

TURNING TOOLS



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.

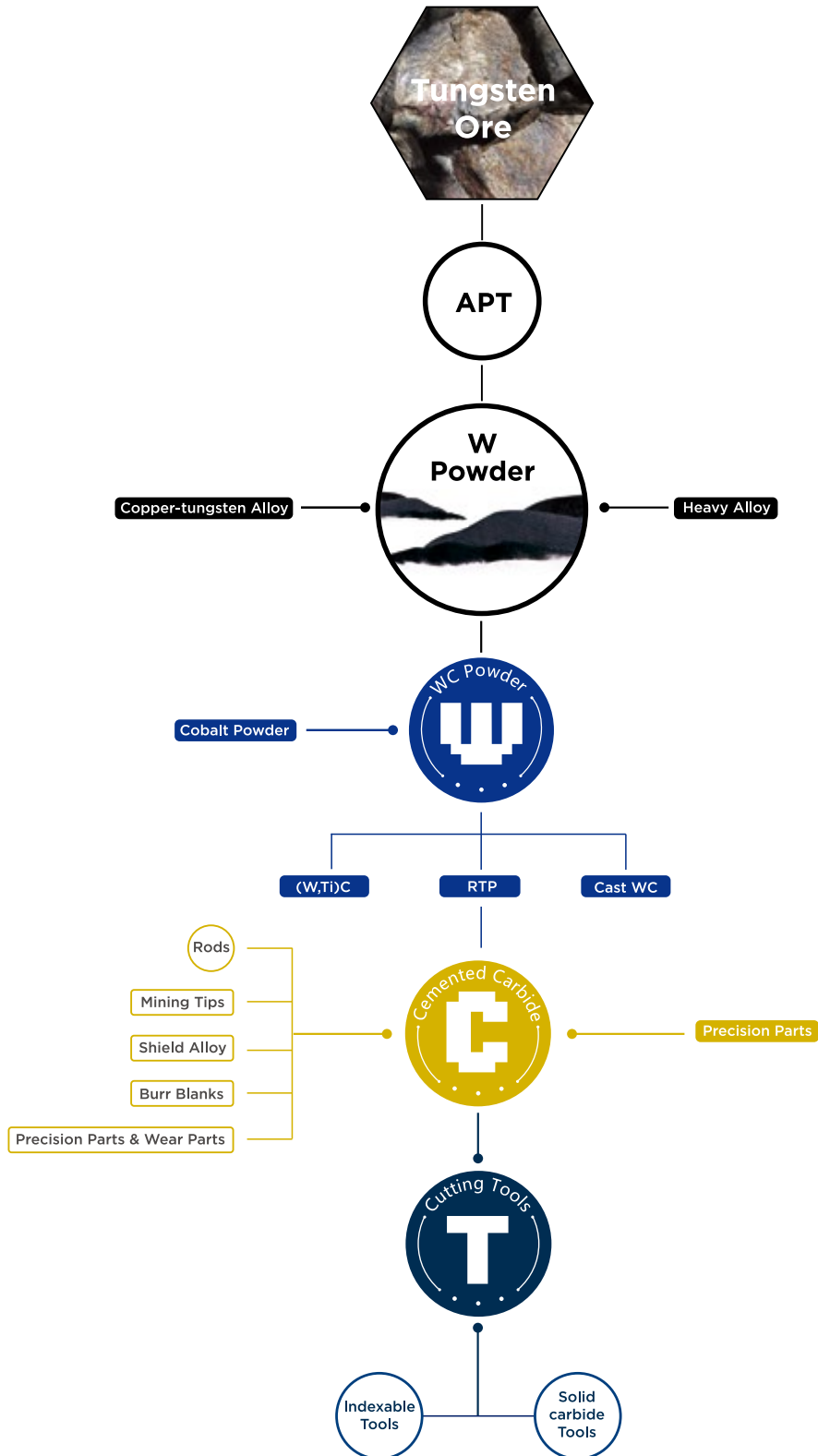
With the Integrated Product Development of complete tungsten industry chain, as well as a pragmatic and innovative management concept, GESAC has always maintained a strong momentum of development, providing the cost effective tungsten powder products and services for global users, offering the excellent 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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Threading Tools —E

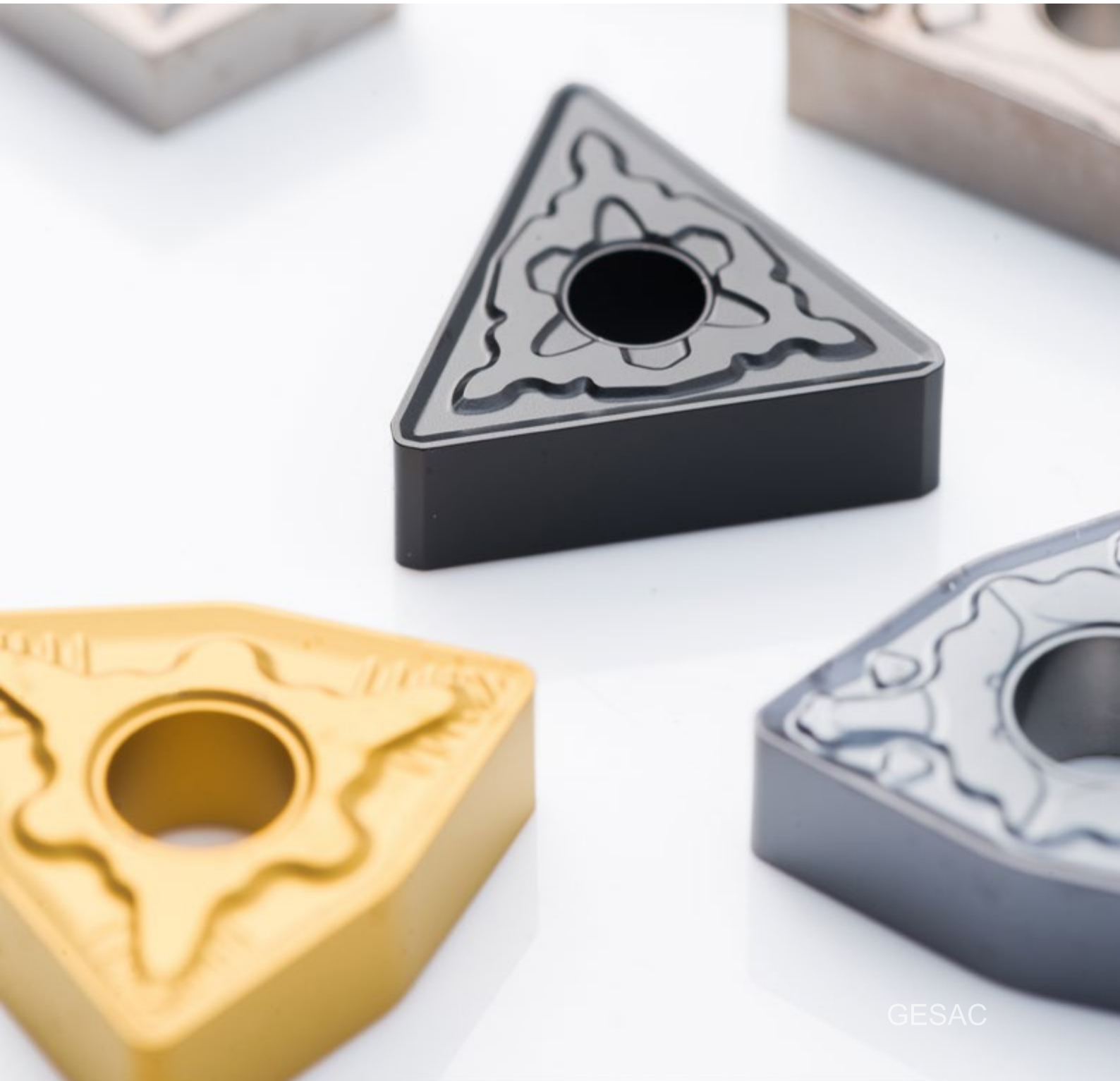
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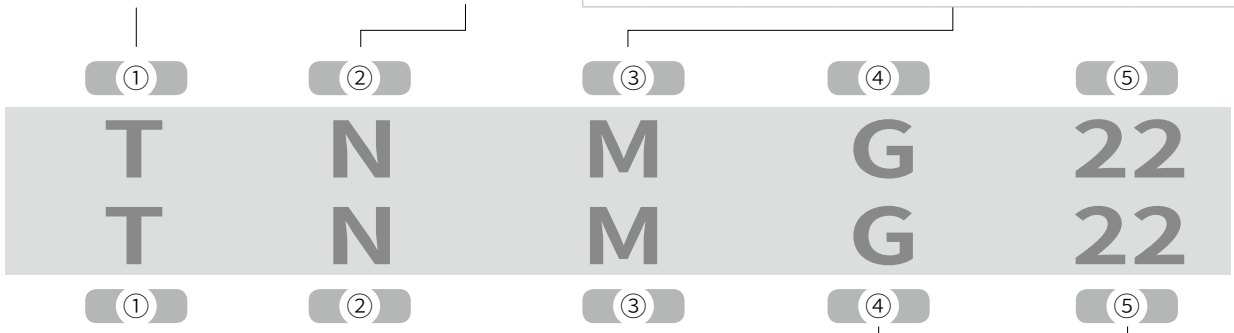
A

General Turning



ISO Turning Indexable Inserts Identification System

Symbol	Shape	Corner Angle	Shape	Symbol	Relief Angle	Tolerance (mm)			Tolerance (inch)				
						Corner Height (m)	Thickness (s)	I.C.dia. (Ød)	Corner Height (m)	Thickness (s)	I.C.dia. (Ød)		
H	Hexagon	120°		A	3°	±0.005	±0.025	±0.025	±0.0002	±0.001	±0.001		
O	Octagon	135°		B	5°	±0.005	±0.025	±0.013	±0.0002	±0.001	±0.0005		
P	Pentagon	108°		C	7°	±0.013	±0.025	±0.025	±0.0005	±0.001	±0.001		
S	Square	90°		D	15°	±0.013	±0.025	±0.013	±0.0005	±0.001	±0.0005		
T	Triangle	60°		E	20°	±0.025	±0.025	±0.025	±0.001	±0.001	±0.001		
C	Rhombic	80°		G	30°	±0.025	±0.13	±0.025	±0.001	±0.005	±0.001		
D		55°		N	0°	±0.08~±0.18	±0.13	±0.05~±0.13	±0.003~±0.007	±0.005	±0.002~±0.005		
E		75°		P	11°	±0.08~±0.18	±0.25	±0.05~±0.13	±0.003~±0.007	±0.001	±0.002~±0.005		
F		50°		K	55°	±0.13~±0.38	±0.13	±0.08~±0.25	±0.005~±0.015	±0.005	±0.003~±0.01		
M		86°		 ② Relief Angle Symbol				③ Tolerance Symbol					
V		35°											
W	Trigon	80°		L	90°	±0.025	±0.025	±0.05~±0.13	±0.001	±0.001	±0.002~±0.005		
L	Rectangle	90°		M	85°	±0.08~±0.18	±0.13	±0.05~±0.13	±0.003~±0.007	±0.005	±0.002~±0.005		
A	Parallelogram	85°		N	82°	±0.08~±0.18	±0.25	±0.05~±0.13	±0.003~±0.007	±0.001	±0.002~±0.005		
B		82°		U	55°	±0.13~±0.38	±0.13	±0.08~±0.25	±0.005~±0.015	±0.005	±0.003~±0.01		
K		55°											
R	Round	—		O	其他								



④ Hole/Chipbreaker Symbol					⑤ Edge Length Symbol (ISO) (mm)																				
Symbol	Hole	Hole Shape	Chpbreaker	Shape	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					
N	Without	—	Without																						
R			Single-sided				03	3.97	03	4.0					06	6.9	4	4.8					3.97		
F			Double-sided						04	4.76	04	4.8					08	8.2	5	5.8				4.76	
A	With Hole	With Hole	Without		05	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5			
M			Single-sided		05	5.56	05	5.6	03	3.8	09	9.6	6	6.8									5.56		
G			Double-sided		06	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6		
W			With Hole and One Countersink 40-60°	With Hole and One Countersink 40-60°	Without		06	6.35	06	6.5	04	4.3	11	11	7	7.8	11	11.2						6.35	
T					Single-sided		07	7.94	08	8.1	05	5.4	13	13.8	9	9.7									7.94
Q					Without		08	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8
U	With Hole and Two Countersink 40-60°C	With Hole and Two Countersink 40-60°C	Without		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			
B			Single-sided		10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10		
H			Double-sided		12	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12		
C	With Hole and One Countersink 70-90°C	With Hole and One Countersink 70-90°C	Without		12	12.7	12	12.7	12	12.9	08	8.7	22	22	15	15.5	22	22.1				12.7			
J			Double-sided		15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4							15.875		
X			Without		16	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16		
	With Hole and Two Countersink 70-90°C	With Hole and Two Countersink 70-90°C	Without		19	19.05	19	19.05	19	19.3	13	13	33	33	23	23.3						19.05			
			Double-sided		20	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20		
			Without		22	22	22.225	22	22.6							38	38.5	27	27.1				22.225		
	With Hole and Two Countersink 70-90°C	With Hole and Two Countersink 70-90°C	Without		25	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25			
			Double-sided		25	25.4	25	25.4	25	25.8					44	44	31	31					25.4		
			Without		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(ϕd) (mm)		Tolerance of Corner Height (mm)		I. C. Size (inch)	Tolerance of I. C. Size(ϕd) (mm)		Tolerance of corner Height (mm)	
	J,K,L, M,N	U	M,N	U		Class J,K, L,M,N	Class U	Class J,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					0.625				
19.05	± 0.1	± 0.18	± 0.15	± 0.27	0.750	± 0.004	± 0.007	± 0.006	± 0.011
25.4					1.000				
31.75	± 0.13	± 0.25	± 0.18	± 0.38	1.250	± 0.005	± 0.010	± 0.007	± 0.015
32					1.260				

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
©Thickness Symble	

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

⑥

04

04

⑥

⑦

08

08

⑦

⑧

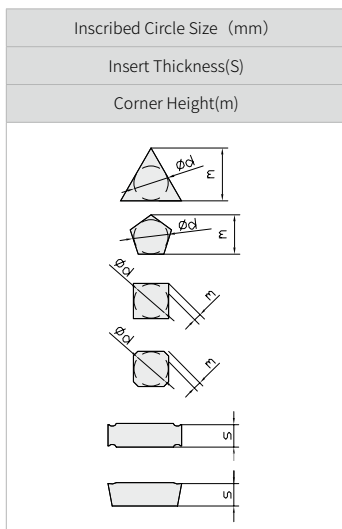
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⑧

HK

HK



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

Workpiece	ISO	Coated		Uncoated
		CVD	PVD	
P Steel	01	GP1105		
	10	GP1115		
	20	GP1120	GA4230	
	30	GP1225		
	40	GP1135		
	50			
M Stainless Steel	01	GM1115	GS3115	
	10		GM3215	
	20	GM1125	GS3125	
	30		GM3225	GA4230
	40			
	50			
K Cast Iron	01	GK1115		
	10			
	20	GK1120	GA4230	
	30	GK1125		
	40	GK1130		
	50			
N Non-ferrous metal	01			GN9115
	10			
	20			GN9120 <small>NEW</small>
	30			
	40			GN9130 <small>NEW</small>
	50			
S HRSA	01			
	10		GS3115	
	20		GS3125	GS9125
	30			
	40			
	50			
H Hardened Material	01			
	10			
	20			
	30			
	40			
	50			

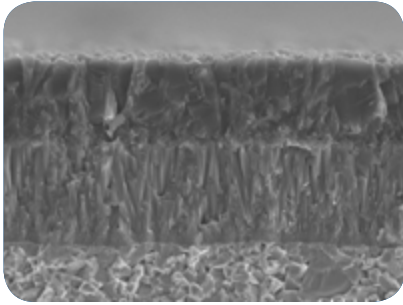
	Cermet	Coating Cermet	CBN	Coating CBN	PCD
	GP91TF GP91TM	GP31TM <small>NEW</small>			
	GP91TF GP91TM	GP31TM <small>NEW</small>			
	GP91TF GP91TM	GP31TM <small>NEW</small>	BKNI15P	BKCI20P <small>NEW</small>	DNN105P DNN120P <small>NEW</small> DNN125P DNN130P DNN135P
			BSNI15P		
				BHCI15P <small>NEW</small> BHCI25P <small>NEW</small> BHCI35P <small>NEW</small>	

COATED CARBIDE(CVD)

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

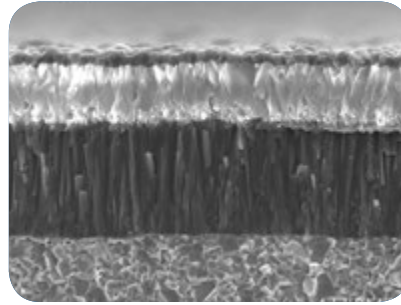
Workpiece	Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
P Steel	Continuous Cutting	GP1105	200-380	P01	
		GP1115	150-360	P10	
	Interrupted Cutting	GP1120	150-360	P20	
		GP1225	120-280	P30	
		GP1135	80-180	P40	
M Stainless Steel	Continuous Cutting	GM1115	200-300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

Extremely wear-resistance Steel
Turning CVD Grade-GP1105



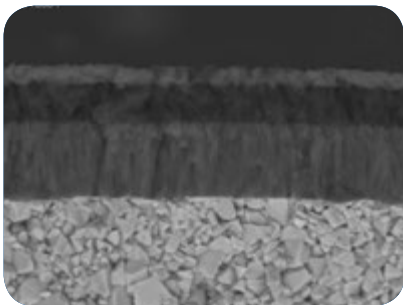
- Superfine Al₂O₃ and MT-TiCN coating on gradient carbide substrate provide excellent wear resistance.
- Suitable for finishing of steel & alloy steel under stable condition.

High versatility Steel Turning CVD
Grade-GP1120



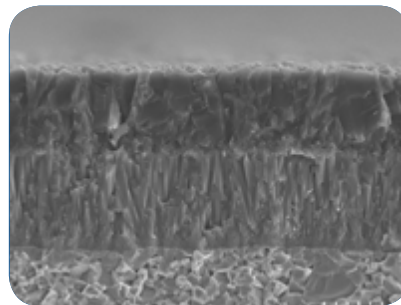
- Perfect combination with nano columnar MT-TiCN and Al₂O₃, TiN coating.
- Special edge treatment technology.
- Suitable for continuous to light interrupted cutting of steel & alloy steel.

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



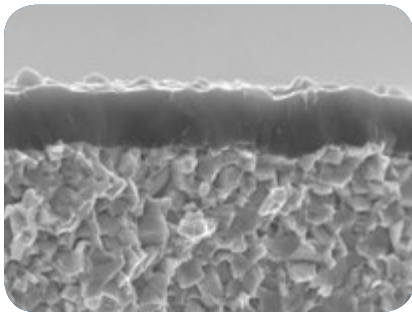
- MT-TiCN and thick Al₂O₃ coated on micrograin carbide substrate. Special postprocessing with excellent edge strength and ensure the stability of cutting.
- Application: Suitable for continuous and light interrupted cutting action of nodular cast iron.

COATED CARBIDE(CVD)

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

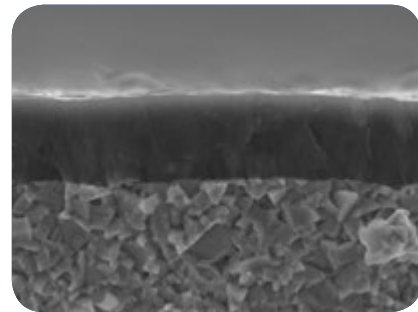
Workpiece	Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
M Stainless Steel	Continuous Cutting	GS3115	120-200	M01	
		GM3215	120-200	M10	
	Interrupted Cutting	GS3125	80-180	M20	
		GM3225	80-180	M30	
S Heat Resistance Alloy	Continuous Cutting	GS3115	40-70	S01	
		GS3125	45-65	S10	
	Interrupted Cutting	GS3125	45-65	S20	
		GS3125	45-65	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 content provide superior adhesion resistance and toughness.
- Application: Suitable for semi-finishing of stainless steels and threading of general materials.

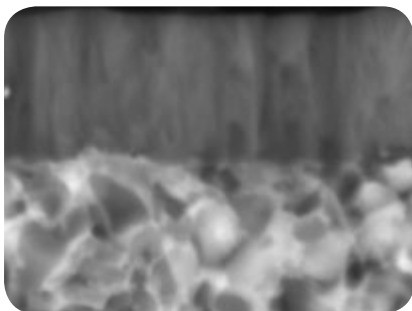
Cermet

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

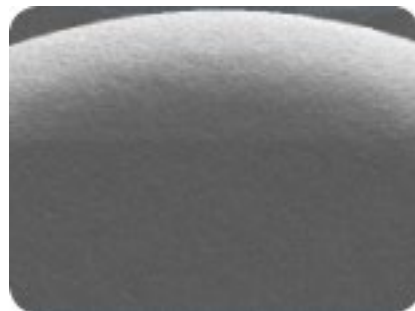
Workpiece	Cutting Mode	Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range	
P	Steel	Continuous Cutting	GP91TF	180-380	P01	
			GP31TM	180-380	P10	
			GP91TM	150-350	P20	
M	Stainless Steel	Continuous Cutting	GP31TM	150-280	M01	
			GP91TM	130-250	M10	
					M20	
K	Cast Iron	Continuous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

NEW

High wear-resistance coating
cermet 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.

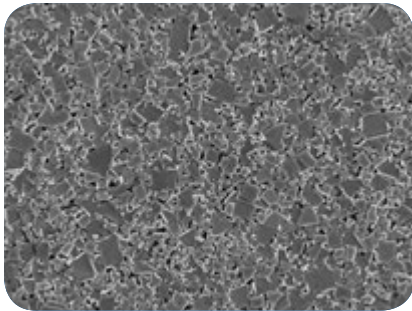
Cemented Carbide

- 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	
		GN9120	700-1500	N10	
	Interrupted Cutting	GN9130	650-1400	N20	
				N30	

NEW

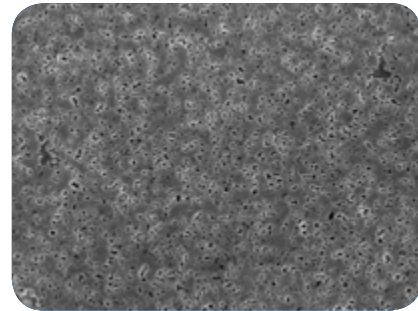
High versatility aluminum alloys Turning Grade-GN9120



- 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.















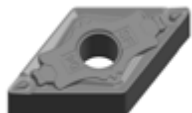






The Working Conditions of Turning Inserts

Workpiece	Geometry	Working Condition				
						
		Continuous	Light Interrupted	Interrupted		
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	
	Positive	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	
Positive		LR	GM1115/GM3215	GM1125/GM3225	GM3225	
		PS	GS3115/GS3125	GS3125		
		GS	GS3125			
		MM	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	
	Positive	GP	GK1115	GK1115/GK1125	GK1125	
		KM	GK1115	GK1115/GK1125	GK1125	
N	Positive	AL	GN9115	GN9120/GN9130	GN9120/GN9130	

Features of Turning Inserts

Turning Inserts (Negative)








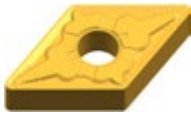




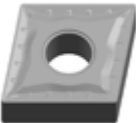
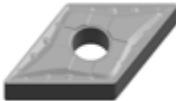











Geometry	Features	Application Range	Cross Section Geometry
PS	<ul style="list-style-type: none"> • PS for finishing of steel(mild steel) and stainless steel. • Sharp edge reduces cutting force, enables high quality surface. • Low feed,small cutting depth. 		
GF	<ul style="list-style-type: none"> • GF for finishing of general steel and alloy steel. • Sharp tool nose and strong cutting edge. Good chip control under small cutting depth. 		
QF	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 P030	DNMG-GF P034	SNMG-GF P038	TNMG-GF P042	VNMG-GF P046	WNMG-GF P048
						
	CNMG-QF P030	DNMG-QF P034	SNMG-QF P038	TNMG-QF P042	VNMG-QF P046	WNMG-QF P048
						
	CNMG-SF P030	DNMG-SF P034	SNMG-SF P038	TNMG-SF P042	VNMG-SF P046	WNMG-SF P048
						
				TNMG-LF P042		WNMG-LF P048

Features of Turning Inserts

Turning Inserts (Negative)









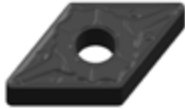





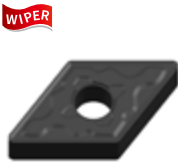

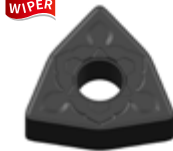






Geometry	Features	Application Range	Cross Section Geometry
GM	<ul style="list-style-type: none"> • GM for semi-finishing of general steel and alloy steel. • Strong flat cutting edge with good strength. 		
QM	<ul style="list-style-type: none"> • QM for semi-finishing of general steel and alloy steel. • Gradient and waved hump wide applicable geometry range. 		
TP	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 P030	DNMG-GM P034	SNMG-GM P038	TNMG-GM P043	VNMG-GM P046	WNMG-GM P048
						
	CNMG-QM P031	DNMG-QM P035	SNMG-QM P039	TNMG-QM P043	VNMG-QM P046	WNMG-QM P048
						
	CNMG-TP P031	DNMG-TP P035	SNMG-TP P039	TNMG-TP P043	VNMG-TP P046	WNMG-TP P049
						
		DNMG _{R/L} -TS P035		TNMG _{R/L} -TS P043		
						
	CNMG _{R/L} -SV P031	DNMG _{R/L} -SV P035	SNMG _{R/L} -SV P039	TNMG _{R/L} -SV P044		WNMG _{R/L} -SV P049

Features of Turning Inserts

Turning Inserts (Negative)

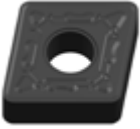
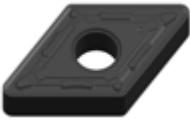









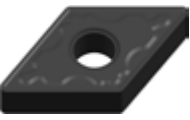











Geometry	Features	Application Range	Cross Section Geometry
LV	<ul style="list-style-type: none"> • LV for semi-finishing and roughing of stainless steel • No edge width and open chip breaker contribute to its sharp cutting edge and low cutting force. • Large chip breaker contribute to its big cutting depth and width. 		
SM	<ul style="list-style-type: none"> • SM for medium cutting of stainless steel and mild steel. • Sharp cutting edge. 		
LM	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 P031	DNMG- SM P036	SNMG- SM P039	TNMG- SM P044	VNMG- SM P046	WNMG-SM P049
						
	CNMG-LM P032	DNMG- LM P036	SNMG- LM P040	TNMG- LM P044	VNMG- LM P047	WNMG-LM P049
						
	CNMG-WMV P032	DNMX-WMV P036		TNMX-WMV P044		WNMG-WMV P049
						
	CNMG-UK P032	DNMG-UK P036	SNMG-UK P040	TNMG-UK P044	VNMG-UK P047	WNMG-UK P050

Features of Turning Inserts

Turning Inserts (Negative)






Geometry	Features	Application Range	Cross Section Geometry
LR	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • HK for cast iron heavy cutting. • Strong cutting edge, big chip pocket, good at big cutting depth and width. 		
QH	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 P032	DNMG-LR P037	SNMG-LR P040	TNMG-LR P045		WNMG-LR P050
						
	CNMG-QR P033	DNMG-QR P037	SNMG-QR P040	TNMG-QR P045		WNMG-QR P050
						
	CNMG-HK P033	DNMG-HK P037	SNMG-HK P041	TNMG-HK P045	VNMG-HK P047	WNMG-HK P050
						
	CNMM-QH P033		SNMM-QH P041			
						
	CNMA P033	DNMA P037	SNMA P041	TNMA P045		WNMA P050

Features of Turning Inserts

Turning Inserts (Positive)
5° Clearance Angle

Geometry	Features	Application Range	Cross Section Geometry
PS	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality. 		
GP	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

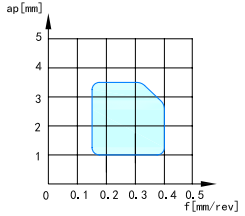
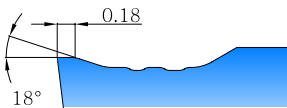
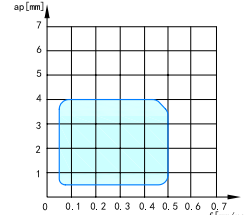
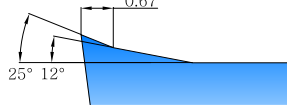
Turning Inserts (Positive)
7° Clearance Angle






Geometry	Features	Application Range	Cross Section Geometry
PS	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality. 		
GP	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 P051	DCET _{R/L} -PS P055		TCET _{R/L} -PS P059	VCET _{R/L} -PS P065	
						
	CCET _{R/L} -GS P051	DCET _{R/L} -GS P055		TCET _{R/L} -GS P059	VCET _{R/L} -GS P065	
						
	CCMT-MM P052	DCMT-MM P056	SCMT-MM P057	TCMT-MM P060		
						
	CCMT-GP P052	DCMT-GP P056	SCMT-GP P057	TCMT-GP P060	VCMT-GP P065	WCMT-GP P067
						
	CCMT-TP P052	DCMT-TP P056	SCMT-TP P057	TCMT-TP P060		

Features of Turning Inserts

Turning Inserts (Positive)
 7° Clearance Angle

Geometry	Features	Application Range	Cross Section Geometry
KM	<ul style="list-style-type: none"> • KM for Semi-finishing and roughing of general steel, alloy steel and cast iron. • Variable land design, combine sharpness with fracture resistance. 	 <p>The graph shows the application range for the KM insert. The vertical axis is labeled 'ap [mm]' and ranges from 0 to 5. The horizontal axis is labeled 'f [mm/rev]' and ranges from 0 to 0.5. A light blue shaded region indicates the recommended operating range, which is roughly between f = 0.15 and 0.45 mm/rev and ap = 1.5 and 3.5 mm.</p>	 <p>The cross-section geometry diagram for the KM insert shows a cutting edge with a 18° angle. A dimension line indicates a distance of 0.18 mm from the cutting edge to the start of the variable land design.</p>
AL	<ul style="list-style-type: none"> • AL for aluminum alloy cutting. • Sharp tool nose due to large rake angle. 	 <p>The graph shows the application range for the AL insert. The vertical axis is labeled 'ap [mm]' and ranges from 0 to 7. The horizontal axis is labeled 'f [mm/rev]' and ranges from 0 to 0.7. A light blue shaded region indicates the recommended operating range, which is roughly between f = 0.1 and 0.5 mm/rev and ap = 1 and 4 mm.</p>	 <p>The cross-section geometry diagram for the AL insert shows a cutting edge with a 25° angle and a secondary angle of 12°. A dimension line indicates a distance of 0.67 mm from the cutting edge to the start of the secondary angle.</p>

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

Features of Turning Inserts

Turning Inserts (Positive)
11° Clearance Angle

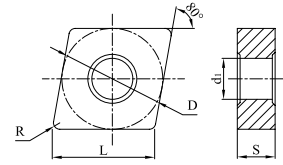
Geometry	Features	Application Range	Cross Section Geometry
PS	<ul style="list-style-type: none"> • PS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,small cutting depth. 		
GS	<ul style="list-style-type: none"> • GS for finishing of steels(mild steels) and stainless steel. • Sharp edge reduces cutting force,enables high quality surface. • Low feed,large cutting depth 		
MM	<ul style="list-style-type: none"> • MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality. 		
GP	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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} P062	VPET _{R/L-PS} P067	
						
				TPET _{R/L-GS} TPEH _{R/L-GS} P062	VPET _{R/L-GS} P067	
						
				TPMT-MM P063		
						
	CPMT-GP CPGT-GP P054		SPMT-GP P058	TPMT-GP P063		
						
				TPMT-TP P063		

Turning Insert (Negative)

CN □ □

Rhombic 80° with Hole



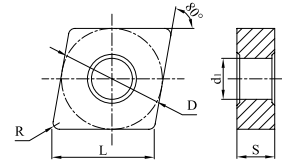
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	CNMG090308-GF	9.7	9.525	3.18	3.81	0.8	○																					
	CNMG120404-GF	12.9	12.7	4.76	5.16	0.4	○																					
	CNMG120408-GF	12.9	12.7	4.76	5.16	0.8	○																					
	CNMG120412-GF	12.9	12.7	4.76	5.16	1.2																						
	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



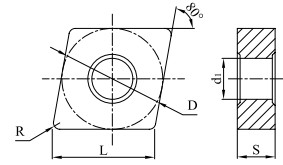
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CNMG090304-QM	9.7	9.525	3.18	3.81	0.4	○	○																					
CNMG090308-QM	9.7	9.525	3.18	3.81	0.8	○	○																					
CNMG120404-QM	12.9	12.7	4.76	5.16	0.4	●	●	●									○										○	
CNMG120408-QM	12.9	12.7	4.76	5.16	0.8	●	●	●	●								○										○	
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



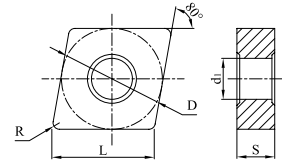
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
	CNMG120404-LM	12.9	12.7	4.76	5.16	0.4						○	●	○	●												
	CNMG120408-LM	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



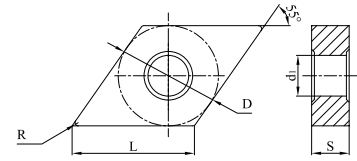
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
CNMG120408-QR	12.9	12.7	4.76	5.16	0.8	○	●	●	●	●																	
CNMG120412-QR	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



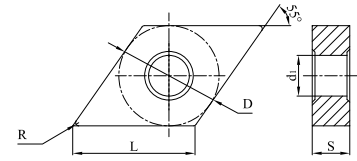
Ordering Code	Dimension					Coated								Uncoated		Cermet													
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM			
	DNMG110404-GF	11.6	9.525	4.76	3.81	0.4	○																						
	DNMG110408-GF	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



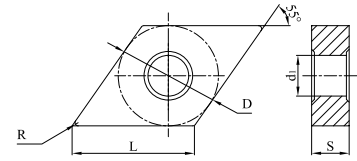
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
DNMG110404-QM	11.6	9.525	4.76	3.81	0.4	○	●																				
DNMG110408-QM	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



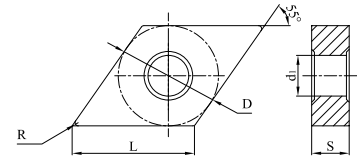
Ordering Code	Dimension					Coated								Uncoated			Cermets											
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM		
	DNMG110404-SM	11.6	9.525	4.76	3.81	0.4								○	●	○	●											
	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							○	○	○	○												
		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



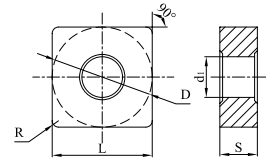
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
	DNMG150408-LR	15.5	12.7	4.76	5.16	0.8								○	○	○	○										
	DNMG150412-LR	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



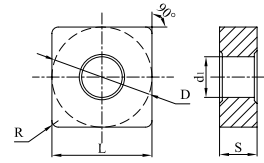
Ordering Code	Dimension					Coated										Uncoated			Cermet										
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM			
	SNMG090304-GF	9.525	9.525	3.18	3.81	0.4	○																						
	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



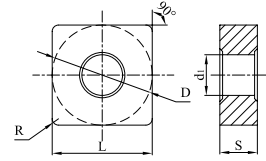
Ordering Code	Dimension					Coated											Uncoated			Cermets							
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
SNMG090304-QM	9.525	9.525	3.18	3.81	0.4	○	○																				
SNMG090308-QM	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



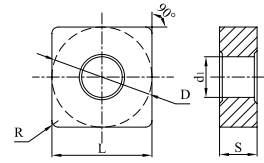
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	di	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
	SNMG120404-LM	12.7	12.7	4.76	5.16	0.4								○	○	○	●										
	SNMG120408-LM	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



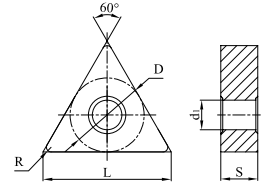
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
	SNMG120408-HK	12.7	12.7	4.76	5.16	0.8											●	●	○	○							
	SNMG120412-HK	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



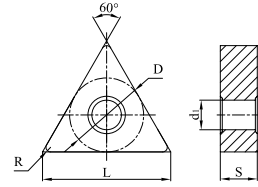
Ordering Code	Dimension					Coated								Uncoated			Cermet										
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
 TNGG160402R-PS	16.5	9.525	4.76	3.81	0.2										●	●											●
TNGG160402L-PS	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																				○	○	

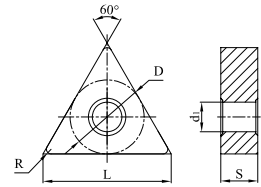


● Stock ○ Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



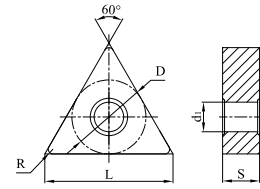
Ordering Code	Dimension					Coated										Uncoated			Cermet							
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TNMG160404R-SV	16.5	9.525	4.76	3.81	0.4	●	●	●		○														○	○
	TNMG160404L-SV	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					○	○	○	●												
	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



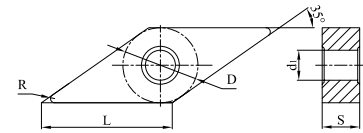
Ordering Code	Dimension					Coated										Uncoated			Cermet							
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	TNMG160408-LR	16.5	9.525	4.76	3.81	0.8							○	○	○	○										
	TNMG160412-LR	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	di	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																						○

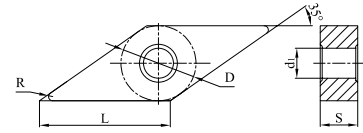
● Stock ○ Available Upon Order








Turning Insert (Negative)

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VN □ □

Rhombic 35° with Hole



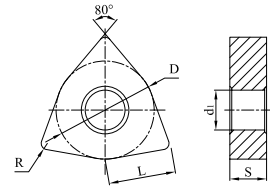
Ordering Code	Dimension					Coated										Uncoated			Cermets									
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM		
 VNMG160404-LM	16.6	9.525	4.76	3.81	0.4																							
 VNMG160408-LM	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



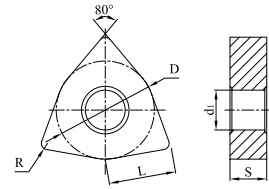
Ordering Code	Dimension					Coated										Uncoated			Cermet									
	L	D	S	di	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM		
 WNMG06T304-GF	6.5	9.525	3.97	3.81	0.4	○																						
WNMG06T308-GF	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



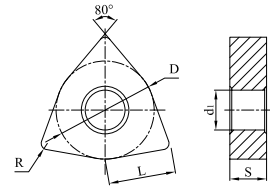
Ordering Code	Dimension					Coated										Uncoated			Cermets									
	L	D	S	di	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM		
	WNMG080404-TP	8.7	12.7	4.76	5.16	0.4																				●	●	
	WNMG080408-TP	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



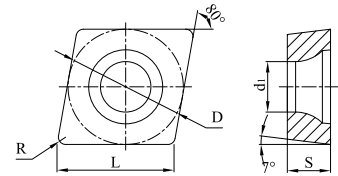
Ordering Code	Dimension					Coated								Uncoated			Cermet											
	L	D	S	di	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM		
	WNMG080404-UK	8.7	12.7	4.76	5.16	0.4											●	○	●									
	WNMG080408-UK	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 (Positive)



Rhombic 80° with Hole



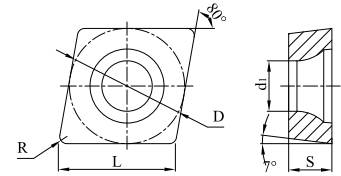
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
CCET0602005R-PS	6.5	6.35	2.38	2.8	<0.05																						
CCET0602005L-PS	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 (Positive)



Rhombic 80° with Hole



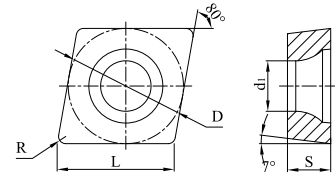
Ordering Code	Dimension					Coated								Uncoated			Cermet									
	L	D	S	di	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
	CCMT060202-MM	6.5	6.35	2.38	2.8	0.2	○	○			○	○	●	●	●										○	○
	CCMT060204-MM	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 (Positive)



Rhombic 80° with Hole



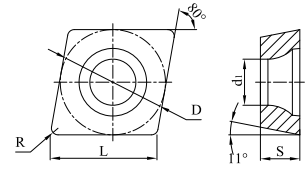
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
CCMT060204-KM	6.5	6.35	2.38	2.8	0.4																						
CCMT09T304-KM	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 (Positive)

CP □ □

Rhombic 80° with Hole



Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	di	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								○	○													

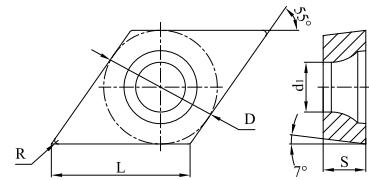


● Stock ○ Available Upon Order

Turning Insert (Positive)

DC □ □

Rhombic 55° with Hole



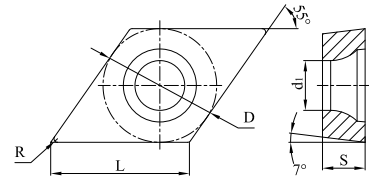
Ordering Code	Dimension					Coated										Uncoated			Cermet							
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM
DCET0702005R-PS	7.8	6.35	2.38	2.8	<0.05											○										○
DCET0702005L-PS	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



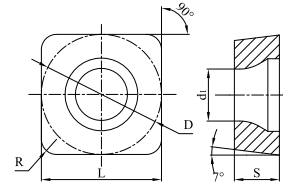
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d _i	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
	DCMT070202-MM	7.8	6.35	2.38	2.8	0.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	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 (Positive)

SC □ □

Square 90° with Hole

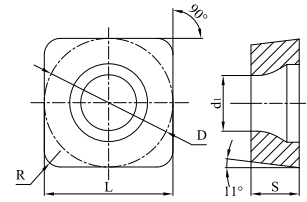



Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
	SCMT09T304-MM	9.525	9.525	3.97	4.4	0.8																					
	SCMT09T308-MM	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 (Positive)

SP □ □
 Square 90° with Hole



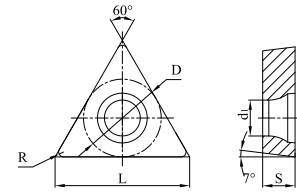
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
SPMT090304-GP	9.525	9.525	3.18	4.4	0.4																						
																											

● Stock ○ Available Upon Order

Turning Insert (Positive)

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											○										○

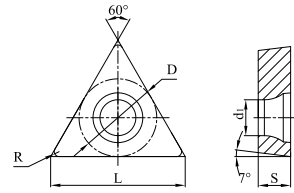


● Stock ○ Available Upon Order

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											●										

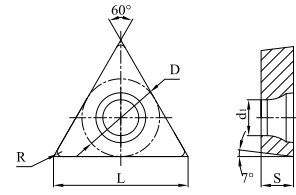
● Stock ○ Available Upon Order

Turning Insert (Positive)

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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																						

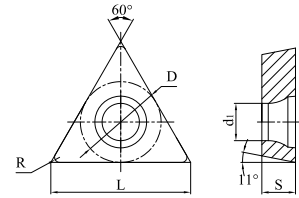


● Stock ○ Available Upon Order

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								○										○		
	TPEH110304L-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								○										○		
	TPEH110304L-GS	11	6.35	3.18	3.4	0.4								○										○		

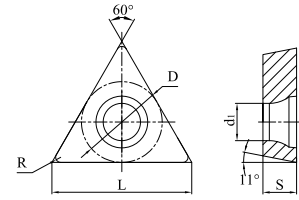
● Stock ○ Available Upon Order

Turning Insert (Positive)

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TP □ □

Rhombic 35° with Hole



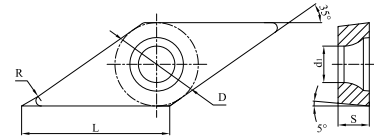
Ordering Code	Dimension					Coated											Uncoated			Cermet									
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM			
	TPMT110202-MM	11	6.35	2.38	2.8	0.2	○	○	○	○	○	○	○	○															
	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 (Positive)

VB □ □

Rhombic 35° with Hole



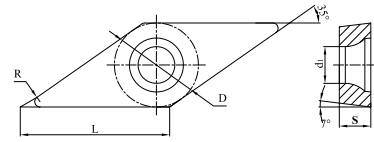
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
 VBET1103005R-PS	11.2	6.35	3.18	2.8	<0.05																						
VBET1103005L-PS	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 (Positive)

VC □ □

Rhombic 35° with Hole



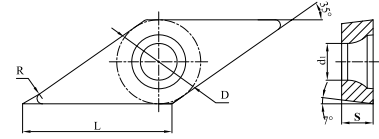
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
VCET1103005R-PS	11.2	6.35	3.18	2.8	<0.05																						
VCET1103005L-PS	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 (Positive)

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																						

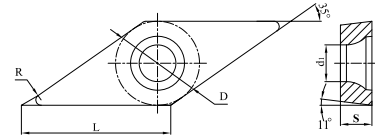


● Stock ○ Available Upon Order

Turning Insert (Positive)

VP □ □

Rhombic 35° with Hole



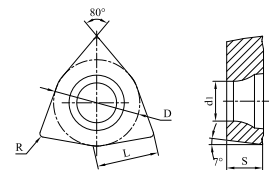
Ordering Code	Dimension					Coated										Uncoated			Cermet								
	L	D	S	d ₁	R	GP1105	GP1115	GP1120	GP1225	GP1135	GM1115	GM1125	GM3215	GM3225	GS3115	GS3125	GK1115	GK1120	GK1125	GK1130	GN9115	GN9120	GN9130	GP31TM	GP91TF	GP91TM	
VPET1103005R-PS	11.2	6.35	3.18	2.8	<0.05																						
VPET1103005L-PS	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		
						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		
						GP1225	160-210-300	0.80-2.00-4.00	0.15-0.20-0.40		
						GP91TM	220-300-380	0.30-1.00-3.00	0.05-0.12-0.28		
				Interruption	TP	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
						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
			Interruption	SV	GP1225	160-200-300	1.00-2.50-4.50	0.18-0.25-0.45			
					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	
					Interruption	QR	GP1135	110-150-230	1.50-3.50-6.00	0.20-0.30-0.60	
							Continuous	QH	GP1105	100-150-240	3.00-6.00-12.0
	GP1225	90-140-210			3.00-6.00-12.0	0.35-0.60-1.10					
	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		
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			
			Interruption	QM	GP1120	140-210-300	0.80-2.00-4.00	0.15-0.20-0.40			
					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				
				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		
				Interruption	QR	GP1135	100-140-220	1.50-3.50-6.00	0.20-0.30-0.60		
						Heavy Cutting	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			
			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		
		Interruption			QF	GP1120	150-180-250	0.40-0.80-2.00	0.08-0.15-0.35		
						GP1225	130-150-230	0.40-0.80-2.00	0.08-0.15-0.35		
						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
		Interruption		QM	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			
					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			
					GP1225	100-140-220	1.00-2.50-4.50	0.18-0.25-0.45			
		Interruption		SV	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			
					Continuous	QR	GP1135	80-120-180	2.00-3.50-6.50	0.20-0.30-0.60	
							Heavy Cutting	QH	GP1105	80-110-190	3.00-6.00-12.0
		GP1225		70-100-170	3.00-6.00-12.0	0.35-0.60-1.10					
		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			
						GM3215	120-160-200	0.40-0.90-1.50	0.05-0.24-0.20			
				Interrtuption	LF	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			
			GM1125	180-230-280	1.00-2.00-3.00				0.15-0.20-0.35			
			Interrtuption	LV	GM3225		80-130-180	1.00-2.00-3.00	0.15-0.20-0.35			
					Continuous		LM	GM3215	120-160-200	0.80-2.20-4.50	0.15-0.24-0.32	
								GM3225	80-130-180	0.80-2.20-4.50	0.15-0.24-0.32	
			Roughing	Continuous	LR	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			
			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
									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
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			
						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			
						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			
						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			
						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
						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
			Finishing & Semi-finishing	Interruption	GP	GP1225	150-180-260	0.40-1.00-2.50	0.07-0.12-0.30
	GP31TM	200-250-300				0.30-1.00-3.00	0.05-0.12-0.25		
	Roughing	Continuous	TP	GP91TM	180-230-300	0.30-1.20-3.00	0.05-0.15-0.25		
				Interruption	KM	GP1225	140-160-240	1.00-2.00-3.50	0.13-0.20-0.40
	Roughing	Interruption	KM	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
	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
						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	
GM1125						180-230-280	0.40-1.00-2.50	0.07-0.12-0.30	
Finishing & Semi-finishing	Interruption	GP	GM3225			80-130-180	0.40-1.00-2.50	0.07-0.12-0.30	
			TP			GP31TM	180-210-280	0.30-1.00-3.00	0.05-0.12-0.25
Roughing Cutting	Continuous	TP	GP91TM	160-190-270	0.30-1.20-3.00	0.05-0.15-0.25			
			KM	GP1225	110-130-200	1.00-2.00-3.50	0.13-0.20-0.40		
Roughing Cutting	Interruption	KM		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
				Interruption	MM	GP1115	130-160-230	0.10-0.60-1.50	0.05-0.10-0.20
						GP1225	120-140-210	0.10-0.60-1.50	0.05-0.10-0.20
						GP31TM	160-200-270	0.30-0.80-1.50	0.05-0.12-0.22
			Finishing & Semi-finishing	Continuous	GP	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
				Interruption	GP	GP1120	120-160-210	0.40-1.00-2.50	0.07-0.12-0.30
						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			
			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
						GS	GS3125	100-170-230	0.20-0.30-1.50
			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
						GM1115	200-250-300	0.40-1.00-2.50	0.07-0.12-0.30
			Semi-finishing	Continuous	GP	GM3215	120-160-200	0.40-1.00-2.50	0.07-0.12-0.30
						GM1125	180-230-280	0.40-1.00-2.50	0.07-0.12-0.30
				Interruption	GP	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
						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
	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
						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	
	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
						GN9120	250-680-960	0.50-1.20-3.50	0.05-0.10-0.30
				Interruption	AL	GN9130	250-650-950	0.50-1.20-4.00	0.05-0.10-0.30
		GN9115				1000-1400-2100	0.50-1.20-3.00	0.05-0.10-0.30	
		HB60-90		Continuous	AL	GN9120	950-1300-2000	0.50-1.20-3.50	0.05-0.10-0.30
						GN9130	950-1200-1950	0.50-1.20-4.00	0.05-0.10-0.30
Interruption	AL		GN9130	950-1200-1950	0.50-1.20-4.00	0.05-0.10-0.30			

B

PCBN/PCD TURNING

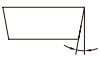


PCBN/PCD Turning Indexable Inserts Identification System

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

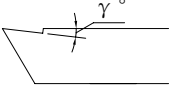
③Tolerance Symbol

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 Hole	With Hole	Without	
M			Single-sided	
G			Double-sided	
W			Without	
T	With	With Hole and One Countersink 40°-60°	Single-sided	
Q			Without	
U			Double-sided	
B			Without	
H	With	With Hole and One Countersink 70°-90°	Single-sided	
C			Without	
J			Double-sided	
X	—	—	—	

⑤Edge Length Symbol (ISO) (mm)															
P		S		C		W		T		D		K		I.C.Size (mm)	
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	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

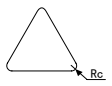


Symbol	Corner-R (mm)
GN	0°
GB	5°
GC	7°
GT	10°

⑩PCD Rake Angle

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

⑥ Thickness	
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




















⑦ Corner 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

⑧ Tips	
Symbol	Application
LF	Continuous sharp
LE	Continues passivation
LT	Continues Chamfer
L	Continues Standard
M	Continues General
H	Interrupted Strength
LS	Continues Others
MS	Interrupted Sharp
HS	Heavy Interrupted sharp
(空)	None

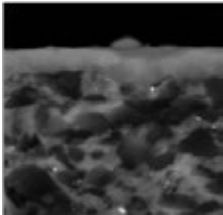
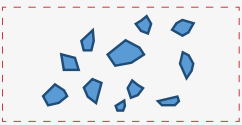
⑨ Number of transpositions	
Item	Number of transpositions
1	1
2	2
3	3
4	4
6	6
8	8

⑩ Geometry

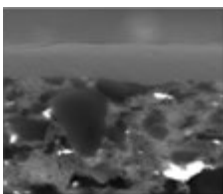
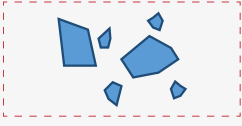
PCBN Grade Application

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

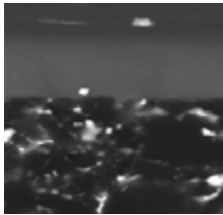
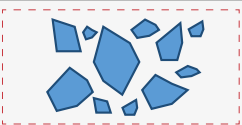
Continuous Cutting for hardened material Coated PCBN Grade-BHC115P **NEW**

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

Continuous Cutting for hardened material Coated PCBN Grade-BHC125P **NEW**

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

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

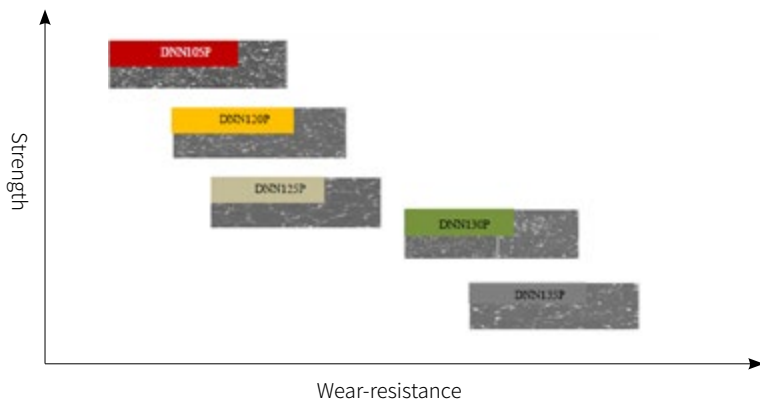
	AlTiN Coating		The latest AlTiN+coating Excellent heat resistance and oxidation resistance
	AlTiN Coating		
			High ratio CBN substrate Excellent impact resistance and chemical stability

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		
		DNN120P				
		DNN125P				
		DNN130P				
		DNN135P				
	Interrupted Cutting	DNN105P	200~1500	N20		
		DNN120P				
		DNN125P				
		DNN130P				
		DNN135P				
Non-metallic material	Continuous Cutting	DNN130P	~3000	N01		
		DNN135P				
	Interrupted Cutting	DNN130P		N20		
		DNN135P				
	Composite material	Continuous Cutting		DNN130P	300~1000	N01
				DNN135P		
Interrupted Cutting	DNN130P	N20				
	DNN135P					






Features&Usage of PCD Grade

Grade	Advantages	Purpose
DNN105P	High density sintered ultra-fine diamond material contribute 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 Inserts PCBN


PCBN (Negative)

Type	Advantages	Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°	Trigon 80°
Braze	<ul style="list-style-type: none"> •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°
Braze	<ul style="list-style-type: none"> •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°
Braze	<ul style="list-style-type: none"> •High precision and longer tool life •Wide range of insert types •High cost performance 				
		CNGA	DNGA	TNGA	VNGA
		P085	P085	P086	P086

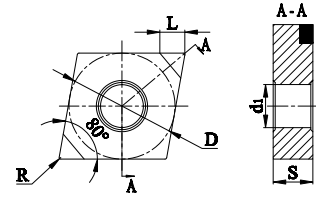
PCD (Positive)


Type	Advantages	Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°	Trigon 360°
Braze	<ul style="list-style-type: none"> •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

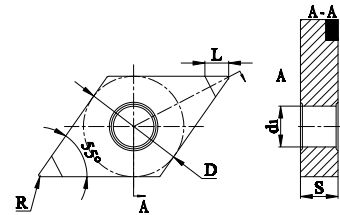



Ordering code	Flute	Dimensions (mm)						PCBN Grade					
		L	D	S	di	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P	
 CNGA120404L-2	2	2.2	12.7	4.76	5.16	0.4	○	○	●	○	○	○	
CNGA120404M-2	2	2.2	12.7	4.76	5.16	0.4	○	○	●	●	○	○	
CNGA120408L-2	2	2.2	12.7	4.76	5.16	0.8	○	○	○	○	○	○	
CNGA120408M-2	2	2.2	12.7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



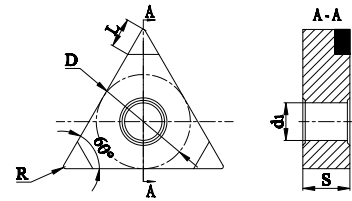
Ordering code	Flute	Dimensions (mm)						PCBN Grade					
		L	D	S	di	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P	
 DNGA150404L-2	2	2.2	12.7	4.76	5.16	0.4	●	○	●	○	○	○	
DNGA150404M-2	2	2.2	12.7	4.76	5.16	0.4	○	○	○	●	○	○	
DNGA150408L-2	2	2.2	12.7	4.76	5.16	0.8	○	○	●	○	○	○	
DNGA150408M-2	2	2.2	12.7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



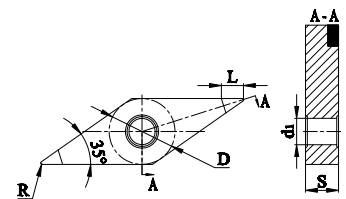
Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	d ₁	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
TNGA160404L-3	3	2.2	9.525	4.76	3.81	0.4	○	○	●	○	○	○
TNGA160404M-3	3	2.2	9.525	4.76	3.81	0.4	○	○	●	●	○	○
TNGA160408L-3	3	2.2	9.525	4.76	3.81	0.8	○	○	●	●	○	○
TNGA160408M-3	3	2.2	9.525	4.76	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	d ₁	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	○	○	●	○	○	○

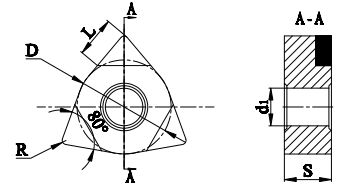



● Stock ○ Available upon Order

PCBN (Negative)

WNGA

Trigon 60° with Hole



Ordering code	Flute	Dimensions (mm)					PCBN Grade							
		L	D	S	di	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	○	○	○	○	○	○	○

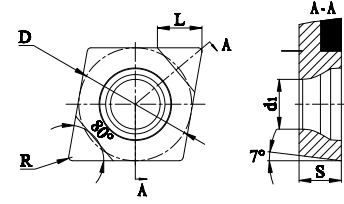
● Stock ○ Available upon Order

● Stock ○ Available upon Order

PCBN (Negative)

CCGW

Rhombic 80° with Hole



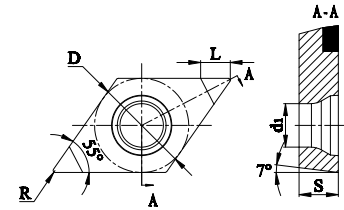
Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	di	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
CCGW060202L-2	2	2	6.35	2.38	2.8	0.2	○	○	○	○	○	○
CCGW060204L-2	2	2	6.35	2.38	2.8	0.4	○	○	●	●	○	○
CCGW060204M-2	2	2	6.35	2.38	2.8	0.4	○	○	○	○	○	○
CCGW060208L-2	2	2	6.35	2.38	2.8	0.8	○	○	○	○	○	○
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	di	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	○	○	●	●	●	●

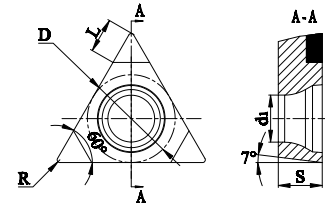



● Stock ○ Available upon Order

PCBN (Negative)

TCGW

Triangle 60° with Hole

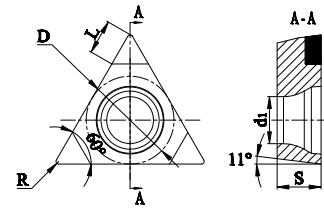



Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	d ₁	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
 TCGW110302L-3	3	2	6.35	3.18	3.4	0.2	○	○	○	○	○	○
TCGW110304L-3	3	2	6.35	3.18	3.4	0.4	●	○	○	○	○	○
TCGW110304M-3	3	2	6.35	3.18	3.4	0.4	○	○	○	●	○	○
TCGW110308L-3	3	2	6.35	3.18	3.4	0.8	○	○	○	○	○	○
TCGW110308M-3	3	2	6.35	3.18	3.4	0.8	○	○	○	○	○	○

● Stock ○ Available upon Order

TPGW

Triangle 60° with Hole



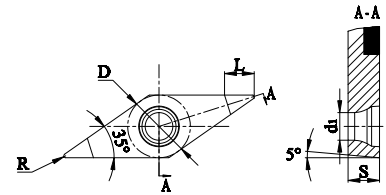
Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	d ₁	R	BKN115P	BKC120P	BHC115P	BHC125P	BHC135P	BSN115P
 TPGW080202L-1	1	2	4.76	2.38	2.3	0.2	○	○	○	○	○	○
TPGW080204L-1	1	2	4.76	2.38	2.3	0.4	○	○	○	○	○	○
TPGW080208L-1	1	2	4.76	2.38	2.3	0.8	○	○	○	○	○	○
TPGW090202L-3	3	2	5.56	2.38	2.8	0.2	○	○	○	○	○	○
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



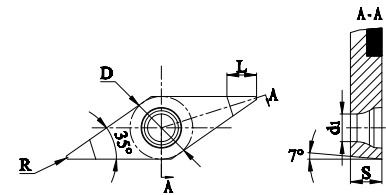
Ordering code	Flute	Dimensions (mm)					PCBN Grade					
		L	D	S	d ₁	R	BKN115P	BHN115P	BHC115P	BHC125P	BHC135P	BHC135P
VBGW110302L-2	2	2	6.35	3.18	2.8	0.2	○	○	○	○	○	○
VBGW110304L-2	2	2	6.35	3.18	2.8	0.4	○	○	○	●	○	○
VBGW110308L-2	2	2	6.35	3.18	2.8	0.8	○	○	○	●	○	○
VBGW110308M-2	2	2	6.35	3.18	2.8	0.8	○	○	○	○	○	○
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	d ₁	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	○	○	○	●	○	○

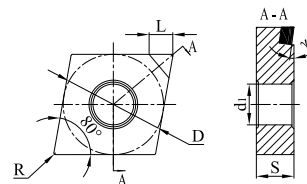


● Stock ○ Available upon Order

PCD (Negative)

CNGA

Rhombic 80° with Hole

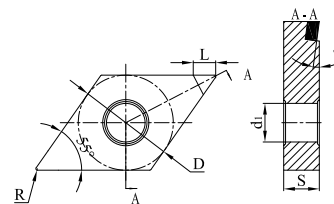


Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
CNGA120404	1	3	12.7	4.76	5.16	0.4	○	○	○	○	○
CNGA120408	1	3	12.7	4.76	5.16	0.8	○	○	○	○	○

● Stock ○ Available upon Order

DNGA

Rhombic 55° with Hole



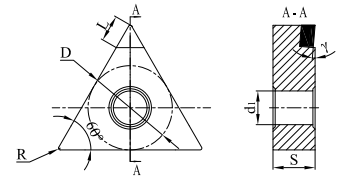
Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
DNGA150404	1	5	12.7	4.76	5.16	0.4	○	○	○	○	○
DNGA150408	1	5	12.7	4.76	5.16	0.8	○	○	○	○	○


● Stock ○ Available upon Order

PCD insert(Negative)

TNGA

Triangle 60° with Hole

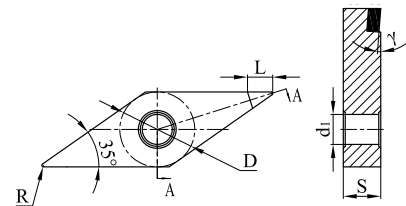



Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
 TNGA160404	1	3	9.525	4.76	3.81	0.4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	TNGA160408	1	3	9.525	4.76	3.81	0.8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

● Stock ○ Available upon Order

VNGA

Rhombic 35° with Hole



Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNN105P	DNN120P	DNN125P	DNN130P	DNN135P
 VNGA160404	1	3	9.525	4.76	3.81	0.4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	VNGA160408	1	3	9.525	4.76	3.81	0.8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

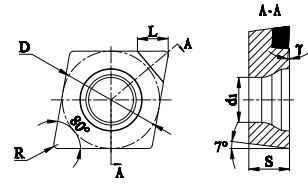
● Stock ○ Available upon Order

PCD (Positive)

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CC□W

Rhombic 80° with Hole



Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNNI05P	DNNI20P	DNNI25P	DNNI30P	DNNI35P
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	○	○	○	○	○



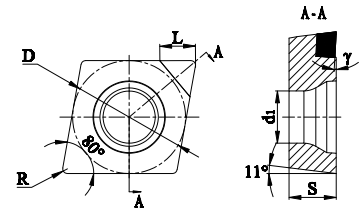
● Stock ○ Available upon Order

PCD (Negative)

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CP□W

Rhombic 80° with Hole



Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNNI05P	DNNI20P	DNNI25P	DNNI30P	DNNI35P
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	○	○	○	○	○



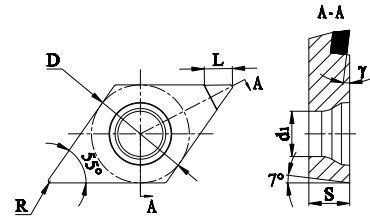
● Stock ○ Available upon Order

PCD (Negative)

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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	○	○	○	○	○

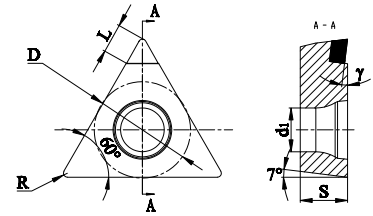


● Stock ○ Available upon Order

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	○	○	○	○	○

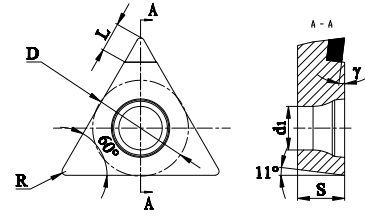
● Stock ○ Available upon Order

PCD (Negative)

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TP□W

Triangle 60° with Hole



Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	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	○	○	○	○	○

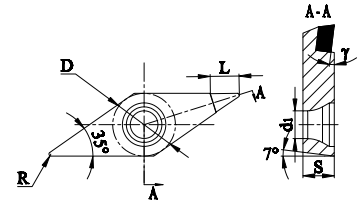


● Stock ○ Available upon Order

PCD (Negative)

VC□W

Rhombic 35° with Hole



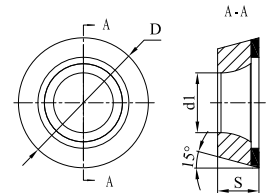
Ordering code	Flute	Dimensions (mm)					PCD Grade				
		L	D	S	d ₁	R	DNNI05P	DNNI20P	DNNI25P	DNNI30P	DNNI35P
VCGW110302	1	3.0	6.35	3.18	2.8	0.2	○	○	○	○	○
VCGW110304	1	3.0	6.35	3.18	2.8	0.4	○	○	●	○	○
VCGW110308	1	3.0	6.35	3.18	2.8	0.8	○	○	○	○	○
VCMW110302M	1	3.0	6.35	3.18	2.8	0.2	○	○	●	○	○
VCMW110304M	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	d ₁	DNNI05P	DNNI20P	DNNI25P	DNNI30P	DNNI35P
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	Continuous	/	BSN115P	50-150-300	0.05-0.20-0.5	0.05-0.12-0.30
H	Hardened Material	≥HRC50	Finishing	Continuous	/	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

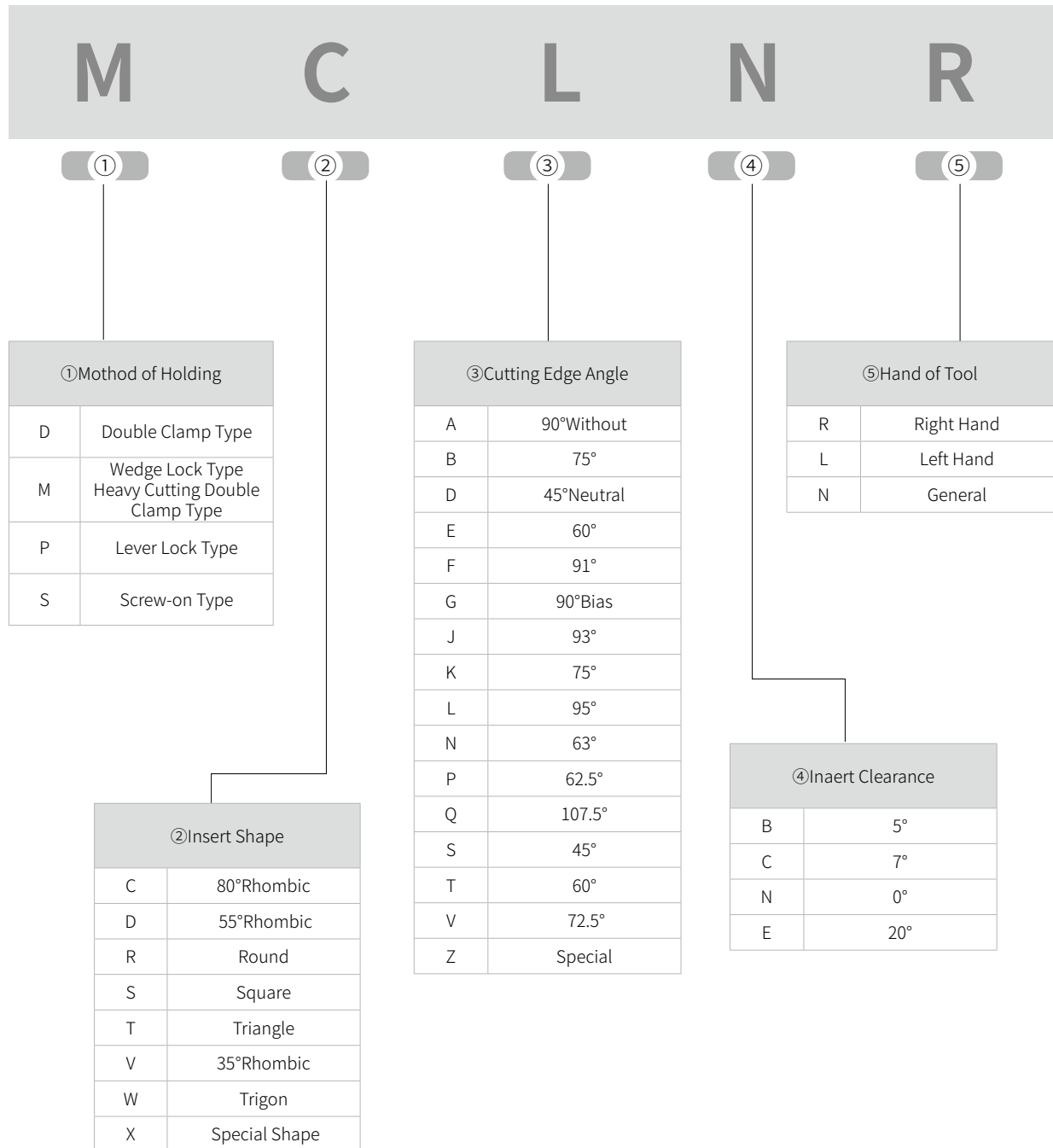
Standard Turning Toolholders



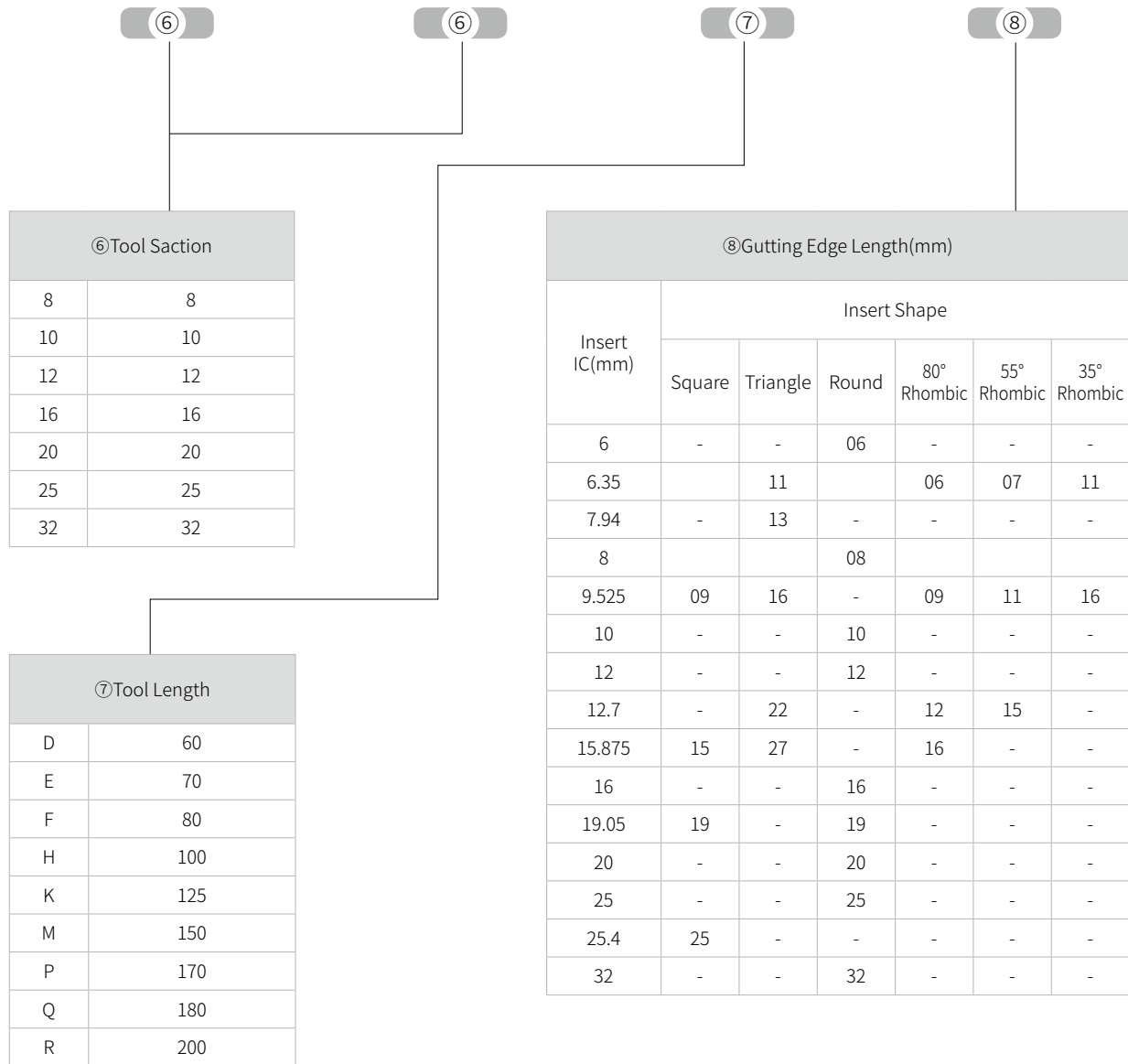
Overview of Turning Toolholders

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

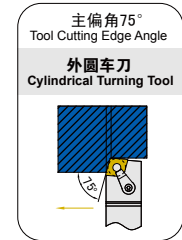
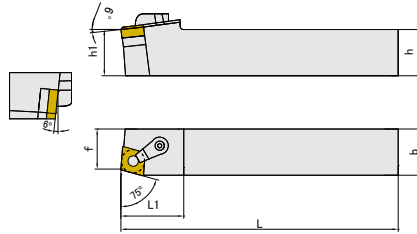


25 25 M 12



External Turning Tool holder(Negative)

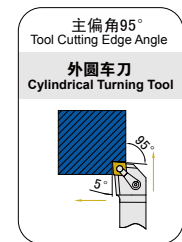
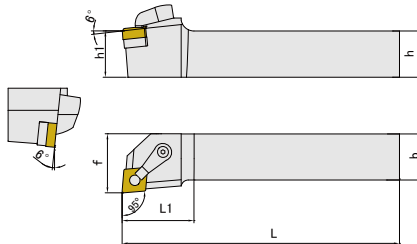
MCBNR



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

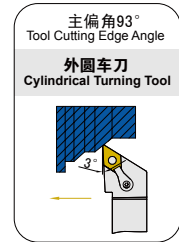
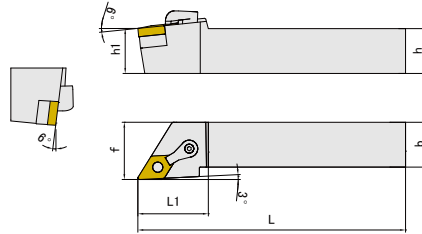


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MCLNR/L2020K12	●	●	20	20	125	25	20	32	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MCLNR/L2525M12	●	●	25	25	150	32	25	32	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MCLNR/L3232P12	●	○	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)

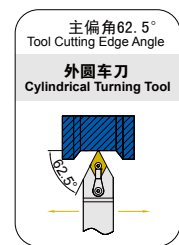
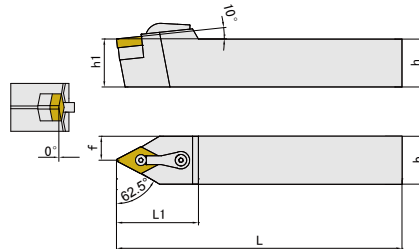
MDJNR



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

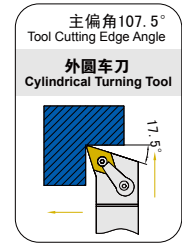
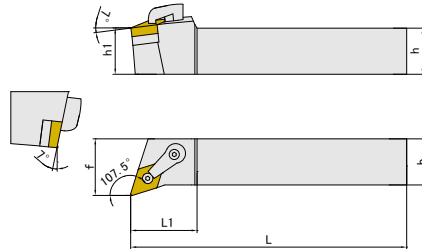


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	h	b	L	L1	h1	f	Shim	Pin		Clamp	Screw	Wrench		
MDPNN2020K11	●	○	20	20	125	36	20	10	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L
MDPNN2020K1504	●	○	20	20	125	42	20	10	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L
MDPNN2525M1504	●	○	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)

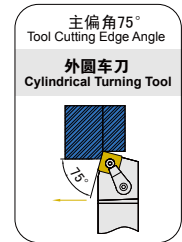
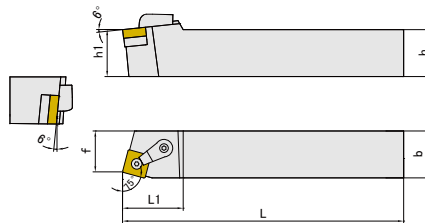
MDQNR



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

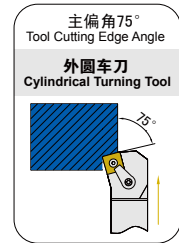
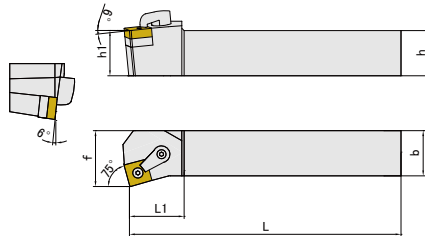


Ordering Code	Stock		Dimension						Insert	Spare Parts				
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MSBNR/L2020K12	●	○	20	20	125	32.5	20	17	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MSBNR/L2525M12	●	○	25	25	150	32.5	25	22	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L 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)

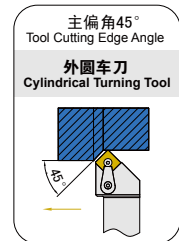
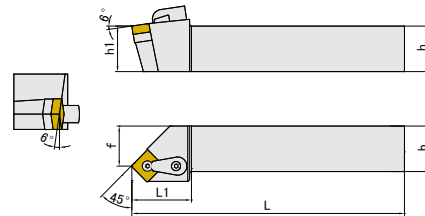
MSKNR



Ordering Code	Stock		Dimension						Insert	Spare Parts				
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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

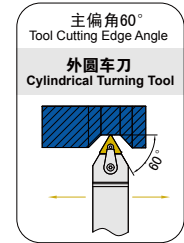
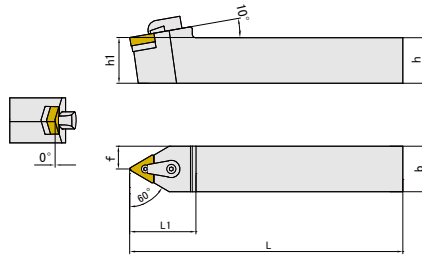


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MSSNR/L2020K12	●	○	20	20	125	32	20	17	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L
MSSNR/L2525M12	●	○	25	25	150	32	25	22	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L
MSSNR/L3232P12	●	○	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)

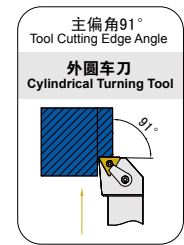
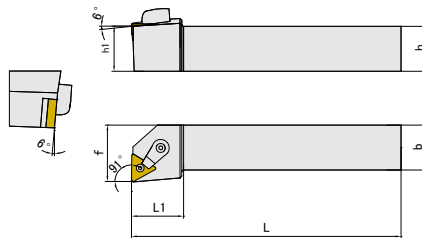
MTENN



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

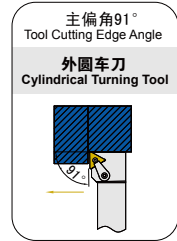
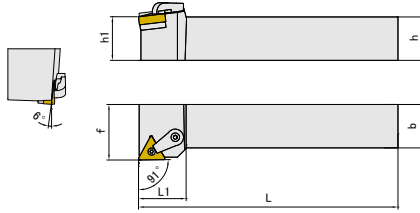


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MTFNR/L2020K16	●	○	20	20	125	28	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTFNR/L2525M16	●	○	25	25	150	28	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTFNR/L3232P16	○	○	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)

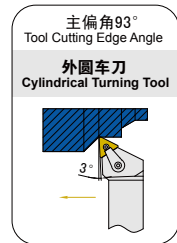
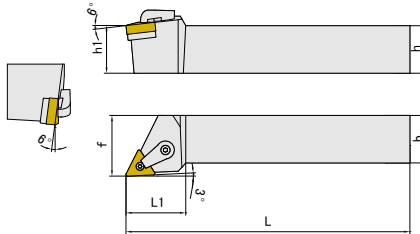
MTGNR



Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
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

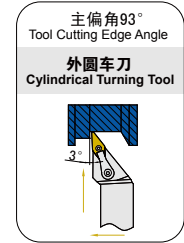
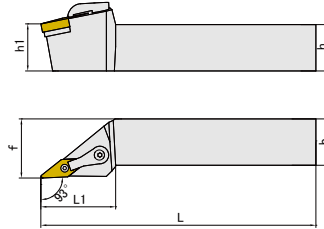


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MTJNR/L2020K16	●	●	20	20	125	32	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTJNR/L2525M16	●	●	25	25	150	32	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MTJNR/L3232P16	○	○	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)

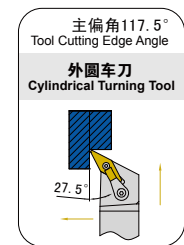
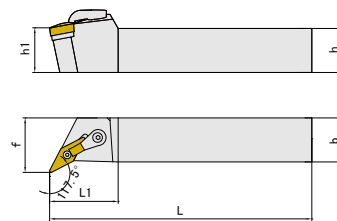
MVJNR



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

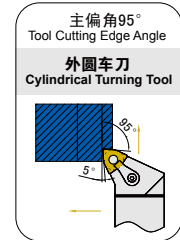
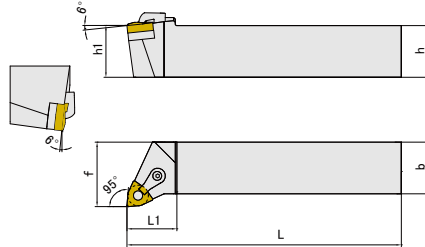


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MVQNR/L2020K16	●	○	20	20	125	40	20	25	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MVQNR/L2525M16	●	○	25	25	150	40	25	32	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L
MVQNR/L3232P16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

●Stock ○Available upon Order

External Turning Tool holder(Negative)

MWLNR

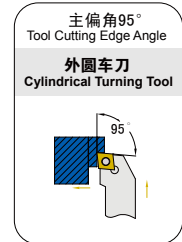
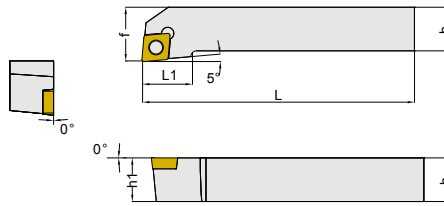


Ordering Code	Stock		Dimension						Insert	Spare Parts				
	R	L	h	b	L	L1	h1	f		Shim	Pin	Clamp	Screw	Wrench
MWLNR/L2020K0604	●	○	20	20	125	25	20	32	WN**0604**	DWN0603M	SPM050130	CAM01	SDM050200	TH20L TH30L
MWLNR/L2020K08	●	○	20	20	125	25	20	32	WN**0804**	DWN0804M	SPM060170	CAM02	SDM060200	TH25L TH30L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

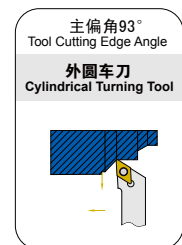
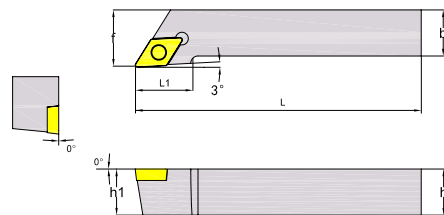
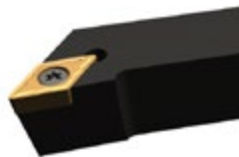
SCLCR



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

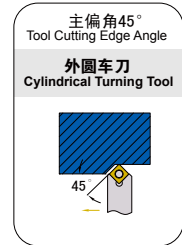
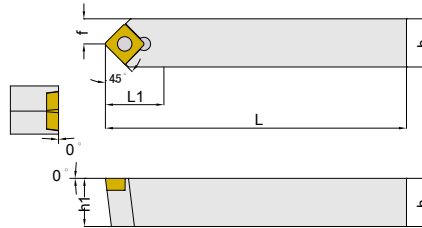
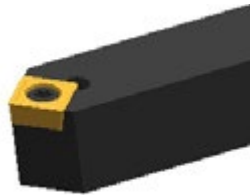


Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
SDJCR/L1010F07	○	○	10	10	80	12	10	15	DC**0702**	SI60M025060-03510	TT08P
SDJCR/L1212H07	○	○	12	12	100	16	12	15			
SDJCR/L1616H11	●	○	16	16	100	20	16	24	DC**11T3**	SI60M040100-05812	TT15P
SDJCR/L2020K11	●	○	20	20	125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

●Stock ○Available upon Order

External Turning Tool holder(Positive)

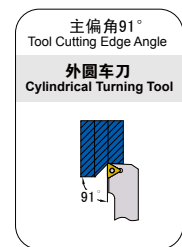
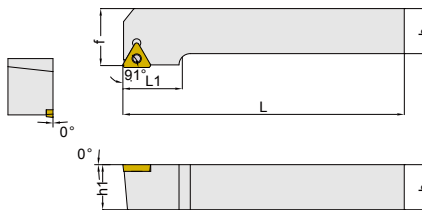
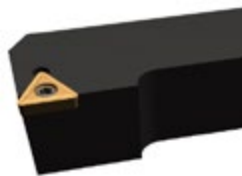
SSDCN



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

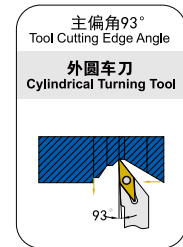
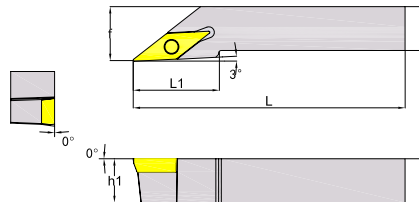


Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
STGCR/L1010F09	○	○	10	10	80	12	10	11	TC**0902**	SI60M022060-03008	TT06P
STGCR/L1212H11	○	○	12	12	100	16	12	16	TC**1102**	SI60M025060-03510	TT08P
STGCR/L1616H11	●	○	16	16	100	20	16	20			
STGCR/L2020K16	●	○	20	20	125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

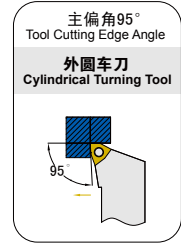
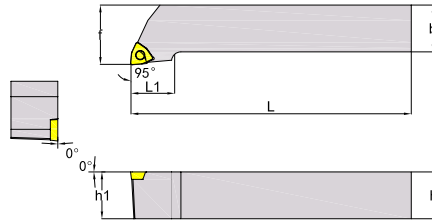


Ordering Code	Stock		Dimension						Insert	Spare Parts	
	R	L	h	b	L	L1	h1	f		Screw	Wrench
SVJCR/L1212H11	○	○	12	12	100	24	12	16	VC**1103**	SI60M025060-03510	TT08P
SVJCR/L1616H11	●	○	16	16	100	26	16	20			
SVJCR/L2020K16	●	○	20	20	125	32	20	25	VC**1604**	SI60M040100-05812	TT15P
SVJCR/L2525M16	●	○	25	25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

●Stock ○Available upon Order

External Turning Tool holder(Positive)

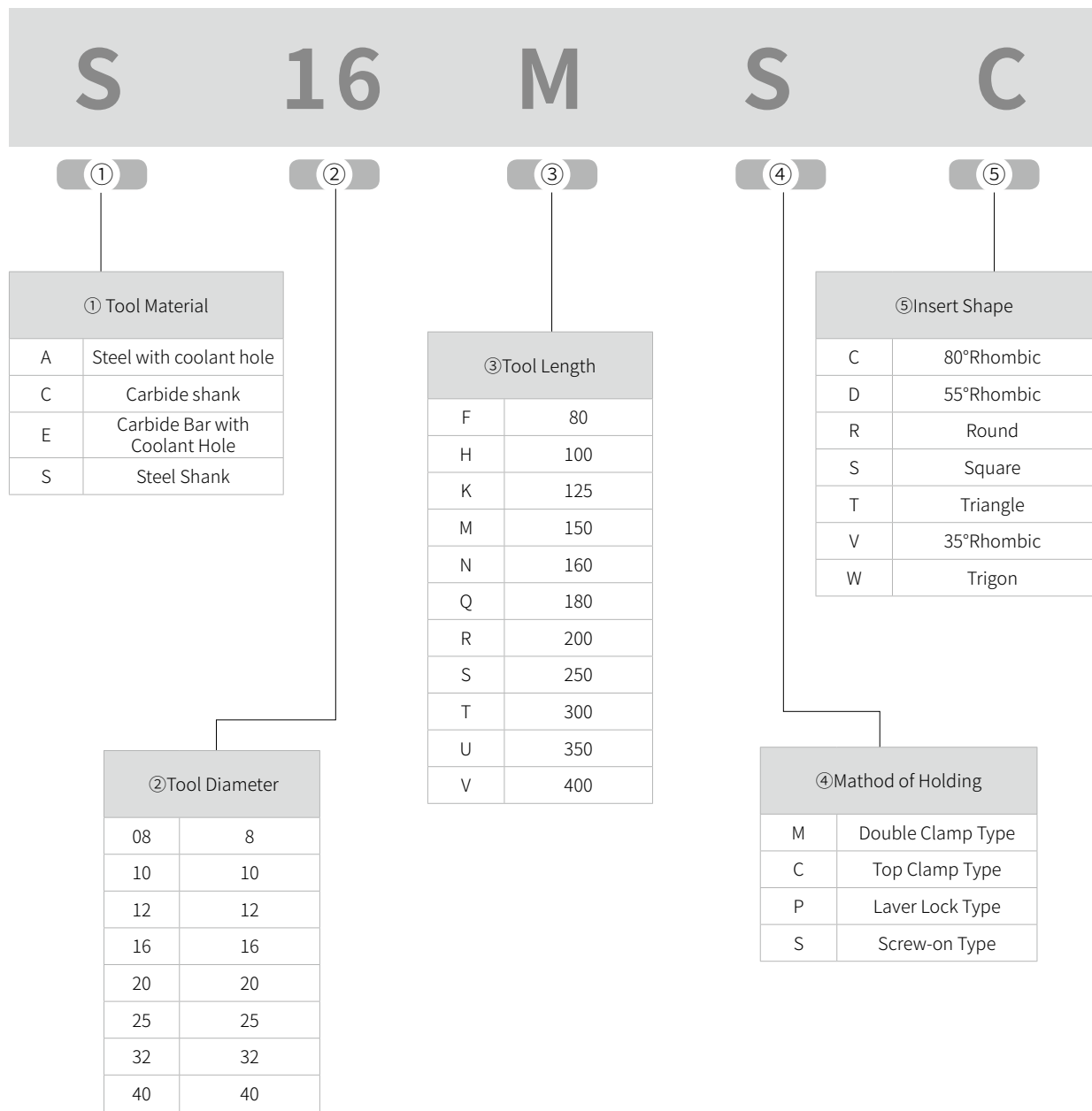
SWLCR



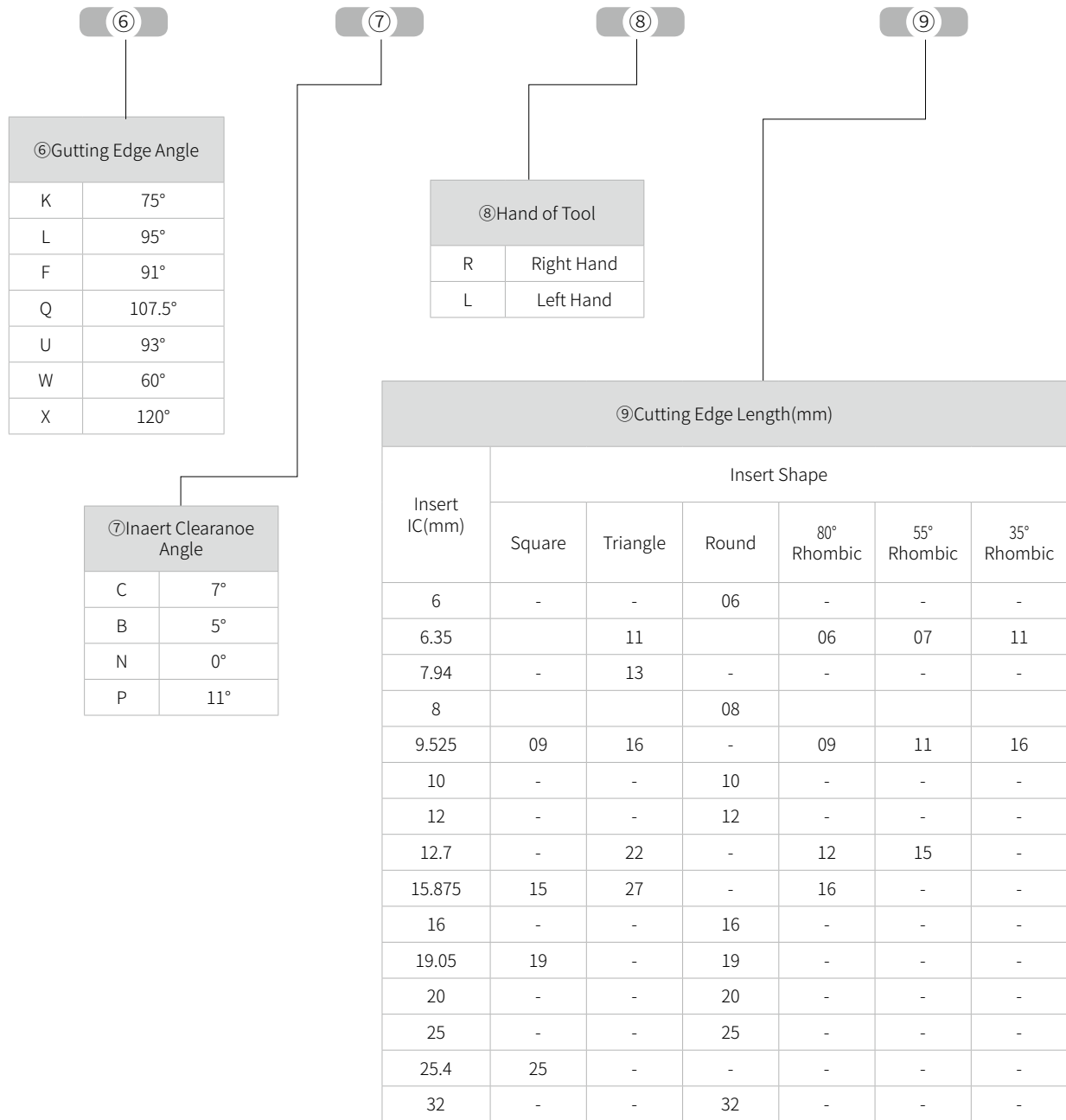
Ordering Code	Stock		Dimension						Insert	Spare Parts	
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SWLCR/L1212H06	●	○	12	12	100	14	12	16	WC**06T3**	SI60M040100-05812	TT15P
SWLCR/L1616H06	●	○	16	16	100	14	16	20			
SWLCR/L2020K06	●	○	20	20	125	15	20	25			
SWLCR/L2525M06	●	○	25	25	150	17	25	32			

●Stock ○Available upon Order

Internal Turning Toolholders Identification System



L C R 09



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

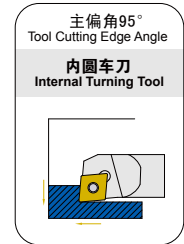
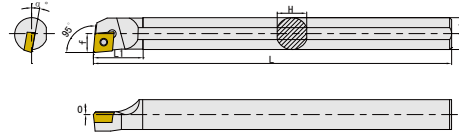
⑦Inaert Clearance Angle	
C	7°
B	5°
N	0°
P	11°

⑧Hand of Tool	
R	Right Hand
L	Left Hand

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

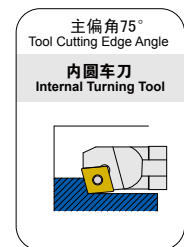
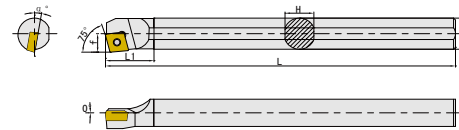
SCLCR



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			

●Stock ○Available upon Order

SCKCR

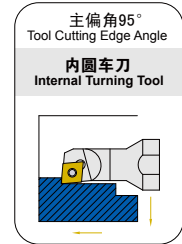
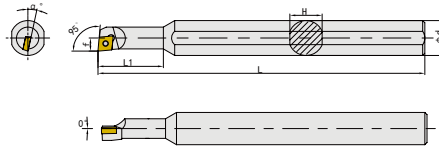


Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-SCKCR/L06	●	○	10	8	5.5	125	13	7	13	CC**0602**	SI60M025060-03510	TT08P
S10K-SCKCR/L06	●	○	12	10	6	125	14	9	12			
S12M-SCKCR/L06	●	○	14	12	7	150	16	11	10			
S12M-SCKCR/L09	●	○	15	12	8	150	23	11	12	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

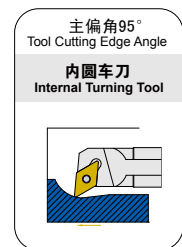
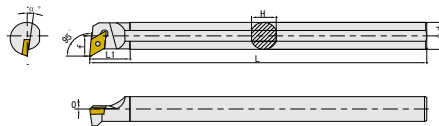
SCLCR-A16



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

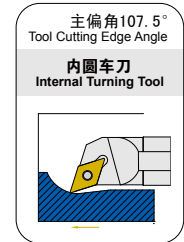
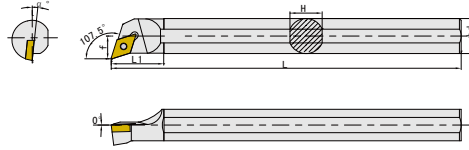


Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S10K-SDUCR/L07	●	○	14	10	8	125	16	9	10	DC**0702**	SI60M025060-03510	TT08P
S12M-SDUCR/L07	●	●	16	12	9	150	18	11	8			
S16Q-SDUCR/L07	●	●	20	16	11	180	20	14.8	6			
S16Q-SDUCR/L11	●	●	20	16	11	180	18	14.8	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

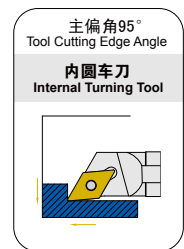
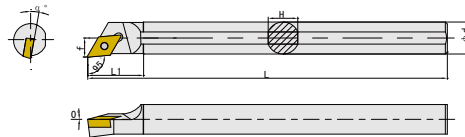
SDQCR



Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
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

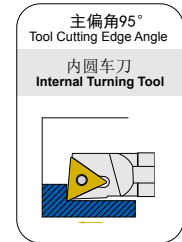
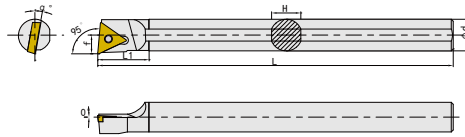


Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-SDXCR/L07	●	○	10	8	5.5	125	18	7	12	DC**0702**	SI60M025060-03510	TT08P
S10K-SDXCR/L07	●	○	12	10	6	125	18	9	10			
S12M-SDXCR/L07	●	○	14	12	7	150	21	11	8			
S16Q-SDXCR/L07	●	○	18	16	9	180	22	14.8	6	DC**11T3**	SI60M040100-05812	TT15P
S20R-SDXCR/L11	○	○	22	20	11.5	200	30	18.4	6			
S25S-SDXCR/L11	○	○	27	25	14	250	35	23.4	4			

●Stock ○Available upon Order

Internal Turning Toolholder

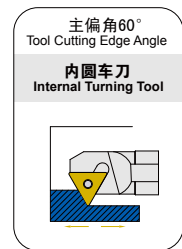
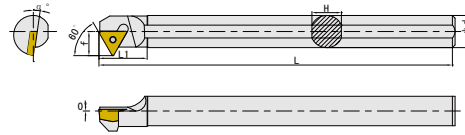
STUCR



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	TC**16T3**	SI60M040100-05812	TT15P
S20R-STUCR/L16	○	○	22	20	11.5	200	25	18.4	4			
S25S-STUCR/L16	○	○	28	25	14	250	30	23.4	6			

●Stock ○Available upon Order

STWCR

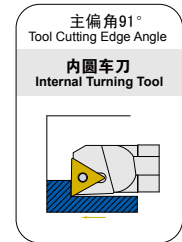
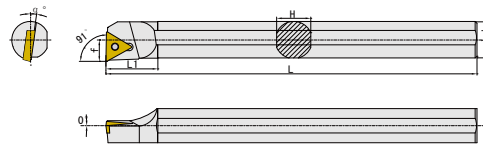


Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S08K-STWCR/L09	●	○	11	8	6	125	15	7	15	TC**0902**	SI60M022060-03008	TT06P
S10K-STWCR/L11	●	○	14	10	8	125	18	9	10			
S12M-STWCR/L11	●	○	16	12	9	150	18	11	8	TC**1102**	SI60M025060-03510	TT08P
S16Q-STWCR/L11	○	○	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

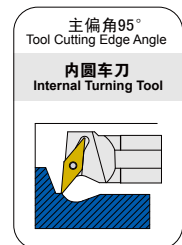
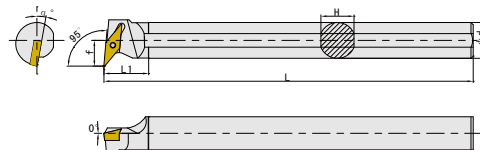
STFCR



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

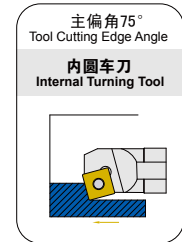
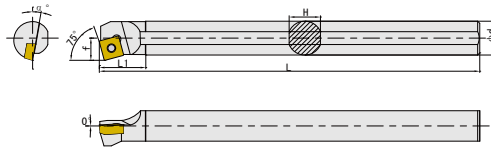


Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S16Q-SVUCR/L11	○	○	20	16	11.5	180	20	14.8	10	VC**1103**	SI60M025060-03510	TT08P
S20R-SVUCR/L11	○	○	25	20	14	200	25	18.4	8			
S25S-SVUCR/L16	○	○	33	25	20	250	25	23.4	8	VC**1604**	SI60M040100-05812	TT15P

●Stock ○Available upon Order

Internal Turning Toolholder

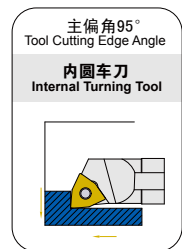
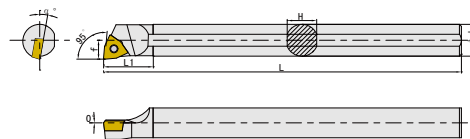
SSKCR



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

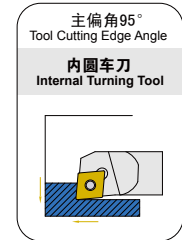
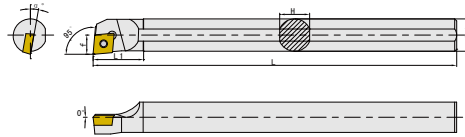


Ordering Code	Stock		Dimension (mm)							Insert	Spare Parts	
	R	L	ΦDmin	Φd	f	L	L1	H	α°		Screw	Wrench
S12M-SWLCR/L06	○	○	14	12	7.5	150	20	11	12	WC**06T3**	SI60M040100-05812	TT15P
S16Q-SWLCR/L06	○	○	18	16	9.5	180	25	14.8	10			
S20R-SWLCR/L06	○	○	22	20	11.5	200	28	18.4	8			
S25S-SWLCR/L06	○	○	27	25	14	250	30	23.4	6			

●Stock ○Available upon Order

Internal Turning Toolholder

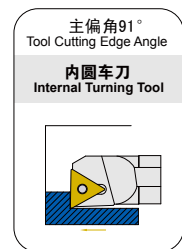
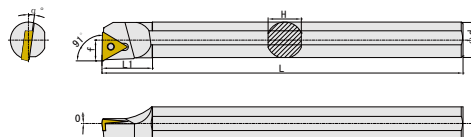
SCLPR



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			

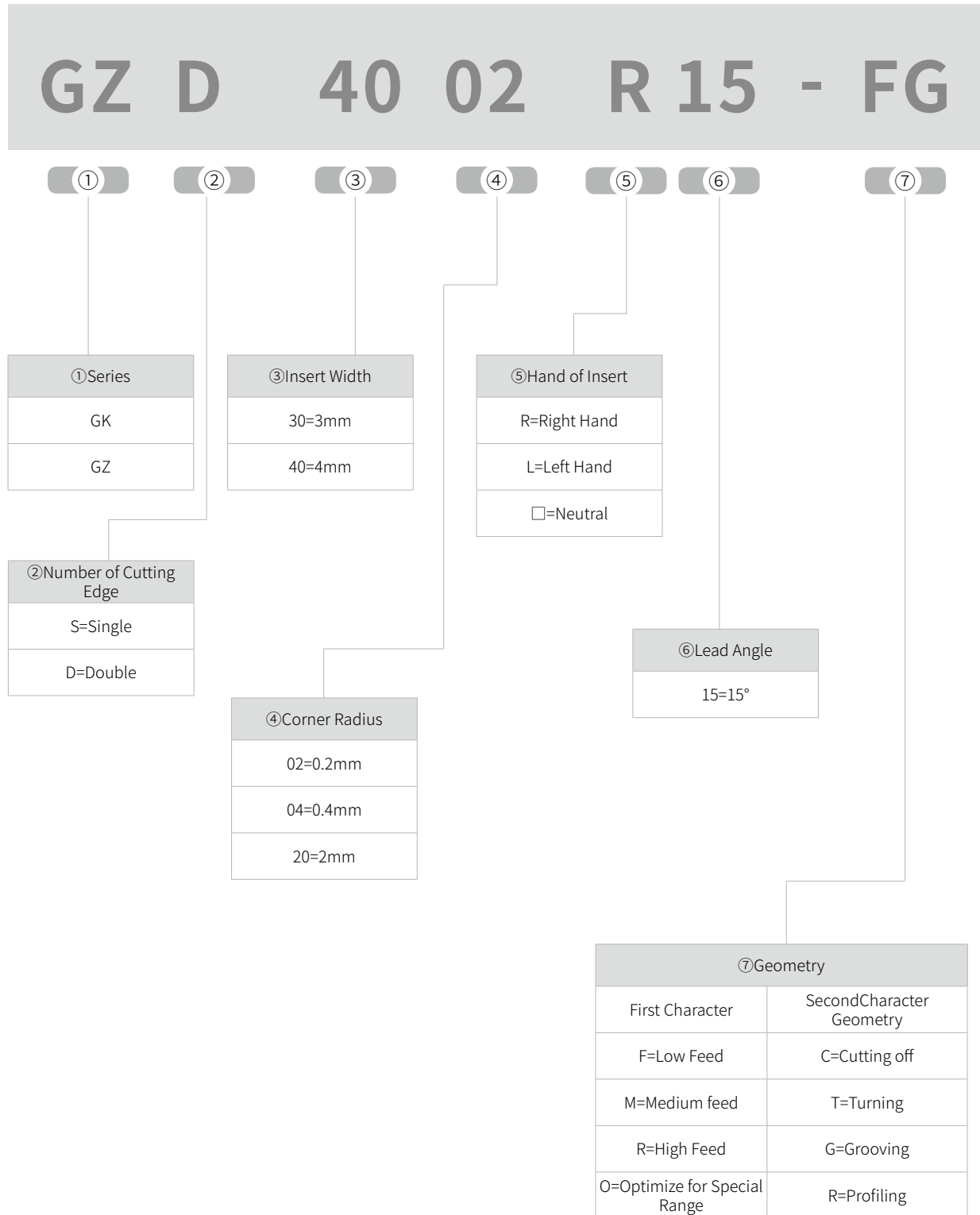
●Stock ○Available upon Order

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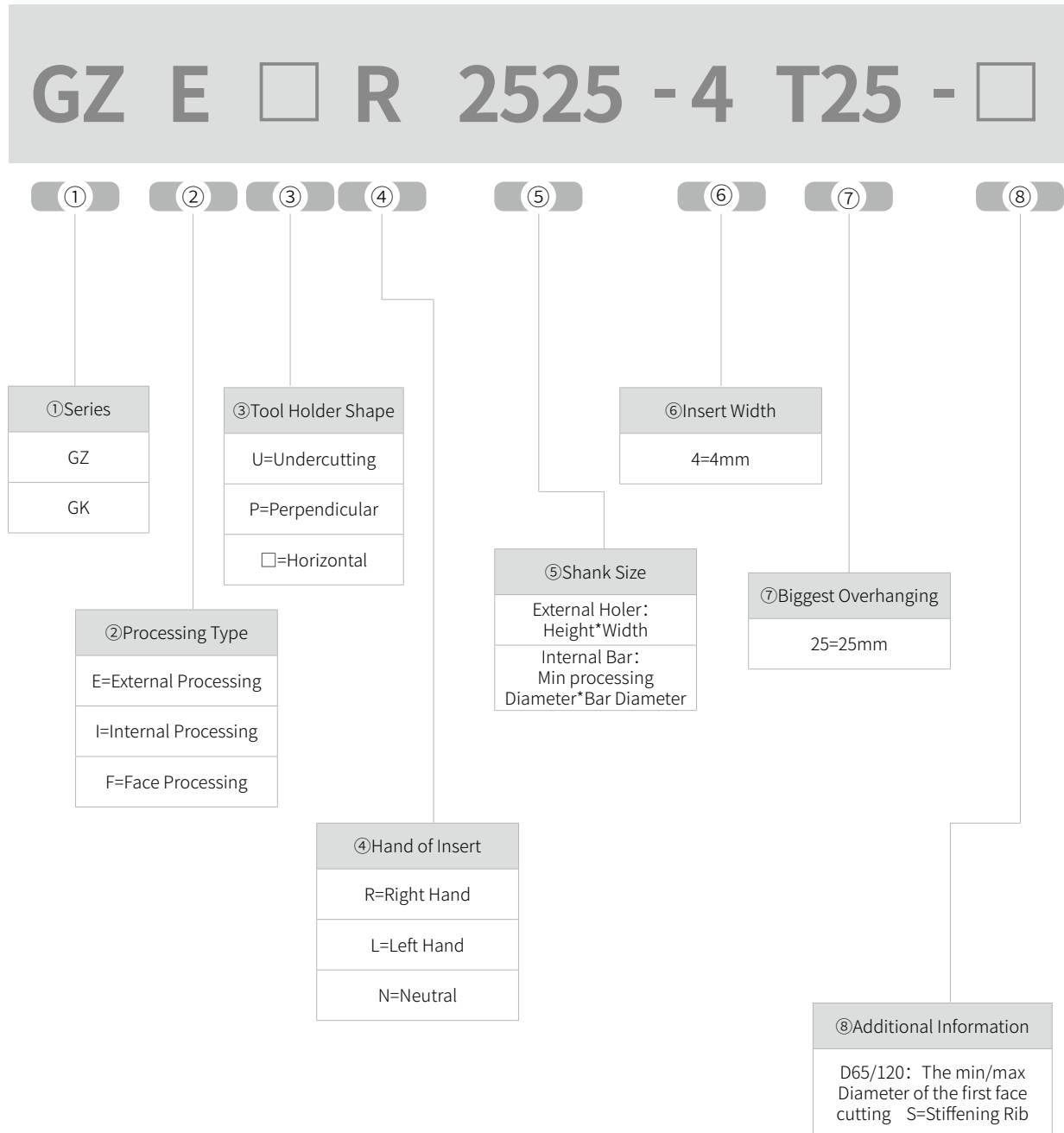
Parting and Grooving Tools



Parting and Grooving Series Insert Identification System



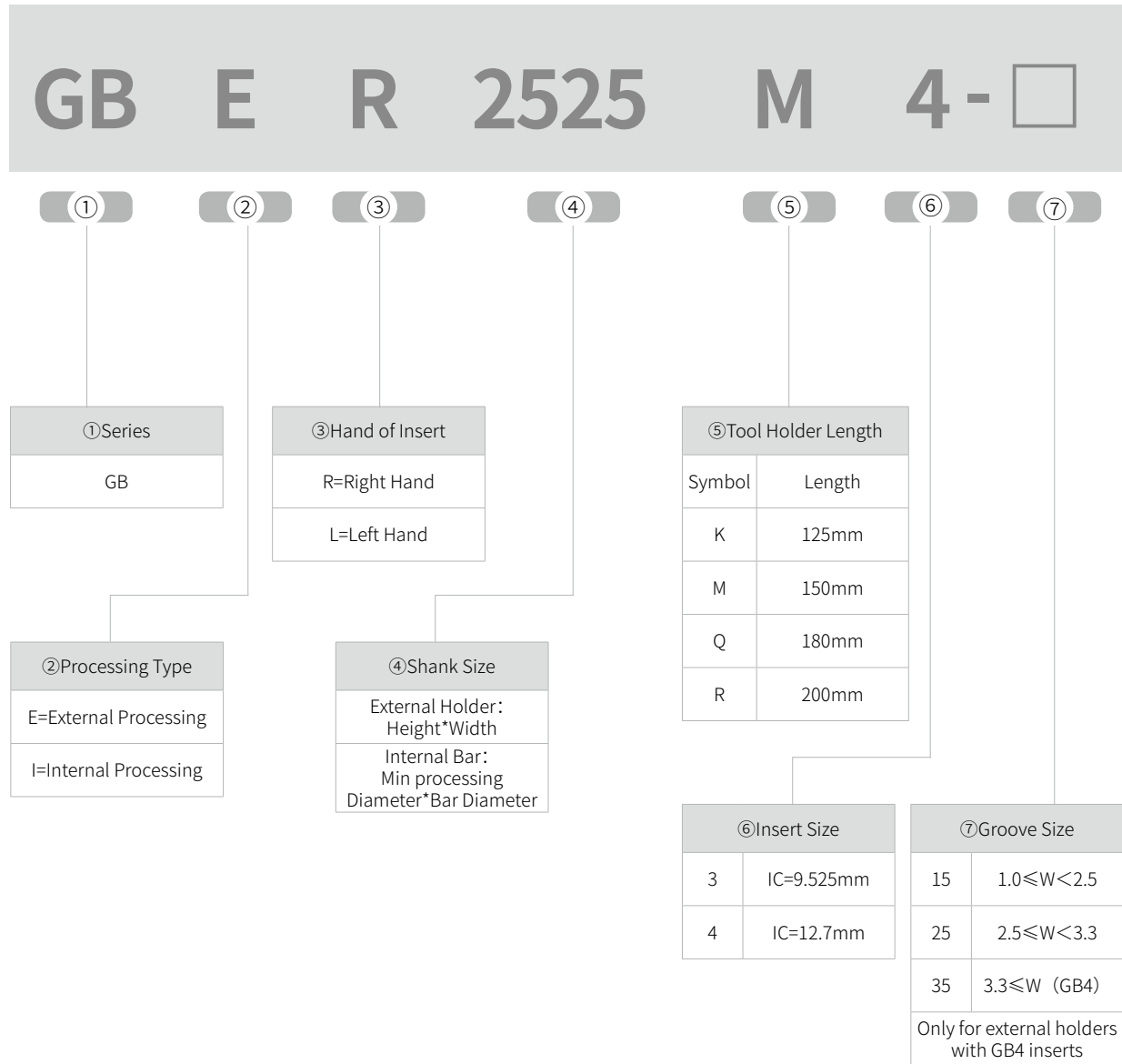
Parting and Grooving Series Tool Holder Identification System



GB Series Insert Identification System



GB Series Tool Holder Identification System



Overview of Parting and Grooving Inserts

Shape	Geometry	Application	Width	Page
	MT	Medium Turning	2.0-8.0 (mm)	P126
	MR	Medium Profiling	2.0-8.0 (mm)	P126
	FG	Precision Grooving	3.0-6.0 (mm)	P127
	OR	Precision Profiling	3.0-6.0 (mm)	P127
	GB	Precision Grooving	0.5-4.3 (mm)	P128

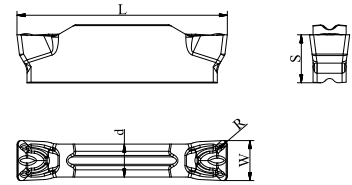
Grades for Parting and Grooving

Workpiece Material	P Steel					M Stainless Steel					K Cast Iron					S HRSA, Titanium Alloy								
	ISO	01	10	20	30	40	50	01	10	20	30	40	01	10	20	30	40	10	20	30	40			
CVD		GP1105											GK1115											
			GP1225																					
Coated	PVD							GS3115										GS3115						
			GA4230						GA4230				GA4230						GS3125					
Uncoated								GS3125											GS9125					

Parting and Grooving Inserts

MT

Medium Turning Inserts



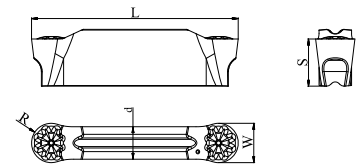
Ordering Code	Dimension					Stock		
	W	R	L	d	S	GP1225	GA4230	GK1115
GKD2002-MT	2.0	0.2	16.0	1.2	3.5	●	●	●
GKD2502-MT	2.5	0.2	18.5	2.0	3.85	●	●	●
GKD3004-MT	3.0	0.4	21.2	2.35	4.8	●	●	●
GKD4004-MT	4.0	0.4	21.0	3.3	4.8	●	●	●
GKD5004-MT	5.0	0.4	26.0	4.1	5.8	●	●	●
GKD5008-MT	5.0	0.8	26.0	4.1	5.8	●	●	●
GKD6004-MT	6.0	0.4	26.0	5.0	5.8	●	●	●
GKD6008-MT	6.0	0.8	26.0	5.0	5.8	●	●	●
GKD8008-MT	8.0	0.8	31.0	6.0	6.5	●	○	●

©For tools, see page130and page134

●Stock ○Available upon order

MR

Medium Profiling Inserts



Ordering Code	Dimension					Stock			
	W	R	L	d	S	GP1105	GP1225	GA4230	GK1115
GKD2010-MR	2.0	1.0	16.0	1.2	3.5	●	○	●	●
GKD3015-MR	3.0	1.5	21.2	2.35	4.8	●	○	●	●
GKD4020-MR	4.0	2.0	21.0	3.3	4.8	●	○	●	●
GKD5025-MR	5.0	2.5	26.0	4.1	5.8	●	○	●	●
GKD6030-MR	6.0	3.0	26.0	5.0	5.8	●	○	●	●
GKD8040-MR	8.0	4.0	31.0	6.0	6.5	●	○	●	●

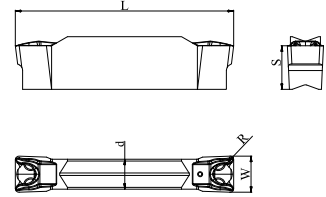
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●Stock ○Available upon order

Parting and Grooving Inserts

FG

Precision Grooving Inserts



Ordering Code	Dimension					Stock	
	W	R	L	d	S	GS3125	GS9125
GZD3002-FG	3.0	0.2	20.4	2.3	4.6	●	●
GZD3004-FG	3.0	0.4	20.4	2.3	4.6	●	●
GZD4002-FG	4.0	0.2	24.0	3.3	4.8	●	●
GZD4004-FG	4.0	0.4	24.0	3.3	4.8	●	●
GZD5002-FG	5.0	0.2	24.0	3.3	4.8	●	●
GZD5004-FG	5.0	0.4	24.0	3.3	4.8	●	●
GZD6002-FG	6.0	0.2	26.0	4.2	4.8	●	●
GZD6004-FG	6.0	0.4	26.0	4.2	4.8	●	●

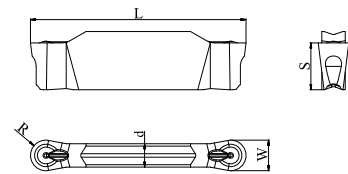


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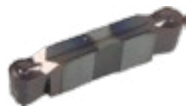
● Stock ○ Available upon order

OR

Precision Profiling Inserts



Ordering Code	Dimension					Stock
	W	R	L	d	S	GS3115
GZD3015-OR	3.0	1.5	21.0	2.3	4.6	●
GZD4020-OR	4.0	2.0	24.0	3.3	4.8	●
GZD5025-OR	5.0	2.5	24.0	3.3	4.8	●
GZD6030-OR	6.0	3.0	21.0	4.2	4.8	●



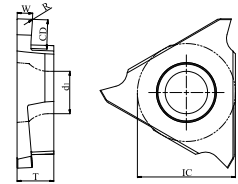
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● Stock ○ Available upon order

Parting and Grooving Inserts

GB

Precision Profiling Inserts



Ordering Code	Dimension						Stock	
	W	CD	R	IC	T	d1	GA4230	
							R	L
GB3050R/L-005	0.50	1.0	0.05	9.525	3.18	4.4	●	○
GB3075R/L-010	0.75	2.0	0.1	9.525	3.18	4.4	●	○
GB3080R/L-005	0.80	2.0	0.05	9.525	3.18	4.4	●	○
GB3095R/L-010	0.95	2.0	0.1	9.525	3.18	4.4	●	○
GB3100R/L-005	1.00	2.0	0.05	9.525	3.18	4.4	●	○
GB3100R/L-010	1.00	2.0	0.1	9.525	3.18	4.4	●	○
GB3120R/L-010	1.20	2.0	0.1	9.525	3.18	4.4	●	○
GB3120R/L-020	1.20	2.0	0.2	9.525	3.18	4.4	●	○
GB3125R/L-010	1.25	2.0	0.1	9.525	3.18	4.4	●	○
GB3140R/L-010	1.40	2.0	0.1	9.525	3.18	4.4	●	○
GB3140R/L-020	1.40	2.0	0.2	9.525	3.18	4.4	●	●
GB3145R/L-010	1.45	2.0	0.1	9.525	3.18	4.4	●	○
GB3150R/L-010	1.50	2.0	0.1	9.525	3.18	4.4	●	○
GB3150R/L-020	1.50	2.0	0.2	9.525	3.18	4.4	●	●
GB3175R/L-010	1.75	2.0	0.1	9.525	3.18	4.4	●	○
GB3200R/L-010	2.00	2.5	0.1	9.525	3.18	4.4	●	○
GB3200R/L-020	2.00	2.5	0.2	9.525	3.18	4.4	●	●
GB3250R/L-010	2.50	2.5	0.1	9.525	3.18	4.4	●	○
GB3250R/L-020	2.50	2.5	0.2	9.525	3.18	4.4	●	●
GB3300R/L-020	3.00	2.5	0.2	9.525	3.18	4.4	●	●



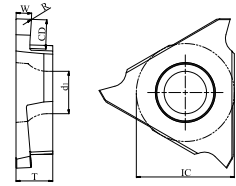
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● Stock ○ Available upon order

Parting and Grooving Inserts

GB

Precision Grooving Inserts



Ordering Code	Dimension						Stock	
	W	CD	R	IC	T	d1	GA4230	
							R	L
GB4125R/L -020	1.25	2.0	0.2	12.7	4.76	5.5	●	●
GB4150R/L -010	1.50	3.5	0.1	12.7	4.76	5.5	●	○
GB4150R/L -020	1.50	3.5	0.2	12.7	4.76	5.5	●	●
GB4175R/L -020	1.75	3.5	0.2	12.7	4.76	5.5	●	○
GB4185R/L -020	1.85	3.5	0.2	12.7	4.76	5.5	●	●
GB4200R/L -005	2.00	3.5	0.05	12.7	4.76	5.5	●	○
GB4200R/L -010	2.00	3.5	0.1	12.7	4.76	5.5	●	○
GB4200R/L -020	2.00	3.5	0.2	12.7	4.76	5.5	●	●
GB4200R/L -030	2.00	3.5	0.3	12.7	4.76	5.5	●	○
GB4200R/L -050	2.00	3.5	0.5	12.7	4.76	5.5	●	○
GB4210R/L -050	2.10	4.0	0.5	12.7	4.76	5.5	●	○
GB4220R/L -030	2.20	4.0	0.3	12.7	4.76	5.5	●	○
GB4235R/L -050	2.35	4.0	0.5	12.7	4.76	5.5	●	○
GB4240R/L -050	2.40	4.0	0.5	12.7	4.76	5.5	●	○
GB4250R/L -030	2.50	4.0	0.3	12.7	4.76	5.5	●	●
GB4265R/L -030	2.65	4.0	0.3	12.7	4.76	5.5	●	○
GB4280R/L -030	2.80	5.0	0.3	12.7	4.76	5.5	●	○
GB4300R/L -030	3.00	4.0	0.3	12.7	4.76	5.5	●	●
GB4330R/L -030	3.30	5.0	0.3	12.7	4.76	5.5	●	○
GB4350R/L -030	3.50	5.0	0.3	12.7	4.76	5.5	●	●
GB4400R/L -040	4.00	5.0	0.4	12.7	4.76	5.5	●	●
GB4430R/L -040	4.30	5.0	0.4	12.7	4.76	5.5	●	○
GBR4100R/L -050	1.00	2.0	0.5	12.7	4.76	5.5	●	●
GBR4150R/L -075	1.50	3.5	0.75	12.7	4.76	5.5	●	●
GBR4200R/L -100	2.00	3.5	1.0	12.7	4.76	5.5	●	●
GBR4250R/L -125	2.50	4.0	1.25	12.7	4.76	5.5	●	●
GBR4300R/L -150	3.00	4.0	1.5	12.7	4.76	5.5	●	●
GBR4400R/L -200	4.00	5.0	2.0	12.7	4.76	5.5	●	●

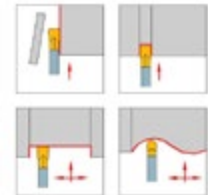
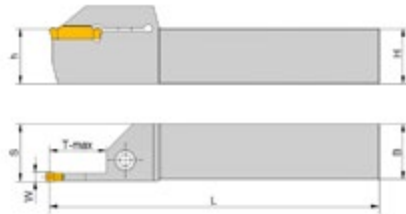
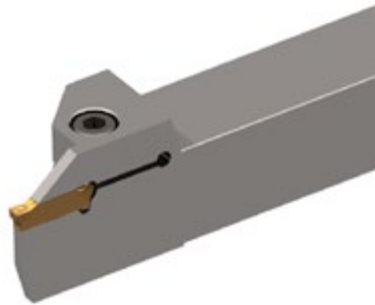


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● Stock ○ Available upon order

GK Series

External Holders for Parting, Grooving, Turning and Profiling



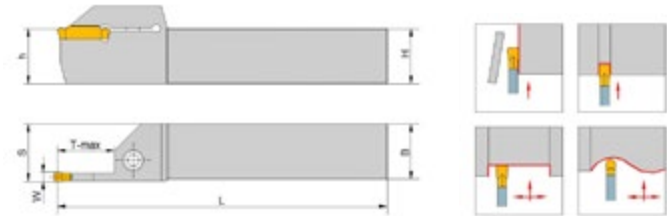
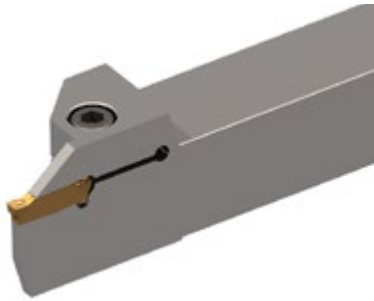
The Picture is Right Hand Holder

Ordering Code	Stock		Inserts	Dimension(mm)						Screw	Wrench
	R	L		W	T-max	H=h	B	L	S		
GKER/L1616-2T14	●	●	GKD20...	2.0	14	16	16	100	17	SCAM050120H	TH40LH
GKER/L2020-2T14	●	●	GKD20...	2.0	14	20	20	125	21	SCAM050200H	TH40LH
GKER/L2525-2T14	●	●	GKD20...	2.0	14	25	25	150	26	SCAM060200H	TH50LH
GKER/L1616-2.5T16	●	●	GKD25...	2.5	16	16	16	100	17	SCAM050120H	TH40LH
GKER/L2020-2.5T16	●	●	GKD25...	2.5	16	20	20	125	21	SCAM050200H	TH40LH
GKER/L2525-2.5T16	●	●	GKD25...	2.5	16	25	25	150	26	SCAM060200H	TH50LH
GKER/L1616-3T18	●	●	GKD30...	3.0	18	16	16	100	17	SCAM050120H	TH40LH
GKER/L2020-3T18	●	●	GKD30...	3.0	18	20	20	125	21	SCAM050200H	TH40LH
GKER/L2020-3T10	○	○	GKD30...	3.0	10	20	20	125	21	SCAM050200H	TH40LH
GKER/L2525-3T18	●	●	GKD30...	3.0	18	25	25	150	26	SCAM060200H	TH50LH
GKER/L2525-3T10	○	○	GKD30...	3.0	10	25	25	150	26	SCAM060200H	TH50LH
GKER/L3225-3T18	●	●	GKD30...	3.0	18	32	25	170	26	SCAM060200H	TH50LH
GKER/L3232-3T18	●	●	GKD30...	3.0	18	32	32	170	33	SCAM060200H	TH50LH
GKER/L3232-3T10	○	○	GKD30...	3.0	10	32	32	170	33	SCAM060200H	TH50LH
GKER/L2020-4T18	●	●	GKD40...	4.0	18	20	20	125	21	SCAM050200H	TH40LH
GKER/L2020-4T10	○	○	GKD40...	4.0	10	20	20	125	21	SCAM050200H	TH40LH
GKER/L2525-4T18	●	●	GKD40...	4.0	18	25	25	150	26	SCAM060200H	TH50LH
GKER/L2525-4T10	○	○	GKD40...	4.0	10	25	25	150	26	SCAM060200H	TH50LH
GKER/L3225-4T18	●	●	GKD40...	4.0	18	32	25	170	26	SCAM060200H	TH50LH
GKER/L3232-4T18	●	●	GKD40...	4.0	18	32	32	170	33	SCAM060200H	TH50LH
GKER/L3232-4T10	○	○	GKD40...	4.0	10	32	32	170	33	SCAM060200H	TH50LH

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GK Series

External Holders for Parting, Grooving, Turning and Profiling



The Picture is Right Hand Holder

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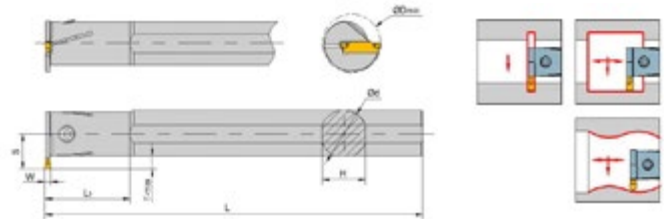
Ordering Code	Stock		Inserts	Dimension(mm)						Screw	Wrench
	R	L		W	T-max	H=h	B	L	S		
GKER/L2020-5T23	●	●	GKD50...	5.0	23	20	20	125	21	SCAM050200H	TH40LH
GKER/L2020-5T15	○	○	GKD50...	5.0	15	20	20	125	21	SCAM050200H	TH40LH
GKER/L2525-5T23	●	●	GKD50...	5.0	23	25	25	150	26	SCAM060200H	TH50LH
GKER/L2525-5T15	○	○	GKD50...	5.0	15	25	25	150	26	SCAM060200H	TH50LH
GKER/L3225-5T23	●	●	GKD50...	5.0	23	32	25	170	26	SCAM060200H	TH50LH
GKER/L3232-5T23	●	●	GKD50...	5.0	23	32	32	170	33	SCAM060200H	TH50LH
GKER/L3232-5T15	○	○	GKD50...	5.0	15	32	32	170	33	SCAM060200H	TH50LH
GKER/L2020-6T23	●	●	GKD60...	6.0	23	20	20	125	21	SCAM050200H	TH40LH
GKER/L2020-6T15	○	○	GKD60...	6.0	15	20	20	125	21	SCAM050200H	TH40LH
GKER/L2525-6T23	●	●	GKD60...	6.0	23	25	25	150	26	SCAM060200H	TH50LH
GKER/L2525-6T15	○	○	GKD60...	6.0	15	25	25	150	26	SCAM060200H	TH50LH
GKER/L3225-6T23	●	●	GKD60...	6.0	23	32	25	170	26	SCAM060200H	TH50LH
GKER/L3232-6T23	●	●	GKD60...	6.0	23	32	32	170	33	SCAM060200H	TH50LH
GKER/L3232-6T15	○	○	GKD60...	6.0	15	32	32	170	33	SCAM060200H	TH50LH
GKER/L2525-8T28	●	●	GKD80...	8.0	28	25	25	150	26.5	SCAM060200H	TH50LH
GKER/L2525-8T15	○	○	GKD80...	8.0	15	25	25	150	26.5	SCAM060200H	TH50LH
GKER/L3232-8T28	●	●	GKD80...	8.0	28	32	32	170	33.5	SCAM060200H	TH50LH
GKER/L3232-8T15	○	○	GKD80...	8.0	15	32	32	170	33.5	SCAM060200H	TH50LH

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● Stock ○ Available upon order

GK Series

Internal Bars for Grooving, Turning and Profiling



The Picture is Right Hand Holder

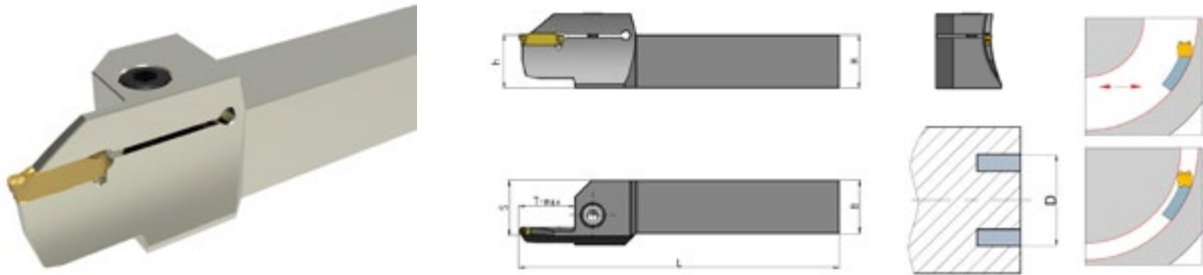
Ordering Code	Stock		Inserts	Dimension(mm)								Screw	Wrench
	R	L		W	T-max	ΦDmin	Φd	S	L	L1	H		
GKIR/L2016-2T04	●	●	GKD20...	2.0	4	20	16	12	125	35	15	SCAM040100H	TH30LH
GKIR/L2520-2T05	●	●	GKD20...	2.0	5	25	20	14.5	150	45	18	SCAM040120H	TH30LH
GKIR/L2925-2T05	●	●	GKD20...	2.0	5	29	25	17	200	45	23	SCAM050120H	TH40LH
GKIR/L2520-2.5T05	●	●	GKD25...	2.5	5	25	20	14.5	150	45	18	SCAM040120H	TH30LH
GKIR/L2925-2.5T05	●	●	GKD25...	2.5	5	29	25	17	200	45	23	SCAM050120H	TH40LH
GKIR/L2520-3T06	●	●	GKD30...	3.0	6	25	20	15.5	150	45	18	SCAM040120H	TH30LH
GKIR/L3125-3T06	●	●	GKD30...	3.0	6	31	25	18.5	200	45	23	SCAM050120H	TH40LH
GKIR/L3732-3T06	●	●	GKD30...	3.0	6	37	32	21.5	250	65	30	SCAM050200H	TH40LH
GKIR/L2520-4T06	●	●	GKD40...	4.0	6	25	20	15.5	150	45	18	SCAM040120H	TH30LH
GKIR/L3125-4T06	●	●	GKD40...	4.0	6	31	25	18.5	200	45	23	SCAM050120H	TH40LH
GKIR/L3732-4T06	●	●	GKD40...	4.0	6	37	32	21.5	250	65	30	SCAM050200H	TH40LH
GKIR/L3125-5T08	●	●	GKD50...	5.0	8	31	25	19.5	200	45	23	SCAM050120H	TH40LH
GKIR/L3732-5T08	●	●	GKD50...	5.0	8	37	32	21.5	250	65	30	SCAM050200H	TH40LH
GKIR/L3125-6T08	●	●	GKD60...	6.0	8	31	25	19.5	200	45	23	SCAM050120H	TH40LH
GKIR/L3732-6T08	●	●	GKD60...	6.0	8	37	32	21.5	250	65	30	SCAM050200H	TH40LH
GKIR/L3732-8T10	●	●	GKD80...	8.0	10	37	32	23.4	250	65	30	SCAM050200H	TH40LH
GKIR/L4540-8T10	●	●	GKD80...	8.0	10	45	40	27.2	300	70	37	SCAM050200H	TH40LH

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● Stock ○ Available upon order

GK Series

Face Grooving Holders-Horizontal



The Picture is Right Hand Holder

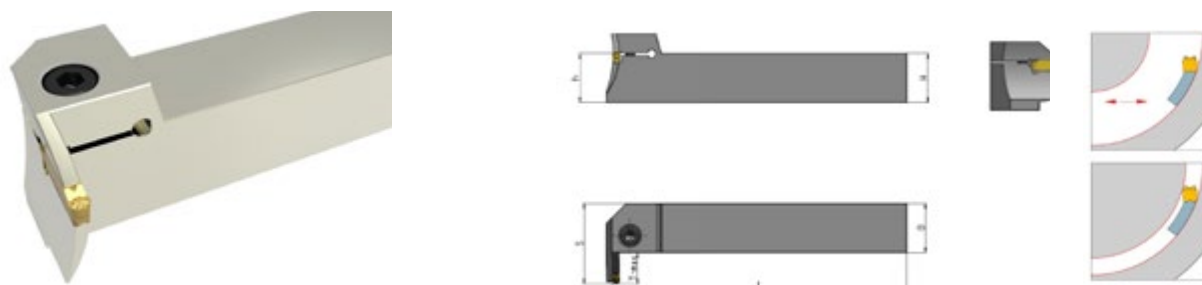
Ordering Code	Stock		Inserts	Dimension(mm)							Screw	Wrench
	R	L		H=h	B	L	S	T-max	Dmin	Dmax		
GKFR/L2525-2T12D75	○	○	GKD20...	25	25	150	26	15	75	100	SCAM060200H	TH50LH
GKFR/L2525-2T12D90	○	○	GKD20...	25	25	150	26	15	90	150	SCAM060200H	TH50LH
GKFR/L2525-3T15D68	○	○	GKD30...	25	25	150	26	15	68	100	SCAM060200H	TH50LH
GKFR/L2525-3T15D90	○	○	GKD30...	25	25	150	26	15	90	160	SCAM060200H	TH50LH
GKFR/L2525-4T15D62	●	●	GKD40...	25	25	150	26	15	62	120	SCAM060200H	TH50LH
GKFR/L2525-4T15D112	●	●	GKD40...	25	25	150	26	15	112	200	SCAM060200H	TH50LH
GKFR/L2525-5T25D68	○	○	GKD50...	25	25	150	26	25	68	95	SCAM060200H	TH50LH
GKFR/L2525-5T25D85	○	○	GKD50...	25	25	150	26	25	85	130	SCAM060200H	TH50LH
GKFR/L2525-6T25D68	○	○	GKD60...	25	25	150	26	25	68	100	SCAM060200H	TH50LH
GKFR/L2525-6T25D88	○	○	GKD60...	25	25	150	26	25	88	180	SCAM060200H	TH50LH
GKFR/L2525-8T25D45	○	○	GKD80...	25	25	150	26	25	45	80	SCAM060200H	TH50LH
GKFR/L2525-8T25D75	○	○	GKD80...	25	25	150	26	25	75	150	SCAM060200H	TH50LH

● Stock ○ Available upon order

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GK Series

Face Grooving Holders-Perpendicular



The Picture is Right Hand Holder

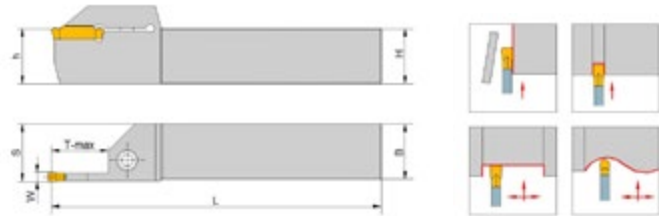
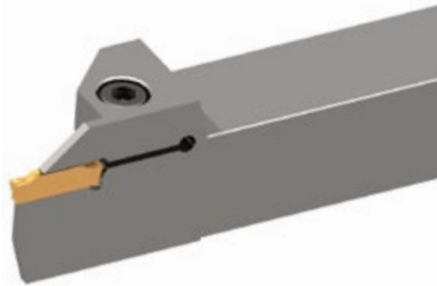
Ordering Code	Stock		Inserts	Dimension(mm)						Screw	Wrench	
	R	L		H=h	B	L	S	T-max	Dmin			Dmax
GKFPR/L2525-4T15D60	●	●	GKD40...	25	25	150	26	15	60	120	SCAM060200H	TH50LH
GKFPR/L2525-4T15D112	●	●	GKD40...	25	25	150	26	15	112	200	SCAM060200H	TH50LH

● Stock ○ Available upon order

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GZ Series

External Holders for Parting, Grooving, Turning and Profiling



The Picture is Right Hand Holder

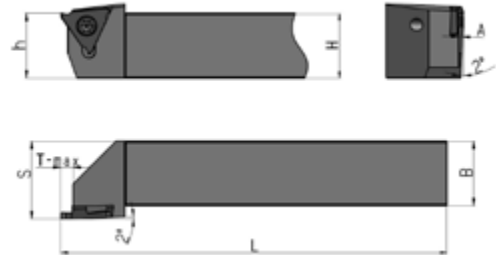
Ordering Code	Stock		适用刀片	Dimension(mm)						Screw	Wrench
	R	L		W	T-max	H=h	B	L	S		
GZER/L2020-3T20	●	●	GZD30...	3.0	20	20	20	125	21	SCAM050200H	TH40LH
GZER/L2525-3T20	●	●	GZD30...	3.0	20	25	25	150	26	SCAM060200H	TH50LH
GZER/L3225-3T20	●	●	GZD30...	3.0	20	32	25	170	26	SCAM060200H	TH50LH
GZER/L2020-4T25	●	●	GZD40...	4.0	25	20	20	125	21	SCAM050200H	TH40LH
			GZD50...	5.0	25	20	20	125	21.5		
GZER/L2525-4T25	●	●	GZD40...	4.0	25	25	25	150	26	SCAM060200H	TH50LH
			GZD50...	5.0	25	25	25	150	26.5		
GZER/L3225-4T25	●	●	GZD40...	4.0	25	32	25	170	26	SCAM060200H	TH50LH
			GZD50...	5.0	25	32	25	170	26.5		
GZER/L2525-6T32	●	●	GZD60...	6.0	32	25	25	150	26	SCAM060300H	TH50LH
GZER/L3225-6T32	●	●	GZD60...	6.0	32	32	25	170	26	SCAM060300H	TH50LH

©For tools, see page 127

● Stock ○ Available upon order

GB Series

External Holders for Grooving



The Picture is Right Hand Holder

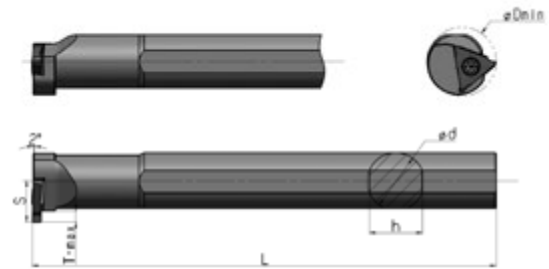
Ordering Code	Stock		Inserts	Dimension(mm)						Screw	Wrench
	R	L		H=h	B	L	S	A	T-max		
GBER/L2020K3	●	○	3...	20	20	125	25	—	2.5	SI60M 035120...	TT15P...
GBER/L2525M3	●	○	3...	25	25	150	30	—	2.5	SI60M 035120...	TT15P...
GBER/L2020K4-15	●	○	4... (1.0 ≤ W < 2.5)	20	20	125	25	1.0	4.0	SI60M 050120...	TT20P...
GBER/L2525M4-15	●	○	4... (1.0 ≤ W < 2.5)	25	25	150	30	1.0	4.0	SI60M 050120...	TT20P...
GBER/L2020K4-25	●	○	4... (2.5 ≤ W < 3.3)	20	20	125	25	2.0	4.5	SI60M 050120...	TT20P...
GBER/L2525M4-25	●	○	4... (2.5 ≤ W < 3.3)	25	25	150	30	2.0	4.5	SI60M 050120...	TT20P...
GBER/L2020K4-35	●	○	4... (3.3 ≤ W < 4.8)	20	20	125	25	3.0	5.5	SI60M 050120...	TT20P...
GBER/L2525M4-35	●	○	4... (3.3 ≤ W < 4.8)	25	25	150	30	3.0	5.5	SI60M 050120...	TT20P...

Remark: SI60M 035120... is meaning of M3.5x9
 ©For tools, see page 128 and page 129

● Stock ○ Available upon order

GB Series

Internal Bars for Grooving



The Picture is Right Hand Holder

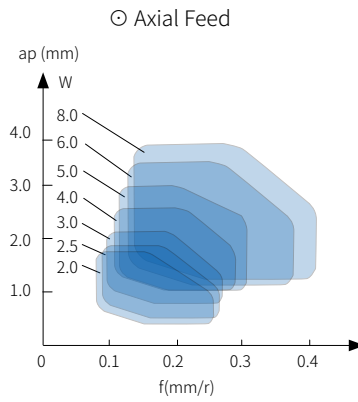
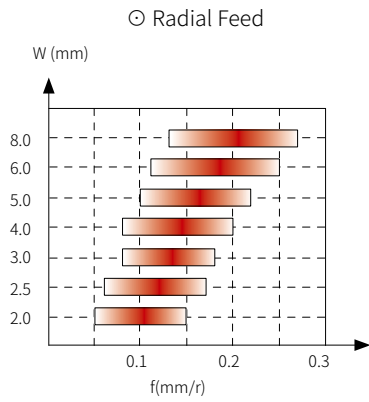
Ordering Code	Stock		Inserts	Dimension(mm)						Screw	Wrench
	R	L		Dmin	ϕd	h	L	A	T-max		
GBIR/L2620Q3	●	●	3...	26	20	18	180	13	3	SI60M 035120...	TT15P...
GBIR/L3525R4	●	●	4...	35	25	23	200	17.5	4.5	SI60M 050120...	TT20P...

Remark: SI60M 035120...is meaning of M3.5x9
 ©For tools,see page 128 and page 129

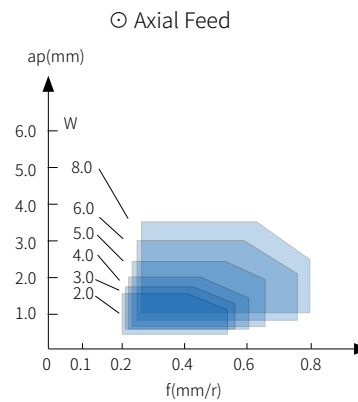
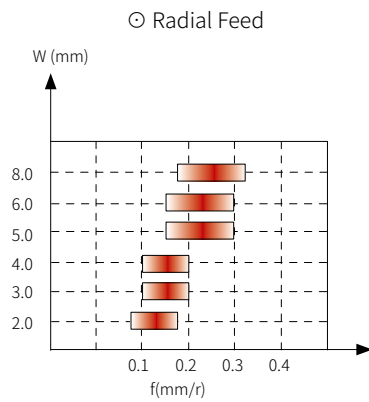
●Stock ○Available upon order

Recommended Feed

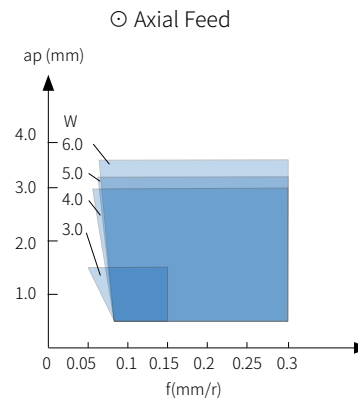
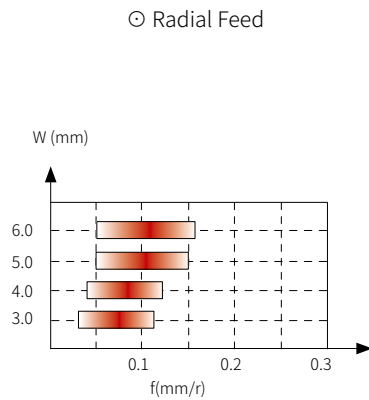
MT



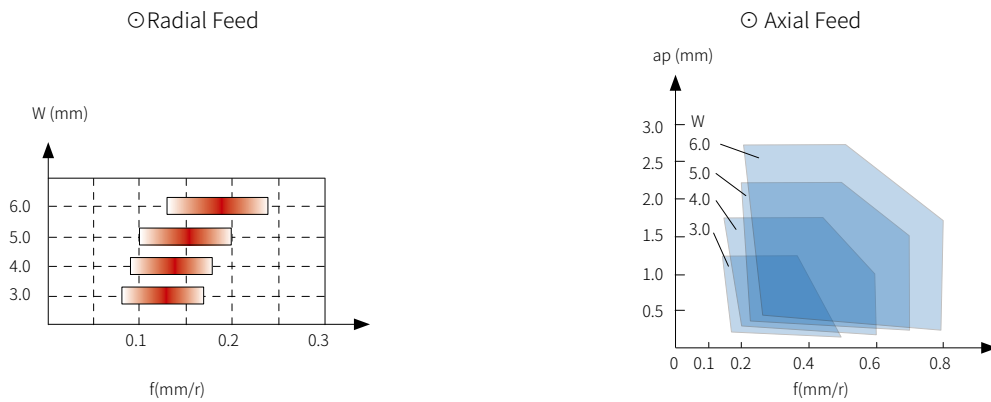
MR



FG



OR



GB

Workpiece Material	feed (mm/r)				
	width (mm)				
	0.5-1.0	1.0-2.0	2.5-3.0	3.3-4.0	4.0-4.3
P Carbon Steel	①.0.03~0.08	①.0.04~0.09 ②.0.04~0.09	①.0.05~0.1 ②.0.05~0.1	①.0.05~0.12 ②.0.05~0.1	①.0.05~0.12 ②.0.05~0.1
	Alloy Steel	①.0.03~0.07	①.0.04~0.08 ②.0.04~0.08	①.0.05~0.9 ②.0.05~0.9	①.0.05~0.1 ②.0.05~0.1
M Stainless Steel	①.0.03~0.07	①.0.04~0.08 ②.0.04~0.08	①.0.05~0.9 ②.0.05~0.9	①.0.05~0.1 ②.0.05~0.1	①.0.05~0.1 ②.0.05~0.1
K Cast Iron	①.0.03~0.08	①.0.04~0.09 ②.0.04~0.09	①.0.05~0.1 ②.0.05~0.1	①.0.05~0.12 ②.0.05~0.1	①.0.05~0.12 ②.0.05~0.1

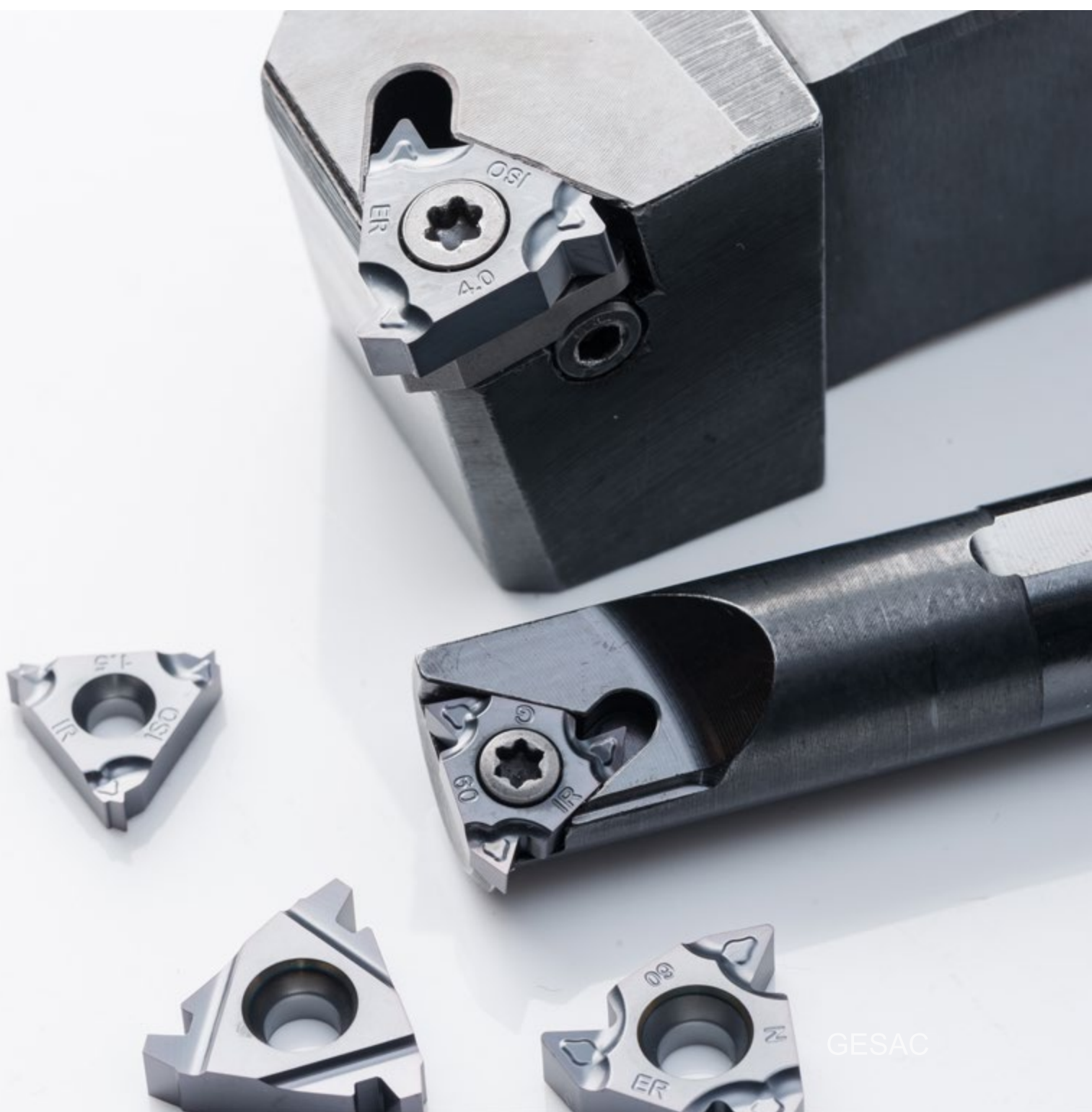
① Radial Fe ② Axial Feed

Recommended Cutting Speed

WorkpieceMaterial	Hardness (HB)	Cutting Speed Vc (m/min)						
		GA4230	GP1225	GP1105	GK1115	GS3115	GS3125	GS9125
Low Carbon Steel	80 – 170	110 (70-180)	120 (80-220)	120 (80-220)		70 (50-100)	70 (50-100)	
High Carbon Steel	170 – 250	110 (70-150)	120 (80-220)	120 (80-220)				
P Low-alloy Steel	140– 260	110 (40-150)	110 (60-180)	110 (60-180)		70 (50-100)	70 (50-100)	
High-alloy Steel	180– 300	110 (40-150)	110 (60-180)	110 (60-180)				
Cast Steel	180– 300	110 (40-150)	110 (60-180)	110 (60-180)				
M Ferritic/ Martensitic	150– 270	110 (40-180)				90 (50-150)	90 (30-180)	
Austenitic	150– 270	110 (40-180)				90 (50-150)	90 (30-180)	
Malleable Cast Iron	150– 230	110 (50-180)			130 (50-200)			
K Gray Cast Iron	150– 230	110 (50-180)			130 (50-200)			
Nodular Cast Iron	160– 260	100 (50-150)			100 (50-150)			
Heat-resistant Alloy	130– 400					35 (15-60)	35 (15-70)	
S Titanium Alloys	130– 400					35 (15-60)	35 (15-70)	35 (15-60)

E

Threading Tools



Threading Insert Identification System

16 E R 1.50 ISO - TC



① Insert Size	
Size	IC(mm)
08	5
11	6.35
16	9.525
22	12.7
27	15.875

③ Hand of Insert
R=Right
L= Left
<input type="checkbox"/> =R&L

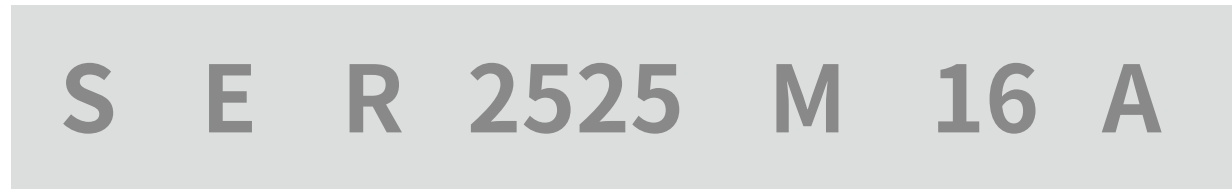
⑤ Thread Standard
60=Partial Profile 60°
55=Partial Profile 55°
ISO=ISO Metric
UN=American UN
W=Whitworth
NPT=National Pipe Thread
BSPT=British BSPT
ACME=American ACME
STACME=American Stub ACME
ABUT=
API=API Thread
UNJ=American Aerospace Thread

⑥ Additional Information
Geometry or Teeth

② Thread Style
E=External
I=Internal
<input type="checkbox"/> =E&I

④ Pitch		
Full Profile		
mm	TPI	
0.35-5.0	72-5	
Partial Profile		
Size	mm	TPI
A	0.5-1.5	48-16
AG	0.5-3.0	48-8
G	1.75-3.0	14-8
N	3.5-5.0	7-5

Threading Holder Identification System



①

②

③

④

⑤

⑥

⑦

①Clamping System	
S=Screw	
C=Clamp	

②Process Type	
E=External	
I=Internal	

③Cutting Direction	
R=Right hand	
L=Left hand	
N=None	

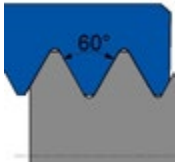
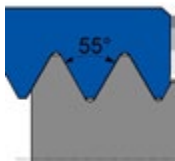
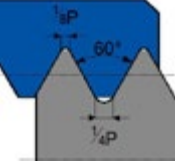
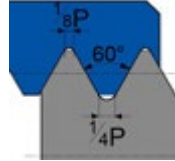
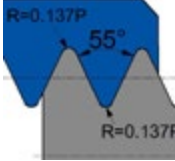
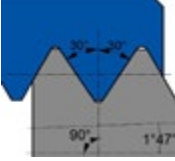
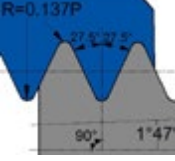
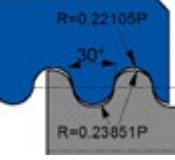
④Shank Size	
External Holder	
Shank Size	hxb
2525	25x25mm
Internal Bar	
Shank Size	Diameter
0025	Diameter 25mm

⑤Thread	
Type	Length
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300
U	350
V	400

⑥Insert Size	
Type	IC(mm)
08	5
11	6.35
16	9.525
22	12.7
27	15.875

⑦Additional	
A=Steel holder with inner coolant	
C=Carbide holder	
E=Carbide holder with inner coolant	
□=steel holder without inner coolant	

Overview of Threading Tools

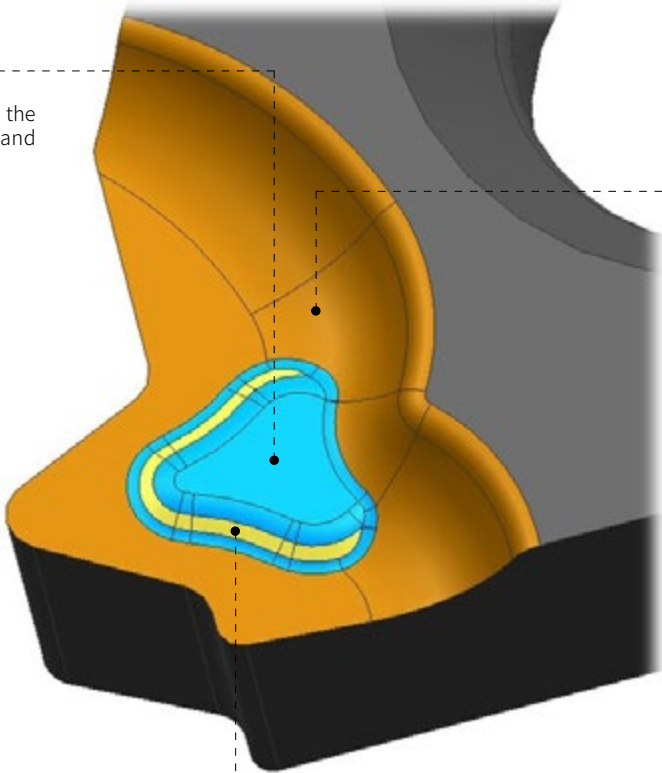
Application	Thread Type	Thread Sketch	ThreadCode	Pitch	Page
For general industry	Partial Profile 60° Thread		60°	0.5-5.0 (mm)	P146
	Partial Profile 55° Thread		55°	48-5 (TPI)	P147
	ISO Metric Thread		ISO	1.0-5.0 (mm)	P148
	UN Thread		UN	24-8 (TPI)	P150
Thread for pipe fittings and couplings for gas, water and sewage.	Whitworth Thread		W	19-11 (TPI)	P151
	NPT Thread		NPT	27-8 (TPI)	P152
Thread for pipe fittings and couplings for gas, steam and water lines.	BSPT Thread		BSPT	28-11 (TPI)	P153
Thread for pipe couplings in food and fire fighting industry.	Round Thread(DIN 405)		RD	10-4 (TPI)	P154

TC — Special Geometry

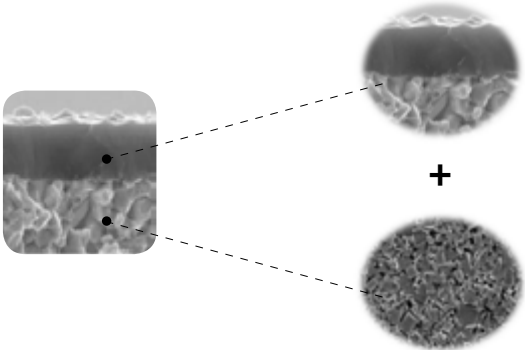
Raised platform •
 Good chip control, apply to the radial infeed, flank infeed and incremental infeed

Wide chip room •
 Smooth chip discharge due to wide chip room

Curved surface •
 Increase the cooling area to avoid the carter wear



GM3225 — General grade for thread turning

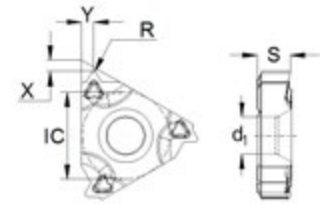



New TiAlN nano-structure coating
 New TiAlN nano-structure coating with excellent heat resistance and bonding resistance.

Micro-grain carbide substrate
 Micro-grain carbide substrate with high wear resistance and good roughness, suitable for thread turning of general material.

Partial Profile 60°

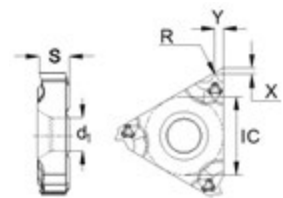
► External




Ordering Code	Pitch (mm)	Dimensions (mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	16 ERA60-TC	0.5-1.5	0.8	0.9	0.08	9.525	3.47	4	●
	16 ERAG60-TC	0.5-3.0	1.1	1.5	0.08	9.525	3.47	4	●
	16 ERG60-TC	1.75-3.0	1.2	1.7	0.25	9.525	3.47	4	●
	22 ERN60-TC	3.5-5.0	1.7	2.5	0.51	12.7	4.71	5	●

● Stock ○ Available Up Order

► Internal

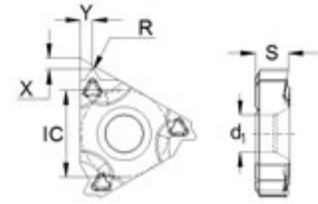


Ordering Code	Pitch (mm)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	08 IRA60-TC	0.5-1.5	0.6	0.7	0.08	5.00	2.25	2.68	●
	11 IRA60-TC	0.5-1.5	0.8	0.9	0.08	6.35	3.00	3.2	●
	16 IRA60-TC	0.5-1.5	0.8	0.9	0.08	9.525	3.47	4	●
	16 IRAG60-TC	0.5-3.0	1.1	1.5	0.08	9.525	3.47	4	●
	16 IRG60-TC	1.75-3.0	1.2	1.7	0.13	9.525	3.47	4	●
	22 IRN60-TC	3.5-5.0	1.7	2.5	0.25	12.7	4.71	5	●

● Stock ○ Available Up Order

Partial Profile 55°

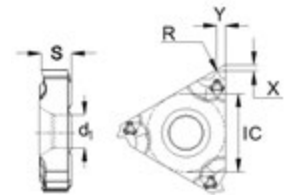
► External



Ordering Code	Pitch (TPI)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	16 ERA55-TC	48-16	0.8	0.9	0.08	9.525	3.47	4	●
	16 ERAG55-TC	48-8	1.1	1.5	0.08	9.525	3.47	4	●
	16 ERG55-TC	14-8	1.2	1.7	0.21	9.525	3.47	4	●
	22 ERN55-TC	7-5	1.7	2.5	0.44	12.7	4.71	5	●

● Stock ○ Available Up Order

► Internal

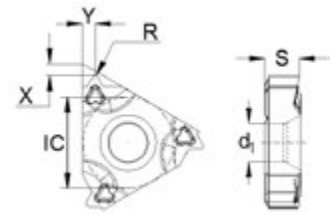


Ordering Code	Pitch (TPI)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	11 IRA55-TC	48-16	0.8	0.9	0.08	6.35	3	3.2	●
	16 IRA55-TC	48-16	0.8	0.9	0.08	9.525	3.47	4	●
	16 IRAG55-TC	48-8	1.1	1.5	0.08	9.525	3.47	4	●
	16 IRG55-TC	14-8	1.2	1.7	0.21	9.525	3.47	4	●
	22 IRN55-TC	7-5	1.7	2.5	0.44	12.7	4.71	5	●

● Stock ○ Available Up Order

Metric 60°

► External

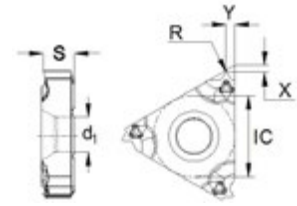


Ordering Code	Pitch (mm)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
16 ER1.00ISO-TC	1.00	0.8	0.7	0.14	9.525	3.47	4	●	
16 ER1.25ISO-TC	1.25	0.8	0.9	0.18	9.525	3.47	4	●	
16 ER1.50ISO-TC	1.50	0.8	1.0	0.22	9.525	3.47	4	●	
16 ER1.75ISO-TC	1.75	1.2	1.2	0.25	9.525	3.47	4	●	
16 ER2.00ISO-TC	2.00	1.2	1.3	0.29	9.525	3.47	4	●	
16 ER2.50ISO-TC	2.50	1.2	1.5	0.36	9.525	3.47	4	●	
16 ER3.00ISO-TC	3.00	1.2	1.5	0.43	9.525	3.47	4	●	
22 ER3.50ISO-TC	3.50	1.6	2.3	0.45	12.7	4.71	5	●	
22 ER4.00ISO-TC	4.00	1.6	2.3	0.52	12.7	4.71	5	●	
22 ER4.50ISO-TC	4.50	1.7	2.4	0.58	12.7	4.71	5	●	
22 ER5.00ISO-TC	5.00	1.7	2.5	0.63	12.7	4.71	5	●	
22 ER5.50ISO-TC	5.50	1.9	2.7	0.72	12.7	4.71	5	●	
22 ER6.00ISO-TC	6.00	1.9	2.7	0.78	12.7	4.71	5	●	



● Stock ○ Available Up Order

► Internal



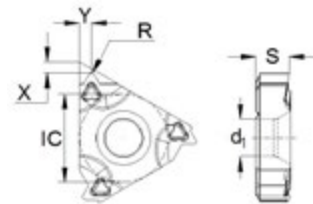
Ordering Code	Pitch (mm)	Dimensions(mm)						Availability
		X	Y	R	IC	S	d1	GM3225
11 IR1.00ISO-TC	1.00	0.8	0.7	0.07	6.35	3.00	3.2	●
11 IR1.25ISO-TC	1.25	0.8	0.9	0.09	6.35	3.00	3.2	●
11 IR1.50ISO-TC	1.50	0.8	1.0	0.11	6.35	3.00	3.2	●
11 IR1.75ISO-TC	1.75	0.9	1.1	0.13	6.35	3.00	3.2	●
11 IR2.00ISO-TC	2.00	0.9	1.1	0.15	6.35	3.00	3.2	●
16 IR1.00ISO-TC	1.00	0.8	0.7	0.07	9.525	3.47	4	●
16 IR1.25ISO-TC	1.25	0.8	0.9	0.09	9.525	3.47	4	●
16 IR1.50ISO-TC	1.50	0.8	1.0	0.11	9.525	3.47	4	●
16 IR1.75ISO-TC	1.75	1.2	1.2	0.13	9.525	3.47	4	●
16 IR2.00ISO-TC	2.00	1.2	1.3	0.15	9.525	3.47	4	●
16 IR2.50ISO-TC	2.50	1.2	1.5	0.18	9.525	3.47	4	●
16 IR3.00ISO-TC	3.00	1.2	1.5	0.22	9.525	3.47	4	●
22 IR3.50ISO-TC	3.50	1.6	2.3	0.22	12.7	4.71	5	●
22 IR4.00ISO-TC	4.00	1.6	2.3	0.25	12.7	4.71	5	●
22 IR4.50ISO-TC	4.50	1.6	2.4	0.28	12.7	4.71	5	●
22 IR5.00ISO-TC	5.00	1.6	2.3	0.32	12.7	4.71	5	●
22 IR5.50ISO-TC	5.50	1.6	2.3	0.36	12.7	4.71	5	●
22 IR6.00ISO-TC	6.00	1.6	2.4	0.39	12.7	4.71	5	●



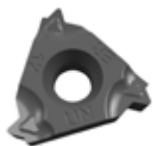
● Stock ○ Available Up Order

UN 60°

► External

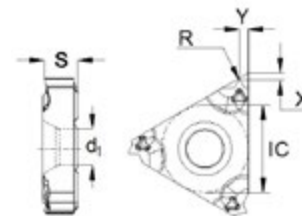


Ordering Code	Pitch (mm)	Dimensions(mm)						Availability
		X	Y	R	IC	S	d1	GM3225
16 ER24UN-TC	24	0.8	0.8	0.15	9.525	3.47	4	●
16 ER20UN-TC	20	0.8	0.9	0.18	9.525	3.47	4	●
16 ER18UN-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
16 ER16UN-TC	16	0.9	1.1	0.23	9.525	3.47	4	●
16 ER14UN-TC	14	1.2	1.5	0.26	9.525	3.47	4	●
16 ER12UN-TC	12	1.2	1.5	0.31	9.525	3.47	4	●
16 ER10UN-TC	10	1.2	1.5	0.37	9.525	3.47	4	○
16 ER8UN-TC	8	1.3	1.7	0.46	9.525	3.47	4	●

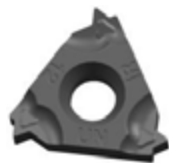


●Stock ○Available Up Order

► Internal



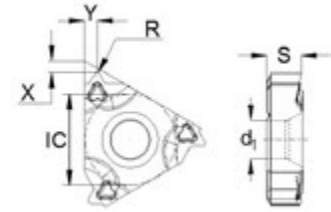
Ordering Code	Pitch (mm)	Dimensions(mm)						Availability
		X	Y	R	IC	S	d1	GM3225
11 IR20UN-TC	20	0.8	0.9	0.09	6.35	3.00	3.2	●
11 IR18UN-TC	18	0.8	1.0	0.10	6.35	3.00	3.2	●
16 IR24UN-TC	24	0.8	0.8	0.08	9.525	3.47	4	●
16 IR20UN-TC	20	0.8	0.9	0.09	9.525	3.47	4	●
16 IR18UN-TC	18	0.8	1.0	0.10	9.525	3.47	4	●
16 IR16UN-TC	16	0.9	1.1	0.12	9.525	3.47	4	●
16 IR14UN-TC	14	1.2	1.5	0.13	9.525	3.47	4	●
16 IR12UN-TC	12	1.2	1.5	0.16	9.525	3.47	4	●
16 IR10UN-TC	10	1.2	1.5	0.19	9.525	3.47	4	○
16 IR8UN-TC	8	1.3	1.7	0.23	9.525	3.47	4	●




●Stock ○Available Up Order

Whitworth 55°

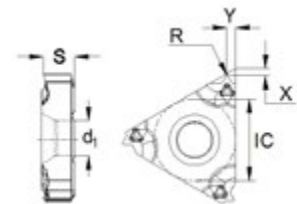
► External




Ordering Code	Pitch (mm)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	16 ER19W-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER18W-TC	18	0.8	1.0	0.18	9.525	3.47	4	●
	16 ER16W-TC	16	0.9	1.1	0.20	9.525	3.47	4	●
	16 ER14W-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER12W-TC	12	1.2	1.5	0.28	9.525	3.47	4	●
	16 ER11W-TC	11	1.2	1.5	0.30	9.525	3.47	4	●
	16 ER10W-TC	10	1.1	1.5	0.34	9.525	3.47	4	●

● Stock ○ Available Up Order

► Internal

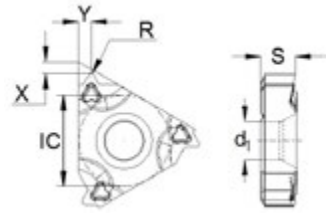



Ordering Code	Pitch (mm)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	11 IR19W-TC	19	0.9	1.1	0.19	6.35	3.00	3.2	●
	11 IR14W-TC	14	0.9	1.1	0.27	6.35	3.00	3.2	●
	16 IR19W-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 IR18W-TC	18	0.8	1.0	0.18	9.525	3.47	4	●
	16 IR16W-TC	16	0.9	1.1	0.2	9.525	3.47	4	●
	16 IR14W-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 IR12W-TC	12	1.2	1.5	0.28	9.525	3.47	4	●
	16 IR11W-TC	11	1.2	1.5	0.30	9.525	3.47	4	●
	16 IR8W-TC	8	1.2	1.5	0.41	9.525	3.47	4	●

● Stock ○ Available Up Order

NPT 60°

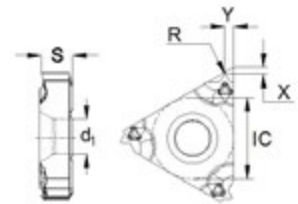
► External

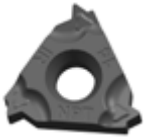


Ordering Code	Pitch (mm)	Dimensions(mm)							Availability
		X	Y	R	IC	S	d1	GM3225	
	16 ER27NPT-TC	27	0.7	0.8	0.13	9.525	3.47	4	●
	16 ER18NPT-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 ER14NPT-TC	14	1.2	1.5	0.22	9.525	3.47	4	●
	16 ER11.5NPT-TC	11.5	1.2	1.5	0.25	9.525	3.47	4	●
	16 ER8NPT-TC	8	1.3	1.8	0.30	9.525	3.47	4	●

● Stock ○ Available Up Order

► Internal

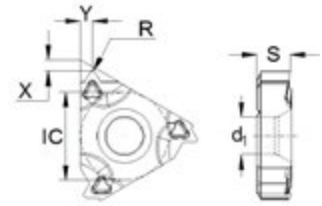



Ordering Code	Pitch (mm)	Dimensions(mm)							Availability
		X	Y	R	IC	S	d1	GM3225	
	11 IR18NPT-TC	18	0.8	1.0	0.20	6.35	3.00	3.2	●
	16 IR27NPT-TC	27	0.7	0.8	0.13	9.525	3.47	4	●
	16 IR18NPT-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 IR14NPT-TC	14	1.2	1.5	0.22	9.525	3.47	4	●
	16 IR11.5NPT-TC	11.5	1.2	1.5	0.25	9.525	3.47	4	●
	16 IR8NPT-TC	8	1.3	1.8	0.30	9.525	3.47	4	●

● Stock ○ Available Up Order

BSPT 55°

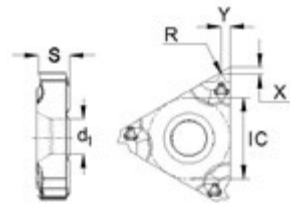
► External




Ordering Code	Pitch (mm)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	16 ER28BSPT-TC	28	0.7	0.8	0.11	9.525	3.47	4	●
	16 ER19BSPT-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER14BSPT-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER11BSPT-TC	11	1.2	1.5	0.30	9.525	3.47	4	●

● Stock ○ Available Up Order

► Internal

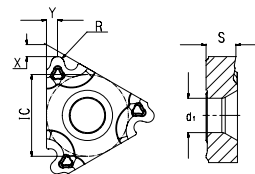



Ordering Code	Pitch (mm)	Dimensions(mm)						Availability	
		X	Y	R	IC	S	d1	GM3225	
	11 IR19BSPT-TC	19	0.8	1.0	0.18	6.35	3.00	3.2	●
	11 IR14BSPT-TC	14	0.9	1.1	0.24	6.35	3.00	3.2	●
	16 IR28BSPT-TC	28	0.7	0.8	0.11	9.525	3.47	4	●
	16 IR19BSPT-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 IR14BSPT-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 IR11BSPT-TC	11	1.2	1.5	0.30	9.525	3.47	4	●

● Stock ○ Available Up Order

Round 30°

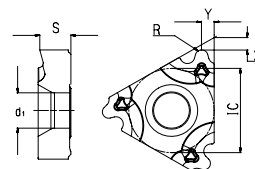
► External




Ordering Code	Pitch (mm)	Dimensions(mm)							Availability
		X	Y	R	IC	S	d1	GM3225	
	16 ER10RD-TC	10	1.1	1.2	0.60	9.525	3.47	4	○
	16 ER8RD-TC	8	1.4	1.3	0.75	9.525	3.47	4	●
	16 ER6RD-TC	6	1.4	1.5	1.00	9.525	3.47	4	●
	22 ER4RD-TC	4	2.2	2.3	1.51	12.7	4.71	5	○

● Stock ○ Available Up Order

► Internal



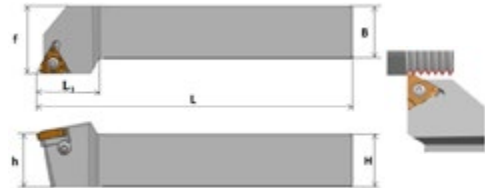
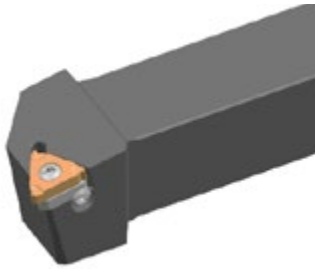
Ordering Code	Pitch (mm)	Dimensions(mm)							Availability
		X	Y	R	IC	S	d1	GM3225	
	16 IR10RD-TC	10	1.1	1.2	0.55	9.525	3.47	4	○
	16 IR8RD-TC	8	1.4	1.3	0.70	9.525	3.47	4	●
	16 IR6RD-TC	6	1.4	1.5	0.936	9.525	3.47	4	●
	22 IR4RD-TC	4	2.2	2.3	1.40	12.7	4.71	5	○





● Stock ○ Available Up Order

Thread Turning Toolholders

SER/L Series

External Toolholders



Ordering Code	Stocks		Insert	Dimensions(mm)						Shim	Insert Screw	ShimScrew	Wrench
	R	L		H	B	L	f	h	L1				
SER/L1212F11	○	○	11ER/L...	12	12	80	16	12	20.5	-	SI60M 025080...	-	TT08PH
SER/L1212F16	●	○	16ER/L...	12	12	80	16	12	22	-	SI60M 035090...	-	TT15PH
SER/L1616H16	●	○		16	16	100	20	16	20.5	DEN16..	SI60M 035120...	SSBM 030060H	TT15PH
SER/L2020K16	●	●		20	20	125	25	20	30				
SER/L2525M16	●	●	25	25	150	32	25	30					
SER/L3232P16	●	○		32	32	170	40	32	30				
SER/L2525M22	●	○	22ER/L...	25	25	150	32	25	36	DEN22..	SI60M 040160...	SSBM 040060H	TT15PH
SER/L3232P22	●	○		32	32	170	40	32	36				
SER/L4040R22	●	○		40	40	200	50	40	36				
SER/L3232P27	●	○	27ER/L...	32	32	170	40	32	40	DEN27..	SI60M 050200...	SSBM 040060H	TT20PH
SER/L4040R27	●	○		40	40	200	50	40	40				

※SI60M035090...is meaning of M3.5×9

●Stock ○Available Up Order

Thread Turning Toolholders

SIR/L Series

External Toolholders



Ordering Code	Pitch		Insert	Dimensions (mm)						Shim	Insert Screw	ShimScrew	Wrench				
	R	L		d _{min}	Φd	H	L	f	L ₁								
SIR/L0008K08	●	○	08IR/L...	9.9	08	7	125	5.5	20	-	SI60M 022050...	-	TT06PH				
SIR/L0010K11	●	○	11IR/L...	13	10	9	125	7.3	25	-	SI60M 025080...	-	TT08PH				
SIR/L0010K11-A16	●	○		13	16	15	125	7.3	30								
SIR/L0012K11	●	○		15	12	11	125	8.4	28								
SIR/L0012K11-A16	●	○		15	16	15	125	8.4	36								
SIR/L0013M16	●	○	16IR/L...	17	16	15	150	10.3	32	-	SI60M 035090...	-	TT15PH				
SIR/L0016Q16	●	○		20	16	15	180	11.5	40								
SIR/L0020Q16	●	○		24	20	18	180	13.4	40								
SIR/L0025R16	●	○		29	25	23	200	16.3	45								
SIR/L0032S16	●	○		36	32	30	250	19.6	50					DIN16..	SI60M 035120...	SSBM 030060H	TT15PH
SIR/L0040T16	●	○		44	40	38	300	23.8	55								
SIR/L0050U16	○	○	56	50	48	350	28.7	60	-	SI60M 040120...	-	TT15PH					
SIR/L0020Q22	○	○	27	20	18	180	14.9	40									
SIR/L0025R22	●	○	22IR/L...	32	25	23	200	18.1					45	DIN22..	SI60M 040160...	SSBM 040060H	TT15PH
SIR/L0032S22	●	○		39	32	30	250	21.5					50				
SIR/L0040T22	●	○		47	40	38	300	25.8	55								
SIR/L0050U22	○	○	57	50	48	350	29.8	70	DIN27..	SI60M 050200...	SSBM 040060H	TT20PH					
SIR/L0032S27	○	○	27IR/L...	40	32	30	250	22.4					60				
SIR/L0040T27	○	○		48	50	36	300	26.4					60				
SIR/L0050U27	○	○	58	60	45	350	31.4	75									

*SI60M035090...is meaning of M3.5×9

●Stock ○Available Up Order

Cutting Speed Recommendation Table

Workpiece Material			Material Hardness	Cutting Speed V _c (m/min)	
				Grade GM3225	
P	Carbon Steel	Low-carbon (C=0.1-0.25%)	HB125	160 (120-230)	
		Medium-carbon (C=0.25-0.55%)	HB150	150 (100-195)	
		High-carbon (C=0.55-0.80%)	HB170	140 (90-180)	
	Low-alloy Steel	Non-hardened	HB180	130 (100-180)	
		Hardened and tempered	HB275	100 (75-140)	
		Hardened and tempered	HB350	80 (60-130)	
	High-alloy Steel	Annealed	HB200	110 (80-140)	
		Hardened and tempered	HB325	90 (70-115)	
	Steel Castings	Unalloyed	HB180	200 (180-220)	
		Low-alloy	HB200	110 (70-150)	
High-alloy		HB225	100 (60-120)		
Manganese steel (12-14% Mn)		HB250	40 (40-50)		
M	Stainless Steel	Austenitic	HB180	120 (90-140)	
		Ferritic/Martensitic	HB200	140 (70-170)	
		Duplex stainless steel	HB230	90 (60-120)	
K	Malleable Cast Iron	Ferritic	HB130	130 (110-170)	
		Pearlitic	HB230	100 (85-145)	
	Gray Cast Iron	Low tensile strength	HB180	120 (100-160)	
		High tensile strength	HB260	100 (80-140)	
	Nodular Cast Iron	Ferritic	HB160	125 (110-160)	
Pearlitic		HB250	100 (80-120)		
N	Wrought Aluminum Alloys	Non aging	HB60	500 (350-700)	
		Aged	HB100	400 (300-500)	
	Cast Aluminum Alloys	Non aging	HB75	450 (300-500)	
		Aged	HB90	290 (200-400)	
	Copper and Copper Alloys	Containing silicon (13-22% Si)	HB130	200 (100-300)	
		Brass	HB90	220 (100-300)	
S	Heat-resistant Alloys	Iron base	Annealed	HB200	45 (35-60)
			Aged	HB280	35 (25-50)
		Nickel base and cobalt base	Annealed	HB250	25 (15-30)
			Aged	HB350	15 (10-25)
			Cast	HB320	13 (10-20)
	Titanium Alloys	Commercial pure (99.5% Ti)	400Rm	150 (140-170)	
		α+β alloys	1050Rm	60 (50-70)	
H	High Hardness Materials	Hardened steel	HRC55	45 (40-50)	
		Chilled cast iron	HB400	40 (30-50)	

Cutting Passes and Radial Infeed Recommendation Table

► ISO Metric / External

Pitch (mm)	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
Total infeed (mm)	0.65	0.79	0.95	1.11	1.26	1.56	1.88	2.18	2.49	2.79	3.10	3.39	3.70
Total passes	5	6	6	8	8	10	12	12	13	14	14	16	16
No. of infeed	Radial infeed per pass (mm)												
1	0.16	0.17	0.20	0.17	0.20	0.20	0.20	0.24	0.24	0.27	0.29	0.27	0.30
2	0.15	0.15	0.19	0.17	0.19	0.19	0.19	0.23	0.22	0.25	0.28	0.26	0.29
3	0.14	0.14	0.18	0.16	0.18	0.18	0.19	0.22	0.22	0.24	0.27	0.26	0.29
4	0.12	0.13	0.16	0.15	0.17	0.17	0.18	0.21	0.21	0.23	0.26	0.25	0.28
5	0.08	0.12	0.14	0.14	0.16	0.17	0.17	0.21	0.21	0.23	0.25	0.25	0.27
6		0.08	0.08	0.13	0.15	0.16	0.17	0.20	0.20	0.22	0.25	0.24	0.26
7				0.11	0.13	0.15	0.16	0.18	0.19	0.21	0.24	0.23	0.26
8				0.08	0.08	0.14	0.15	0.17	0.18	0.20	0.23	0.23	0.25
9						0.12	0.14	0.16	0.17	0.19	0.22	0.22	0.24
10						0.08	0.13	0.15	0.16	0.18	0.20	0.21	0.23
11							0.12	0.13	0.15	0.17	0.19	0.20	0.22
12							0.08	0.08	0.14	0.16	0.17	0.19	0.20
13									0.12	0.14	0.15	0.18	0.19
14									0.18	0.10	0.10	0.16	0.17
15												0.14	0.15
16												0.10	0.10

► ISO Metric/ Internal

Pitch (mm)	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
Total infeed (mm)	0.63	0.77	0.92	1.05	1.20	1.48	1.78	2.03	2.31	2.61	2.88	3.19	3.44
Total passes	5	6	6	8	8	10	12	12	13	14	14	16	16
No. of infeed	Radial infeed per pass (mm)												
1	0.15	0.16	0.20	0.16	0.19	0.19	0.19	0.22	0.21	0.23	0.26	0.25	0.28
2	0.14	0.15	0.18	0.15	0.18	0.18	0.18	0.21	0.21	0.23	0.26	0.25	0.27
3	0.13	0.14	0.17	0.15	0.17	0.17	0.18	0.20	0.20	0.22	0.25	0.24	0.26
4	0.12	0.13	0.15	0.14	0.16	0.17	0.17	0.20	0.19	0.22	0.24	0.24	0.26
5	0.08	0.11	0.13	0.13	0.15	0.16	0.16	0.19	0.19	0.21	0.24	0.23	0.26
6		0.08	0.08	0.12	0.14	0.15	0.16	0.18	0.18	0.20	0.23	0.22	0.24
7				0.11	0.12	0.14	0.15	0.17	0.18	0.20	0.22	0.22	0.24
8				0.08	0.08	0.13	0.14	0.16	0.17	0.19	0.21	0.22	0.23
9						0.12	0.14	0.15	0.16	0.18	0.20	0.20	0.22
10						0.08	0.12	0.14	0.15	0.17	0.19	0.20	0.21
11							0.11	0.12	0.14	0.16	0.18	0.19	0.20
12							0.08	0.08	0.13	0.15	0.16	0.18	0.19
13									0.12	0.14	0.15	0.17	0.18
14									0.08	0.10	0.10	0.16	0.16
15												0.14	0.15
16												0.10	0.10

► UN / External

Pitch (mm)	24	20	18	16	14	12	10	8
Total infeed (mm)	0.70	0.84	0.92	1.04	1.17	1.35	1.62	2.02
Total passes	5	6	6	7	8	8	10	12
No. of infeed	Radial infeed per pass (mm)							
1	0.18	0.18	0.20	0.19	0.18	0.22	0.21	0.22
2	0.16	0.17	0.18	0.18	0.18	0.21	0.20	0.21
3	0.15	0.15	0.17	0.17	0.17	0.20	0.19	0.20
4	0.13	0.14	0.15	0.16	0.16	0.19	0.18	0.20
5	0.08	0.12	0.13	0.14	0.15	0.17	0.17	0.19
6		0.08	0.08	0.12	0.14	0.15	0.16	0.18
7				0.08	0.12	0.13	0.15	0.17
8					0.08	0.08	0.14	0.16
9							0.12	0.15
10							0.08	0.14
11								0.12
12								0.08

► UN / Internal

Pitch (mm)	24	20	18	16	14	12	10	8
Total infeed (mm)	0.66	0.78	0.86	0.96	1.07	1.25	1.48	2.03
Total passes	5	6	6	7	8	8	10	12
No. of infeed	Radial infeed per pass (mm)							
1	0.16	0.16	0.18	0.17	0.16	0.20	0.19	0.22
2	0.15	0.16	0.17	0.16	0.16	0.19	0.18	0.21
3	0.14	0.14	0.16	0.15	0.15	0.18	0.17	0.20
4	0.12	0.13	0.14	0.14	0.14	0.17	0.17	0.20
5	0.08	0.12	0.13	0.13	0.14	0.16	0.16	0.19
6		0.08	0.08	0.12	0.13	0.14	0.15	0.18
7				0.08	0.11	0.13	0.14	0.17
8					0.08	0.08	0.13	0.16
9							0.12	0.15
10							0.08	0.14
11								0.12
12								0.08

► Whitworth / External& Internal

Pitch (mm)	19	18	16	14	12	11	10	8
Total infeed (mm)	0.90	0.97	1.08	1.20	1.42	1.51	1.70	2.10
Total passes	6	7	8	8	8	9	10	12
No. of infeed	Radial infeed per pass (mm)							
1	0.19	0.17	0.17	0.19	0.23	0.22	0.22	0.23
2	0.18	0.16	0.16	0.18	0.22	0.21	0.21	0.22
3	0.17	0.16	0.15	0.17	0.21	0.20	0.20	0.21
4	0.15	0.15	0.15	0.16	0.19	0.19	0.19	0.21
5	0.13	0.13	0.14	0.15	0.18	0.18	0.18	0.20
6	0.08	0.12	0.13	0.14	0.16	0.16	0.17	0.19
7		0.08	0.11	0.12	0.14	0.15	0.16	0.18
8			0.08	0.08	0.08	0.13	0.15	0.17
9						0.08	0.13	0.16
10							0.08	0.14
11								0.12
12								0.08

► BSPT / External& Internal

Pitch (mm)	28	19	14	11
Total infeed (mm)	0.62	0.90	1.20	1.51
Total passes	5	6	8	9
No. of infeed	Radial infeed per pass (mm)			
1	0.15	0.19	0.19	0.22
2	0.14	0.18	0.18	0.21
3	0.13	0.17	0.17	0.20
4	0.12	0.15	0.16	0.19
5	0.08	0.13	0.15	0.18
6		0.08	0.14	0.16
7			0.12	0.15
8			0.08	0.13
9				0.08

► NPT / External& Internal

Pitch (mm)	27	18	14	11.5	8
Total infeed (mm)	0.76	1.11	1.42	1.73	2.48
Total passes	6	8	10	12	15
No. of infeed	Radial infeed per pass (mm)				
1	0.15	0.17	0.18	0.18	0.21
2	0.15	0.17	0.17	0.17	0.21
3	0.14	0.16	0.16	0.17	0.20
4	0.13	0.15	0.16	0.16	0.20
5	0.11	0.14	0.15	0.16	0.19
6	0.08	0.13	0.14	0.15	0.18
7		0.11	0.14	0.15	0.18
8		0.08	0.13	0.14	0.17
9			0.11	0.13	0.17
10			0.08	0.12	0.16
11				0.11	0.15
12				0.08	0.14
13					0.13
14					0.11
15					0.08

► Round / External

Pitch (mm)	10	8	6	4
Total infeed (mm)	1.30	1.63	2.17	2.95
Total passes	8	10	12	14
No. of infeed	Radial infeed per pass (mm)			
1	0.21	0.21	0.24	0.30
2	0.20	0.20	0.23	0.29
3	0.19	0.19	0.22	0.28
4	0.18	0.19	0.21	0.27
5	0.16	0.18	0.20	0.26
6	0.15	0.17	0.19	0.25
7	0.13	0.15	0.18	0.24
8	0.08	0.14	0.17	0.23
9		0.12	0.16	0.22
10		0.08	0.15	0.21
11			0.13	0.19
12			0.08	0.18
13				0.15
14				0.10

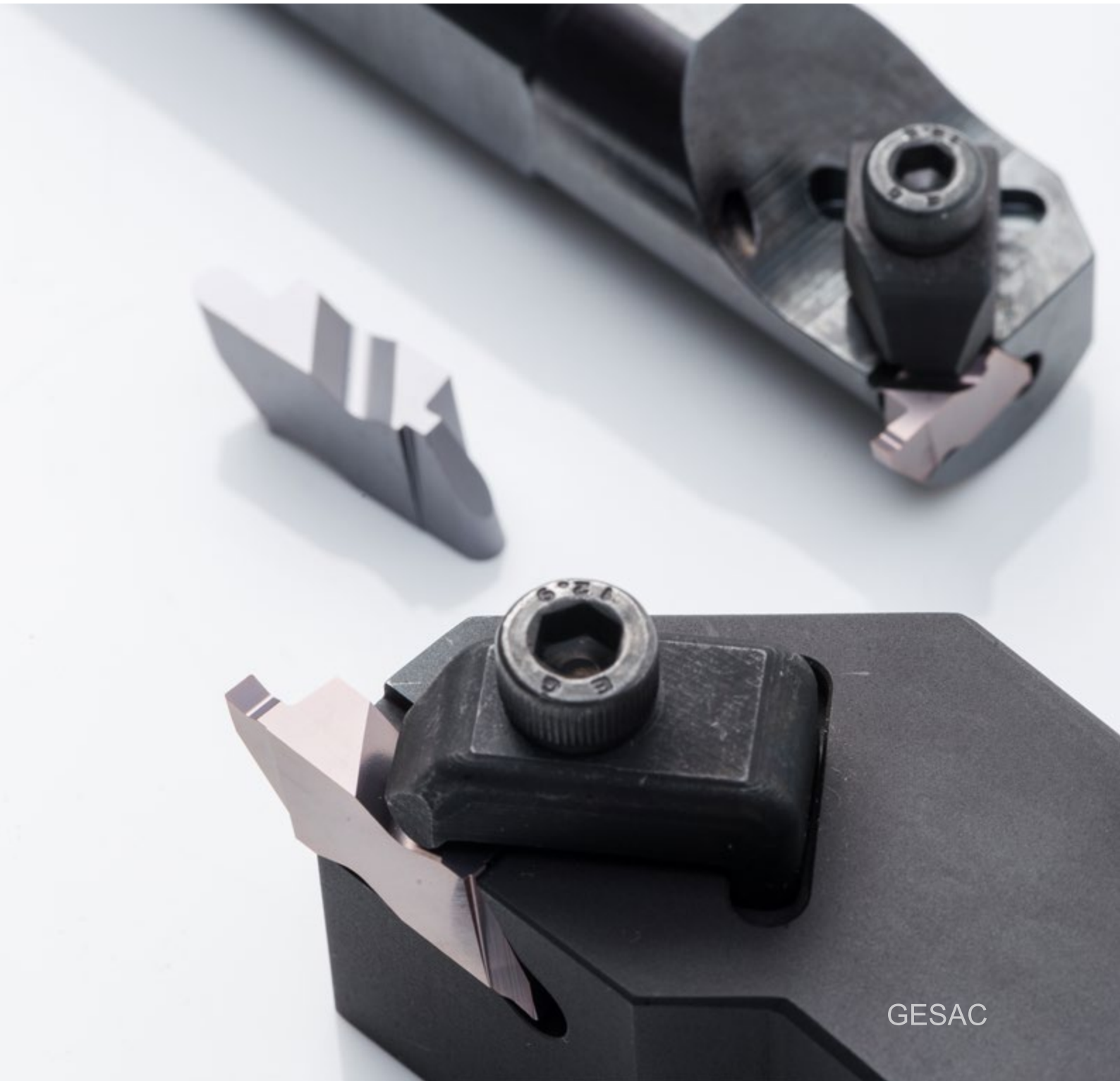
► Round / Internal

Pitch (mm)	10	8	6	4
Total infeed (mm)	1.34	1.64	2.18	2.98
Total passes	8	10	12	14
No. of infeed	Radial infeed per pass (mm)			
1	0.22	0.21	0.24	0.30
2	0.21	0.20	0.23	0.29
3	0.20	0.20	0.22	0.29
4	0.18	0.19	0.21	0.28
5	0.17	0.18	0.21	0.27
6	0.15	0.17	0.20	0.26
7	0.13	0.16	0.19	0.25
8	0.08	0.14	0.17	0.24
9		0.12	0.16	0.23
10		0.08	0.15	0.21
11			0.13	0.20
12			0.08	0.18
13				0.16
14				0.10

Attention: Infeeds of less than 0.05mm should be avoided, for austenitic stainless steels not less than 0.08mm.

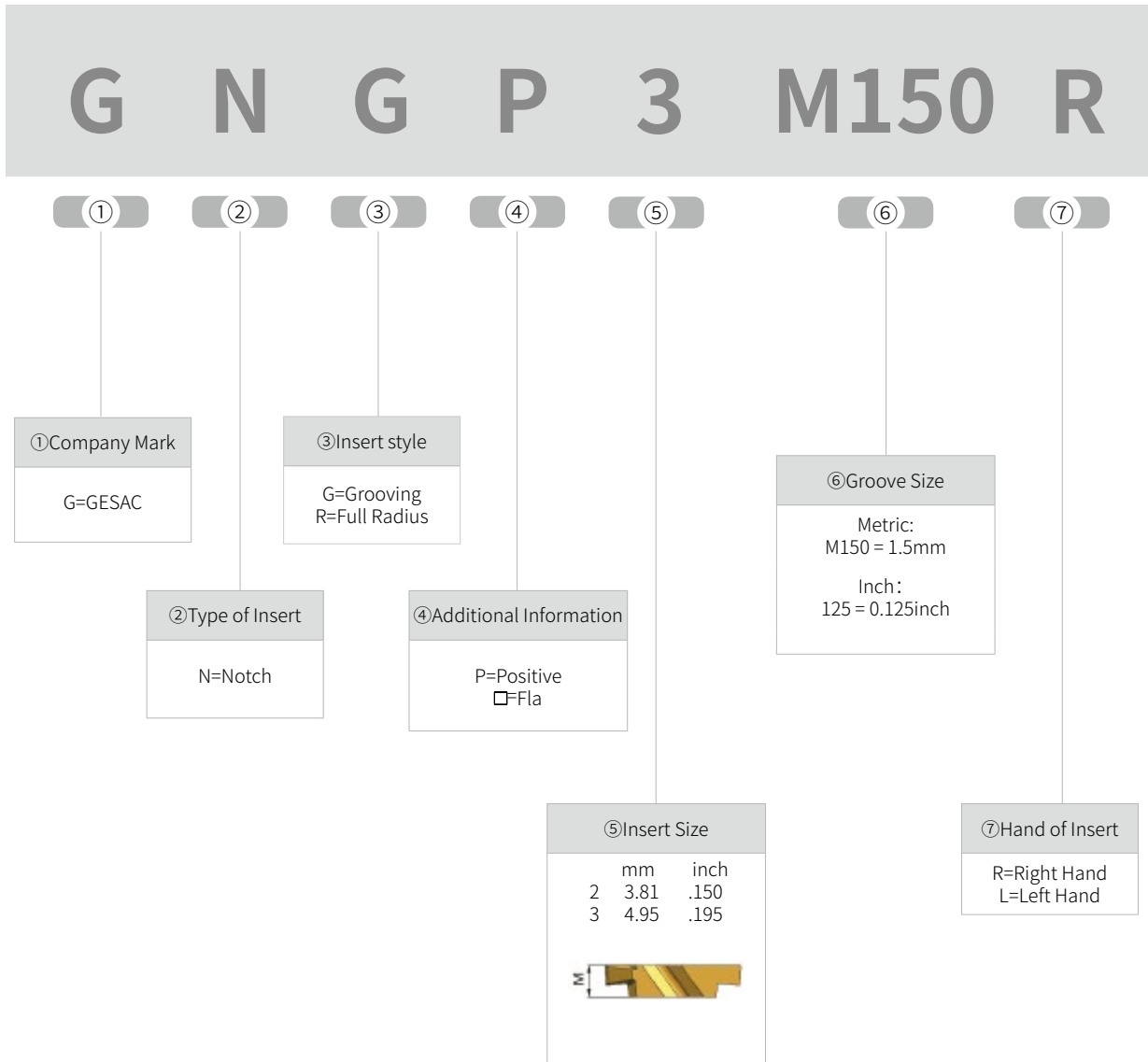
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G-NotchSeries Tools

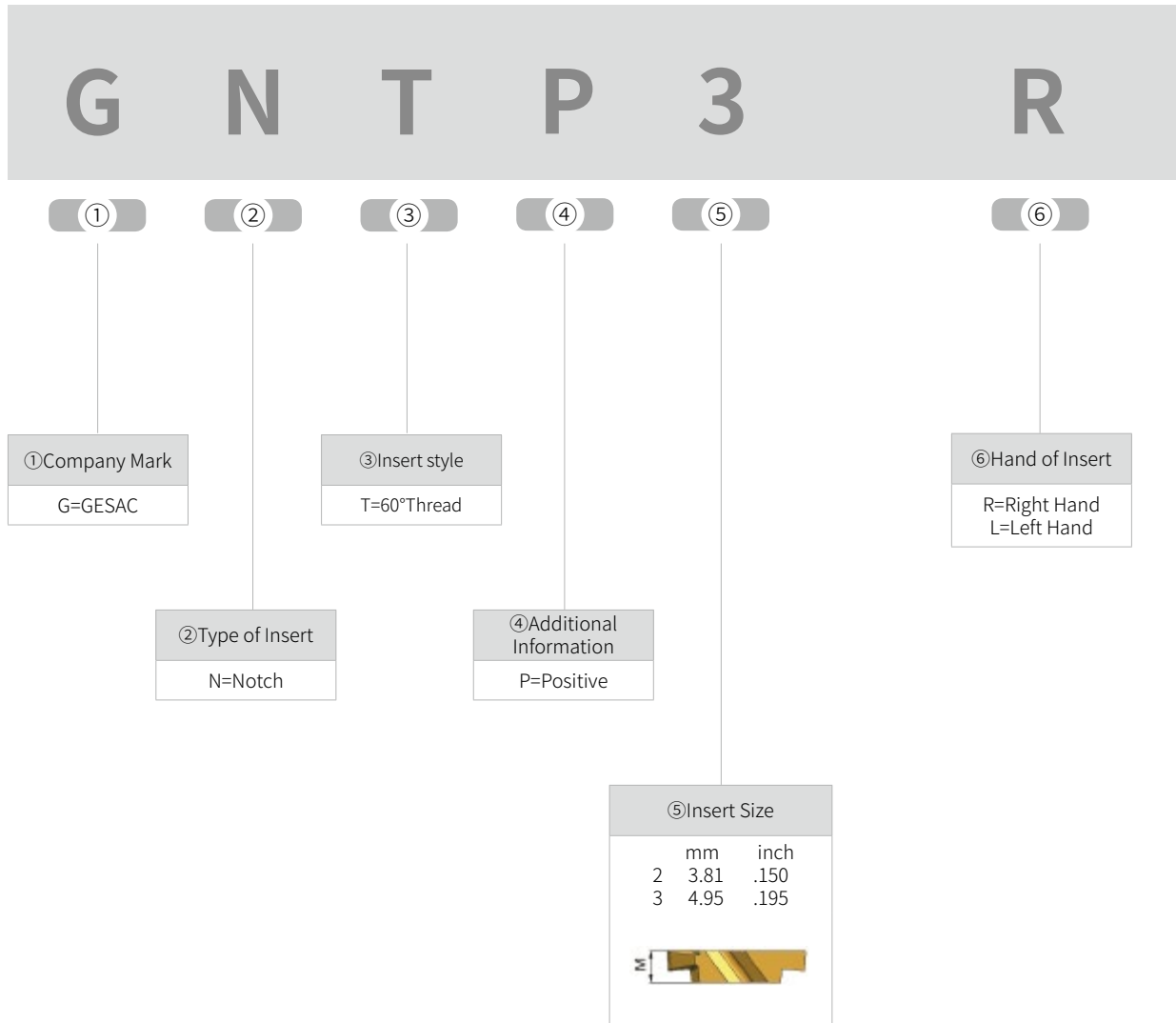


GESAC

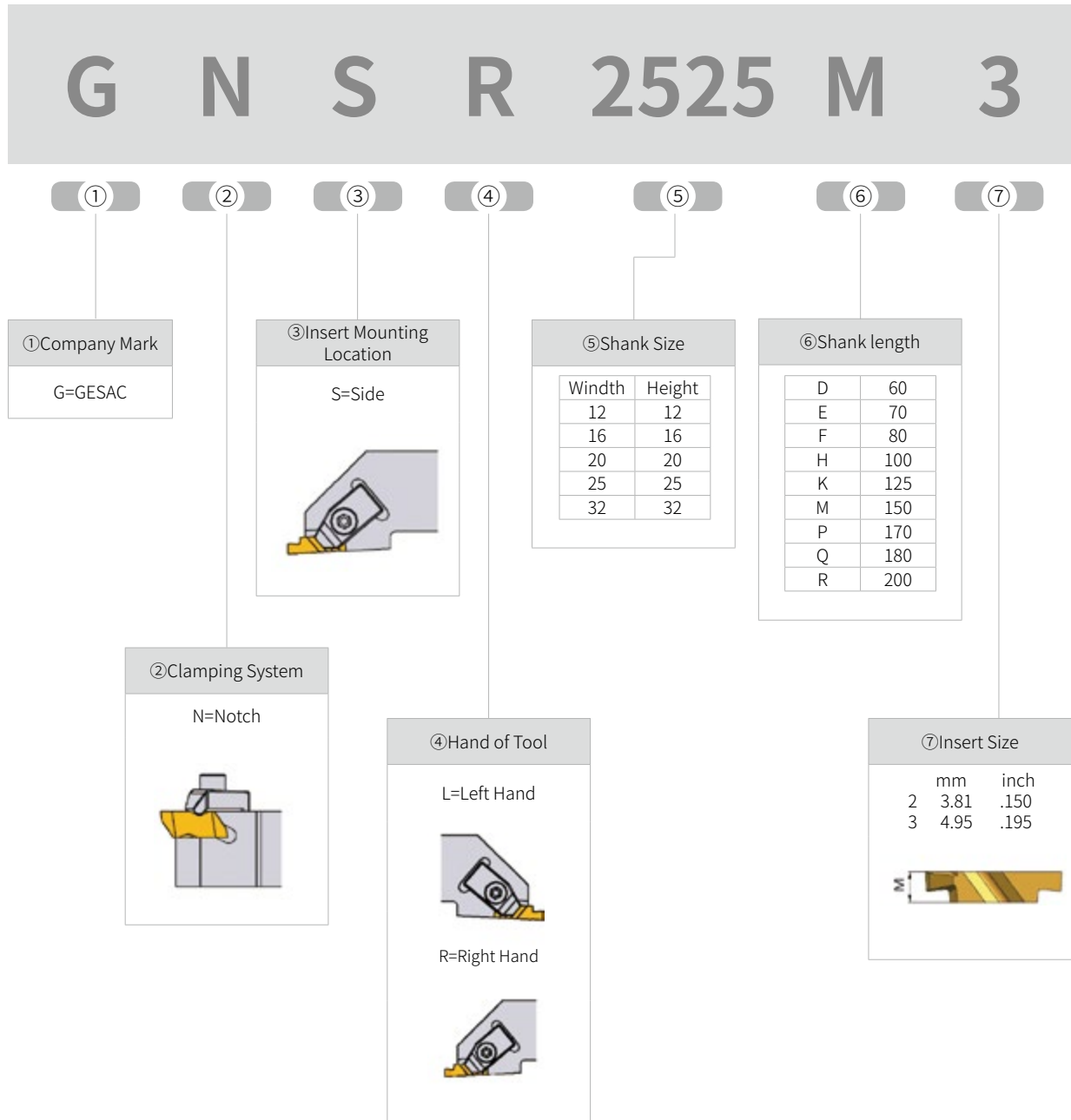
G-Notch Series Grooving Inserts Identification System



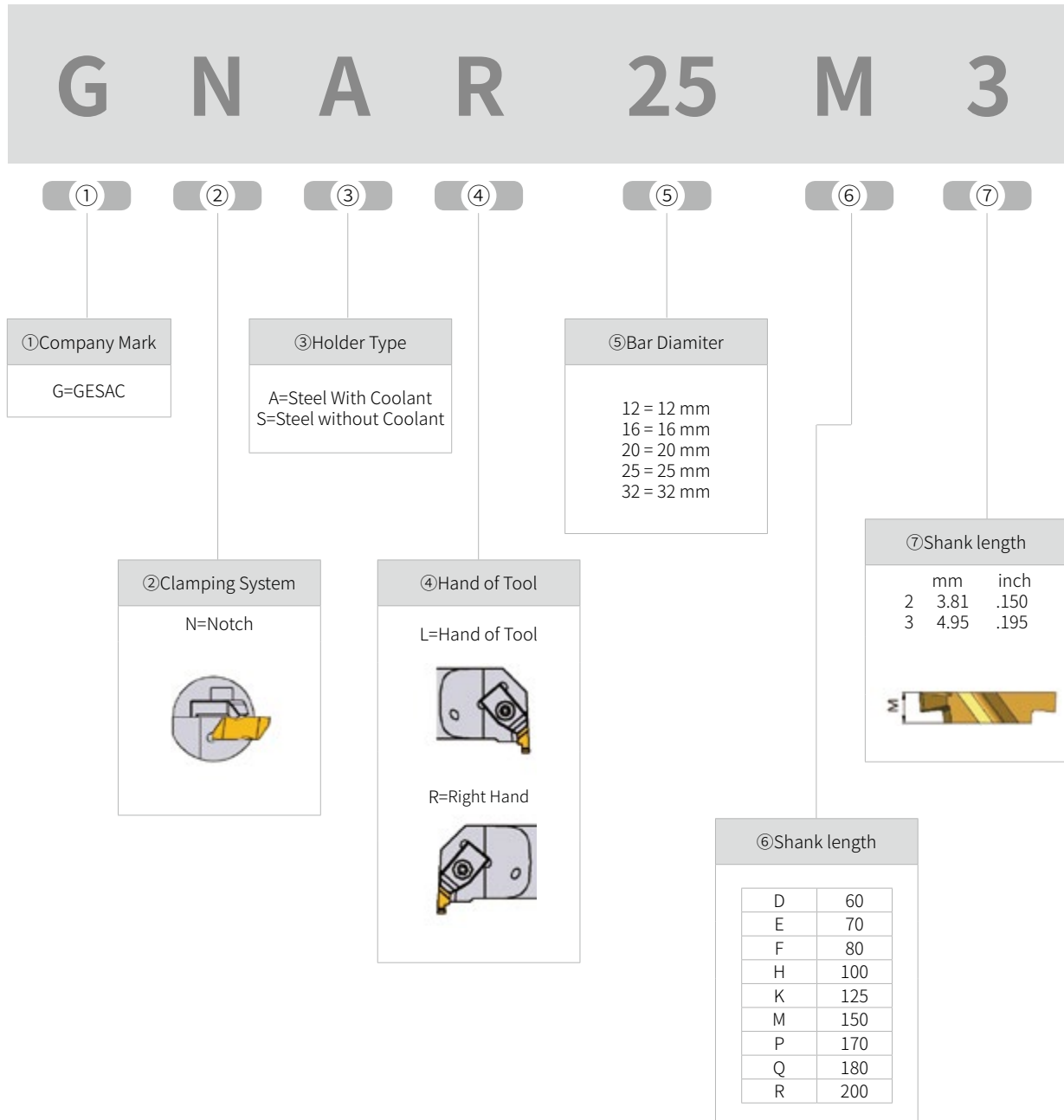
G-Notch Series Threading Inserts Identification System



G-Notch External Holder Identification System




G-Notch Internal Bar Identification System



Note: Left hand bars use right hand inserts, Right hand bars use left hand inserts.

Overview of G-Notch Series Inserts

Application	Style	Shape	Width/Pitch	Page
Precision Grooving	GNGP		1.00-3.50 (mm)	P169
Precision Profiling	GNR		2.00-3.18 (mm)	P171
Threading	GNTP		0.70-5.00(mm) 36-5(TPI)	P171

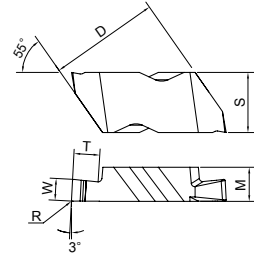
Grades for G-Notch Series Inserts

Workpiece Material		P Steel					M Stainless Steel					K Cast Iron				
		01	10	20	30	40	50	01	10	20	30	40	01	10	20	30
Coated	PVD	GM3225					GM3225					GM3225				

Precision Grooving Inserts

GNGP

Grooving Positive Rake Insert



Ordering Code	Dimensions(mm)						Insert Size	Stock
	W	R	T	S	M	D		GM3225
GNGP2M100L	1.00	0.09	1.27	5.56	3.81	8.74	2	○
GNGP2M100R	1.00	0.09	1.27	5.56	3.81	8.74	2	○
GNGP2047L	1.19	0.09	1.27	5.56	3.81	8.74	2	●
GNGP2047R	1.19	0.09	1.27	5.56	3.81	8.74	2	●
GNGP2M150L	1.50	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M150R	1.50	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2062L	1.57	0.19	2.79	5.56	3.81	8.74	2	●
GNGP2062R	1.57	0.19	2.79	5.56	3.81	8.74	2	●
GNGP2M170L	1.70	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M170R	1.70	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2070L	1.78	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2078L	1.98	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2078R	1.98	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M200L	2.00	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M200R	2.00	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M220L	2.20	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M220R	2.20	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2094L	2.38	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2094R	2.38	0.19	2.79	5.56	3.81	8.74	2	●
GNGP2M250L	2.50	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2M250R	2.50	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2125L	3.18	0.19	2.79	5.56	3.81	8.74	2	○
GNGP2125R	3.18	0.19	2.79	5.56	3.81	8.74	2	●
GNGP3031L	0.79	0.09	1.27	8.74	4.95	16.1	3	○
GNGP3031R	0.79	0.09	1.27	8.74	4.95	16.1	3	○
GNGP3M100L	1.00	0.19	1.91	8.74	4.95	16.1	3	○
GNGP3M100R	1.00	0.19	1.91	8.74	4.95	16.1	3	○
GNGP3047L	1.19	0.19	1.91	8.74	4.95	16.1	3	●
GNGP3047R	1.19	0.19	1.91	8.74	4.95	16.1	3	●



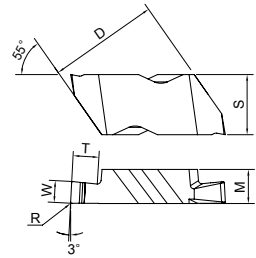
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● Stock ○ Available upon Order

Precision Grooving Inserts

GNGP

Grooving Positive Rake Inserts



Ordering Code	Dimensions(mm)						Insert Size	Stock
	W	R	T	S	M	D		GM3225
GNGP3M150L	1.50	0.19	2.39	8.74	4.95	16.1	3	○
GNGP3M150R	1.50	0.19	2.39	8.74	4.95	16.1	3	○
GNGP3062L	1.58	0.19	2.39	8.74	4.95	16.1	3	●
GNGP3062R	1.58	0.19	2.39	8.74	4.95	16.1	3	●
GNGP3070L	1.78	0.19	2.39	8.74	4.95	16.1	3	○
GNGP3078L	1.98	0.19	2.39	8.74	4.95	16.1	3	○
GNGP3078R	1.98	0.19	2.39	8.74	4.95	16.1	3	○
GNGP3M200L	2.00	0.19	2.39	8.74	4.95	16.1	3	●
GNGP3M200R	2.00	0.19	2.39	8.74	4.95	16.1	3	●
GNGP3094L	2.39	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3094R	2.39	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3M250L	2.50	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3M250R	2.50	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3M300L	3.00	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3M300R	3.00	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3125L	3.18	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3125R	3.18	0.19	3.81	8.74	4.95	16.1	3	●
GNGP3M350L	3.50	0.19	3.81	8.74	4.95	16.1	3	○
GNGP3M350R	3.50	0.19	3.81	8.74	4.95	16.1	3	○

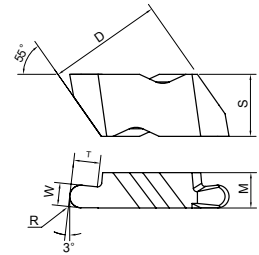


● Stock ○ Available upon Order

Precision Grooving Inserts

GNR

Full Radius Inserts



Ordering Code	Dimensions(mm)							Insert Size	Stock
	W	R	T	S	M	D	GM3225		
GNR3M100L	2.00	1.00	2.39	8.74	4.95	16.10	3	○	
GNR3M100R	2.00	1.00	2.39	8.74	4.95	16.10	3	○	
GNR3M150L	3.00	1.50	3.81	8.74	4.95	16.10	3	○	
GNR3M150R	3.00	1.50	3.81	8.74	4.95	16.10	3	○	
GNR3047L	2.39	1.19	3.81	8.74	4.95	16.1	3	●	
GNR3047R	2.39	1.19	3.81	8.74	4.95	16.1	3	●	
GNR3062L	3.18	1.59	3.81	8.74	4.95	16.10	3	○	
GNR3062R	3.18	1.59	3.81	8.74	4.95	16.10	3	○	

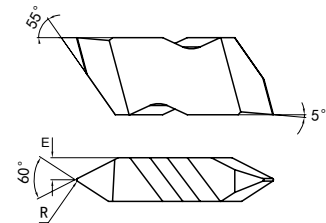


● Stock ○ Available upon Order

Threading Inserts

GNTP

60° Partial Profile Threading Inserts With Positive Top Rake



Ordering Code	Dimensions						Insert Size	Stock
	R	E	Pitch					GM3225
			External	Internal	External	Internal		
GNT2L	0.10	1.91	0.70-3.00	1.25-3.50	8-36	7-20	2	●
GNT2R	0.10	1.91	0.70-3.00	1.25-3.50	8-36	7-20	2	●
GNT3L	0.17	2.49	1.25-4.00	2.00-5.00	4-20	5-12	3	●
GNT3R	0.17	2.49	1.25-4.00	2.00-5.00	4-20	5-12	3	●
GNT3004L	0.10	2.49	1.25-4.00	2.00-5.00	5-36	5-12	3	○
GNT3004R	0.10	2.49	1.25-4.00	2.00-5.00	5-36	5-12	3	○

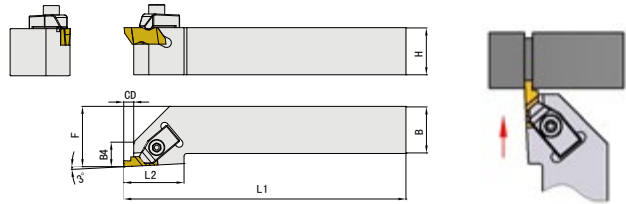


● Stock ○ Available upon Order

External Holders

G-Notch Series

GNSR/L



The Picture is Right Hand Holder

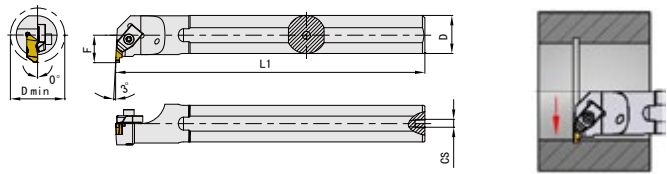
Ordering Code	Dimensions(mm)							Insert	Spare Parts			Stock
	H	B	F	L1	L2	B4	CD		Clamp	Screw	Wrench	
GNSR1616H2	16	16	20	100	19	9	3.5	GN.2R	CAN02RH	SCAM040120H	TH30LH	●
GNSR2020K2	20	20	25	125	19	9	3.5	GN.2R	CAN02RH	SCAM040120H	TH30LH	●
GNSR2525M2	25	25	32	150	19	9	3.5	GN.2R	CAN02RH	SCAM040120H	TH30LH	●
GNSR2020K3	20	20	25	125	32	13	5.3	GN.3R	CAN03RH	SCAM050200H	TH40LH	●
GNSR2525M3	25	25	32	150	32	13	5.3	GN.3R	CAN03RH	SCAM050200H	TH40LH	●
GNSL1616H2	16	16	20	100	19	9	3.5	GN.2L	CAN02LH	SCAM040120H	TH30LH	●
GNSL2020K2	20	20	25	125	19	9	3.5	GN.2L	CAN02LH	SCAM040120H	TH30LH	●
GNSL2525M2	25	25	32	150	19	9	3.5	GN.2L	CAN02LH	SCAM040120H	TH30LH	●
GNSL2020K3	25	20	25	125	32	13	5.3	GN.3L	CAN03LH	SCAM050200H	TH40LH	●
GNSL2525M3	25	25	32	150	32	13	5.3	GN.3L	CAN03LH	SCAM050200H	TH40LH	●

● Stock ○ Available upon Order

Internal Bars

G-Notch Series

GNAR/L



The Picture is Right Hand Holder

Ordering Code	Dimensions(mm)					Insert	Spare Parts			Stock
	D	D min	L1	F	CS		Clamp	Screw	Wrench	
GNAR20Q2	20	26	180	13	1/8-27 NPT	GN.2L	CAN02LH	SCAM040120H	TH30LH	●
GNAR25R2	25	34	200	17	1/4-18 NPT	GN.2L	CAN02LH	SCAM040120H	TH30LH	●
GNAR25R3	25	34	200	17	1/4-18 NPT	GN.3L	CAN03LH	SCAM050200H	TH40LH	●
GNAL20Q2	20	26	180	13	1/8-27 NPT	GN.2R	CAN02RH	SCAM040120H	TH30LH	●
GNAL25R2	25	34	200	17	1/4-18 NPT	GN.2R	CAN02RH	SCAM040120H	TH30LH	●
GNAL25R3	25	34	200	17	1/4-18 NPT	GN.3R	CAN03RH	SCAM050200H	TH40LH	●

Note: Left hand bars use right hand inserts, Right hand bars use left hand inserts.

● Stock ○ Available upon Order

Recommended Feed

Width(mm)	Feed(mm/r)
0.79-1.50	0.08 (0.03-0.12)
1.50-2.50	0.10 (0.04-0.16)
2.50-3.50	0.12 (0.05-0.20)
3.50-4.50	0.14 (0.05-0.25)

Recommended Cutting Speed

Workpiece Material	Hardness (HB)	Cutting Speed Vc (m/min)			
		GM3125	GA4230	GS3115	
P	Low Carbon Steel	80 – 170	105 (60-170)	110 (70-180)	
	High Carbon Steel	170 – 250	105 (60-160)	110 (70-160)	
	Low-alloy Steel	140- 260	105 (50-160)	110 (60-160)	
	High-alloy Steel	180- 300	105 (50-160)	110 (60-160)	
M	Ferritic/Martensitic	150- 270	90 (40-140)	100 (40-180)	90 (50-150)
	Austenitic	150- 270	90 (40-140)	100 (40-180)	90 (50-150)
K	Malleable Cast Iron	150- 230	160 (60-300)	180 (70-300)	
	Gray Cast Iron	150- 230	160 (60-300)	180 (70-300)	
	Nodular Cast Iron	160- 260	140 (50-250)	160 (60-300)	
S	Heat-resistant Alloy	130- 400			35 (15-60)
	Titanium Alloys	130- 400			35 (15-60)



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