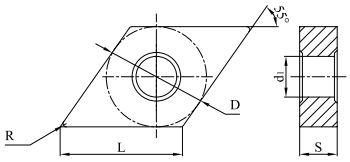
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	DNMG110404-SM	11.6	9.525	4.76	3.81	0.4						○	●	○	●												
	DNMG110408-SM	11.6	9.525	4.76	3.81	0.8						○	○	○	●												
	DNMG110412-SM	11.6	9.525	4.76	3.81	1.2						○	○	○	○												
	DNMG150404-SM	15.5	12.7	4.76	5.16	0.4						○	●	○	●												
	DNMG150408-SM	15.5	12.7	4.76	5.16	0.8						○	●	○	●												
	DNMG150412-SM	15.5	12.7	4.76	5.16	1.2						○	○	○	○												
	DNMG150604-SM	15.5	12.7	6.35	5.16	0.4						○	○	○	●												
	DNMG150608-SM	15.5	12.7	6.35	5.16	0.8						○	●	○	●												
	DNMG150612-SM	15.5	12.7	6.35	5.16	1.2						○	○	○	●												
	DNMG110404-LM	11.6	9.525	4.76	3.81	0.4						○	○	○	●												
	DNMG110408-LM	11.6	9.525	4.76	3.81	0.8						○	○	○	○												
	DNMG150404-LM	15.5	12.7	4.76	5.16	0.4						○	○	●	●												
	DNMG150408-LM	15.5	12.7	4.76	5.16	0.8						○	○	○	●												
	DNMG150412-LM	15.5	12.7	4.76	5.16	1.2						○	○	○	○												
	DNMG150604-LM	15.5	12.7	6.35	5.16	0.4						○	○	○	●												
	DNMG150608-LM	15.5	12.7	6.35	5.16	0.8						○	○	○	●												
	DNMG150612-LM	15.5	12.7	6.35	5.16	1.2						○	○	○	○												
WIPER 	DNMX150408-WMV	15.5	12.7	4.76	5.16	0.8	●			●								●	○	○							
	DNMX150412-WMV	15.5	12.7	4.76	5.16	1.2	●			●								●	○	○							
	DNMX150608-WMV	15.5	12.7	6.35	5.16	0.8	●			●								●	○	○							
	DNMX150612-WMV	15.5	12.7	6.35	5.16	1.2	●			●								●	○	○							
	DNMG150404-UK	15.5	12.7	4.76	5.16	0.4												●		○							
	DNMG150408-UK	15.5	12.7	4.76	5.16	0.8												●	○	○	○						
	DNMG150412-UK	15.5	12.7	4.76	5.16	1.2												●	○	○	○						
	DNMG150604-UK	15.5	12.7	6.35	5.16	0.4												●	○	○							
	DNMG150608-UK	15.5	12.7	6.35	5.16	0.8												●	●	●	○						
	DNMG150612-UK	15.5	12.7	6.35	5.16	1.2												●	○	○	○						
	DNMG150616-UK	15.5	12.7	6.35	5.16	1.6												○		○							

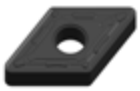
● Stock ○ Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



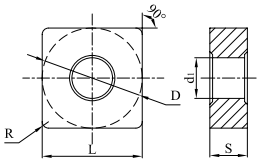
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	DNMG150408-LR	15.5	12.7	4.76	5.16	0.8						○	○	○	○												
	DNMG150412-LR	15.5	12.7	4.76	5.16	1.2						○	○	○	○												
	DNMG150608-LR	15.5	12.7	6.35	6.35	0.8						○	○	○	●												
	DNMG150612-LR	15.5	12.7	6.35	6.35	1.2						○	○	○	○												
	DNMG150408-QR	15.5	12.7	4.76	5.16	0.8				○																	
	DNMG150412-QR	15.5	12.7	4.76	5.16	1.2				○																	
	DNMG150608-QR	15.5	12.7	6.35	6.35	0.8		○		○	○																
	DNMG150612-QR	15.5	12.7	6.35	6.35	1.2	○	○		●	○																
	DNMG150616-QR	15.5	12.7	6.35	6.35	1.6				○	○																
	DNMG150408-HK	15.5	12.7	4.76	5.16	0.8												●	○	○	○						
	DNMG150412-HK	15.5	12.7	4.76	5.16	1.2												●	○	○	○						
	DNMG150608-HK	15.5	12.7	6.35	5.16	0.8												●	○	●	○						
	DNMG150612-HK	15.5	12.7	6.35	5.16	1.2												●	○	○	○						
	DNMA150404	15.5	12.7	4.76	5.16	0.4												●		○							
	DNMA150408	15.5	12.7	4.76	5.16	0.8												●	○	○	○						
	DNMA150412	15.5	12.7	4.76	5.16	1.2												○	○	○	○						
	DNMA150416	15.5	12.7	4.76	5.16	1.6												○	○	○	○						
	DNMA150604	15.5	12.7	6.35	5.16	0.4												○		○							
	DNMA150608	15.5	12.7	6.35	5.16	0.8												●	●	○	○						
	DNMA150612	15.5	12.7	6.35	5.16	1.2												●	○	○	○						

● Stock ○ Available Upon Order

Turning Insert (Negative)

SN□□

Square 90° with Hole



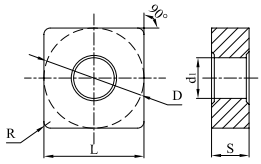
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	SNMG090304-GF	9.525	9.525	3.18	3.81	0.4		○																			
	SNMG090308-GF	9.525	9.525	3.18	3.81	0.8		○																			
	SNMG120404-GF	12.7	12.7	4.76	5.16	0.4		○																			
	SNMG120408-GF	12.7	12.7	4.76	5.16	0.8		○																			
	SNMG090304-QF	9.525	9.525	3.18	3.81	0.4		○		○																	
	SNMG090308-QF	9.525	9.525	3.18	3.81	0.8		○		○																	
	SNMG120404-QF	12.7	12.7	4.76	5.16	0.4		○		○																	○
	SNMG120408-QF	12.7	12.7	4.76	5.16	0.8	○	●		○								○									○
	SNMG120404-SF	12.7	12.7	4.76	5.16	0.4										○											
	SNMG120408-SF	12.7	12.7	4.76	5.16	0.8										●											
	SNMG090304-GM	9.525	9.525	3.18	3.81	0.4																					
	SNMG090308-GM	9.525	9.525	3.18	3.81	0.8				○																	
	SNMG120404-GM	12.7	12.7	4.76	5.16	0.4		○		○																	
	SNMG120408-GM	12.7	12.7	4.76	5.16	0.8				●																	
	SNMG120412-GM	12.7	12.7	4.76	5.16	1.2		○		○																	
	SNMG120416-GM	12.7	12.7	4.76	5.16	1.6				○																	
	SNMG150608-GM	15.875	15.875	6.35	6.35	0.8				○																	
	SNMG150612-GM	15.875	15.875	6.35	6.35	1.2				○																	
	SNMG150616-GM	15.875	15.875	6.35	6.35	1.6				○																	
	SNMG190612-GM	19.05	19.05	6.35	7.94	1.2				●																	
	SNMG190616-GM	19.05	19.05	6.35	7.94	1.6																					

● Stock ○ Available Upon Order

Turning Insert (Negative)

SN□□

Square 90° with Hole



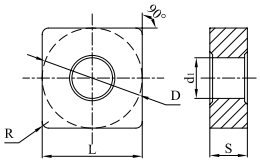
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	SNMG090304-QM	9.525	9.525	3.18	3.81	0.4		○		○																	
	SNMG090308-QM	9.525	9.525	3.18	3.81	0.8		○		○																	
	SNMG120404-QM	12.7	12.7	4.76	5.16	0.4		○	○	○																	○
	SNMG120408-QM	12.7	12.7	4.76	5.16	0.8	○	●	○	●								○									○
	SNMG120412-QM	12.7	12.7	4.76	5.16	1.2		○		●																	
	SNMG120416-QM	12.7	12.7	4.76	5.16	1.6				●																	
	SNMG150608-QM	15.875	15.875	6.35	6.35	0.8		○		○																	
	SNMG150612-QM	15.875	15.875	6.35	6.35	1.2		●																			
	SNMG190612-QM	19.05	19.05	6.35	7.94	1.2		○																			
	SNMG120404-TP	12.7	12.7	4.76	5.16	0.4																			○		○
	SNMG120408-TP	12.7	12.7	4.76	5.16	0.8																			○		○
	SNMG120404R-SV	12.7	12.7	4.76	5.16	0.4				●																	
	SNMG120408R-SV	12.7	12.7	4.76	5.16	0.8				●																	
	SNMG120408L-SV	12.7	12.7	4.76	5.16	0.8				●																	
	SNMG090304-SM	9.525	9.525	3.18	3.81	0.4						○	○	○	○												
	SNMG090308-SM	9.525	9.525	3.18	3.81	0.8						○	○	○	○												
	SNMG120404-SM	12.7	12.7	4.76	5.16	0.4						○	●	○	●												
	SNMG120408-SM	12.7	12.7	4.76	5.16	0.8						○	●	●	●	○											
	SNMG120412-SM	12.7	12.7	4.76	5.16	1.2						○	○	○	●												
	SNMG120416-SM	12.7	12.7	4.76	5.16	1.6						○	○	○	○												
	SNMG150608-SM	15.875	15.875	6.35	6.35	0.8						○	○	○	○												
	SNMG150612-SM	15.875	15.875	6.35	6.35	1.2						○	○	○	○	○											
	SNMG150616-SM	15.875	15.875	6.35	6.35	1.6						○	○	○	○												
	SNMG190612-SM	19.05	19.05	6.35	7.94	1.2						○	○	○	●												
	SNMG190616-SM	19.05	19.05	6.35	7.94	1.6						○	○	○	●	○											

● Stock ○ Available Upon Order

Turning Insert (Negative)

SN□□

Square 90° with Hole



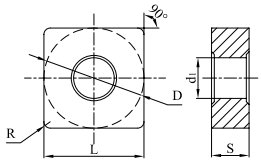
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	SNMG120404-LM	12.7	12.7	4.76	5.16	0.4						○	○	○	●												
	SNMG120408-LM	12.7	12.7	4.76	5.16	0.8						○	○	○	●		○										
	SNMG120412-LM	12.7	12.7	4.76	5.16	1.2						○	○	○	○		○										
	SNMG120408-UK	12.7	12.7	4.76	5.16	0.8												●	○	○	○						
	SNMG120412-UK	12.7	12.7	4.76	5.16	1.2												●	○	○	○						
	SNMG150412-UK	15.875	15.875	4.76	6.35	1.2												○	○	○	○						
	SNMG150612-UK	15.875	15.875	6.35	6.35	1.2												○	○	○	○						
	SNMG150616-UK	15.875	15.875	6.35	6.35	1.6												○	○	○	○						
	SNMG190612-UK	19.05	19.05	6.35	7.94	1.2												○	○	○	○						
	SNMG190616-UK	19.05	19.05	6.35	7.94	1.6												○	○	○	○						
	SNMG120408-LR	12.7	12.7	4.76	5.16	0.8						○	○	○	●		○										
	SNMG120412-LR	12.7	12.7	4.76	5.16	1.2						○	○	○	●		○										
	SNMG150608-LR	15.875	15.875	6.35	6.35	0.8						○	○	○	○												
	SNMG150612-LR	15.875	15.875	6.35	6.35	1.2						○	○	○	○												
	SNMG190612-LR	19.05	19.05	6.35	7.94	1.2						○	○	○	●												
	SNMG190616-LR	19.05	19.05	6.35	7.94	1.6						○	○	○	○												
	SNMG120408-QR	12.7	12.7	4.76	5.16	0.8				○	○																
	SNMG120412-QR	12.7	12.7	4.76	5.16	1.2				○	○																
	SNMG120416-QR	12.7	12.7	4.76	5.16	1.6				○																	
	SNMG150608-QR	15.875	15.875	6.35	6.35	0.8				○																	
	SNMG150612-QR	15.875	15.875	6.35	6.35	1.2				○	○																
	SNMG150616-QR	15.875	15.875	6.35	6.35	1.6		○		○	○																
	SNMG150624-QR	15.875	15.875	6.35	6.35	2.4				○																	
	SNMG190608-QR	19.05	19.05	6.35	7.94	0.8				○																	
	SNMG190612-QR	19.05	19.05	6.35	7.94	1.2				○	●																
	SNMG190616-QR	19.05	19.05	6.35	7.94	1.6	●			○																	
	SNMG190624-QR	19.05	19.05	6.35	7.94	2.4				○																	
	SNMG250724-QR	25.4	25.4	7.94	9.21	2.4		○		○																	
	SNMG250924-QR	25.4	25.4	9.52	9.21	2.4		○																			

● Stock ○ Available Upon Order

Turning Insert (Negative)

SN□□

Square 90° with Hole



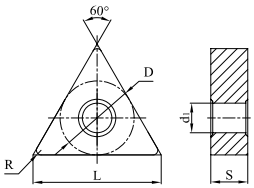
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	SNMG120408-HK	12.7	12.7	4.76	5.16	0.8												●	●	○	○						
	SNMG120412-HK	12.7	12.7	4.76	5.16	1.2												●	●	○	○						
	SNMG120416-HK	12.7	12.7	4.76	5.16	1.6												○	○	●	○						
	SNMG150612-HK	15.875	15.875	6.35	6.35	1.2												○	○	○	○						
	SNMG150616-HK	15.875	15.875	6.35	6.35	1.6												●	○	○	○						
	SNMG190612-HK	19.05	19.05	6.35	7.94	1.2												○	○	○	○						
	SNMG190616-HK	19.05	19.05	6.35	7.94	1.6												○	○	○	○						
	SNMM150616-QH	15.875	19.05	6.35	7.94	1.6	○	○																			
	SNMM190612-QH	19.05	19.05	6.35	7.94	1.2				○																	
	SNMM190616-QH	19.05	19.05	6.35	7.94	1.6				○																	
	SNMM190624-QH	19.05	19.05	6.35	7.94	2.4				○	○																
	SNMM250724-QH	25.4	25.4	7.94	9.12	2.4	○	●		○	○																
	SNMM250732-QH	25.4	25.4	7.94	9.12	3.2				○																	
	SNMM250924-QH	25.4	25.4	9.52	9.12	2.4	○	○		●	○																
	SNMM250932-QH	25.4	25.4	9.52	9.12	3.2				○	○																
	SNMA090304	9.525	9.525	3.18	3.81	0.4												○		○							
	SNMA090308	9.525	9.525	3.18	3.81	0.8												○		○							
	SNMA090312	9.525	9.525	3.18	3.81	1.2												○		○							
	SNMA120404	12.7	12.7	4.76	5.16	0.4												○		○							
	SNMA120408	12.7	12.7	4.76	5.16	0.8												●	○	○	○						
	SNMA120412	12.7	12.7	4.76	5.16	1.2												●	●	●	○						
	SNMA120416	12.7	12.7	4.76	5.16	1.6												●	○	●	●						
	SNMA190612	19.05	19.05	6.35	7.94	1.2												●	○	○	○						
	SNMA190616	19.05	19.05	6.35	7.94	1.6												○	○	○	○						
	SNMA190632	19.05	19.05	6.35	7.94	3.2												○	○	○	○						

● Stock ○ Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



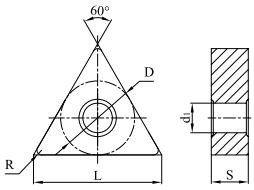
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TNGG160402R-PS	16.5	9.525	4.76	3.81	0.2										●	●								●		
	TNGG160402L-PS	16.5	9.525	4.76	3.81	0.2										○	○								○		
	TNGG160404R-PS	16.5	9.525	4.76	3.81	0.4										○	○								○		
	TNGG160404L-PS	16.5	9.525	4.76	3.81	0.4										○	○								○		
	TNGG160408R-PS	16.5	9.525	4.76	3.81	0.8										○	○								○		
	TNGG160408L-PS	16.5	9.525	4.76	3.81	0.8										○	○								○		
	TNMG110304-GF	11	6.35	3.18	2.26	0.4		○																			
	TNMG160304-GF	16.5	9.525	3.18	3.81	0.4		○																			
	TNMG160308-GF	16.5	9.525	3.18	3.81	0.8		○																			
	TNMG160404-GF	16.5	9.525	4.76	3.81	0.4		○		●																	
	TNMG160408-GF	16.5	9.525	4.76	3.81	0.8		○																			
	TNMG220404-GF	22	12.7	4.76	5.16	0.4		○																			
	TNMG220408-GF	22	12.7	4.76	5.16	0.8		○																			
	TNMG160404-QF	16.5	9.525	4.76	3.81	0.4	○	●	○	○								○							○		○
	TNMG160408-QF	16.5	9.525	4.76	3.81	0.8	○	○	○	●								○							○		○
	TNMG220404-QF	22	12.7	4.76	5.16	0.4		○		○																	
	TNMG220408-QF	22	12.7	4.76	5.16	0.8		○		○																	
	TNMG160404-SF	16.5	9.525	4.76	3.81	0.4								○	○	●											
	TNMG160408-SF	16.5	9.525	4.76	3.81	0.8										●											
	TNMG160404-LF	16.5	9.525	4.76	3.81	0.4								○	●												
	TNMG160408-LF	16.5	9.525	4.76	3.81	0.8								○	●												

● Stock ○ Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



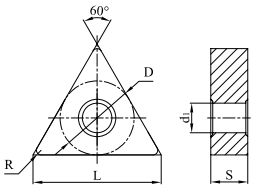
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TNMG160304-GM	16.5	9.525	3.18	3.81	0.4		○		○																	
	TNMG160308-GM	16.5	9.525	3.18	3.81	0.8				○																	
	TNMG160312-GM	16.5	9.525	3.18	3.81	1.2				○																	
	TNMG160404-GM	16.5	9.525	4.76	3.81	0.4		○		●																	
	TNMG160408-GM	16.5	9.525	4.76	3.81	0.8		○		●																	
	TNMG160412-GM	16.5	9.525	4.76	3.81	1.2		○		●																	
	TNMG220404-GM	22	12.7	4.76	5.16	0.4				○																	
	TNMG220408-GM	22	12.7	4.76	5.16	0.8		○		○																	
	TNMG220412-GM	22	12.7	4.76	5.16	1.2		○		○																	
	TNMG220416-GM	22	12.7	4.76	5.16	1.6				○																	
	TNMG270608-GM	27.5	15.875	6.35	6.35	0.8				○																	
	TNMG270612-GM	27.5	15.875	6.35	6.35	1.2				●																	
	TNMG330608-GM	33	19.05	6.35	7.94	0.8				○																	
	TNMG330612-GM	33	19.05	6.35	7.94	1.2				○																	
	TNMG110304-QM	11	6.35	3.18	2.26	0.4		○		○																	
	TNMG110308-QM	11	6.35	3.18	2.26	0.8		○		○																	
	TNMG160404-QM	16.5	9.525	4.76	3.81	0.4	●	●	○	●								○									○
	TNMG160408-QM	16.5	9.525	4.76	3.81	0.8	●	●	○	●								●									○
	TNMG160412-QM	16.5	9.525	4.76	3.81	1.2	●	●	○	●								○									
	TNMG220408-QM	22	12.7	4.76	5.16	0.8		○		●																	
	TNMG220412-QM	22	12.7	4.76	5.16	1.2		○		○																	
	TNMG220416-QM	22	12.7	4.76	5.16	1.6		○		○																	
	TNMG160404-TP	16.5	9.525	4.76	3.81	0.4																			●		●
	TNMG160408-TP	16.5	9.525	4.76	3.81	0.8																			●		●
	TNMG160404R-TS	16.5	9.525	4.76	3.81	0.4																			●		●
	TNMG160404L-TS	16.5	9.525	4.76	3.81	0.4																			○		●
	TNMG160408R-TS	16.5	9.525	4.76	3.81	0.8																			○		●
	TNMG160408L-TS	16.5	9.525	4.76	3.81	0.8																			○		○

● Stock ○ Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



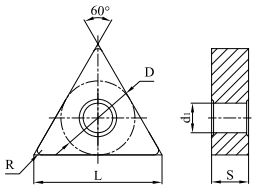
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TNMG160404R-SV	16.5	9.525	4.76	3.81	0.4		●	●	●			○												○		○
	TNMG160404L-SV	16.5	9.525	4.76	3.81	0.4			○	●			○												○		○
	TNMG160408R-SV	16.5	9.525	4.76	3.81	0.8			○	●			○												○		○
	TNMG160408L-SV	16.5	9.525	4.76	3.81	0.8			○	●			○												○		○
	TNMG160404L-LV	16.5	9.525	4.76	3.81	0.4								○	●												
	TNMG160404R-LV	16.5	9.525	4.76	3.81	0.4								○	●												
	TNMG160408L-LV	16.5	9.525	4.76	3.81	0.8								○	○												
	TNMG160408R-LV	16.5	9.525	4.76	3.81	0.8								○	●												
	TNMG160404-SM	16.5	9.525	4.76	3.81	0.4						○	●	●	●	○											○
	TNMG160408-SM	16.5	9.525	4.76	3.81	0.8						○	●	○	●	○											○
	TNMG160412-SM	16.5	9.525	4.76	3.81	1.2						○	○	○	●												
	TNMG220408-SM	22	12.7	4.76	5.16	0.8						○	○	○	●												
	TNMG220412-SM	22	12.7	4.76	5.16	1.2						○	○	○	○												
	TNMG220416-SM	22	12.7	4.76	5.16	1.6						○	○	○	○												
	TNMG160404-LM	16.5	9.525	4.76	3.81	0.4						○	●	●	●												
	TNMG160408-LM	16.5	9.525	4.76	3.81	0.8						○	○	●	●												
	TNMG160412-LM	16.5	9.525	4.76	3.81	1.2						○	○	○	●												
WIPER 	TNMX160408-WMV	16.5	9.525	4.76	3.81	0.8	●			●								●	○	○							
	TNMX160412-WMV	16.5	9.525	4.76	3.81	1.2	●			●								●	○	○							
	TNMG160404-UK	16.5	9.525	4.76	3.81	0.4												●		●							
	TNMG160408-UK	16.5	9.525	4.76	3.81	0.8												●	○	●							
	TNMG160412-UK	16.5	9.525	4.76	3.81	1.2												●	○	○							
	TNMG160416-UK	16.5	9.525	4.76	3.81	1.6												●	○	○							
	TNMG220408-UK	22	12.7	4.76	5.16	0.8												○	○	○	○						
	TNMG220412-UK	22	12.7	4.76	5.16	1.2												○	○	○	○						
	TNMG220416-UK	22	12.7	4.76	5.16	1.6												○	○	○	○						

● Stock ○ Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



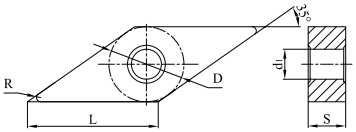
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TNMG160408-LR	16.5	9.525	4.76	3.81	0.8						○	○	○	○												
	TNMG160412-LR	16.5	9.525	4.76	3.81	1.2						○	○	○	●												
	TNMG220408-LR	22	12.7	4.76	5.16	0.8						○	○	○	○												
	TNMG160408-QR	16.5	9.525	4.76	3.81	0.8				○	○																
	TNMG160412-QR	16.5	9.525	4.76	3.81	1.2				○	○																
	TNMG220408-QR	22	12.7	4.76	5.16	0.8				○																	
	TNMG220412-QR	22	12.7	4.76	5.16	1.2				○	○																
	TNMG220416-QR	22	12.7	4.76	5.16	1.6				○																	
	TNMG270608-QR	27.5	15.875	6.35	6.35	0.8				○																	
	TNMG270612-QR	27.5	15.875	6.35	6.35	1.2					○																
	TNMG270616-QR	27.5	15.875	6.35	6.35	1.6																					
	TNMG330716-QR	33	19.05	7.94	7.94	1.6				○																	
	TNMG330924-QR	33	19.05	9.52	7.94	2.4				○																	
	TNMG160408-HK	16.5	9.525	4.76	3.81	0.8												●	●	●							
	TNMG160412-HK	16.5	9.525	4.76	3.81	1.2												●	●	○							
	TNMG220408-HK	22	12.7	4.76	5.16	0.8												○	○	○							
	TNMG220412-HK	22	12.7	4.76	5.16	1.2												●	●	○	○						
	TNMG220416-HK	22	12.7	4.76	5.16	1.6												●	●	○	○						
	TNMG270612-HK	27.5	15.875	6.35	6.35	1.2												○		○							
	TNMG270616-HK	27.5	15.875	6.35	6.35	1.6												○		○							
	TNMA110304	11	6.35	3.18	2.26	0.4												○		○							
	TNMA110308	11	6.35	3.18	2.26	0.8												○		○							
	TNMA160308	16.5	9.525	3.18	3.81	0.8												○		○							
	TNMA160404	16.5	9.525	4.76	3.81	0.4												●		○							
	TNMA160408	16.5	9.525	4.76	3.81	0.8												●	○	○	○						
	TNMA160412	16.5	9.525	4.76	3.81	1.2												●	○	○	○						
	TNMA160416	16.5	9.525	4.76	3.81	1.6												●	○	○	○						
	TNMA220404	22	12.7	4.76	5.16	0.4												○		○							
	TNMA220408	22	12.7	4.76	5.16	0.8												●	○	○	○						
	TNMA220412	22	12.7	4.76	5.16	1.2												●	○	○	○						
	TNMA220416	22	12.7	4.76	5.16	1.6												●	○	○	○						

● Stock ○ Available Upon Order

Turning Insert (Negative)

VN□□

Rhombic 35° with Hole



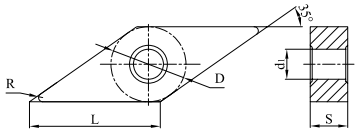
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	VNMG160404-GF	16.6	9.525	4.76	3.81	0.4		○		○																	
	VNMG160408-GF	16.6	9.525	4.76	3.81	0.8		○																			
	VNMG220404-GF	22.1	12.7	4.76	5.16	0.4		○																			
	VNMG220408-GF	22.1	12.7	4.76	5.16	0.8		○																			
	VNMG160402-QF	16.6	9.525	4.76	3.81	0.2				●																	
	VNMG160404-QF	16.6	9.525	4.76	3.81	0.4	●	●	○	●								○							○		○
	VNMG160408-QF	16.6	9.525	4.76	3.81	0.8	●	●	○	○								○							○		○
	VNMG220404-QF	22.1	12.7	4.76	5.16	0.4		○		○																	
	VNMG220408-QF	22.1	12.7	4.76	5.16	0.8		○		○																	
	VNMG160404-SF	16.6	9.525	4.76	3.81	0.4									○	●											
	VNMG160408-SF	16.6	9.525	4.76	3.81	0.8										●											
	VNMG160404-GM	16.6	9.525	4.76	3.81	0.4		○		○																	
	VNMG160408-GM	16.6	9.525	4.76	3.81	0.8		○		●																	
	VNMG160412-GM	16.6	9.525	4.76	3.81	1.2		●		●																	
	VNMG220408-GM	22.1	12.7	4.76	5.16	0.8				○																	
	VNMG160404-QM	16.6	9.525	4.76	3.81	0.4		●	●	●								○									○
	VNMG160408-QM	16.6	9.525	4.76	3.81	0.8	●	●	●	●								○									○
	VNMG160412-QM	16.6	9.525	4.76	3.81	1.2		○		●								○									
	VNMG160404-TP	16.6	9.525	4.76	3.81	0.4																			●		●
	VNMG160408-TP	16.6	9.525	4.76	3.81	0.8																			○		○
	VNMG160404-SM	16.6	9.525	4.76	3.81	0.4						○	●	●	●												○
	VNMG160408-SM	16.6	9.525	4.76	3.81	0.8						○	●	●	●												○

● Stock ○ Available Upon Order

Turning Insert (Negative)

VN□□

Rhombic 35° with Hole



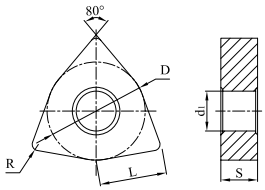
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	VNMG160404-LM	16.6	9.525	4.76	3.81	0.4						○	○	●	●												
	VNMG160408-LM	16.6	9.525	4.76	3.81	0.8						○	○	●	●												
	VNMG160404-UK	16.6	9.525	4.76	3.81	0.4												●	○	●							
	VNMG160408-UK	16.6	9.525	4.76	3.81	0.8												●	○	●	●						
	VNMG160412-UK	16.6	9.525	4.76	3.81	1.2												●	○	○	○						
	VNMG160408-HK	16.6	9.525	4.76	3.81	0.8												●	●	○	○						
	VNMG160412-HK	16.6	9.525	4.76	3.81	1.2												●	●	○	○						

● Stock ○ Available Upon Order

Turning Insert (Negative)

WN□□

Trigon 60° with Hole



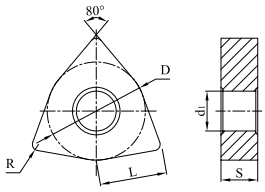
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	WNMG06T304-GF	6.5	9.525	3.97	3.81	0.4		○																			
	WNMG06T308-GF	6.5	9.525	3.97	3.81	0.8		○																			
	WNMG060404-GF	6.5	9.525	4.76	3.81	0.4		○																			
	WNMG060408-GF	6.5	9.525	4.76	3.81	0.8		○																			
	WNMG080404-GF	8.7	12.7	4.76	5.16	0.4		●																			
	WNMG080408-GF	8.7	12.7	4.76	5.16	0.8		○		●																	
	WNMG060404-QF	6.5	9.525	4.76	3.81	0.4		○		●																	
	WNMG060408-QF	6.5	9.525	4.76	3.81	0.8		○		●																	
	WNMG080404-QF	8.7	12.7	4.76	5.16	0.4	●	●	○	○								○							○		○
	WNMG080408-QF	8.7	12.7	4.76	5.16	0.8	●	●	○	●								○							○		○
	WNMG060404-SF	6.5	9.525	4.76	3.81	0.4										●											
	WNMG060408-SF	6.5	9.525	4.76	3.81	0.8										●											
	WNMG080404-SF	8.7	12.7	4.76	5.16	0.4								○	○	●											
	WNMG080408-SF	8.7	12.7	4.76	5.16	0.8										●											
	WNMG080404-LF	6.5	9.525	4.76	3.81	0.4								○	●												
	WNMG080408-LF	6.5	9.525	4.76	3.81	0.8								●	●												
	WNMG06T304-GM	6.5	9.525	3.97	3.81	0.4		○		○																	
	WNMG06T308-GM	6.5	9.525	3.97	3.81	0.8		○		○																	
	WNMG06T312-GM	6.5	9.525	3.97	3.81	1.2		○		○																	
	WNMG060404-GM	6.5	9.525	4.76	3.81	0.4		○		○																	
	WNMG060408-GM	6.5	9.525	4.76	3.81	0.8		○		●																	
	WNMG080404-GM	8.7	12.7	4.76	5.16	0.4				●																	
	WNMG080408-GM	8.7	12.7	4.76	5.16	0.8		●		●																	
	WNMG080412-GM	8.7	12.7	4.76	5.16	1.2		●		●																	
	WNMG080416-GM	8.7	12.7	4.76	5.16	1.6		○		●																	
	WNMG060404-QM	6.5	9.525	4.76	3.81	0.4		○		○								○									
	WNMG060408-QM	6.5	9.525	4.76	3.81	0.8		●	○	○																	
	WNMG060412-QM	6.5	9.525	4.76	3.81	1.2		●		○																	
	WNMG080404-QM	8.7	12.7	4.76	5.16	0.4	●	●	●	●								○									○
	WNMG080408-QM	8.7	12.7	4.76	5.16	0.8	●	●	●	●								●									○
	WNMG080412-QM	8.7	12.7	4.76	5.16	1.2	●	●	●	●								○									
	WNMG080416-QM	8.7	12.7	4.76	5.16	1.6	●			○																	

● Stock ○ Available Upon Order

Turning Insert (Negative)

WN□□

Trigon 60° with Hole



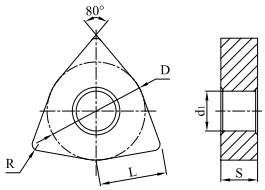
	Ordering Code	Dimension					Coated														Uncoated			Cermet		
		L	D	S	d1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	WNMG080404-TP	8.7	12.7	4.76	5.16	0.4																			●		●
	WNMG080408-TP	8.7	12.7	4.76	5.16	0.8																			○		○
	WNMG080408R-SV	8.7	12.7	4.76	5.16	0.8	●			●																	
	WNMG080408L-SV	8.7	12.7	4.76	5.16	0.8	●			●																	
	WNMG06T304-SM	6.5	9.525	3.97	3.81	0.4						○	○	○	○												
	WNMG06T308-SM	6.5	9.525	3.97	3.81	0.8						○	○	○	●												
	WNMG06T312-SM	6.5	9.525	3.97	3.81	1.2						○	○	○	○												
	WNMG060404-SM	6.5	9.525	4.76	3.81	0.4						○	○	○	●												
	WNMG060408-SM	6.5	9.525	4.76	3.81	0.8						○	●	○	○												
	WNMG060412-SM	6.5	9.525	4.76	3.81	1.2						●	○	○	○	○											
	WNMG080404-SM	8.7	12.7	4.76	5.16	0.4						○	●	○	●												○
	WNMG080408-SM	8.7	12.7	4.76	5.16	0.8						○	●	●	●	○											○
	WNMG080412-SM	8.7	12.7	4.76	5.16	1.2						○	●	○	●												
	WNMG06T304-LM	6.5	9.525	3.97	3.81	0.4						○	○	○	○												
	WNMG06T308-LM	6.5	9.525	3.97	3.81	0.8						○	○	○	○												
	WNMG06T312-LM	6.5	9.525	3.97	3.81	1.2						○	○	○	○												
	WNMG060404-LM	6.5	9.525	4.76	3.81	0.4						○	○	○	●												
	WNMG060408-LM	6.5	9.525	4.76	3.81	0.8						○	○	○	●												
	WNMG060412-LM	6.5	9.525	4.76	3.81	1.2						○	○	○	○												
	WNMG080404-LM	8.7	12.7	4.76	5.16	0.4						○	●	○	●												
	WNMG080408-LM	8.7	12.7	4.76	5.16	0.8						○	●	●	●												
	WNMG080412-LM	8.7	12.7	4.76	5.16	1.2						○	○	○	●												
	WNMG080408-WMV	8.7	12.7	4.76	5.16	0.8	●			●								●	○	○							
	WNMG080412-WMV	8.7	12.7	4.76	5.16	1.2	●			●								●	○	○							

● Stock ○ Available Upon Order

Turning Insert (Negative)

WN□□

Trigon 60° with Hole



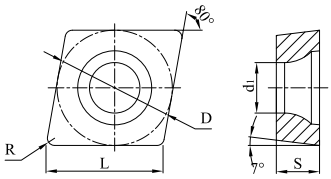
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	WNMG080404-UK	8.7	12.7	4.76	5.16	0.4												●	○	●							
	WNMG080408-UK	8.7	12.7	4.76	5.16	0.8												●	●	●	○						
	WNMG080412-UK	8.7	12.7	4.76	5.16	1.2												●	●	●	●						
	WNMG080408-LR	8.7	12.7	4.76	5.16	0.8						○	○	●	●												
	WNMG080412-LR	8.7	12.7	4.76	5.16	1.2						○	○	○	●												
	WNMG080408-QR	8.7	12.7	4.76	5.16	0.8	○	○		●	●																
	WNMG080412-QR	8.7	12.7	4.76	5.16	1.2	○			●	○																
	WNMG080416-QR	8.7	12.7	4.76	5.16	1.6		○		○																	
	WNMG06T308-HK	6.5	9.525	3.97	3.81	0.8												○	●	●							
	WNMG060408-HK	6.5	9.525	4.76	3.81	0.8												●	○	●							
	WNMG080408-HK	8.7	12.7	4.76	5.16	0.8												●	●	●	●						
	WNMG080412-HK	8.7	12.7	4.76	5.16	1.2												●	●	●	○						
	WNMA06T304	6.5	9.525	3.97	3.81	0.4												○									
	WNMA060404	6.5	9.525	4.76	3.81	0.4												○		○							
	WNMA060408	6.5	9.525	4.76	3.81	0.8												○		○							
	WNMA080404	8.7	12.7	4.76	5.16	0.4												●		●							
	WNMA080408	8.7	12.7	4.76	5.16	0.8												●	○	●	○						
	WNMA080412	8.7	12.7	4.76	5.16	1.2												●	●	●	●						
	WNMA080416	8.7	12.7	4.76	5.16	1.6												●	●	○	○						

● Stock ○ Available Upon Order

Turning Insert (Postive)

CC□□

Rhombic 80° with Hole



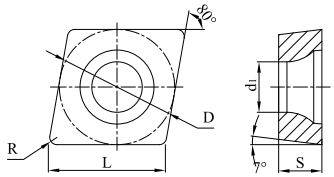
Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CCET0602005R-PS	6.5	6.35	2.38	2.8	<0.05										○									○		
	CCET0602005L-PS	6.5	6.35	2.38	2.8	<0.05										○									○		
	CCET060201R-PS	6.5	6.35	2.38	2.8	0.1										○									○		
	CCET060201L-PS	6.5	6.35	2.38	2.8	0.1										○									○		
	CCET060202R-PS	6.5	6.35	2.38	2.8	0.2										○									○		
	CCET060202L-PS	6.5	6.35	2.38	2.8	0.2										○									○		
	CCET060204R-PS	6.5	6.35	2.38	2.8	0.4										○									○		
	CCET060204L-PS	6.5	6.35	2.38	2.8	0.4										○									○		
	CCET09T3005R-PS	9.7	9.525	3.97	4.4	<0.05										○									○		
	CCET09T3005L-PS	9.7	9.525	3.97	4.4	<0.05										○									○		
	CCET09T301R-PS	9.7	9.525	3.97	4.4	0.1										○									○		
	CCET09T301L-PS	9.7	9.525	3.97	4.4	0.1										○									○		
	CCET09T302R-PS	9.7	9.525	3.97	4.4	0.2										○									○		
	CCET09T302L-PS	9.7	9.525	3.97	4.4	0.2										○									○		
	CCET09T304R-PS	9.7	9.525	3.97	4.4	0.4										○									○		
	CCET09T304L-PS	9.7	9.525	3.97	4.4	0.4										○									○		
	CCET0602005R-GS	6.5	6.35	2.38	2.8	<0.05										○									○		
	CCET0602005L-GS	6.5	6.35	2.38	2.8	<0.05										○									○		
	CCET060201R-GS	6.5	6.35	2.38	2.8	0.1										○									○		
	CCET060201L-GS	6.5	6.35	2.38	2.8	0.1										○									○		
	CCET060202R-GS	6.5	6.35	2.38	2.8	0.2										○									○		
	CCET060202L-GS	6.5	6.35	2.38	2.8	0.2										○									○		
	CCET060204R-GS	6.5	6.35	2.38	2.8	0.4										○									○		
	CCET060204L-GS	6.5	6.35	2.38	2.8	0.4										○									○		
	CCET09T3005R-GS	9.7	9.525	3.97	4.4	<0.05										○									○		
	CCET09T3005L-GS	9.7	9.525	3.97	4.4	<0.05										○									○		
	CCET09T301R-GS	9.7	9.525	3.97	4.4	0.1										○									○		
	CCET09T301L-GS	9.7	9.525	3.97	4.4	0.1										○									○		
	CCET09T302R-GS	9.7	9.525	3.97	4.4	0.2										○									○		
	CCET09T302L-GS	9.7	9.525	3.97	4.4	0.2										○									○		
	CCET09T304R-GS	9.7	9.525	3.97	4.4	0.4										○									○		
	CCET09T304L-GS	9.7	9.525	3.97	4.4	0.4										○									○		

● Stock ○ Available Upon Order

Turning Insert (Postive)

CC□□

Rhombic 80° with Hole



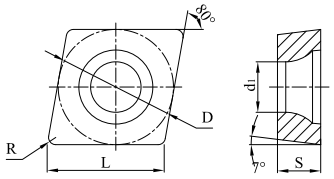
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CCMT060202-MM	6.5	6.35	2.38	2.8	0.2		○		○		○	○	●	●	●									○	○
	CCMT060204-MM	6.5	6.35	2.38	2.8	0.4	○	○		○		○	●	●	●	●		○	○	○	○				●		●
	CCMT060208-MM	6.5	6.35	2.38	2.8	0.8						○	○	○	●	○		○	○	○	○						
	CCMT09T302-MM	9.7	9.525	3.97	4.4	0.2		○		○		○	○	○	●	●	○								○		○
	CCMT09T304-MM	9.7	9.525	3.97	4.4	0.4	○	●		●		○	●	●	●	●	●	○	○	○	○				●		●
	CCMT09T308-MM	9.7	9.525	3.97	4.4	0.8		●		○		○	●	○	●	●		○	○	○	○				○		○
	CCMT060202-GP	6.5	6.35	2.38	2.8	0.2		○				○	●					●	○						○		○
	CCMT060204-GP	6.5	6.35	2.38	2.8	0.4		●	●	●		○	●	○	●			●	○	○	○				○		●
	CCMT060208-GP	6.5	6.35	2.38	2.8	0.8		○		●		○	●	○	●			●	○	○	○				○		○
	CCMT09T302-GP	9.7	9.525	3.97	4.4	0.2		●		○		○	○					○	○						○		○
	CCMT09T304-GP	9.7	9.525	3.97	4.4	0.4		●	●	●		○	●	○	●	○		●	○	○	○				●		●
	CCMT09T308-GP	9.7	9.525	3.97	4.4	0.8		●	○	●		○	●	○	●			●	○	●	○				○		○
	CCMT120404-GP	12.9	12.7	4.76	5.56	0.4		●		●		○	●					●	○	○	○				○		○
	CCMT120408-GP	12.9	12.7	4.76	5.56	0.8		●		●		○	●					●	○	○	○				○		○
	CCMT120412-GP	12.9	12.7	4.76	5.56	1.2		○				○	○					●	○	○	○						
	CCGT060202-GP	6.5	6.35	2.38	2.8	0.2								○	○												
	CCGT060204-GP	6.5	6.35	2.38	2.8	0.4								○	●												
	CCGT060208-GP	6.5	6.35	2.38	2.8	0.8								○	○												
	CCGT09T302-GP	9.7	9.525	3.97	4.4	0.2								○	○	○											
	CCGT09T304-GP	9.7	9.525	3.97	4.4	0.4								○	●												
	CCGT09T308-GP	9.7	9.525	3.97	4.4	0.8								○	○	○											
	CCGT120404-GP	12.9	12.7	4.76	5.56	0.4								○	○												
	CCGT120408-GP	12.9	12.7	4.76	5.56	0.8								○	○												
	CCMT060202-TP	6.5	6.35	2.38	2.8	0.2																			○		○
	CCMT060204-TP	6.5	6.35	2.38	2.8	0.4																			●		●
	CCMT060208-TP	6.5	6.35	2.38	2.8	0.8																			○		○
	CCMT09T302-TP	9.7	9.525	3.97	4.4	0.2																			○		○
	CCMT09T304-TP	9.7	9.525	3.97	4.4	0.4																			●		●
	CCMT09T308-TP	9.7	9.525	3.97	4.4	0.8																			○		○
	CCMT120404-TP	12.9	12.7	4.76	5.56	0.4																			○		○
	CCMT120408-TP	12.9	12.7	4.76	5.56	0.8																			○		○

● Stock ○ Available Upon Order

Turning Insert (Postive)

CC□□

Rhombic 80° with Hole



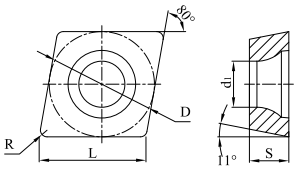
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CCMT060204-KM	6.5	6.35	2.38	2.8	0.4												○	○	○	○						
	CCMT09T304-KM	9.7	9.525	3.97	4.4	0.4				○								○	○	○	○						
	CCMT09T308-KM	9.7	9.525	3.97	4.4	0.8				●								●	●	○	○						
	CCMT120404-KM	12.9	12.7	4.76	5.56	0.4												●									
	CCMT120408-KM	12.9	12.7	4.76	5.56	0.8				●								●	○	○	○						
	CCMT120412-KM	12.9	12.7	4.76	5.56	1.2				○								●	○	○	○						
	CCGX060202-AL	6.5	6.35	2.38	2.8	0.2																	○				
	CCGX060204-AL	6.5	6.35	2.38	2.8	0.4																○	○	○			
	CCGX060208-AL	6.5	6.35	2.38	2.8	0.8																○	○	○			
	CCGX09T302-AL	9.7	9.525	3.97	4.4	0.2																○	○	○			
	CCGX09T304-AL	9.7	9.525	3.97	4.4	0.4																○	○	○			
	CCGX09T308-AL	9.7	9.525	3.97	4.4	0.8																○	○	○			
	CCGX120402-AL	12.9	12.7	4.76	5.5	0.2																●	○				
	CCGX120404-AL	12.9	12.7	4.76	5.5	0.4																○	○	○			
	CCGX120408-AL	12.9	12.7	4.76	5.5	0.8																○	○	○			

● Stock ○ Available Upon Order

Turning Insert (Postive)

CP□□

Rhombic 80° with Hole



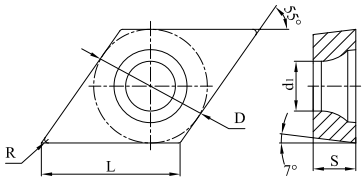
Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CPMT120412-GP	12.9	12.7	4.76	5.56	1.2				○		○	○	○	○			○									
	CPGT060204-GP	6.5	6.35	2.38	2.8	0.4								○	○												
	CPGT060208-GP	6.5	6.35	2.38	2.8	0.8								○	○												
	CPGT09T302-GP	9.7	9.525	3.97	4.4	0.2								○	○												
	CPGT09T304-GP	9.7	9.525	3.97	4.4	0.4								○	○												
	CPGT09T308-GP	9.7	9.525	3.97	4.4	0.8								○	○												
	CPGT120404-GP	12.9	12.7	4.76	5.56	0.4								○	○												
	CPGT120408-GP	12.9	12.7	4.76	5.56	0.8								○	○												

● Stock ○ Available Upon Order

Turning Insert (Postive)

DC□□

Rhombic 55° with Hole



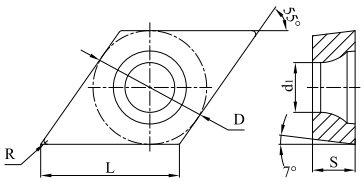
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	DCET0702005R-PS	7.8	6.35	2.38	2.8	<0.05										○									○		
	DCET0702005L-PS	7.8	6.35	2.38	2.8	<0.05										○									○		
	DCET070201R-PS	7.8	6.35	2.38	2.8	0.1										○									○		
	DCET070201L-PS	7.8	6.35	2.38	2.8	0.1										○									○		
	DCET070202R-PS	7.8	6.35	2.38	2.8	0.2										○									○		
	DCET070202L-PS	7.8	6.35	2.38	2.8	0.2										○									○		
	DCET070204R-PS	7.8	6.35	2.38	2.8	0.4										○									○		
	DCET070204L-PS	7.8	6.35	2.38	2.8	0.4										○									○		
	DCET11T3005R-PS	11.6	9.525	3.97	4.4	<0.05										○									○		
	DCET11T3005L-PS	11.6	9.525	3.97	4.4	<0.05										○									○		
	DCET11T301R-PS	11.6	9.525	3.97	4.4	0.1										○									○		
	DCET11T301L-PS	11.6	9.525	3.97	4.4	0.1										○									○		
	DCET11T302R-PS	11.6	9.525	3.97	4.4	0.2										○									○		
	DCET11T302L-PS	11.6	9.525	3.97	4.4	0.2										○									○		
	DCET11T304R-PS	11.6	9.525	3.97	4.4	0.4										○									○		
	DCET11T304L-PS	11.6	9.525	3.97	4.4	0.4										○									○		
	DCET0702005R-GS	7.8	6.35	2.38	2.8	<0.05										○									○		
	DCET0702005L-GS	7.8	6.35	2.38	2.8	<0.05										○									○		
	DCET070201R-GS	7.8	6.35	2.38	2.8	0.1										○									○		
	DCET070201L-GS	7.8	6.35	2.38	2.8	0.1										○									○		
	DCET070202R-GS	7.8	6.35	2.38	2.8	0.2										○									○		
	DCET070202L-GS	7.8	6.35	2.38	2.8	0.2										○									○		
	DCET070204R-GS	7.8	6.35	2.38	2.8	0.4										○									○		
	DCET070204L-GS	7.8	6.35	2.38	2.8	0.4										○									○		
	DCET11T3005R-GS	11.6	9.525	3.97	4.4	<0.05										○									○		
	DCET11T3005L-GS	11.6	9.525	3.97	4.4	<0.05										○									○		
	DCET11T301R-GS	11.6	9.525	3.97	4.4	0.1										○									○		
	DCET11T301L-GS	11.6	9.525	3.97	4.4	0.1										○									○		
	DCET11T302R-GS	11.6	9.525	3.97	4.4	0.2										○									○		
	DCET11T302L-GS	11.6	9.525	3.97	4.4	0.2										○									○		
	DCET11T304R-GS	11.6	9.525	3.97	4.4	0.4										○									○		
	DCET11T304L-GS	11.6	9.525	3.97	4.4	0.4										○									○		

● Stock ○ Available Upon Order

Turning Insert (Postive)

DC□□

Rhombic 55° with Hole



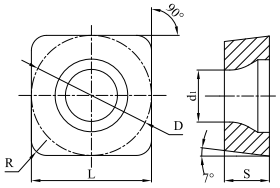
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	DCMT070202-MM	7.8	6.35	2.38	2.8	0.2		○		○		○	○	○	●	●									○		○
	DCMT070204-MM	7.8	6.35	2.38	2.8	0.4		●		○		○	●	●	●	●									●		●
	DCMT070208-MM	7.8	6.35	2.38	2.8	0.8								○	○	○											
	DCMT11T302-MM	11.6	9.525	3.97	4.4	0.2		○		○		○	●	○	○	●									○		○
	DCMT11T304-MM	11.6	9.525	3.97	4.4	0.4	●	●		○		○	●	●	●	●		○		○					●		●
	DCMT11T308-MM	11.6	9.525	3.97	4.4	0.8	●	●		●		○	●	●	●	●				○	○				○		○
	DCMT070202-GP	7.8	6.35	2.38	2.8	0.2		○				○	○					○							○		○
	DCMT070204-GP	7.8	6.35	2.38	2.8	0.4		●		●		○	●	○	●			●		○					○		○
	DCMT070208-GP	7.8	6.35	2.38	2.8	0.8				●		○	●					○		○					○		○
	DCMT11T302-GP	11.6	9.525	3.97	4.4	0.2						○	○					○							○		○
	DCMT11T304-GP	11.6	9.525	3.97	4.4	0.4		●	●	●		○	●	●	●			●		○					○		○
	DCMT11T308-GP	11.6	9.525	3.97	4.4	0.8		●	○	●		○	●	○	●			●		○					○		○
	DCMT11T312-GP	11.6	9.525	3.97	4.4	1.2								○	○	○											
	DCMT150404-GP	15.5	12.7	4.76	5.56	0.4						○	○					○		○							
	DCMT150408-GP	15.5	12.7	4.76	5.56	0.8				○		○	○			○		○		○							
	DCMT150412-GP	15.5	12.7	4.76	5.56	1.2						○	○					○		○							
	DCGT070202-GP	7.8	6.35	2.38	2.8	0.2								○	●												
	DCGT070204-GP	7.8	6.35	2.38	2.8	0.4								○	●												
	DCGT070208-GP	7.8	6.35	2.38	2.8	0.8								○	○												
	DCGT11T302-GP	11.6	9.525	3.97	4.4	0.2								○	○												
	DCGT11T304-GP	11.6	9.525	3.97	4.4	0.4								○	○												
	DCGT11T308-GP	11.6	9.525	3.97	4.4	0.8								○	●												
	DCMT070202-TP	7.8	6.35	2.38	2.8	0.2																			○		○
	DCMT070204-TP	7.8	6.35	2.38	2.8	0.4																			○		●
	DCMT070208-TP	7.8	6.35	2.38	2.8	0.8																			○		○
	DCMT11T302-TP	11.6	9.525	3.97	4.4	0.2																			○		○
	DCMT11T304-TP	11.6	9.525	3.97	4.4	0.4																			○		●
	DCMT11T308-TP	11.6	9.525	3.97	4.4	0.8																			○		○
	DCMT11T304-KM	11.6	9.525	3.97	4.4	0.4				○								●		○							
	DCMT11T308-KM	11.6	9.525	3.97	4.4	0.8				○								●		○							
	DCGX070202-AL	7.8	6.35	2.38	2.8	0.2																					
	DCGX070204-AL	7.8	6.35	2.38	2.8	0.4																	○				
	DCGX070208-AL	7.8	6.35	2.38	2.8	0.8																○	○	○			
	DCGX11T302-AL	11.6	9.525	3.97	4.4	0.2																○	○	○			
	DCGX11T304-AL	11.6	9.525	3.97	4.4	0.4																○	●	○			
	DCGX11T308-AL	11.6	9.525	3.97	4.4	0.8																●	○	○			

● Stock ○ Available Upon Order

Turning Insert (Postive)

SC□□

Square 90° with Hole



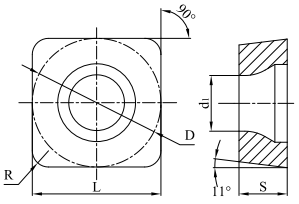
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	SCMT09T304-MM	9.525	9.525	3.97	4.4	0.8						○	○	○	○	○		○	○	○	○						
	SCMT09T308-MM	9.525	9.525	3.97	4.4	0.8		○		○		○	○	●	○	○		○	○	○	○						
												○															
												○															
	SCMT09T304-GP	9.525	9.525	3.97	4.4	0.4				●		○	●	○	●			●	○	○	○						
	SCMT09T308-GP	9.525	9.525	3.97	4.4	0.8		●		●		○	○					●	○	○	○						
	SCMT120404-GP	12.7	12.7	4.76	5.56	0.4		○		●		○	○					●	○	○	○						○
	SCMT120408-GP	12.7	12.7	4.76	5.56	0.8				●		○	●					●	○	○	○						○
	SCMT09T304-TP	9.525	9.525	3.97	4.4	0.4																			○		○
	SCMT09T308-TP	9.525	9.525	3.97	4.4	0.8																			○		○
	SCMT120404-TP	12.7	12.7	4.76	5.56	0.4																			○		○
	SCMT120408-TP	12.7	12.7	4.76	5.56	0.8																			○		○
	SCMT09T308-KM	9.525	9.525	3.97	4.4	0.8				○								○	○	○	○						
	SCMT120408-KM	12.7	12.7	4.76	5.56	0.8				○								○	○	○	○						
	SCMT120412-KM	12.7	12.7	4.76	5.56	1.2												○	○	○	○						
	SCGX09T304-AL	9.525	9.525	3.97	4.4	0.4															○	○	○	○			
	SCGX09T308-AL	9.525	9.525	3.97	4.4	0.8															○	○	○	○			
	SCGX120404-AL	12.7	12.7	4.76	5.5	0.4															○	○	○	○			
	SCGX120408-AL	12.7	12.7	4.76	5.5	0.8															○	○	○	○			

● Stock ○ Available Upon Order

Turning Insert (Postive)

SP□□

Square 90° with Hole



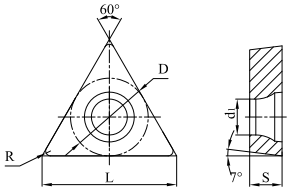
Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	SPMT090304-GP	9.525	9.525	3.18	4.4	0.4																					○

● Stock ○ Available Upon Order

Turning Insert (Postive)

TC□□

Triangle 60° with Hole



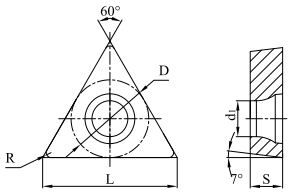
Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TCET080201R-PS	8.2	4.76	2.38	2.3	0.1										○									○		
	TCET080201L-PS	8.2	4.76	2.38	2.3	0.1										○									○		
	TCET080202R-PS	8.2	4.76	2.38	2.3	0.2										○									○		
	TCET080202L-PS	8.2	4.76	2.38	2.3	0.2										○									○		
	TCET080204R-PS	8.2	4.76	2.38	2.3	0.4										○									○		
	TCET080204L-PS	8.2	4.76	2.38	2.3	0.4										○									○		
	TCET110201R-PS	11	6.35	2.38	2.8	0.1										○									○		
	TCET110201L-PS	11	6.35	2.38	2.8	0.1										○									○		
	TCET110202R-PS	11	6.35	2.38	2.8	0.2										○									○		
	TCET110202L-PS	11	6.35	2.38	2.8	0.2										○									○		
	TCET110204R-PS	11	6.35	2.38	2.8	0.4										○									○		
	TCET110204L-PS	11	6.35	2.38	2.8	0.4										●									●		
	TCET080201R-GS	8.2	4.76	2.38	2.3	0.1										○									○		
	TCET080201L-GS	8.2	4.76	2.38	2.3	0.1										○									○		
	TCET080202R-GS	8.2	4.76	2.38	2.3	0.2										○									○		
	TCET080202L-GS	8.2	4.76	2.38	2.3	0.2										○									○		
	TCET080204R-GS	8.2	4.76	2.38	2.3	0.4										○									○		
	TCET080204L-GS	8.2	4.76	2.38	2.3	0.4										○									○		
	TCET110201R-GS	11	6.35	2.38	2.8	0.1										○									○		
	TCET110201L-GS	11	6.35	2.38	2.8	0.1										○									○		
	TCET110202R-GS	11	6.35	2.38	2.8	0.2										○									○		
	TCET110202L-GS	11	6.35	2.38	2.8	0.2										○									○		
	TCET110204R-GS	11	6.35	2.38	2.8	0.4										○									○		
	TCET110204L-GS	11	6.35	2.38	2.8	0.4										○									○		

● Stock ○ Available Upon Order

Turning Insert (Postive)

TC□□

Trigon 60° with Hole



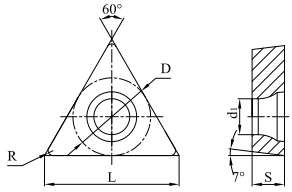
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TCMT110202-MM	11	6.35	2.38	2.8	0.2		○		○		○	○	○	●	○									○		○
	TCMT110204-MM	11	6.35	2.38	2.8	0.4		○		○		○	○	○	●	●		○							●		●
	TCMT16T304-MM	16.5	9.525	3.97	4.4	0.4						○	○	○	○												
	TCMT16T308-MM	16.5	9.525	3.97	4.4	0.8						○	○	○	●												
	TCMT090204-GP	9.6	5.56	2.38	2.5	0.4		○		●		○	●					●		○					○		○
	TCMT110202-GP	11	6.35	2.38	2.8	0.2				○		○	○					○							○		○
	TCMT110204-GP	11	6.35	2.38	2.8	0.4		●		●		○	●	○	●			●							○		○
	TCMT110208-GP	11	6.35	2.38	2.8	0.8		○		●		○	●					●		●					○		○
	TCMT16T304-GP	16.5	9.525	3.97	4.4	0.4		●		●		○	●	●	●			●		○					○		○
	TCMT16T308-GP	16.5	9.525	3.97	4.4	0.8		○		●		○	●	○	●			●		●					○		○
	TCMT16T312-GP	16.5	9.525	3.97	4.4	1.2						○	○					○		○							
	TCMT220408-GP	22	12.7	4.76	5.56	0.8		●		●		○	○					●		○							
	TCGT090204-GP	9.6	5.56	2.38	2.5	0.4								○	●												
	TCGT110202-GP	11	6.35	2.38	2.8	0.2								○	○												
	TCGT110204-GP	11	6.35	2.38	2.8	0.4								○	○												
	TCGT110208-GP	11	6.35	2.38	2.8	0.8								○	●												
	TCGT16T304-GP	16.5	9.525	3.97	4.4	0.4								○	○												
	TCGT16T308-GP	16.5	9.525	3.97	4.4	0.8								○	○												
	TCGT220408-GP	22	12.7	4.76	5.16	0.8						○	○	○	○												
	TCMT090202-TP	9.6	5.56	2.38	2.5	0.4																			○		○
	TCMT090204-TP	9.6	5.56	2.38	2.5	0.4																			●		●
	TCMT090208-TP	9.6	5.56	2.38	2.5	0.8																			○		○
	TCMT110204-TP	11	6.35	2.38	2.8	0.4																			○		●
	TCMT110208-TP	11	6.35	2.38	2.8	0.8																			○		○
	TCMT16T304-TP	16.5	9.525	3.97	4.4	0.4																			○		○
	TCMT16T308-TP	16.5	9.525	3.97	4.4	0.8																			○		○
	TCMT110204-KM	11	6.35	2.38	2.8	0.4				○								○									
	TCMT16T304-KM	16.5	9.525	3.97	4.4	0.4				○								○									
	TCMT16T308-KM	16.5	9.525	3.97	4.4	0.8				○								●									

● Stock ○ Available Upon Order

Turning Insert (Postive)

TC□□

Trigon 60° with Hole



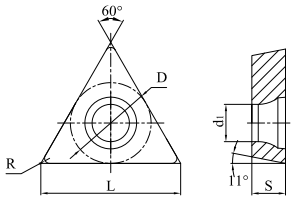
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TCGX090204-AL	9.6	5.56	2.38	2.5	0.4																○	○	○			
	TCGX110202-AL	11	6.35	2.38	2.8	0.2																○	○				
	TCGX110204-AL	11	6.35	2.38	2.8	0.4																○	○	○			
	TCGX110208-AL	11	6.35	2.38	2.8	0.8																○	○	○			
	TCGX16T302-AL	16.5	9.525	3.97	4.4	0.2																○	○				
	TCGX16T304-AL	16.5	9.525	3.97	4.4	0.4																○	○	○			
	TCGX16T308-AL	16.5	9.525	3.97	4.4	0.8																○	○	○			

● Stock ○ Available Upon Order

Turning Insert (Postive)

TP□□

Rhombic 35° with Hole



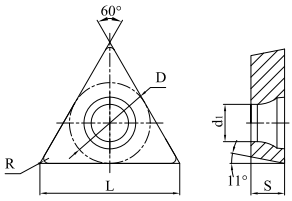
Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TPET080201R-PS	8.2	4.76	2.38	2.3	0r.1											○								○		
	TPET080201L-PS	8.2	4.76	2.38	2.3	0.1											○								○		
	TPET080202R-PS	8.2	4.76	2.38	2.3	0.2											○								○		
	TPET080202L-PS	8.2	4.76	2.38	2.3	0.2											○								○		
	TPET080204R-PS	8.2	4.76	2.38	2.3	0.4											○								○		
	TPET080204L-PS	8.2	4.76	2.38	2.3	0.4											●								●		
	TPET080201R-GS	8.2	4.76	2.38	2.3	0.1											○								○		
	TPET080201L-GS	8.2	4.76	2.38	2.3	0.1											○								○		
	TPET080202R-GS	8.2	4.76	2.38	2.3	0.2											○								○		
	TPET080202L-GS	8.2	4.76	2.38	2.3	0.2											○								○		
	TPET080204R-GS	8.2	4.76	2.38	2.3	0.4											○								○		
	TPET080204L-GS	8.2	4.76	2.38	2.3	0.4											○								○		
	TPEH090201R-PS	9.6	5.56	2.38	3.0	0.1											○								○		
	TPEH090201L-PS	9.6	5.56	2.38	3.0	0.1											○								○		
	TPEH090202R-PS	9.6	5.56	2.38	3.0	0.2											○								○		
	TPEH090202L-PS	9.6	5.56	2.38	3.0	0.2											○								○		
	TPEH090204R-PS	9.6	5.56	2.38	3.0	0.4											○								○		
	TPEH090204L-PS	9.6	5.56	2.38	3.0	0.4											●								●		
	TPEH110301R-PS	11	6.35	3.18	3.4	0.1											○								○		
	TPEH110301L-PS	11	6.35	3.18	3.4	0.1											○								○		
	TPEH110302R-PS	11	6.35	3.18	3.4	0.2											○								○		
	TPEH110302L-PS	11	6.35	3.18	3.4	0.2											○								○		
	TPEH110304R-PS	11	6.35	3.18	3.4	0.4											○								○		
	TPEH110304L-PS	11	6.35	3.18	3.4	0.4											●								●		
	TPEH090202R-GS	9.6	5.56	2.38	3.0	0.2											○								○		
	TPEH090202L-GS	9.6	5.56	2.38	3.0	0.2											○								○		
	TPEH090204R-GS	9.6	5.56	2.38	3.0	0.4											○								○		
	TPEH090204L-GS	9.6	5.56	2.38	3.0	0.4											○								○		
	TPEH110302R-GS	11	6.35	3.18	3.4	0.2											○								○		
	TPEH110302L-GS	11	6.35	3.18	3.4	0.2											○								○		
	TPEH110304R-GS	11	6.35	3.18	3.4	0.4											○								○		
	TPEH110304L-GS	11	6.35	3.18	3.4	0.4											○								○		

● Stock ○ Available Upon Order

Turning Insert (Postive)

TP□□

Rhombic 35° with Hole



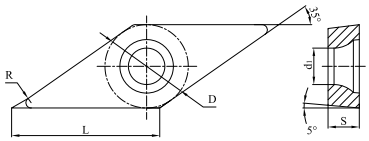
Ordering Code		Dimension					Coated														Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TPMT110202-MM	11	6.35	2.38	2.8	0.2		○		○		○	○	○	○	○											
	TPMT110204-MM	11	6.35	2.38	2.8	0.4		○		○		○	●	○	○	○											
	TPMT110304-MM	11	6.35	3.18	3.4	0.4						○	○												○		○
	TPGT110204-GP	11	6.35	2.38	2.8	0.4								○	○												
	TPGT110208-GP	11	6.35	2.38	2.8	0.8								○	○												
	TPGT16T304-GP	16.5	9.525	3.97	4.4	0.4								○	○												
	TPGT16T308-GP	16.5	9.525	3.97	4.4	0.8								○	○												
	TPMT090202-TP	9.6	5.56	2.38	2.5	0.2																			○		○
	TPMT090204-TP	9.6	5.56	2.38	2.5	0.4																			○		●
	TPMT090208-TP	9.6	5.56	2.38	2.5	0.8																			○		○
	TPMT110302-TP	11	6.35	3.18	3.4	0.2																			○		○
	TPMT110304-TP	11	6.35	3.18	3.4	0.4																			○		●
	TPMT110308-TP	11	6.35	3.18	3.4	0.8																			○		○
	TPMT160302-TP	16.5	9.525	3.18	4.4	0.2																			○		○
	TPMT160304-TP	16.5	9.525	3.18	4.4	0.4																			○		○
	TPMT160308-TP	16.5	9.525	3.18	4.4	0.8																			○		○

● Stock ○ Available Upon Order

Turning Insert (Postive)

VB□□

Rhombic 35° with Hole



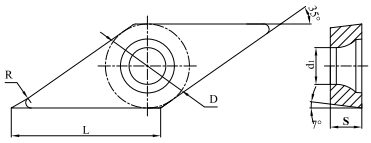
Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	VBET1103005R-PS	11.2	6.35	3.18	2.8	<0.05										○									○	
	VBET1103005L-PS	11.2	6.35	3.18	2.8	<0.05										○									○	
	VBET110301R-PS	11.2	6.35	3.18	2.8	0.1										○									○	
	VBET110301L-PS	11.2	6.35	3.18	2.8	0.1										○									○	
	VBET110302R-PS	11.2	6.35	3.18	2.8	0.2										○									○	
	VBET110302L-PS	11.2	6.35	3.18	2.8	0.2										○									○	
	VBET110304R-PS	11.2	6.35	3.18	2.8	0.4										○									○	
	VBET110304L-PS	11.2	6.35	3.18	2.8	0.4										○									○	
	VBET1103005R-GS	11.2	6.35	3.18	2.8	<0.05										○									○	
	VBET1103005L-GS	11.2	6.35	3.18	2.8	<0.05										○									○	
	VBET110301R-GS	11.2	6.35	3.18	2.8	0.1										○									○	
	VBET110301L-GS	11.2	6.35	3.18	2.8	0.1										○									○	
	VBET110302R-GS	11.2	6.35	3.18	2.8	0.2										●									○	
	VBET110302L-GS	11.2	6.35	3.18	2.8	0.2										○									○	
	VBET110304R-GS	11.2	6.35	3.18	2.8	0.4										○									○	
	VBET110304L-GS	11.2	6.35	3.18	2.8	0.4										○									○	
	VBMT110304-MM	11.2	6.35	3.18	2.8	0.4		●		○		○	●	●	●	●		○							○		○
	VBMT110308-MM	11.2	6.35	3.18	2.8	0.8								○	○												
	VBMT160402-MM	16.6	9.525	4.76	4.4	0.2						○	○	○	●	○									○		○
	VBMT160404-MM	16.6	9.525	4.76	4.4	0.4	●	●		○		○	●	●	●	●									●		●
	VBMT160408-MM	16.6	9.525	4.76	4.4	0.8	●	●		○		○	●	○	●	●									○		○
	VBMT160404-GP	16.6	9.525	4.76	4.4	0.4		●		●		○	●	○	●			●		○					○		○
	VBMT160408-GP	16.6	9.525	4.76	4.4	0.8		○		●		○	●	○	●			●		○					○		○
	VBMT160412-GP	16.6	9.525	4.76	4.4	1.2		○		○		○	○					○									
	VBMT110304-TP	11.2	6.35	3.18	2.8	0.4																			●		●
	VBMT110308-TP	11.2	6.35	3.18	2.8	0.8																			○		○
	VBMT160402-TP	16.6	9.525	4.76	4.4	0.2																			○		○
	VBMT160404-TP	16.6	9.525	4.76	4.4	0.4																			●		●
	VBMT160408-TP	16.6	9.525	4.76	4.4	0.8																			○		○
	VBMT160408-KM	16.6	9.525	4.76	4.4	0.8				○								●	●								

● Stock ○ Available Upon Order

Turning Insert (Postive)

VC□□

Rhombic 35° with Hole



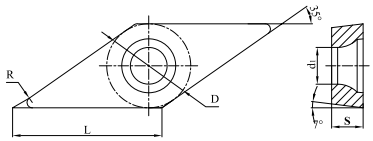
Ordering Code		Dimension					Coated													Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	VCET1103005R-PS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VCET1103005L-PS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VCET110301R-PS	11.2	6.35	3.18	2.8	0.1										○									○		
	VCET110301L-PS	11.2	6.35	3.18	2.8	0.1										○									○		
	VCET110302R-PS	11.2	6.35	3.18	2.8	0.2										○									○		
	VCET110302L-PS	11.2	6.35	3.18	2.8	0.2										○									○		
	VCET110304R-PS	11.2	6.35	3.18	2.8	0.4										○									○		
	VCET110304L-PS	11.2	6.35	3.18	2.8	0.4										○									○		
	VCET1103005R-GS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VCET1103005L-GS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VCET110301R-GS	11.2	6.35	3.18	2.8	0.1										○									○		
	VCET110301L-GS	11.2	6.35	3.18	2.8	0.1										○									○		
	VCET110302R-GS	11.2	6.35	3.18	2.8	0.2										○									○		
	VCET110302L-GS	11.2	6.35	3.18	2.8	0.2										○									○		
	VCET110304R-GS	11.2	6.35	3.18	2.8	0.4										○									○		
	VCET110304L-GS	11.2	6.35	3.18	2.8	0.4										○									○		
	VCMT110304-GP	11.2	6.35	3.18	2.8	0.4				●		○	●					○							○		○
	VCMT110308-GP	11.2	6.35	3.18	2.8	0.8						○	○					○							○		○
	VCMT160404-GP	16.6	9.525	4.76	4.4	0.4		●		●		○	●					●							○		○
	VCMT160408-GP	16.6	9.525	4.76	4.4	0.8		●		●		○	●					●							○		○
	VCGT110302-GP	11.2	6.35	3.18	2.8	0.2								○	○												
	VCGT110304-GP	11.2	6.35	3.18	2.8	0.4								○	●												
	VCGT160404-GP	16.6	9.525	4.76	4.4	0.4								○	●												
	VCGT160408-GP	16.6	9.525	4.76	4.4	0.8								○	○												
	VCMT160404-KM	16.6	9.525	4.76	4.4	0.4				○								○									
	VCMT160408-KM	16.6	9.525	4.76	4.4	0.8				○								○									

● Stock ○ Available Upon Order

Turning Insert (Postive)

VC□□

Rhombic 35° with Hole



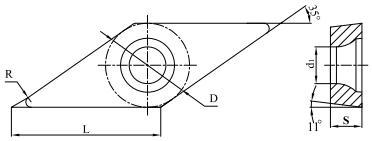
Ordering Code	Dimension					Coated													Uncoated			Cermet		
	L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
VCGX110302-AL	11.2	6.35	3.18	2.8	0.2																	○				
VCGX110304-AL	11.2	6.35	3.18	2.8	0.4																○	○	○			
VCGX110308-AL	11.2	6.35	3.18	2.8	0.8																○	○	○			
VCGX160402-AL	16.6	9.525	4.76	4.4	0.2																○	○				
VCGX160404-AL	16.6	9.525	4.76	4.4	0.4																○	●	○			
VCGX160408-AL	16.6	9.525	4.76	4.4	0.8																○	○	○			
VCGX160412-AL	16.6	9.525	4.76	4.4	1.2																○	●	○			
VCGX220512-AL	22.1	12.7	5.56	5.6	1.2																○	○	○			
VCGX220516-AL	22.1	12.7	5.56	5.6	1.6																○	○	○			
VCGX220530-AL	22.1	12.7	5.56	5.6	3																○	○	○			

● Stock ○ Available Upon Order

Turning Insert (Postive)

VP□□

Rhombic 35° with Hole

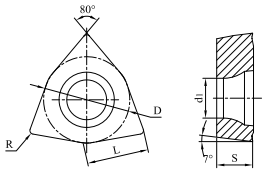


Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	VPET1103005R-PS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VPET1103005L-PS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VPET110301R-PS	11.2	6.35	3.18	2.8	0.1										○									○		
	VPET110301L-PS	11.2	6.35	3.18	2.8	0.1										○									○		
	VPET110302R-PS	11.2	6.35	3.18	2.8	0.2										○									○		
	VPET110302L-PS	11.2	6.35	3.18	2.8	0.2										○									○		
	VPET1103005R-GS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VPET1103005L-GS	11.2	6.35	3.18	2.8	<0.05										○									○		
	VPET110301R-GS	11.2	6.35	3.18	2.8	0.1										○									○		
	VPET110301L-GS	11.2	6.35	3.18	2.8	0.1										○									○		
	VPET110302R-GS	11.2	6.35	3.18	2.8	0.2										○									○		
	VPET110302L-GS	11.2	6.35	3.18	2.8	0.2										○									○		

● Stock ○ Available Upon Order

WC□□

Trigon 60° with Hole



Ordering Code		Dimension					Coated												Uncoated			Cermet		
		L	D	S	d_1	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	WCMT06T304-GP	6.5	9.525	3.97	4.4	0.4		○		○		○	○					○							○		○
	WCMT06T308-GP	6.5	9.525	3.97	4.4	0.8		○		○		○	○					○							○		○

● Stock ○ Available Upon Order

Recommended Cutting Data

Negative

ISO	Workpiece materials	Hardness	Cutting Range	Application	Geometries	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Depth of Cut ap(mm)	Feed rate f(mm)
P	Low Carbon Steel	⩽HB180	superfinishing &Finishing	Continuous	PS	GP91TF	220-300-380	0.08-0.15-0.30	0.03-0.08-0.15
			Finishing	Continuous	QF	GP31TM	220-300-380	0.40-0.80-1.50	0.04-0.12-0.22
						GP91TM	200-280-350	0.40-1.00-2.00	0.08-0.20-0.30
						GP1105	220-280-380	0.40-0.80-2.00	0.08-0.15-0.35
						GP1115	200-260-360	0.40-0.80-2.00	0.08-0.15-0.35
						GP1120	200-260-360	0.40-0.80-2.00	0.08-0.15-0.35
				Interrtuption		GP1225	180-240-320	0.40-0.80-2.00	0.08-0.15-0.35
			Semi-finishing	Continuous	QM	GP91TM	200-260-330	0.50-1.50-3.00	0.15-0.22-0.35
						GP1105	200-260-360	0.80-2.00-4.00	0.15-0.20-0.40
						GP1115	180-230-320	0.80-2.00-4.00	0.15-0.20-0.40
						GP1120	180-230-320	0.80-2.00-4.00	0.15-0.20-0.40
				Interrtuption		GP1225	160-210-300	0.80-2.00-4.00	0.15-0.20-0.40
				Continuous	TP	GP31TM	220-300-380	0.30-1.00-3.00	0.05-0.12-0.28
						GP91TM	200-280-350	0.30-1.20-3.00	0.05-0.15-0.28
				Continuous	TS	GP31TM	200-280-350	0.50-1.00-3.00	0.10-0.15-0.35
						GP91TM	200-260-330	0.50-1.20-3.00	0.10-0.20-0.35
				Continuous	SV	GP31TM	180-240-330	1.00-1.50-3.50	0.18-0.20-0.35
						GP91TM	180-230-320	1.00-1.50-3.50	0.18-0.25-0.40
						GP1120	180-220-320	1.00-2.50-4.50	0.18-0.25-0.45
				Interrtuption		GP1225	160-200-300	1.00-2.50-4.50	0.18-0.25-0.45
			Roughing	Continuous	QR	GP1105	130-190-270	1.50-3.50-6.00	0.20-0.30-0.60
						GP1225	120-170-250	1.50-3.50-6.00	0.20-0.30-0.60
				Interrtuption		GP1135	110-150-230	1.50-3.50-6.00	0.20-0.30-0.60
			Heavy Cutting	Continuous	QH	GP1105	100-150-240	3.00-6.00-12.0	0.35-0.60-1.10
						GP1225	90-140-210	3.00-6.00-12.0	0.35-0.60-1.10
				Interrtuption		GP1135	80-130-190	3.00-6.00-12.0	0.35-0.60-1.10
	Carbon Steel & Alloy Steel	HB180-280	superfinishing &Finishing	Continuous	PS	GP91TF	200-270-350	0.08-0.15-0.30	0.03-0.08-0.15
			Finishing	Continuous	QF	GP31TM	200-270-350	0.40-0.80-1.50	0.04-0.12-0.22
						GP91TM	180-250-330	0.40-1.00-2.00	0.08-0.20-0.30
						GP1105	200-250-340	0.40-0.80-2.00	0.08-0.15-0.35
						GP1115	180-230-320	0.40-0.80-2.00	0.08-0.15-0.35
						GP1120	180-230-320	0.40-0.80-2.00	0.08-0.15-0.35
				Interrtuption		GP1225	160-200-300	0.40-0.80-2.00	0.08-0.15-0.35
			Semi-finishing	Continuous	QM	GP91TM	180-230-310	0.50-1.50-3.00	0.15-0.20-0.35
						GP1105	160-230-320	0.80-2.00-4.00	0.15-0.22-0.40
						GP1115	140-210-300	0.80-2.00-4.00	0.15-0.20-0.40
						GP1120	140-210-300	0.80-2.00-4.00	0.15-0.20-0.40
				Interrtuption		GP1225	120-190-280	0.80-2.00-4.00	0.15-0.20-0.40
				Continuous	TP	GP31TM	200-270-350	0.30-1.00-2.50	0.05-0.12-0.28
						GP91TM	180-250-330	0.30-1.20-2.50	0.05-0.15-0.28
				Continuous	TS	GP31TM	180-250-330	0.50-1.00-3.00	0.10-0.15-0.35
						GP91TM	180-230-310	0.50-1.20-3.00	0.10-0.20-0.35

Recommended Cutting Data

Negative

ISO	Workpiece materials	Hardness	Cutting Range	Application	Geometries	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Depth of Cut ap(mm)	Feed rate f(mm)
P	Carbon Steel & Alloy Steel	HB180-280	Semi-finishing	Continuous	SV	GP31TM	160-220-310	1.00-1.50-3.50	0.18-0.20-0.35
						GP91TM	160-210-300	1.00-1.50-3.50	0.18-0.25-0.40
						GP1120	140-200-300	1.00-2.50-4.50	0.18-0.25-0.45
				Interrtuption		GP1225	120-180-280	1.00-2.50-4.50	0.18-0.25-0.45
			Finishing	Continuous	QR	GP1105	120-180-260	1.50-3.50-6.00	0.20-0.30-0.60
						GP1225	110-160-240	1.50-3.50-6.00	0.20-0.30-0.60
				Interrtuption		GP1135	100-140-220	1.50-3.50-6.00	0.20-0.30-0.60
			Heavy Cutting	Continuous	QH	GP1105	90-140-230	3.00-6.00-12.0	0.35-0.60-1.10
						GP1225	80-130-200	3.00-6.00-12.0	0.35-0.60-1.10
				Interrtuption		GP1135	70-120-180	3.00-6.00-12.0	0.35-0.60-1.10
		HB280-350	Finishing	Continuous	QF	GP31TM	180-250-320	0.40-0.80-1.50	0.04-0.12-0.22
						GP91TM	170-230-300	0.40-1.00-2.00	0.08-0.20-0.30
						GP1105	160-200-270	0.40-0.80-2.00	0.08-0.15-0.35
						GP1115	150-180-250	0.40-0.80-2.00	0.08-0.15-0.35
						GP1120	150-180-250	0.40-0.80-2.00	0.08-0.15-0.35
				Interrtuption		GP1225	130-150-230	0.40-0.80-2.00	0.08-0.15-0.35
			Semi-finishing	Continuous	QM	GP91TM	160-210-300	0.50-1.50-3.00	0.15-0.22-0.35
						GP1105	120-180-250	0.80-2.00-4.00	0.15-0.20-0.40
						GP1115	110-170-240	0.80-2.00-4.00	0.15-0.20-0.40
						GP1120	110-170-240	0.80-2.00-4.00	0.15-0.20-0.40
				Interrtuption		GP1225	100-150-220	0.80-2.00-4.00	0.15-0.20-0.40
				Continuous	TP	GP31TM	180-250-320	0.30-1.00-2.50	0.05-0.12-0.28
						GP91TM	170-230-300	0.30-1.20-2.50	0.05-0.15-0.28
				Continuous	TS	GP31TM	170-230-300	0.50-1.00-3.00	0.10-0.15-0.35
						GP91TM	150-210-280	0.50-1.20-3.00	0.10-0.20-0.35
				Continuous	SV	GP31TM	140-190-270	1.00-1.50-3.50	0.18-0.20-0.35
						GP91TM	140-180-260	1.00-1.50-3.50	0.18-0.25-0.40
						GP1120	110-160-240	1.00-2.50-4.50	0.18-0.25-0.45
				Interrtuption		GP1225	100-140-220	1.00-2.50-4.50	0.18-0.25-0.45
			Roughing	Continuous	QR	GP1105	100-150-210	2.00-3.50-6.50	0.20-0.30-0.60
						GP1225	90-140-200	2.00-3.50-6.50	0.20-0.30-0.60
				Interrtuption		GP1135	80-120-180	2.00-3.50-6.50	0.20-0.30-0.60
			Heavy Cutting	Continuous	QH	GP1105	80-110-190	3.00-6.00-12.0	0.35-0.60-1.10
						GP1225	70-100-170	3.00-6.00-12.0	0.35-0.60-1.10
				Interrtuption		GP1135	60-90-150	3.00-6.00-12.0	0.35-0.60-1.10

Recommended Cutting Data

Negative

ISO	Workpiece materials	Hardness	Cutting Range	Application	Geometries	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Depth of Cut ap(mm)	Feed rate f(mm)
M	stainless steel 303,304 and 316, etc.	≤HB300	superfinishing &Finishing	Continuous	PS	GS3115	120-190-250	0.08-0.15-0.30	0.03-0.08-0.15
						GS3125	100-170-230	0.08-0.15-0.30	0.03-0.08-0.15
			Finishing	Continuous	SF	GS3115	120-190-250	0.10-0.80-1.50	0.08-0.10-0.30
				Continuous	LF	GM3215	120-160-200	0.40-0.90-1.50	0.05-0.24-0.20
				Interrtuption		GM3225	80-130-180	0.40-0.90-1.50	0.05-0.12-0.20
			Semi-finishing	Continuous	SM	GM1115	200-250-300	1.00-2.00-3.00	0.15-0.20-0.35
						GM3215	120-160-200	1.00-2.00-3.00	0.15-0.20-0.35
				Interrtuption		GM1125	180-230-280	1.00-2.00-3.00	0.15-0.20-0.35
						GM3225	80-130-180	1.00-2.00-3.00	0.15-0.20-0.35
				Continuous	LV	GM3215	120-160-200	0.80-2.20-4.50	0.15-0.24-0.32
				Interrtuption		GM3225	80-130-180	0.80-2.20-4.50	0.15-0.24-0.32
				Continuous	LM	GM1115	200-250-300	0.80-1.80-3.50	0.08-0.18-0.40
						GM3215	120-160-200	0.80-1.80-3.50	0.08-0.18-0.40
				Interrtuption		GM1125	180-230-280	0.80-1.80-3.50	0.08-0.18-0.40
						GM3225	80-130-180	0.80-1.80-3.50	0.08-0.18-0.40
			Roughing	Continuous	LR	GM1115	200-250-300	1.50-3.00-5.00	0.15-0.30-0.50
						GM3215	120-160-200	1.50-3.00-5.00	0.15-0.30-0.50
				Interrtuption		GM1125	180-230-280	1.50-3.00-5.00	0.15-0.30-0.50
						GM3225	80-130-180	1.50-3.00-5.00	0.15-0.30-0.50
K	Gray cast iron FC200，FC250，FC300 etc.	≤HB300	Finishing &Semi-finishing	Continuous	UK	GK1115	230-350-500	0.50-1.50-3.00	0.10-0.20-0.40
				Interrtuption		GK1125	220-320-480	0.50-1.50-3.00	0.10-0.20-0.40
			Roughing	Continuous	HK	GK1115	220-320-480	0.50-2.00-4.00	0.10-0.25-0.50
				Interrtuption		GK1125	210-300-450	0.50-2.00-4.00	0.10-0.25-0.50
			Heavy Cutting	Continuous	Flat	GK1115	210-300-450	1.00-2.50-6.00	0.20-0.30-0.60
				Interrtuption		GK1125	200-280-430	1.00-2.50-6.00	0.20-0.30-0.60
	Ductile cast iron FCD450,FCD600 etc.	≤HB300	Finishing &Semi-finishing	Continuous	UK	GK1120	180-260-380	0.50-1.50-3.00	0.10-0.20-0.40
				Interrtuption		GK1130	160-230-350	0.50-1.50-3.00	0.10-0.20-0.40
			Roughing	Continuous	HK	GK1120	180-240-360	0.50-2.00-4.00	0.10-0.25-0.50
				Interrtuption		GK1130	160-210-340	0.50-2.00-4.00	0.10-0.25-0.50
			Heavy Cutting	Continuous	Flat	GK1120	180-220-350	1.00-2.50-6.00	0.20-0.30-0.60
				Interrtuption		GK1130	160-200-330	1.00-2.50-6.00	0.20-0.30-0.60

Recommended Cutting Data

Positive

ISO	Workpiece materials	Hardness	Cutting Range	Application	Geometries	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Depth of Cut ap(mm)	Feed rate f(mm)
P	Low Carbon Steel	⩽HB180	superfinishing &Finishing	Continuous	PS	GP91TF	220-300-380	0.08-0.15-0.30	0.03-0.08-0.15
				Continuous	GS	GP91TF	220-300-380	0.20-0.30-1.50	0.02-0.05-0.08
			Finishing	Continuous	MM	GP31TM	220-280-340	0.10-0.50-1.00	0.03-0.10-0.20
						GP91TM	200-250-310	0.10-0.60-1.50	0.03-0.12-0.20
						GP1105	190-240-320	0.10-0.60-1.50	0.05-0.10-0.20
						GP1115	180-220-300	0.10-0.60-1.50	0.05-0.10-0.20
				Interrtuption		GP1225	170-200-280	0.10-0.60-1.50	0.05-0.10-0.20
			Finishing &Semi-finishing	Continuous	GP	GP31TM	200-250-300	0.30-0.80-1.50	0.05-0.12-0.22
						GP91TM	180-230-300	0.30-1.00-1.80	0.05-0.15-0.22
						GP1115	170-200-280	0.40-1.00-2.50	0.07-0.12-0.30
						GP1120	170-200-280	0.40-1.00-2.50	0.07-0.12-0.30
				Interrtuption		GP1225	150-180-260	0.40-1.00-2.50	0.07-0.12-0.30
			Finishing &Semi-finishing	Continuous	TP	GP31TM	200-250-300	0.30-1.00-3.00	0.05-0.12-0.25
						GP91TM	180-230-300	0.30-1.20-3.00	0.05-0.15-0.25
			Roughing	Continuous	KM	GP1225	140-160-240	1.00-2.00-3.50	0.13-0.20-0.40
				Interrtuption		GP1225	130-150-230	1.00-2.00-3.50	0.13-0.20-0.40
	Carbon Steel & Alloy Steel	HB180-280	superfinishing &Finishing	Continuous	PS	GP91TF	200-250-330	0.08-0.15-0.30	0.03-0.08-0.15
				Continuous	GS	GP91TF	200-250-330	0.20-0.30-1.50	0.02-0.05-0.08
			Finishing	Continuous	MM	GS3115	120-160-200	0.50-0.70-1.50	0.05-0.10-0.20
						GM3215	120-160-200	0.50-0.70-1.50	0.05-0.10-0.20
						GM1115	200-250-300	0.50-0.70-1.50	0.05-0.10-0.20
				Interrtuption		GM1125	180-230-280	0.50-0.70-1.50	0.05-0.10-0.20
						GM3225	80-130-180	0.50-0.70-1.50	0.05-0.10-0.20
			Finishing &Semi-finishing	Continuous	GP	GM1115	200-250-300	0.40-1.00-2.50	0.07-0.12-0.30
						GM3215	120-160-200	0.40-1.00-2.50	0.07-0.12-0.30
				Interrtuption		GM1125	180-230-280	0.40-1.00-2.50	0.07-0.12-0.30
						GM3225	80-130-180	0.40-1.00-2.50	0.07-0.12-0.30
			Finishing &Semi-finishing	Continuous	TP	GP31TM	180-210-280	0.30-1.00-3.00	0.05-0.12-0.25
						GP91TM	160-190-270	0.30-1.20-3.00	0.05-0.15-0.25
			Roughing Cutting	Continuous	KM	GP1225	110-130-200	1.00-2.00-3.50	0.13-0.20-0.40
				Interrtuption		GP1225	100-120-190	1.00-2.00-3.50	0.13-0.20-0.40

Recommended Cutting Data

Positive

ISO	Workpiece materials	Hardness	Cutting Range	Application	Geometries	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Depth of Cut ap(mm)	Feed rate f(mm)
P	Carbon Steel & Alloy Steel	HB280-350	Finishing	Continuous	MM	GP31TM	160-220-300	0.10-0.50-1.00	0.03-0.10-0.20
						GP91TM	140-200-280	0.10-0.60-1.50	0.03-0.12-0.20
						GP1105	140-180-240	0.10-0.60-1.50	0.05-0.10-0.20
						GP1115	130-160-230	0.10-0.60-1.50	0.05-0.10-0.20
				Interrtuption		GP1225	120-140-210	0.10-0.60-1.50	0.05-0.10-0.20
			Finishing &Semi-finishing	Continuous	GP	GP31TM	160-200-270	0.30-0.80-1.50	0.05-0.12-0.22
						GP91TM	130-160-250	0.30-1.00-1.80	0.05-0.15-0.22
						GP1115	120-160-210	0.40-1.00-2.50	0.07-0.12-0.30
						GP1120	120-160-210	0.40-1.00-2.50	0.07-0.12-0.30
				Interrtuption		GP1225	100-140-220	0.40-1.00-2.50	0.07-0.12-0.30
			Finishing &Semi-finishing	Continuous	TP	GP31TM	160-200-270	0.30-1.00-3.00	0.05-0.12-0.25
						GP91TM	130-160-250	0.30-1.20-3.00	0.05-0.15-0.25
			Roughing	Continuous	KM	GP1225	90-110-180	1.00-2.00-3.50	0.13-0.20-0.40
				Interrtuption		GP1225	80-100-170	1.00-2.00-3.50	0.13-0.20-0.40
M	stainless steel 303, 304 and 316, etc.	⩽HB300	superfinishing &Finishing	Continuous	PS	GS3125	100-170-230	0.08-0.15-0.30	0.03-0.08-0.15
				Continuous	GS	GS3125	100-170-230	0.20-0.30-1.50	0.02-0.05-0.08
			Finishing	Continuous	MM	GS3115	120-160-200	0.50-0.70-1.50	0.05-0.10-0.20
						GM3215	120-160-200	0.50-0.70-1.50	0.05-0.10-0.20
						GM1115	200-250-300	0.50-0.70-1.50	0.05-0.10-0.20
						GM1125	180-230-280	0.50-0.70-1.50	0.05-0.10-0.20
						GM3225	80-130-180	0.50-0.70-1.50	0.05-0.10-0.20
			Semi-finishing	Continuous	GP	GM1115	200-250-300	0.40-1.00-2.50	0.07-0.12-0.30
						GM3215	120-160-200	0.40-1.00-2.50	0.07-0.12-0.30
				Interrtuption		GM1125	180-230-280	0.40-1.00-2.50	0.07-0.12-0.30
						GM3225	80-130-180	0.40-1.00-2.50	0.07-0.12-0.30
K	Gray cast iron FC200, FC250, FC300 etc.	⩽HB250	Finishing &Semi-finishing	Continuous	GP	GK1115	180-280-380	0.30-0.80-2.00	0.05-0.12-0.25
				Interrtuption		GK1125	160-250-350	0.30-0.80-2.00	0.05-0.12-0.25
			Roughing	Continuous	KM	GK1115	180-260-360	1.00-2.00-4.00	0.13-0.20-0.40
				Interrtuption		GK1125	160-230-340	1.00-2.00-4.00	0.13-0.20-0.40
	Ductile cast iron FCD450, FCD600 etc.	⩽HB270	Finishing &Semi-finishing	Continuous	GP	GK1115	160-250-350	0.30-0.80-2.00	0.05-0.12-0.25
				Interrtuption		GK1125	140-230-330	0.30-0.80-2.00	0.05-0.12-0.25
			Roughing	Continuous	KM	GK1115	160-230-330	1.00-2.00-4.00	0.13-0.20-0.40
				Interrtuption		GK1125	140-200-310	1.00-2.00-4.00	0.13-0.20-0.40
N	Titanium Alloy	HB90-100	Finishing &Semi-finishing	Continuous	AL	GN9115	250-700-970	0.50-1.20-3.00	0.05-0.10-0.30
				Interrtuption	AL	GN9120	250-680-960	0.50-1.20-3.50	0.05-0.10-0.30
					AL	GN9130	250-650-950	0.50-1.20-4.00	0.05-0.10-0.30
		HB60-90		Continuous	AL	GN9115	1000-1400-2100	0.50-1.20-3.00	0.05-0.10-0.30
				Interrtuption	AL	GN9120	950-1300-2000	0.50-1.20-3.50	0.05-0.10-0.30
					AL	GN9130	950-1200-1950	0.50-1.20-4.00	0.05-0.10-0.30

B

PCBN/PCD TURNING



PCBN/PCD Turning Indexable Inserts Identification System

Symbol	Shape	Corner Angle	Figure
H	Hexagon	120°	
O	Octagon	135°	
P	Pentagon	108°	
S	Square	90°	
T	Triangle	60°	
C	Rhombic	80°	
D		55°	
V		35°	
W	Trigon	80°	
L	Rectangle	90°	
A	Rectangle	85°	
R	Round	--	

①Shape Symbol

Symbol	Corner Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Others

②Relief Angle Symbol

Symbol	Tolerance(mm)			Tolerance(inch)		
	Corner Height(m)	Thickness (S)	I.G.dia. (Ød)	Corner Height(m)	Thickness (S)	I.G.dia. (Ød)
A	±0.005	±0.025	±0.025	±0.0002	±0.001	±0.001
F	±0.005	±0.025	±0.013	±0.0002	±0.001	±0.0005
C	±0.013	±0.025	±0.025	±0.0005	±0.001	±0.001
H	±0.013	±0.025	±0.013	±0.0005	±0.001	±0.0005
E	±0.025	±0.025	±0.025	±0.001	±0.001	±0.001
G	±0.025	±0.13	±0.025	±0.001	±0.005	±0.001
J	±0.005	±0.025	±0.05~0.13	±0.0002	±0.001	±0.002~0.005
K	±0.013	±0.025	±0.05~0.13	±0.0005	±0.001	±0.002~0.005
L	±0.025	±0.025	±0.05~0.13	±0.001	±0.001	±0.002~0.005
M	±0.08~0.18	±0.13	±0.05~0.13	±0.003~0.007	±0.005	±0.002~0.005
N	±0.08~0.18	±0.025	±0.05~0.13	±0.003~0.007	±0.001	±0.002~0.005
U	±0.13~0.38	±0.13	±0.08~0.25	±0.005~0.015	±0.005	±0.003~0.01

③Tolerance Symbol

①	②	③	④	⑤
T	N	G	A	22
T	N	M	G	22

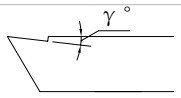
④Hole/Chipbreaker Symbol

Symbol	Hole	Hole Shape	Chipbreaker	Shape
N	Without	—	Without	
R			Single-sided	
F			Double-sided	
A	With	With Hole	Without	
M			Single-sided	
G			Double-sided	
W		With Hobe and One Countersink 40°~60°	Without	
T			Single-sided	
Q		With Hobe and Two Countersinks 40°~60°	Without	
U			Double-sided	
B		With Hobe and One Countersink 70°~90°	Without	
H			Single-sided	
C		With Hobe and Two Countersinks 70°~90°	Without	
J			Double-sided	
X	—	—	—	

⑤Edge Length Symbol（ISO）(mm)

P		S		C		W		T		D		V		K		I.C.Size (mm)
Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	
		03	3.97	03	4.0			06	6.9	4	4.8					3.97
		04	4.76	04	4.8			08	8.2	5	5.8					4.76
05	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
		05	5.56	05	5.6	03	3.8	09	9.6	6	6.8					5.56
06	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6
		06	6.35	06	6.5	04	4.3	11	11	7	7.8	11	11.2			6.35
		07	7.94	08	8.1	05	5.4	13	13.8	9	9.7					7.94
08	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8
09	9.525	09	9.525	09	9.7	06	6.5	16	16.5	11	11.6	16	16.6	16	19.7	9.525
10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10
12	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
12	12.7	12	12.7	12	12.9	08	8.7	22	22	15	15.5	22	22.1			12.7
15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4					15.875
16	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16
19	19.05	19	19.05	19	19.3	13	13	33	33	23	23.3					19.05
20	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20
		22	22.225	22	22.6			38	38.5	27	27.1					22.225
25	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25
25	25.4	25	25.4	25	25.8			44	44	31	31					25.4
31	31.75	31	31.75	32	32.2			55	55	38	38.8					31.75
31	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32

PCBN/PCD Turning Indexable Inserts Identification System



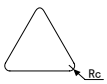
Symbol	Corner-R (mm)
GN	0°
GB	5°
GC	7°
GT	10°

⑩PCD Rake Angle

⑥	⑦	⑧	⑨	⑩
04	08	M	- 3	GN
04	08	M	- 3	GN

⑥Thickness	
Symbol	Thickness
01	1.59
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

⑦Corner Rc Symbol



Symbol	Corner-R(mm)
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2

⑧Tips

Symbol	Application
LF	Continuous sharp
LE	Continues passivation
LT	Continues Chamfer
L	Continues Standard
M	Continues Gerenal
H	Interrupted Strength
LS	Continues Others
MS	Interrupted Sharp
HS	Heavy Interrupted sharp
(空)	None

⑨Number of transpositions

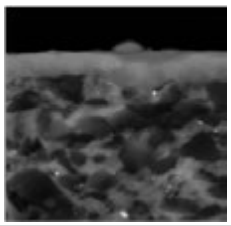
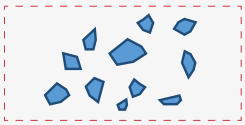
Item	Number of transpositions
1	1
2	2
3	3
4	4
6	6
8	8

⑩Geometry

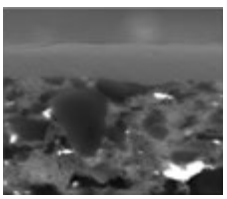
PCBN Grade Application

Workpiece Material		Turning Insert		Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
K	Gray cast iron	Continuous Cutting		BKN115P	400-1500	K01	BKN115P, BKC120P NEW
						K10	
		Interrupted Cutting		BKC120P	200-500	K20	
						K30	
						K40	
S	Powder Metallurgy	Continuous Cutting		BSN115P	50-300	S01	BSN115P
						S10	
		Interrupted Cutting				S20	
						S30	
						S40	
H	Hardened Material	Continuous Cutting		BHC 115P	100-220	H01	BHC115P NEW
		Medium Interrupted Cutting		BHC 125P	100-200	H10	
						H20	BHC125P NEW
		Heavy Interrupted Cutting		BHC 135P	50-130	H30	
						H40	BHC135P NEW

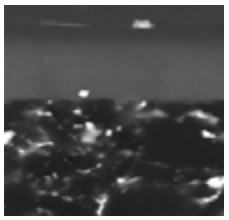
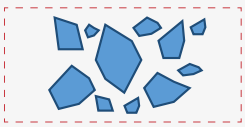
Continuous Cutting for hardened material Coated PCBN Grade-BHC115P NEW

	AlTIN Coating AlTIN Coating	The latest AlTIN+coating Excellent heat resistance and oxidation resistance
		Ultra –fine CBN substrate Excellent wear resistance and red hardness

Continuous Cutting for hardened material Coated PCBN Grade-BHC125P NEW

	AlTIN Coating AlTIN Coating	The latest AlTIN+coating Excellent heat resistance and oxidation resistance
		Mixed Crystal CBN Substrate Both wear resistance and impact resistance

Heavy Interrupted Cutting for hardened material Coated PCBN Grade-BHC135P NEW

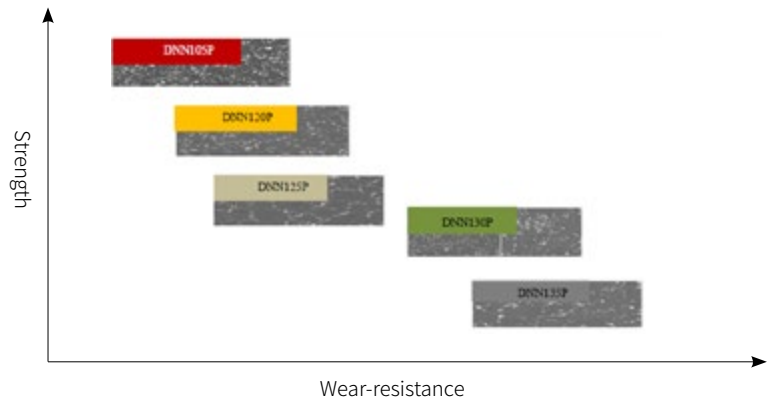
	AlTIN Coating AlTIN Coating	The latest AlTIN+coating Excellent heat resistance and oxidation resistance
		High ratio CBN substrate Excellent impact resistance and chemical stability

PCBN Grade Application

Workpiece Material		Turning Insert		Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
N	Non-ferrous metal	Continuous Cutting		DNN105P	300~3000	N01	DNN105P
				DNN120P		N10	DNN120P (NEW)
				DNN125P			DNN125P
				DNN130P	200~1500	N20	DNN130P
				DNN135P			DNN135P
		Interrupted Cutting		DNN105P	200~1500	N30	
				DNN120P			
				DNN125P			
	Non-metallic material	Continuous Cutting		DNN130P	~3000	N01	
				DNN135P		N10	DNN30P / DNN35P
		Interrupted Cutting		DNN130P		N20	
				DNN135P		N30	
	Composite material	Continuous Cutting		DNN130P	300~1000	N01	
				DNN135P		N10	DNN30P / DNN135P
		Interrupted Cutting		DNN130P		N20	
				DNN135P		N30	

Features&Usage of PCD Grade

Grade	Advantages	Purpose
DNN105P	High density sintered ultra-fine diamond material congribute to the highest wear resistance and collapse resistance, with superior sharpness.	Mainly used in the processing of medium and low silicon aluminium alloy, copper and copper alloy, cemented carbide and ceramic pre-sintered billet and other materials.
NEW DNN120P	Fine-grained diamond material with good machinability and wear resistance	Mainly used in the processing of aluminium alloy, copper and copper alloy, pressed film products, hard rubber, carbon and ceramic pre-sintered blanks and other materials.
DNN125P	Medium-sized diamond material, with good wear resistance and discharge performance, good impact resistance, strong versatility	Mainly used in the processing of aluminium alloy, copper and copper alloy, pressed film products, hard rubber, carbon and ceramic pre-sintered blanks and other materials.
DNN130P	High content, mixed size diamond material, with excellent wear resistance, high impact strength, good surface quality	It is mainly used for milling of high aluminium alloy, processing of carbon fibers and glass fibers.
DNN135P	Large size diamond material, long tool life, high wear resistance, general surface finish	Mainly used for rough turning and intermittent processing of aluminum alloy, MMC, cemented carbide and other wear-resistant materials with silicon content greater than 14%.



Range of PCBN Turning InsertsPCBN

PCBN (Negative)

Type	Advantages	Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°	Trigon 80°
Brazed	•High precision and longer tool life •Wide range of insert types •High cost performance					
		CNGA	DNGA	TNGA	VNGA	WNGA
		P079	P079	P080	P080	P081

PCBN (Negative)

Type	Advantages	Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°	Trigon 80°
Brazed	•High precision and longer tool life •Wide range of insert types •High cost performance					
		CCGW	DCGW	TCGW/TPGW	VBGW/VCGW	
		P082	P082	P083	P084	

PCD (Negative)

Type	Advantages	Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°
Brazed	•High precision and longer tool life •Wide range of insert types •High cost performance				
		CNGA	DNGA	TNGA	VNGA
		P085	P085	P086	P086

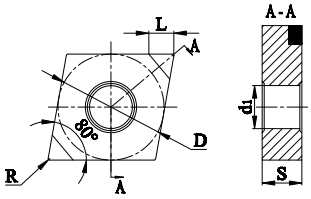
PCD (Postive)

Type	Advantages	Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°	Trigon 360°
Brazed	•High precision and longer tool life •Wide range of insert types •High cost performance					
		CC□W/CP□W	DC□W	TC□W/TP□W	VC□W	RDEW
		P087	P089	P091	P092	P092

PCBN (Negative)

CNGA

Rhombic 80° with Hole

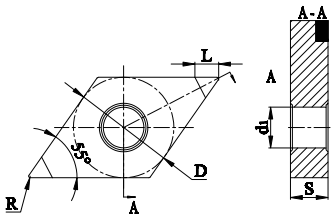


Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	CNGA120404L-2	2	2.2	12.7	4.76	5.16	0.4	○	○	●	○	○	○
	CNGA120404M-2	2	2.2	12.7	4.76	5.16	0.4	○	○	●	●	○	○
	CNGA120408L-2	2	2.2	12.7	4.76	5.16	0.8	○	○	○	○	○	○
	CNGA120408M-2	2	2.2	12.7	4.76	5.16	0.8	○	○	●	●	●	●
	CNGA120408H-2	2	2.2	12.7	4.76	5.16	0.8	○	○	○	●	○	○
	CNGA120412M-2	2	2.2	12.7	4.76	5.16	1.2	○	○	●	●	●	○

●Stock ○Available upon Order

DNGA

Rhombic 55° with Hole



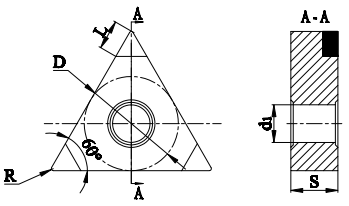
Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	DNGA150404L-2	2	2.2	12.7	4.76	5.16	0.4	●	○	●	○	○	○
	DNGA150404M-2	2	2.2	12.7	4.76	5.16	0.4	○	○	○	●	○	○
	DNGA150408L-2	2	2.2	12.7	4.76	5.16	0.8	○	○	●	○	○	○
	DNGA150408M-2	2	2.2	12.7	4.76	5.16	0.8	●	○	○	●	○	●
	DNGA150412M-2	2	2.2	12.7	4.76	5.16	1.2	○	○	○	○	○	○
	DNGA150604M-2	2	2.2	12.7	6.35	5.16	0.4	○	○	○	○	○	○
	DNGA150608M-2	2	2.2	12.7	6.35	5.16	0.8	○	○	○	○	○	○
	DNGA150612M-2	2	2.2	12.7	6.35	5.16	1.2	○	○	○	○	○	○

●Stock ○Available upon Order

PCBN (Negative)

TNGA

Triangle 60° with Hole

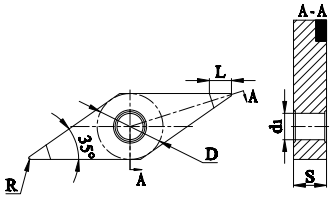


Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	TNGA160404L-3	3	2.2	9.525	4.76	3.81	0.4	○	○	●	○	○	○
	TNGA160404M-3	3	2.2	9.525	4.76	3.81	0.4	○	○	●	●	○	○
	TNGA160408L-3	3	2.2	9.525	4.76	3.81	0.8	○	○	●	●	○	○
	TNGA160408M-3	3	2.2	9.525	4.76	3.81	0.8	○	○	●	●	●	○
	TNGA160408H-3	3	2.2	9.525	4.76	3.81	0.8	○	○	○	●	○	○
	TNGA160412M-3	3	2.2	9.525	4.76	3.81	1.2	○	○	○	○	○	○
	TNGA160416H-3	3	2.2	9.525	4.76	3.81	1.6	○	○	○	○	●	○

●Stock ○Available upon Order

VNGA

Rhombic 35° with Hole



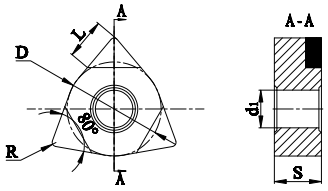
Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	VNGA160404L-2	2	2.2	9.525	4.76	3.81	0.4	○	○	○	○	○	○
	VNGA160404M-2	2	2.2	9.525	4.76	3.81	0.4	○	○	○	●	●	○
	VNGA160408L-2	2	2.2	9.525	4.76	3.81	0.8	○	○	●	○	○	○
	VNGA160408M-2	2	2.2	9.525	4.76	3.81	0.8	○	○	○	●	●	○
	VNGA160412M-2	2	2.2	9.525	4.76	3.81	1.2	○	○	●	○	○	○

●Stock ○Available upon Order

PCBN (Negative)

WNGA

Trigon 60° with Hole



Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	WNGA080404L-3	3	2.2	12.7	4.76	3.81	0.4	○	○	○	○	○	○
	WNGA080404M-3	3	2.2	12.7	4.76	3.81	0.4	○	○	○	●	○	○
	WNGA080408L-3	3	2.2	12.7	4.76	3.81	0.8	○	○	○	○	○	○
	WNGA080408M-3	3	2.2	12.7	4.76	3.81	0.8	●	○	○	○	●	○
	WNGA080408H-3	3	2.2	12.7	4.76	3.81	0.8	○	○	○	●	○	○
	WNGA080412M-3	3	2.2	12.7	4.76	3.81	1.2	○	○	○	○	○	○

●Stock ○Available upon Order

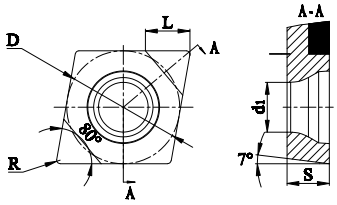
●Stock ○Available upon Order

●Stock ○Available upon Order

PCBN (Negative)

CCGW

Rhombic 80° with Hole

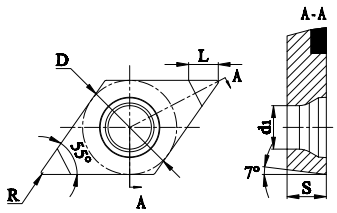


Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
CCGW060202L-2	2	2	6.35	2.38	2.8	0.2	○	○	○	○	○	○
CCGW060204L-2	2	2	6.35	2.38	2.8	0.4	○	○	●	●	○	○
CCGW060204M-2	2	2	6.35	2.38	2.8	0.4	○	○	○	○	○	○
CCGW060208L-2	2	2	6.35	2.38	2.8	0.8	○	○	○	○	○	○
CCGW060208M-2	2	2	6.35	2.38	2.8	0.8	○	○	●	○	○	○
CCGW09T302L-2	2	2	9.525	3.97	4.4	0.2	○	○	○	○	○	○
CCGW09T304L-2	2	2	9.525	3.97	4.4	0.4	●	○	●	○	○	○
CCGW09T304M-2	2	2	9.525	3.97	4.4	0.4	○	○	○	●	●	○
CCGW09T308L-2	2	2	9.525	3.97	4.4	0.8	○	○	○	○	○	○
CCGW09T308M-2	2	2	9.525	3.97	4.4	0.8	●	○	●	●	●	○
CCGW09T308H-2	2	2	9.525	3.97	4.4	0.8	○	○	○	●	○	○

●Stock ○Available upon Order

DCGW

Rhombic 55° with Hole



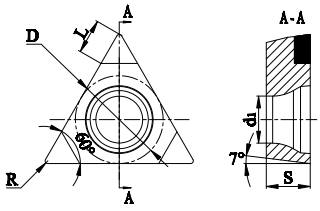
Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
DCGW070202L-2	2	2	6.35	2.38	2.8	0.2	○	○	○	●	○	○
DCGW070204L-2	2	2	6.35	2.38	2.8	0.4	○	○	●	●	○	○
DCGW070204M-2	2	2	6.35	2.38	2.8	0.4	○	○	○	○	○	○
DCGW070208L-2	2	2	6.35	2.38	2.8	0.8	○	○	○	○	○	○
DCGW070208M-2	2	2	6.35	2.38	2.8	0.8	○	○	○	○	○	○
DCGW11T302L-2	2	2	9.525	3.97	4.4	0.2	○	○	○	○	○	○
DCGW11T304L-2	2	2	9.525	3.97	4.4	0.4	●	○	○	○	○	○
DCGW11T304M-2	2	2	9.525	3.97	4.4	0.4	○	○	●	●	●	○
DCGW11T308L-2	2	2	9.525	3.97	4.4	0.8	○	○	○	○	○	○
DCGW11T308M-2	2	2	9.525	3.97	4.4	0.8	○	○	●	●	●	●

●Stock ○Available upon Order

PCBN (Negative)

TCGW

Triangle 60° with Hole

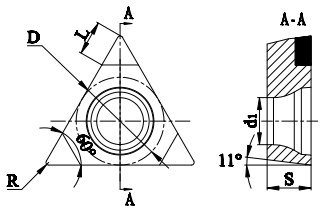


Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	TCGW110302L-3	3	2	6.35	3.18	3.4	0.2	○	○	○	○	○	○
	TCGW110304L-3	3	2	6.35	3.18	3.4	0.4	●	○	○	○	○	○
	TCGW110304M-3	3	2	6.35	3.18	3.4	0.4	○	○	○	●	○	○
	TCGW110308L-3	3	2	6.35	3.18	3.4	0.8	○	○	○	○	○	○
	TCGW110308M-3	3	2	6.35	3.18	3.4	0.8	○	○	○	○	○	○

●Stock ○Available upon Order

TPGW

Triangle 60° with Hole



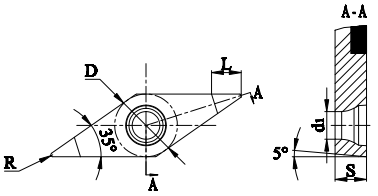
Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	TPGW080202L-1	1	2	4.76	2.38	2.3	0.2	○	○	○	○	○	○
	TPGW080204L-1	1	2	4.76	2.38	2.3	0.4	○	○	○	○	○	○
	TPGW080208L-1	1	2	4.76	2.38	2.3	0.8	○	○	○	○	○	○
	TPGW090202L-3	3	2	5.56	2.38	2.8	0.2	○	○	○	○	○	○
	TPGW090204L-3	3	2	5.56	2.38	2.8	0.4	●	○	○	●	○	○
	TPGW090208L-3	3	2	5.56	2.38	2.8	0.8	●	○	○	○	○	○
	TPGW110202L-3	3	2	6.35	2.38	2.8	0.2	○	○	○	○	○	○
	TPGW110204L-3	3	2	6.35	2.38	2.8	0.4	○	○	○	○	○	○
	TPGW110208M-3	3	2	6.35	2.38	2.8	0.8	○	○	○	○	○	○
	TPGW110302L-3	3	2	6.35	3.18	3.4	0.2	○	○	○	○	○	○
	TPGW110304L-3	3	2	6.35	3.18	3.4	0.4	○	○	○	○	○	●
	TPGW110304M-3	3	2	6.35	3.18	3.4	0.4	○	○	○	○	○	○
	TPGW110308L-3	3	2	6.35	3.18	3.4	0.8	○	○	●	●	○	○
	TPGW110308M-3	3	2	6.35	3.18	3.4	0.8	○	○	○	○	○	○

●Stock ○Available upon Order

PCBN (Negative)

VBGW

Rhombic 35° with Hole

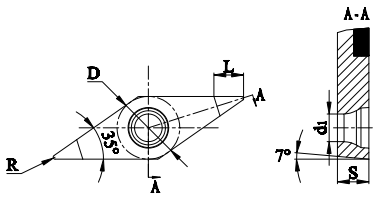


Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BHN115P	BHC115P	BHC125P	BHC135P	BHC135P
	VBGW110302L-2	2	2	6.35	3.18	2.8	0.2	○	○	○	○	○	○
	VBGW110304L-2	2	2	6.35	3.18	2.8	0.4	○	○	○	●	○	○
	VBGW110308L-2	2	2	6.35	3.18	2.8	0.8	○	○	○	●	○	○
	VBGW110308M-2	2	2	6.35	3.18	2.8	0.8	○	○	○	○	○	○
	VBGW160402L-2	2	2	9.525	4.76	4.4	0.2	○	○	○	○	○	○
	VBGW160404L-2	2	2	9.525	4.76	4.4	0.4	●	○	○	○	○	○
	VBGW160408L-2	2	2	9.525	4.76	4.4	0.8	●	○	○	○	○	○
	VBGW160408M-2	2	2	9.525	4.76	4.4	0.8	○	○	●	●	○	○

●Stock ○Available upon Order

VCGW

Rhombic 35° with Hole



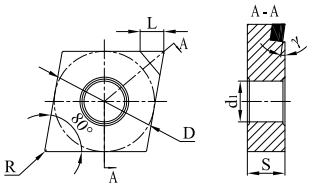
Ordering code		Flute	Dimensions (mm)					PCBN Grade					
			L	D	S	d1	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
	VCGW110302L-2	2	2	6.35	3.18	2.8	0.2	○	○	○	○	○	○
	VCGW110304L-2	2	2	6.35	3.18	2.8	0.4	●	○	○	○	○	○
	VCGW110308L-2	2	2	6.35	3.18	2.8	0.8	○	○	○	○	○	○
	VCGW110308M-2	2	2	6.35	3.18	2.8	0.8	●	○	○	○	○	○
	VCGW160402L-2	2	2	9.525	4.76	4.4	0.2	○	○	○	○	○	○
	VCGW160404L-2	2	2	9.525	4.76	4.4	0.4	○	○	○	○	○	○
	VCGW160408L-2	2	2	9.525	4.76	4.4	0.8	○	○	○	○	○	○
	VCGW160408M-2	2	2	9.525	4.76	4.4	0.8	○	○	○	●	○	○

●Stock ○Available upon Order

PCD (Negative)

CNGA

Rhombic 80° with Hole

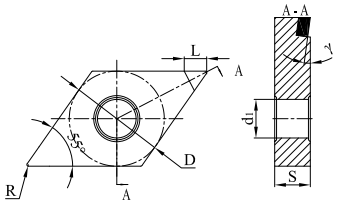


Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	CNGA120404	1	3	12.7	4.76	5.16	0.4	○	○	○	○	○
	CNGA120408	1	3	12.7	4.76	5.16	0.8	○	○	○	○	○

●Stock ○Available upon Order

DNGA

Rhombic 55° with Hole



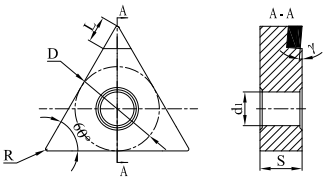
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	DNGA150404	1	5	12.7	4.76	5.16	0.4	○	○	○	○	○
	DNGA150408	1	5	12.7	4.76	5.16	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD insert(Negative)

TNGA

Triangle 60° with Hole

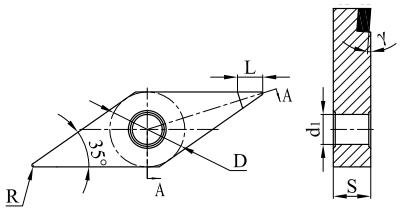


Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	TNGA160404	1	3	9.525	4.76	3.81	0.4	○	○	○	○	○
	TNGA160408	1	3	9.525	4.76	3.81	0.8	○	○	○	○	○

●Stock ○Available upon Order

VNGA

Rhombic 35° with Hole



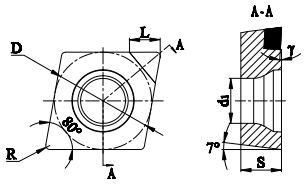
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	VNGA160404	1	3	9.525	4.76	3.81	0.4	○	○	○	○	○
	VNGA160408	1	3	9.525	4.76	3.81	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD (Postive)

CC□W

Rhombic 80° with Hole



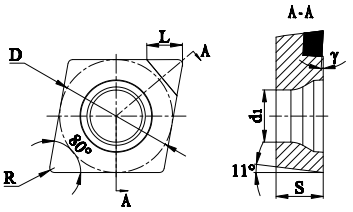
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	CCGW060202	1	2.5	6.35	2.38	2.8	0.2	○	○	○	○	○
	CCGW060204	1	2.5	6.35	2.38	2.8	0.4	○	○	○	○	○
	CCGW060208	1	2.5	6.35	2.38	2.8	0.8	○	○	○	○	○
	CCMW060202M	1	2.5	6.35	2.38	2.8	0.2	○	○	○	○	○
	CCMW060204M	1	2.5	6.35	2.38	2.8	0.4	○	○	●	○	○
	CCMW060208M	1	2.5	6.35	2.38	2.8	0.8	○	○	○	○	○
	CCGW09T302	1	3.0	9.525	3.97	4.4	0.2	○	○	○	○	○
	CCGW09T304	1	3.0	9.525	3.97	4.4	0.4	●	○	●	○	○
	CCGW09T308	1	3.0	9.525	3.97	4.4	0.8	○	○	○	○	○
	CCMW09T302M	1	3.0	9.525	3.97	4.4	0.2	○	○	●	○	○
	CCMW09T304M	1	3.0	9.525	3.97	4.4	0.4	○	○	●	○	○
	CCMW09T308M	1	3.0	9.525	3.97	4.4	0.8	○	○	○	○	○
	CCGW120402	1	3.0	12.7	4.76	5.5	0.2	○	○	○	○	○
	CCGW120404	1	3.0	12.7	4.76	5.5	0.4	○	○	○	○	○
	CCGW120408	1	3.0	12.7	4.76	5.5	0.8	○	○	○	○	○
	CCMW120402M	1	3.0	12.7	4.76	5.5	0.2	○	○	○	○	○
	CCMW120404M	1	3.0	12.7	4.76	5.5	0.4	○	○	●	○	○
	CCMW120408M	1	3.0	12.7	4.76	5.5	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD (Negative)

CP□W

Rhombic 80° with Hole



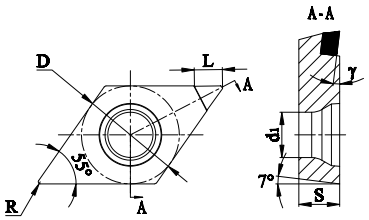
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	CPGW060202	1	2.5	6.35	2.38	2.8	0.2	○	○	○	○	○
	CPGW060204	1	2.5	6.35	2.38	2.8	0.4	○	○	○	○	○
	CPGW060208	1	2.5	6.35	2.38	2.8	0.8	○	○	○	○	○
	CPMW060202M	1	2.5	6.35	2.38	2.8	0.2	○	○	○	○	○
	CPMW060204M	1	2.5	6.35	2.38	2.8	0.4	○	○	○	○	○
	CPMW060208M	1	2.5	6.35	2.38	2.8	0.8	○	○	○	○	○
	CPGW09T302	1	3.0	9.525	3.97	4.4	0.2	○	○	○	○	○
	CPGW09T304	1	3.0	9.525	3.97	4.4	0.4	●	○	●	○	○
	CPGW09T308	1	3.0	9.525	3.97	4.4	0.8	○	○	○	○	○
	CPMW09T302M	1	3.0	9.525	3.97	4.4	0.2	○	○	●	○	○
	CPMW09T304M	1	3.0	9.525	3.97	4.4	0.4	○	○	●	○	○
	CPMW09T308M	1	3.0	9.525	3.97	4.4	0.8	○	○	○	○	○
	CPGW120402	1	3.0	12.7	4.76	5.5	0.2	○	○	○	○	○
	CPGW120404	1	3.0	12.7	4.76	5.5	0.4	○	○	○	○	○
	CPGW120408	1	3.0	12.7	4.76	5.5	0.8	○	○	○	○	○
	CPMW120402M	1	3.0	12.7	4.76	5.5	0.2	○	○	○	○	○
	CPMW120404M	1	3.0	12.7	4.76	5.5	0.4	○	○	●	○	○
	CPMW120408M	1	3.0	12.7	4.76	5.5	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD (Negative)

DC□W

Rhombic 55° with Hole



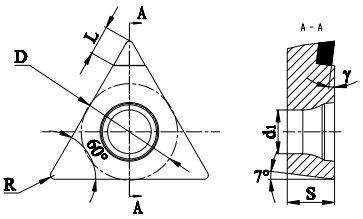
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d_1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	DCGW070204	1	2.5	6.35	2.38	2.8	0.4	○	○	○	○	○
	DCMW070204M	1	2.5	6.35	2.38	2.8	0.4	○	○	●	○	○
	DCGW11T302	1	3.0	9.525	3.97	4.4	0.2	○	○	○	○	○
	DCGW11T304	1	3.0	9.525	3.97	4.4	0.4	●	○	●	○	○
	DCGW11T308	1	3.0	9.525	3.97	4.4	0.8	○	○	○	○	○
	DCMW11T302M	1	3.0	9.525	3.97	4.4	0.2	○	○	●	○	○
	DCMW11T304M	1	3.0	9.525	3.97	4.4	0.4	○	○	●	○	○
	DCMW11T308M	1	3.0	9.525	3.97	4.4	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD (Negative)

TC□W

Triangle 60° with Hole



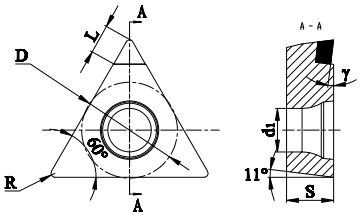
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	TCGW080202	1	2.5	4.76	2.38	2.5	0.2	○	○	○	○	○
	TCGW080204	1	2.5	4.76	2.38	2.5	0.4	●	○	○	○	○
	TCMW080202M	1	2.5	4.76	2.38	2.5	0.2	○	○	●	○	○
	TCMW080204M	1	2.5	4.76	2.38	2.5	0.4	○	○	●	○	○
	TCGW090202	1	2.5	5.56	2.38	2.5	0.2	○	○	○	○	○
	TCGW090204	1	2.5	5.56	2.38	2.5	0.4	○	○	○	○	○
	TCMW090202M	1	2.5	5.56	2.38	2.5	0.2	○	○	●	○	○
	TCMW090204M	1	2.5	5.56	2.38	2.5	0.4	○	○	●	○	○
	TCGW110302	1	3.0	6.35	3.18	2.8	0.2	○	○	○	○	○
	TCGW110304	1	3.0	6.35	3.18	2.8	0.4	●	○	○	○	○
	TCGW110308	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
	TCMW110302M	1	3.0	6.35	3.18	2.8	0.2	○	○	●	○	○
	TCMW110304M	1	3.0	6.35	3.18	2.8	0.4	○	○	●	○	○
	TCMW110308M	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
	TCGW160402	1	3.0	9.525	4.76	4.4	0.2	○	○	○	○	○
	TCGW160404	1	3.0	9.525	4.76	4.4	0.4	○	○	○	○	○
	TCGW160408	1	3.0	9.525	4.76	4.4	0.8	○	○	○	○	○
	TCMW160402M	1	3.0	9.525	4.76	4.4	0.2	○	○	○	○	○
	TCMW160404M	1	3.0	9.525	4.76	4.4	0.4	○	○	○	○	○
	TCMW160408M	1	3.0	9.525	4.76	4.4	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD (Negative)

TP□W

Triangle 60° with Hole



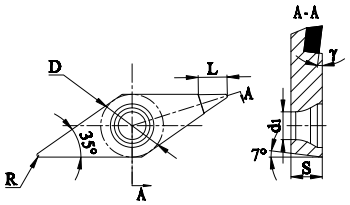
Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	TPGW080202	1	2.5	4.76	2.38	2.5	0.2	○	○	○	○	○
	TPGW080204	1	2.5	4.76	2.38	2.5	0.4	○	○	○	○	○
	TPMW080202M	1	2.5	4.76	2.38	2.5	0.2	○	○	○	○	○
	TPMW080204M	1	2.5	4.76	2.38	2.5	0.4	○	○	●	○	○
	TPGW090202	1	2.5	5.56	2.38	2.5	0.2	○	○	○	○	○
	TPGW090204	1	2.5	5.56	2.38	2.5	0.4	○	○	●	○	○
	TPMW090202M	1	2.5	5.56	2.38	2.5	0.2	○	○	○	○	○
	TPMW090204M	1	2.5	5.56	2.38	2.5	0.4	○	○	●	○	○
	TPGW110302	1	3.0	6.35	3.18	2.8	0.2	○	○	○	○	○
	TPGW110304	1	3.0	6.35	3.18	2.8	0.4	○	○	○	○	○
	TPGW110308	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
	TPMW110302M	1	3.0	6.35	3.18	2.8	0.2	○	○	○	○	○
	TPMW110304M	1	3.0	6.35	3.18	2.8	0.4	○	○	●	○	○
	TPMW110308M	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
	TPGW160402	1	3.0	9.525	4.76	4.4	0.2	○	○	○	○	○
	TPGW160404	1	3.0	9.525	4.76	4.4	0.4	○	○	○	○	○
	TPGW160408	1	3.0	9.525	4.76	4.4	0.8	○	○	○	○	○
	TPMW160402M	1	3.0	9.525	4.76	4.4	0.2	○	○	○	○	○
	TPMW160404M	1	3.0	9.525	4.76	4.4	0.4	○	○	○	○	○
	TPMW160408M	1	3.0	9.525	4.76	4.4	0.8	○	○	○	○	○

●Stock ○Available upon Order

PCD (Negative)

VC□W

Rhombic 35° with Hole

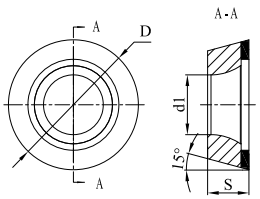


Ordering code		Flute	Dimensions (mm)					PCD Grade				
			L	D	S	d1	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	VCGW110302	1	3.0	6.35	3.18	2.8	0.2	○	○	○	○	○
	VCGW110304	1	3.0	6.35	3.18	2.8	0.4	○	○	●	○	○
	VCGW110308	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
	VCMW110302M	1	3.0	6.35	3.18	2.8	0.2	○	○	●	○	○
	VCMW110304M	1	3.0	6.35	3.18	2.8	0.4	○	○	○	○	○
	VCMW110308M	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
	VCGW160402	1	3.0	9.525	4.76	4.4	0.2	○	○	○	○	○
	VCGW160404	1	3.0	9.525	4.76	4.4	0.4	○	○	●	○	○
	VCGW160408	1	3.0	9.525	4.76	4.4	0.8	○	○	○	○	○
	VCGW160412	1	3.0	9.525	4.76	4.4	1.2	○	○	○	○	○
	VCMW160402M	1	3.0	9.525	4.76	4.4	0.2	○	○	○	○	○
	VCMW160404M	1	3.0	9.525	4.76	4.4	0.4	○	○	●	○	○
	VCMW160408M	1	3.0	9.525	4.76	4.4	0.8	○	○	○	○	○
	VCMW160412M	1	3.0	9.525	4.76	4.4	1.2	○	○	○	○	○

●Stock ○Available upon Order

RDEW

R 80° with Hole



Ordering code		Flute	Dimensions (mm)			PCD Grade				
			D	S	d1	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
	RDEW0803	1	8	3.18	2.94	○	○	○	○	○
	RDEW1003	1	10	3.18	4.4	○	○	○	○	○
	RDEW1204	1	12	4.76	4.4	○	○	○	○	○

●Stock ○Available upon Order

Recommended Cutting Data

PCBN Tool

ISO	Workpiece Material	Hardness	Cutting Range	Purpose	Geometry	Grade	Min-Optimum-Max		
							Vc(m/min)	ap(mm)	f(mm/rev)
K	Gray cast iron	HB200~230	Finishing	General	/	BKN115P	400-600-1500	0.05-0.20-0.50	0.05-0.20-0.40
	Alloy cast iron	⩾HB200	Finishing	General	/	BKN115P	200-400-800	0.05-0.20-0.50	0.05-0.20-0.40
	Powder Metallurgy	QT450~QT700	Finishing	General	/	BKC120P	150-300-500	0.10-0.20-0.50	0.05-0.12-0.3
S	Hardened Material	HRB50~90	Finishing	Continious	/	BSN115P	50-150-300	0.05-0.20-0.5	0.05-0.12-0.30
H	Hardened Material	⩾HRC50	Finishing	Continious	/	BHC115P	120-150-220	0.05-0.10-0.20	0.05-0.10-0.20
	Hardened Material	⩾HRC50	Roughing-Finishing	General	/	BHC125P	100-130-180	0.05-0.10-0.50	0.05-0.10-0.20
	Hardened Material	⩾HRC50	Finishing-Semi-finishing	Interrupted	/	BHC135P	80-100-150	0.05-0.10-0.40	0.05-0.10-0.20

PCD Tool

ISO	Workpiece Material	Vc（m/min）	f(mm/rev)	ap(mm)
N	Aluminum Alloy	~3000	~0.2	~3
	Copper Alloy	~1000	~0.2	~3
	Reinforced plastics	~1000	~0.4	~3
	Wood and inorganic board	~4000	~0.4	-
	Cemented Alloy	10~30	~0.2	~0.5
	Graphite	100~600	~1	~3

C

Standard Turning Toolholders



Overview of Turning Toolholders

MCBNR	MCLNR	MDJNR	MDPNN	MDQNR
P098	P098	P099	P099	P100
				
MSBNR	MSKNR	MSSNR	MTENN	MTFNR
P100	P101	P101	P102	P102
				
MTGNR	MTJNR	MVJNR	MVQNR	MWLNR
P103	P103	P104	P104	P105
				
SCLCR	SDJCR	SSDCN	STGCR	SVJCR
P106	P106	P107	P107	P108
				
SWLCR	SCLCR	SCKCR	SCLCR-A16	SDUCR
P109	P112	P112	P113	P113
				
SDQCR	SDXCR	STUCR	STWCR	STFCR
P114	P114	P115	P115	P116
				
SVUCR	SSKCR	SWLCR	SCLPR	STFPR
P116	P117	P117	P118	P118
				

External Turning Toolholders Identification System



①Mothod of Holding	
D	Double Clamp Type
M	Wedge Lock Type Heavy Cutting Double Clamp Type
P	Lever Lock Type
S	Screw-on Type

②Insert Shape	
C	80°Rhombic
D	55°Rhombic
R	Round
S	Square
T	Triangle
V	35°Rhombic
W	Trigon
X	Special Shape

③Cutting Edge Angle	
A	90°Without
B	75°
D	45°Neutral
E	60°
F	91°
G	90°Bias
J	93°
K	75°
L	95°
N	63°
P	62.5°
Q	107.5°
S	45°
T	60°
V	72.5°
Z	Special

④Inaert Clearance	
B	5°
C	7°
N	0°
E	20°

⑤Hand of Tool	
R	Right Hand
L	Left Hand
N	General

25	25	M	12
⑥	⑥	⑦	⑧

⑥Tool Saction	
8	8
10	10
12	12
16	16
20	20
25	25
32	32

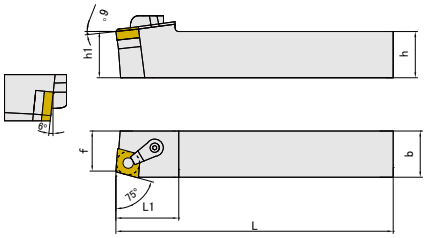
⑦Tool Length	
D	60
E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200

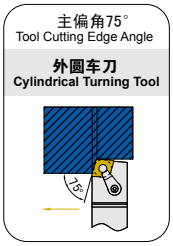
⑧Gutting Edge Length(mm)						
Insert IC(mm)	Insert Shape					
	Square	Triangle	Round	80° Rhombic	55° Rhombic	35° Rhombic
6	-	-	06	-	-	-
6.35		11		06	07	11
7.94	-	13	-	-	-	-
8			08			
9.525	09	16	-	09	11	16
10	-	-	10	-	-	-
12	-	-	12	-	-	-
12.7	-	22	-	12	15	-
15.875	15	27	-	16	-	-
16	-	-	16	-	-	-
19.05	19	-	19	-	-	-
20	-	-	20	-	-	-
25	-	-	25	-	-	-
25.4	25	-	-	-	-	-
32	-	-	32	-	-	-

External Turning Tool holder(Negative)

MCBNR





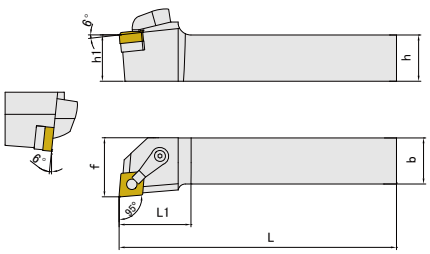


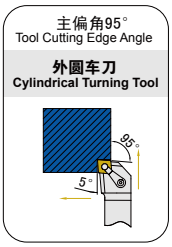
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MCBNR/L2020K12	●	○	20	20	125	32	20	17	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MCBNR/L2525M12	●	○	25	25	150	32	25	22	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MCBNR/L3232P12	●	○	32	32	170	32	32	27	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L
MCBNR/L2525M16	●	○	25	25	150	32	25	33	CN**1606**	DCN1604M	SPM080220F	CAM03	SDM060250	TH30L
MCBNR/L3232P19	○	○	32	32	170	40	32	29	CN**1906**	DCN1904M	SPM100240F	CAM05	SDM080350F	TH40L

●Stock ○Available upon Order

MCLNR







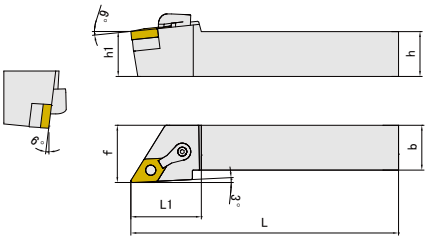
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MCLNR/L2020K12	●	●	20	20	125	25	20	32	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MCLNR/L2525M12	●	●	25	25	150	32	25	32	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MCLNR/L3232P12	●	○	32	32	170	40	32	32	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L
MCLNR/L2525M16	●	○	25	25	150	32	25	33	CN**1606**	DCN1604M	SPM080220F	CAM03	SDM060250	TH30L
MCLNR/L3232P19	○	○	32	32	170	38	32	40	CN**1906**	DCN1904M	SPM100240F	CAM05	SDM080350F	TH40L

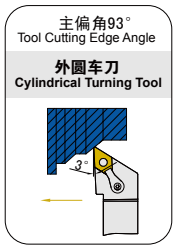
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MDJNR





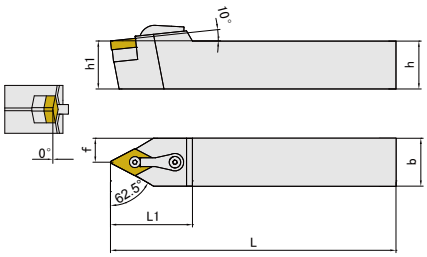


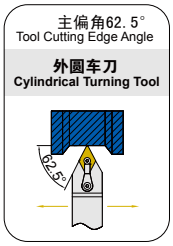
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MDJNR/L2020K11	●	○	20	20	125	34	20	25	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L
MDJNR/L2020K1504	●	○	20	20	125	38	20	25	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L
MDJNR/L2525M1504	●	○	25	25	150	38	25	32	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060250	TH25L TH30L
MDJNR/L3232P1506	○	○	32	32	170	38	32	40	DN**1506**	DDN1504M	SPM060190	CAM03	SDM060280	TH25L TH30L

●Stock ○Available upon Order

MDPNN







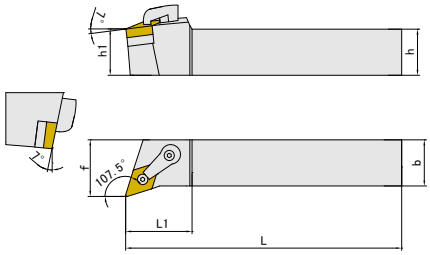
Ordering Code	Stock	Dimension						Insert	Spare Parts				
		h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MDPNN2020K11	●	20	20	125	36	20	10	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L
MDPNN2020K1504	●	20	20	125	42	20	10	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L
MDPNN2525M1504	●	25	25	150	42	25	12.5	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060250	TH25L TH30L
MDPNN3232P1506	○	32	32	170	42	32	16	DN**1506**	DDN1504M	SPM060190	CAM03	SDM060280	TH25L TH30L

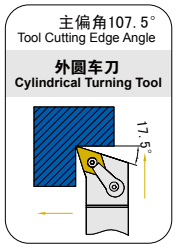
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MDQNR





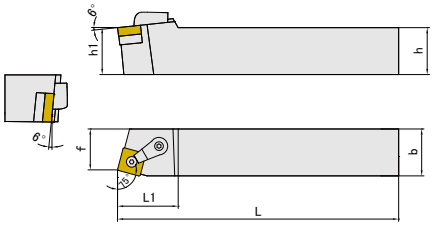


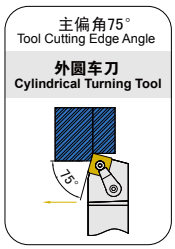
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MDQNR/L2020K11	●	○	20	20	125	32	20	25	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L
MDQNR/L2020K1504	●	○	20	20	125	36	20	25	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L
MDQNR/L2525M1504	●	○	25	25	150	36	25	32	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060250	TH25L TH30L
MDQNR/L3232P1506	○	○	32	32	170	36	32	40	DN**1506**	DDN1504M	SPM060190	CAM03	SDM060280	TH25L TH30L

●Stock ○Available upon Order

MSBNR







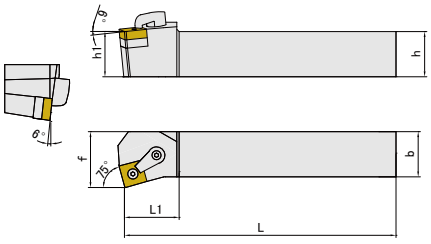
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MSBNR/L2020K12	●	○	20	20	125	32.5	20	17	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MSBNR/L2525M12	●	○	25	25	150	32.5	25	22	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MSBNR/L3232P12	●	○	32	32	170	32.5	32	27	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L
MSBNR/L2525M15	○	○	25	25	150	38	25	22	SN**1506**	DSN1504M	SPM080220F	CAM03	SDM060250	TH30L
MSBNR/L3232P19	○	○	32	32	170	42	32	27	SN**1906**	DSN1904M	SPM100240F	CAM05	SDM080350F	TH40L

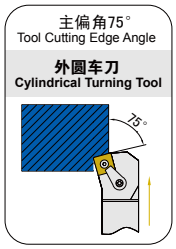
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MSKNR





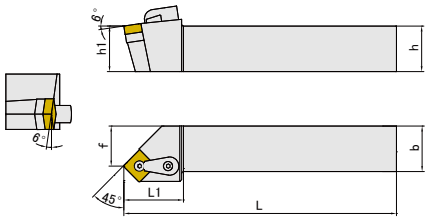


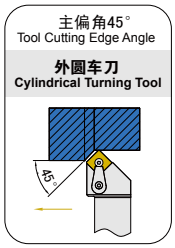
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MSKNR/L2020K12	●	○	20	20	125	29	20	25	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MSKNR/L2525M12	●	○	25	25	150	29	25	32	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MSKNR/L3232P12	○	○	32	32	170	29	32	40	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L
MSKNR/L2525M15	○	○	25	25	150	34	25	32	SN**1506**	DSN1504M	SPM080220F	CAM03	SDM060250	TH30L
MSKNR/L3232P19	○	○	32	32	170	35	32	40	SN**1906**	DSN1904M	SPM100240F	CAM05	SDM080350F	TH40L

●Stock ○Available upon Order

MSSNR







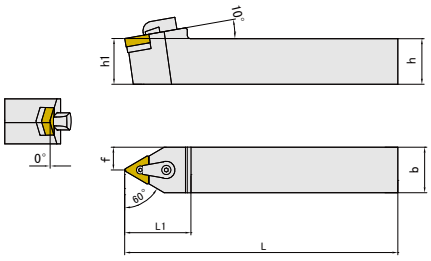
Ordering Code	Stock		Dimension						Insert	Spare Parts				
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MSSNR/L2020K12	●	○	20	20	125	32	20	17	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MSSNR/L2525M12	●	○	25	25	150	32	25	22	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MSSNR/L3232P12	●	○	32	32	170	32	32	27	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L
MSSNR/L2525M15	●	○	25	25	150	40	25	32	SN**1506**	DSN1504M	SPM080220F	CAM03	SDM060250	TH30L
MSSNR/L3232P19	○	○	32	32	170	43	32	40	SN**1906**	DSN1904M	SPM100240F	CAM05	SDM080350F	TH40L

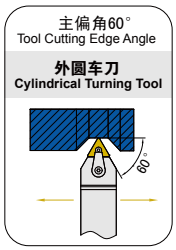
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MTENN





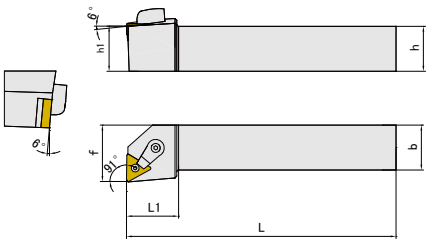


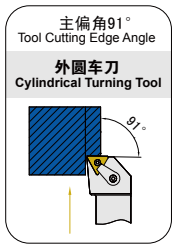
Ordering Code	Stock	Dimension						Insert	Spare Parts				
		h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MTENN2020K16	●	20	20	125	35	20	10	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060200	TH20L TH30L
MTENN2525M16	●	25	25	150	35	25	12.5	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTENN3232P16	○	32	32	170	35	32	16	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L
MTENN3232P22	○	32	32	170	38	32	16	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L

●Stock ○Available upon Order

MTFNR







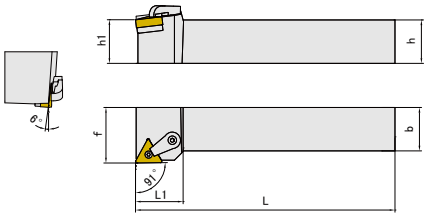
Ordering Code	Stock		Dimension						Insert	Spare Parts				
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MTFNR/L2020K16	●	○	20	20	125	28	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTFNR/L2525M16	●	○	25	25	150	28	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTFNR/L3232P16	○	○	32	32	170	28	32	40	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L
MTFNR/L3232P22	○	○	32	32	170	32	32	32	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L

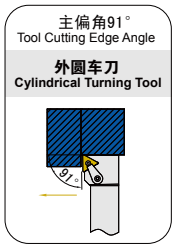
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MTGNR





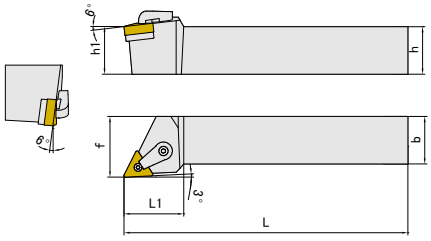


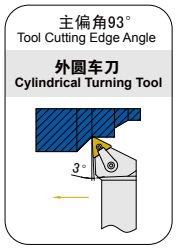
Ordering Code	Stock		Dimension						Insert	Spare Parts				
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MTGNR/L2020K16	●	○	20	20	125	28	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTGNR/L2525M16	●	○	25	25	150	28	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTGNR/L3232P16	○	○	32	32	170	34	32	40	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L
MTGNR/L3232P22	○	○	32	32	170	32	32	40	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L

●Stock ○Available upon Order

MTJNR







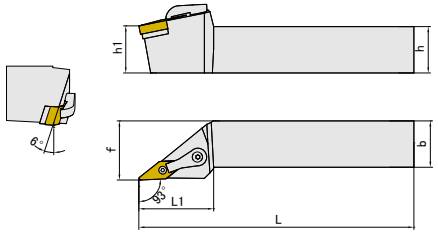
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MTJNR/L2020K16	●	●	20	20	125	32	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTJNR/L2525M16	●	●	25	25	150	32	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTJNR/L3232P16	○	○	32	32	170	32	32	40	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L
MTJNR/L3232P22	○	○	32	32	170	38	32	16	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L

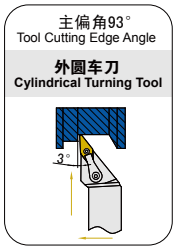
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MVJNR





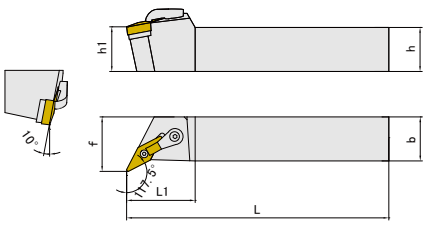


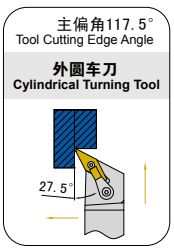
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MVJNR/L2020K16	●	○	20	20	125	42	20	20	VN**1604**	DVN1603M	SPM050130	CAM04	SDM060250	TH20L TH30L
MVJNR/L2525M16	●	○	25	25	150	42	25	25	VN**1604**	DVN1603M	SPM050130	CAM04	SDM060250	TH20L TH30L
MVJNR/L3232P16	○	○	32	32	170	42	32	32	VN**1604**	DVN1603M	SPM050130	CAM04	SDM060280	TH20L TH30L

●Stock ○Available upon Order

MVQNR







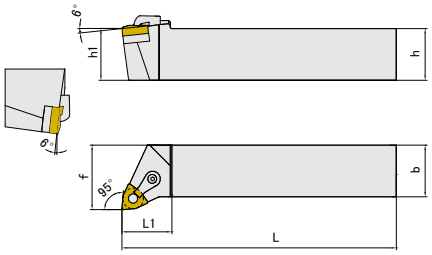
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MVQNR/L2020K16	●	○	20	20	125	40	20	25	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MVQNR/L2525M16	●	○	25	25	150	40	25	32	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MVQNR/L3232P16	○	○	32	32	170	40	32	40	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L

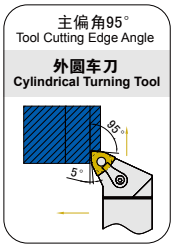
●Stock ○Available upon Order

External Turning Tool holder(Negative)

MWLNR







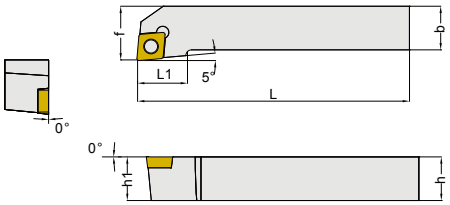
Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MWLNR/L2020K0604	●	○	20	20	125	25	20	32	WN**0604**	DWN0603M	SPM050130	CAM01	SDM050200	TH20L TH30L
MWLNR/L2020K08	●	○	20	20	125	25	20	32	WN**0804**	DWN0804M	SPM060170	CAM02	SDM060200	TH25L TH30L
MWLNR/L2525M08	●	●	25	25	150	32	25	32	WN**0804**	DWN0804M	SPM060170	CAM02	SDM060250	TH25L TH30L
MWLNR/L3232P08	●	○	32	32	170	40	32	32	WN**0804**	DWN0804M	SPM060170	CAM02	SDM060280	TH25L TH30L

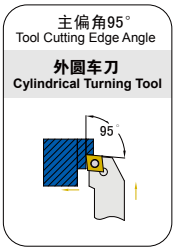
●Stock ○Available upon Order

External Turning Tool holder(Positive)

SCLCR



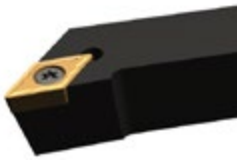


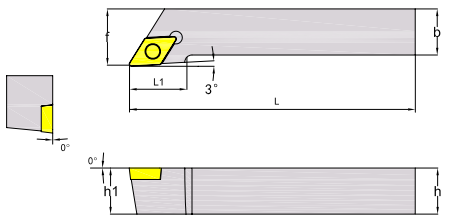


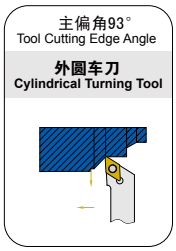
Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
SCLCR/L1010F06	○	○	10	10	80	12	10	10	CC**0602**	SI60M025060-03510	TT08P
SCLCR/L1212H09	○	○	12	12	100	16	12	16	CC**09T3**	SI60M040100-05812	TT15P
SCLCR/L1616H09	●	○	16	16	100	20	16	20			
SCLCR/L2020K09	●	○	20	20	125	25	20	25			
SCLCR/L2525M12	●	○	25	25	150	32	25	32	CC**1204**	SI60M050120-07012	TT20P

●Stock ○Available upon Order

SDJCR





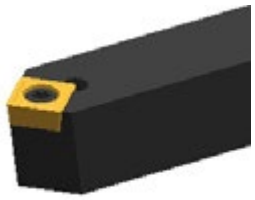


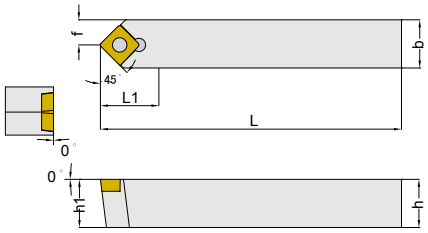
Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
SDJCR/L1010F07	○	○	10	10	80	12	10	15	DC**0702**	SI60M025060-03510	TT08P
SDJCR/L1212H07	○	○	12	12	100	16	12	15			
SDJCR/L1616H11	●	○	16	16	100	20	16	24	DC**11T3**	SI60M040100-05812	TT15P
SDJCR/L2020K11	●	○	20	20	125	20	20	24			
SDJCR/L2525M11	●	○	25	25	150	23	25	29			

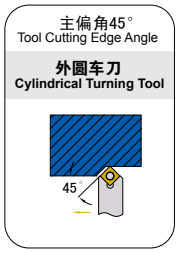
●Stock ○Available upon Order

External Turning Tool holder(Positive)

SSDCN





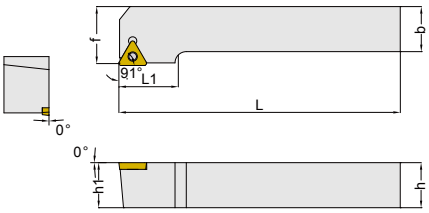


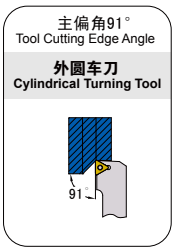
Ordering Code	Stock	Dimension						Insert	Spare Parts	
		h	b	L	L1	h1	f		Screw	Wrench
SSDCN1212H09	○	12	12	80	16	12	6	SC**09T3**	SI60M040100-05812	TT15P
SSDCN1616H09	●	16	16	100	16	16	8			
SSDCN2020K09	●	20	20	125	16	20	10			
SSDCN2525M12	○	25	25	150	22	25	12.5	SC**1204**	SI60M050120-07012	TT20P

●Stock ○Available upon Order

STGCR





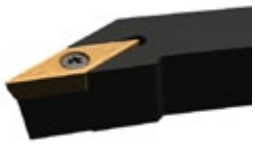


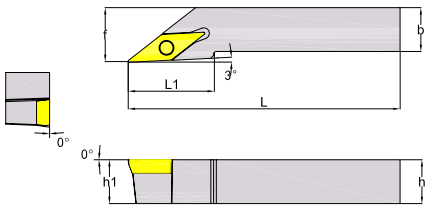
Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
STGCR/L1010F09	○	○	10	10	80	12	10	11	TC**0902**	SI60M022060-03008	TT06P
STGCR/L1212H11	○	○	12	12	100	16	12	16	TC**1102**	SI60M025060-03510	TT08P
STGCR/L1616H11	●	○	16	16	100	20	16	20			
STGCR/L2020K16	●	○	20	20	125	25	20	25	TC**16T3**	SI60M040100-05812	TT15P
STGCR/L2525M16	●	○	25	25	150	27	25	32			

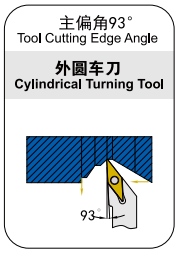
●Stock ○Available upon Order

External Turning Tool holder(Positive)

SVJCR







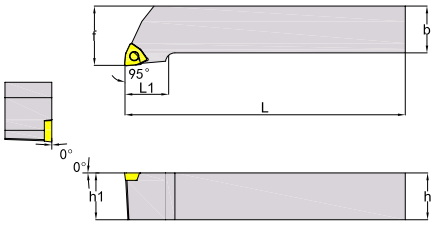
Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
SVJCR/L1212H11	○	○	12	12	100	24	12	16	VC**1103**	SI60M025060-03510	TT08P
SVJCR/L1616H11	●	○	16	16	100	26	16	20			
SVJCR/L2020K16	●	○	20	20	125	32	20	25	VC**1604**	SI60M040100-05812	TT15P
SVJCR/L2525M16	●	○	25	25	150	32	25	32			

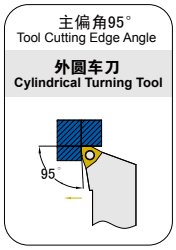
●Stock ○Available upon Order

External Turning Tool holder(Positive)

SWLCR







Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
SWLCR/L1212H06	●	○	12	12	100	14	12	16	WC**06T3**	SI60M040100-05812	TT15P
SWLCR/L1616H06	●	○	16	16	100	14	16	20			
SWLCR/L2020K06	●	○	20	20	125	15	20	25			
SWLCR/L2525M06	●	○	25	25	150	17	25	32			

●Stock ○Available upon Order

Internal Turning Toolholders Identification System



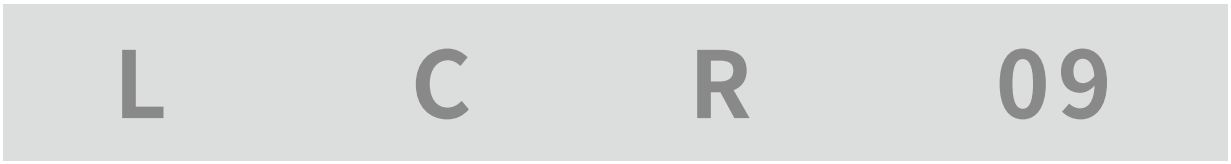
① Tool Material	
A	Steel with coolant hole
C	Carbide shank
E	Carbide Bar with Coolant Hole
S	Steel Shank

③Tool Length	
F	80
H	100
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400

⑤Insert Shape	
C	80°Rhombic
D	55°Rhombic
R	Round
S	Square
T	Triangle
V	35°Rhombic
W	Trigon

②Tool Diameter	
08	8
10	10
12	12
16	16
20	20
25	25
32	32
40	40

④Mathod of Holding	
M	Double Clamp Type
C	Top Clamp Type
P	Laver Lock Type
S	Screw-on Type



⑥Gutting Edge Angle	
K	75°
L	95°
F	91°
Q	107.5°
U	93°
W	60°
X	120°

⑧Hand of Tool	
R	Right Hand
L	Left Hand

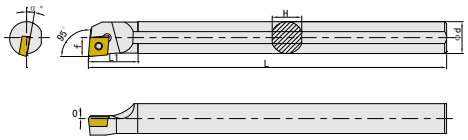
⑦Inaert Clearanoe Angle	
C	7°
B	5°
N	0°
P	11°

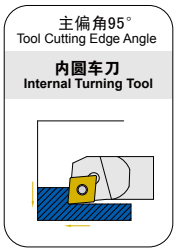
⑨Cutting Edge Length(mm)						
Insert IC(mm)	Insert Shape					
	Square	Triangle	Round	80° Rhombic	55° Rhombic	35° Rhombic
6	-	-	06	-	-	-
6.35		11		06	07	11
7.94	-	13	-	-	-	-
8			08			
9.525	09	16	-	09	11	16
10	-	-	10	-	-	-
12	-	-	12	-	-	-
12.7	-	22	-	12	15	-
15.875	15	27	-	16	-	-
16	-	-	16	-	-	-
19.05	19	-	19	-	-	-
20	-	-	20	-	-	-
25	-	-	25	-	-	-
25.4	25	-	-	-	-	-
32	-	-	32	-	-	-

Internal Turning Toolholder

SCLCR





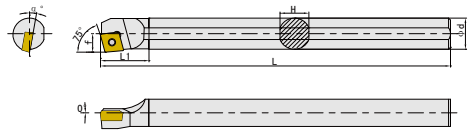


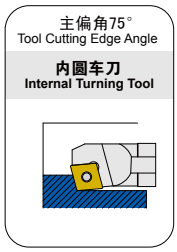
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-SCLCR/L06	●	○	10	8	5.5	125	12	7	13	CC**0602**	SI60M025060-03510	TT08P
S10K-SCLCR/L06	●	○	12	10	6	125	15	9	12			
S12M-SCLCR/L06	●	●	14	12	7	150	16	11	10			
S12M-SCLCR/L09	●	●	15	12	8	150	20	11	12	CC**09T3**	SI60M040100-05812	TT15P
S16Q-SCLCR/L09	●	○	18	16	9.5	180	25	14.8	10			
S20R-SCLCR/L09	●	●	22	20	11.5	200	28	18.4	8			
S25S-SCLCR/L09	●	○	27	25	14	250	30	23.4	6			
S25S-SCLCR/L12	○	○	28	25	14.5	250	35	23.4	8	CC**1204**	SI60M050120-07012	TT20P

●Stock ○Available upon Order

SCKCR







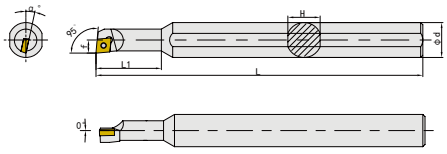
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
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S10K-SCKCR/L06	●	○	12	10	6	125	14	9	12			
S12M-SCKCR/L06	●	○	14	12	7	150	16	11	10			
S12M-SCKCR/L09	●	○	15	12	8	150	23	11	12	CC**09T3**	SI60M040100-05812	TT15P
S16Q-SCKCR/L09	●	○	18	16	9.5	180	25	14.8	10			
S20R-SCKCR/L09	○	○	22	20	11.5	200	28	18.4	8			
S25S-SCKCR/L09	○	○	27	25	14	250	30	23.4	6			

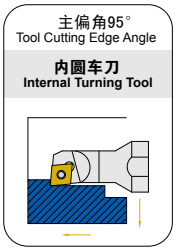
●Stock ○Available upon Order

Internal Turning Toolholder

SCLCR-A16





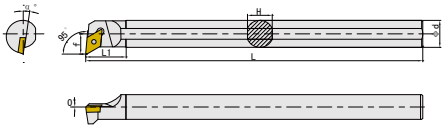


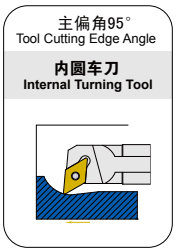
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S07M-SCLCR/L06-A16	●	○	9	7	4.9	150	25	14.8	15	CC**0602**	SI60M025060-03510	TT08P
S08M-SCLCR/L06-A16	●	○	10	8	5.5	150	28	14.8	13			
S10M-SCLCR/L06-A16	●	○	12	10	6	150	30	14.8	12			
S12M-SCLCR/L06-A16	●	○	14	12	7	150	33	14.8	10			

●Stock ○Available upon Order

SDUCR







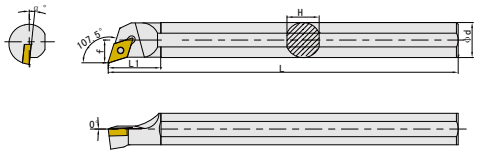
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S10K-SDUCR/L07	●	○	14	10	8	125	16	9	10	DC**0702**	SI60M025060-03510	TT08P
S12M-SDUCR/L07	●	●	16	12	9	150	18	11	8			
S16Q-SDUCR/L07	●	●	20	16	11	180	20	14.8	6			
S16Q-SDUCR/L11	●	●	20	16	11	180	18	14.8	6	DC**11T3**	SI60M040100-05812	TT15P
S20R-SDUCR/L11	●	○	24	20	13	200	28	18.4	6			
S25S-SDUCR/L11	○	○	29	25	16	250	28	23.4	4			

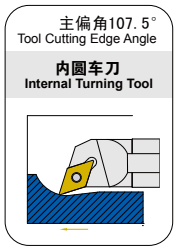
●Stock ○Available upon Order

Internal Turning Toolholder

SDQCR





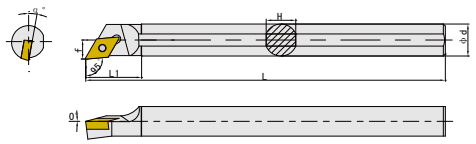


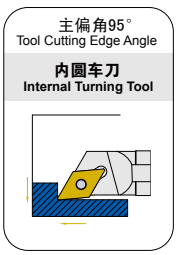
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
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S10K-SDQCR/L07	●	○	13	10	7	125	18	9	10	DC**0702**	SI60M025060-03510	TT08P
S12M-SDQCR/L07	●	○	16	12	9	150	18	11	8			
S16Q-SDQCR/L07	●	○	20	16	11	180	24	14.8	6			
S16Q-SDQCR/L11	●	○	20	16	10.5	180	26	14.8	6	DC**11T3**	SI60M040100-05812	TT15P
S20R-SDQCR/L11	●	○	24	20	13	200	30	18.4	6			
S25S-SDQCR/L11	○	○	29	25	16	250	35	23.4	4			

●Stock ○Available upon Order

SDXCR







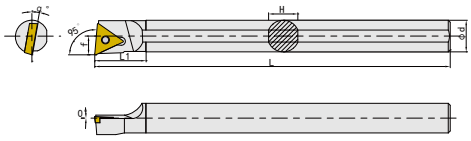
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
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S10K-SDXCR/L07	●	○	12	10	6	125	18	9	10			
S12M-SDXCR/L07	●	○	14	12	7	150	21	11	8			
S16Q-SDXCR/L07	●	○	18	16	9	180	22	14.8	6			
S20R-SDXCR/L11	○	○	22	20	11.5	200	30	18.4	6	DC**11T3**	SI60M040100-05812	TT15P
S25S-SDXCR/L11	○	○	27	25	14	250	35	23.4	4			

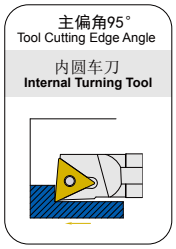
●Stock ○Available upon Order

Internal Turning Toolholder

STUCR







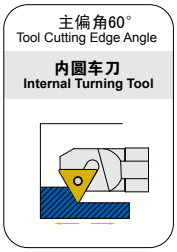
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-STUCR/L09	●	○	10	8	5.5	125	14	7	15	TC**0902**	SI60M022060-03008	TT06P
S10K-STUCR/L09	●	○	12	10	6	125	15	9	13			
S10K-STUCR/L11	●	○	12	10	6	125	17	9	12	TC**1102**	SI60M025060-03510	TT08P
S12M-STUCR/L11	●	○	14	12	7	150	20	11	10			
S16Q-STUCR/L11	●	○	18	16	9	180	20	14.8	8			
S20R-STUCR/L11	○	○	22	20	11	200	22	18.4	6			
S20R-STUCR/L16	○	○	22	20	11.5	200	25	18.4	4	TC**16T3**	SI60M040100-05812	TT15P
S25S-STUCR/L16	○	○	28	25	14	250	30	23.4	6			

●Stock ○Available upon Order

STWCR







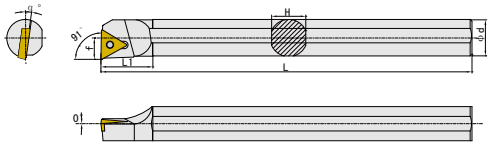
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-STWCR/L09	●	○	11	8	6	125	15	7	15	TC**0902**	SI60M022060-03008	TT06P
S10K-STWCR/L11	●	○	14	10	8	125	18	9	10	TC**1102**	SI60M025060-03510	TT08P
S12M-STWCR/L11	●	○	16	12	9	150	18	11	8			
S16Q-STWCR/L11	○	○	20	16	11	180	27	14.8	6			
S20R-STWCR/L11	○	○	24	20	13	200	26	18.4	4			
S20R-STWCR/L16	○	○	25	20	14.5	200	32	18.4	8	TC**16T3**	SI60M040100-05812	TT15P
S25S-STWCR/L16	○	○	30	25	17	250	30	23.4	6			

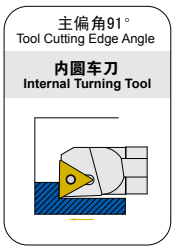
●Stock ○Available upon Order

Internal Turning Toolholder

STFCR





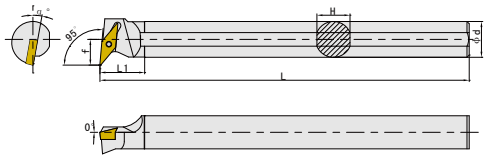


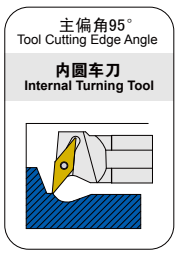
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-STFCR/L09	●	○	10	8	5.5	125	14	7	15	TC**0902**	SI60M022060-03008	TT06P
S10K-STFCR/L09	●	○	12	10	6	125	15	9	13			
S12M-STFCR/L09	●	○	14	12	7	150	17	11	10			
S12M-STFCR/L11	●	○	14	12	7	150	20	11	10	TC**1102**	SI60M025060-03510	TT08P
S16Q-STFCR/L11	●	○	18	16	9	180	20	14.8	8			
S20R-STFCR/L11	○	○	22	20	11	200	22	18.4	6			
S20R-STFCR/L16	○	○	22	20	11.5	200	25	18.4	4	TC**16T3**	SI60M040100-05812	TT15P
S25S-STFCR/L16	○	○	27	25	14	250	30	23.4	6			

●Stock ○Available upon Order

SVUCR







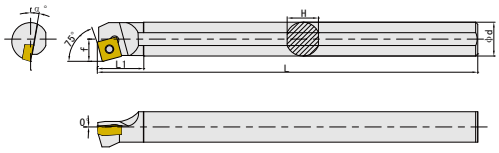
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
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S20R-SVUCR/L11	○	○	25	20	14	200	25	18.4	8			
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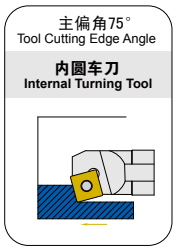
●Stock ○Available upon Order

Internal Turning Toolholder

SSKCR





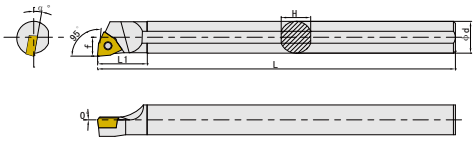


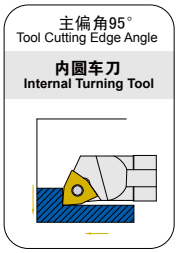
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S12M-SSKCR/L09	●	○	15	12	8.5	150	11	11	10	SC**09T3**	SI60M025060-03510	TT08P
S16Q-SSKCR/L09	●	○	19	16	10.5	180	22	14.8	10			
S20R-SSKCR/L09	○	○	23	20	12.5	200	25	18.4	8			
S25S-SSKCR/L12	○	○	28	25	15	250	40	23.4	6	SC**1204**	SI60M040100-05812	TT15P

●Stock ○Available upon Order

SWLCR







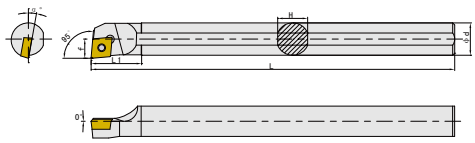
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
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S16Q-SWLCR/L06	○	○	18	16	9.5	180	25	14.8	10			
S20R-SWLCR/L06	○	○	22	20	11.5	200	28	18.4	8			
S25S-SWLCR/L06	○	○	27	25	14	250	30	23.4	6			

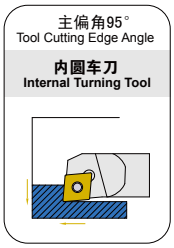
●Stock ○Available upon Order

Internal Turning Toolholder

SCLPR





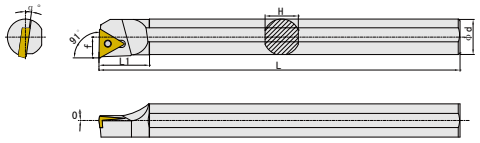


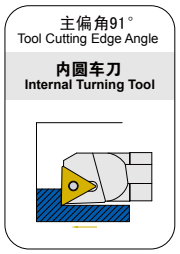
Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-SCLPR/L06	○	○	10	8	5.5	125	12	7	13	CP**0602**	SI60M025060-03510	TT08P
S10K-SCLPR/L06	○	○	12	10	6	125	15	9	12			
S12M-SCLPR/L06	○	○	14	12	7	150	16	11	10			
S12M-SCLPR/L09	○	○	15	12	8	150	20	11	12	CP**09T3**	SI60M040100-05812	TT15P
S16Q-SCLPR/L09	○	○	18	16	9.5	180	25	14.8	10			
S20R-SCLPR/L09	○	○	22	20	11.5	200	28	18.4	8			
S25S-SCLPR/L09	○	○	27	25	14	250	30	23.4	6			

●Stock ○Available upon Order

STFPR







Ordering Code	Stock		Dimension（mm）							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S10K-STFPR/L1102	○	○	12	10	6	125	17	9	12	TP**1102**	SI60M025060-03510	TT08P
S12M-STFPR/L1102	○	○	14	12	7	150	20	11	10			
S16Q-STFPR/L1102	○	○	18	16	9	180	20	14.8	8			
S20R-STFPR/L1102	○	○	22	20	11	200	22	18.4	6			
S20R-STFPR/L16T3	○	○	22	20	11.5	200	25	18.4	4	TP**16T3**	SI60M040100-05812	TT15P
S25S-STFPR/L16T3	○	○	27	25	14	250	30	23.4	6			

●Stock ○Available upon Order