TURNING TOOLS

GESAC

About GESAC

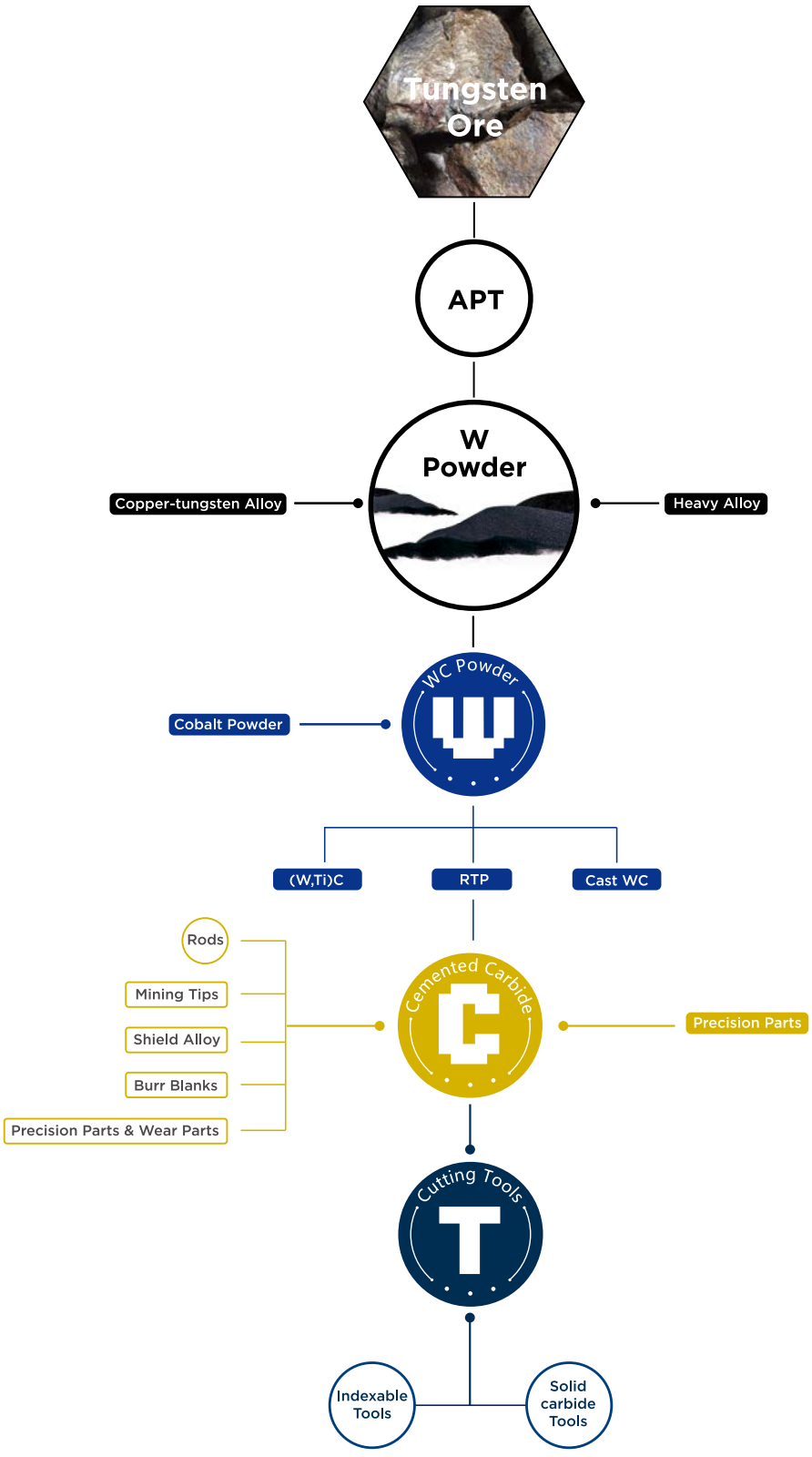
Xiamen Golden Egret Special Alloy Co., Ltd. (GESAC), founded in 1989, is a Sino-foreign joint venture with national high-tech, affiliated with XTC, which is one of six major rare earth groups in China. GESAC is committed to research & development, production and professional solutions providing of high-quality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

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

GESAC owns four production headquarters and one national level research center domestically,and three sales branches and one production base overseas. 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.



Contents

A

INSERT MATERIAL

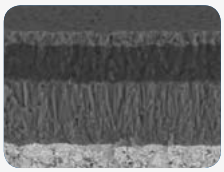
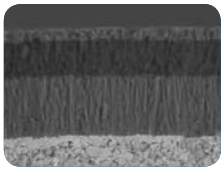
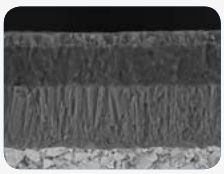
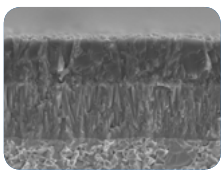
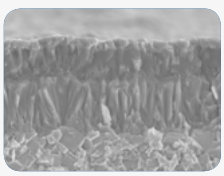
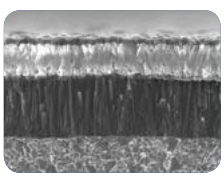
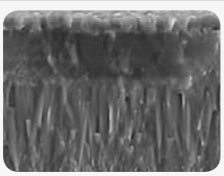
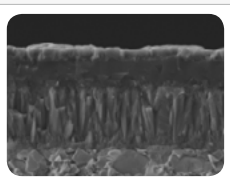
Application Summary of Turning Grades

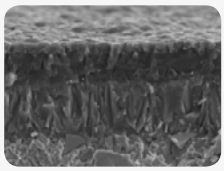
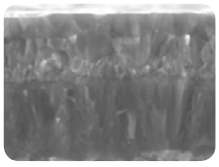
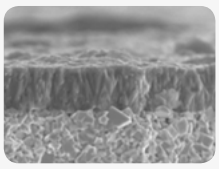
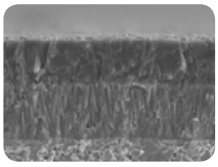
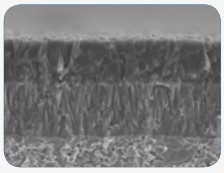
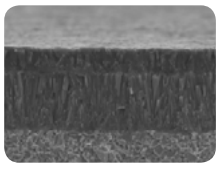
Workpiece	ISO	Coated Carbide		Carbide
		CVD	PVD	
P	01	GPT6110 NEW, GPT6120 NEW, GPT6130 NEW, GP1105, GP1115, GP1120, GP1225, GP1130, GP1135	GA4230	
	10			
	20			
	30			
	40			
	50			
M	01			
	10	GM1115	GM3215	
	20	GM1125	GM3220, GM3225, GA4230	
	30			
	40			
	50			
K	01			
	10	GK1115		
	20	GK1120	GA4230	
	30	GK1125		
	40			
N	01			GN9115
	10			
	20		GN3125	GN9120
	30			GN9130
	40			
S	01			
	10		GS3115	GS9125
	20			
	30			
	40			
H	01			
	10			
	20			
	30			
	40			


Cermet
Coated Cermet
CBN
Coated CBN
PCD
GP91TM
GP31TM
GP91TM
GP31TM
GP91TM
GP31TM
BKN115P
BKC120P
DNN125P
BSN115P
BHC115P
BHC125P
BHC135P

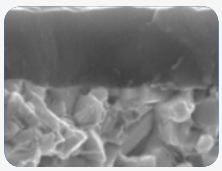
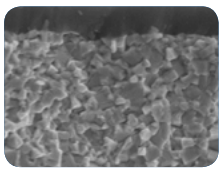
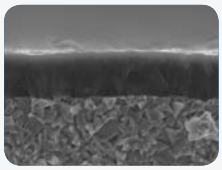
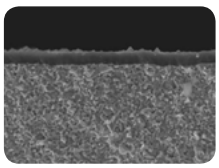
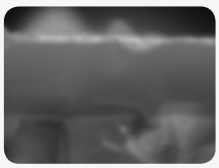
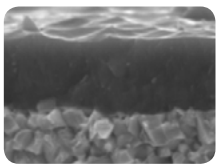
Turning Grades

CVD Coated Carbide

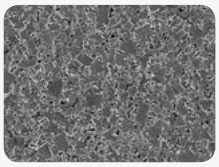
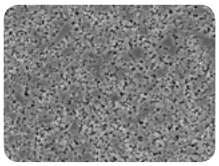
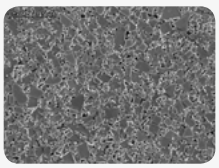
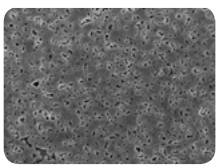
ISO	Grade	Grade Color	Grade Microstructure	Grade Feature
P	GPT6110	Champagne		•Brand new CVD coating with special post-treatment technology and high hot hardness cemented carbide substrate, provides the grade with superior adhesion resistance and excellent wear resistance. •Recommended for continuous cutting conditions of carbon steels and alloy steels at high speeds.
	GPT6120	Champagne		•Brand new CVD coating with unique low-stress post-treatment, matching cemented carbide substrate with perfect thermo-plastic deformation resistance, guarantees the high wear resistance and toughness. •Recommended for carbon steels and alloy steels in wide cutting conditions at medium to high speeds.
	GPT6130	Champagne		•New cemented carbide with special cobalt enrichment controlling technology, combined with new CVD coating and advanced post-treatment, greatly improves the edge breakage. •Recommended for most interrupted cutting conditions of carbon steels and alloy steels at medium speeds.
	GP1105	Ash black		•Combining the ultrafine Al2O3 and MT-TiCN coatings with gradient cemented carbide substrate, provides the new grade with excellent wear resistance. •Recommended for stable finishing turning of carbon steels & alloy steels, including steels parting and grooving processing.
	GP1115	Yellow		•Ultrafine MT-TiCN and Al2O3 coatings, matching smooth indexed TiN layer and good wear resistant substrate, ensures the grade with long service life. •Recommended for stable finishing to semi-finishing of carbon steels and alloy steels.
	GP1120	Golden		•High-strength gradient substrate combined with CVD coating has excellent performance in continuous and light interrupted cutting conditions. •Recommended for semi-finishing and light cutting conditions of carbon steels and alloy steels.
	GP1130	Golden		•Fine MT-TiCN and tough Al2O3 in combination with high toughness gradient substrate ensures the good resistance to cutting edge breakage. •Recommended for roughing of carbon steels and alloy steels at low and medium cutting speeds.
	GP1135	Yellow		•Well controlled MT-TiCN, Al2O3 and TiN coating with well wear resistance combined with a gradient carbide substrate improves the edge security and high toughness. •Recommended for roughing of carbon steels and alloy steels at high metal removal rates.

ISO	Grade	Grade Color	Grade Microstructure	Grade Feature
P	GP1225	Yellow		•Combined columnar grain MT-TiCN, Al2O3 and TiN coating with a gradient substrate provides excellent wear resistance and toughness. •Recommended for semi-finishing to medium roughing of steels and alloy steels.
M	GM1115	Shiny golden		•Combined nano-columnar MT-TiCN, thin Al2O3, bright TiN and a gradient substrate gives excellent wear resistance, low-stress post-treatment provides less built-up-edge and longer tool life. •Recommended for finishing to semi-finishing of stainless steels.
	GM1125	Shiny golden		•Compact TiCN coating with good toughness substrate gives the grade with excellent resistance to heat and mechanical impact. •Recommended for semi-finishing to roughing machining of stainless steels.
K	GK1115	Ash black		•High wear resistant substrate with fine grain, combined with thick Al2O3 coating and smoothy post-treatment, provides the grade with outstanding wear resistance and high edge toughness on processing grey cast irons. •Recommended for finishing machining of grey cast irons.
	GK1120	Ash black		•Thicker Al2O3 coating combined with fine grained substrate provides high edge security and toughness. •Recommended for finishing to semi-finishing of nodular cast irons.
	GK1125	Ash black		•Thick MT-TiCN coating and ultrafine Al2O3, matching high wear resistant cemented carbide substrate with fine grain, helps to improve toughness and great wear resistance. •Recommended for interrupted roughing of nodular cast irons.

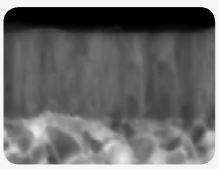
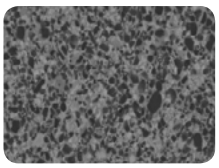
PVD Coated Carbide

ISO	Grade	Grade Color	Grade Microstructure	Grade Feature
M	GM3215	Purplish grey		•Brand new PVD TiAlN coating combined with submicron grained WC-Co cemented carbide substrate, provides the new grade with excellent wear resistance and heat resistance. •Recommended for finishing of stainless steels and heat resistant alloys in stable cutting conditions at medium speeds.
	GM3220	Bronze		•New nano-structured PVD coating matching high cobalt cemented carbide substrate, gives the grade with excellent wear resistance and high hot hardness. •Recommended for continuous cutting and light or medium interrupted cutting of stainless steels and soft steels at medium to low cutting speeds.
	GM3225	Purplish grey		•The combination of optimized TiAlN coating and submicron grained carbide substrate with high Co content, provides superior adhesion and toughness. •Recommended for semi-finishing of stainless steels and threading of steels, stainless steels, etc.
S	GS3115	Purplish red		•Fine grained cemented carbide substrate, matching PVD coating with high aluminum content, have excellent adhesion and wear resistance. •Recommended for semi-finishing or finishing of stainless steels and heat resistant alloys.
N	GN3125	Purplish bronze		•New TiB-based PVD coating with fine grained cemented carbide substrate, gives excellent wear resistance and less built-up-edge, which makes it optimal for efficient cutting of non-ferrous metals. •Recommended for general machining of copper, aluminum and other non-ferrous metals.
/	GA4230	Purplish red		•PVD TiAlN coating with high toughness substrate provides excellent wear resistance and high edge security for a broad application area. •Recommended as general choice for parting and grooving of steels.

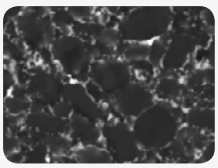
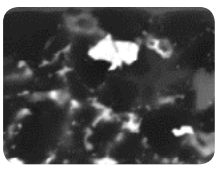
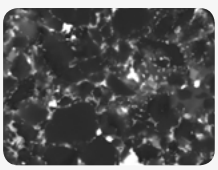
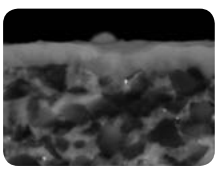
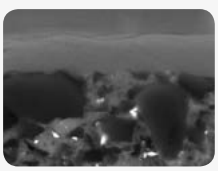
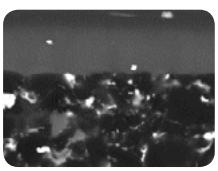
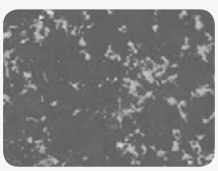
Carbide

ISO	Grade	Grade Color	Grade Microstructure	Grade Feature
S	GS9125	Uncoated		•Uncoated fine grain substrate has a good balance of wear resistance and toughness. •Recommended as the first choice for titanium alloys, and even for semi-finishing of titanium alloys grooving.
N	GN9115	Uncoated		•Uncoated fine-grained grade has great wear resistance. •Recommended for finishing of aluminum alloys and copper alloys at high cutting speeds.
	GN9120	Uncoated		•Fine-grained substrate with special surface treatment improves the wear resistance and less built-up-edge. •Recommended for finishing to semi-finishing of aluminum alloys, copper alloys and other non-ferrous materials.
	GN9130	Uncoated		•Uncoated fine-grained substrate grade has quite good wear resistance and toughness. •Recommended for semi-finishing of coppers and aluminum alloys.

Cermet

ISO	Grade	Grade Color	Grade Microstructure	Grade Feature
P	GP31TM	Purplish grey		•Thin PVD coating and cermet have excellent resistance to built-up-edge and plastic deformation, which ensures the high surface quality. •Recommended for finishing of carbon steels and low alloy steels at high cutting speeds.
	GP91TM	Uncoated		•Uncoated cermet has well wear resistance and toughness, even excellent high surface quality. •Recommended for finishing of carbon steels and low alloy steels when good surface quality is required.

PCBN & PCD

ISO	Grade	Grade Color	Grade Microstructure	Grade Feature
K	BKN115P	Uncoated		•Uncoated grade with high hardness has excellent wear resistance. •Recommended for finishing of grey cast irons and valve seat machining.
	BKC120P	Purplish grey		•Outstanding PVD coating can reduce the friction between cutting edge and workpiece, which improves the wear resistance dramatically. •Recommended for finishing of nodular cast irons.
S	BSN115P	Uncoated		•Uncoated grade has a high edge toughness and chemical stability •Recommended for finishing of powder metallurgy parts.
H	BHC115P	Purplish grey		•New TiAlN coating provides the good resistance to notch wear, which reduces the roughness of the workpiece surface. •Recommended for finishing of quenched steels when high surface quality and close tolerances are required.
	BHC125P	Purplish grey		•CBN substrates with TiAlN coating have great toughness and wear resistance, which is capable of longer tool life and more stability. •Recommended for general machining of quenched steels.
	BHC135P	Purplish grey		•CBN substrate with high edge toughness matching TiAlN coating greatly improves wear resistance. •Recommended for interrupted processing of quenched steels.
N	DNN125P	Uncoated		•Medium grained diamond has excellent wear resistance and toughness. •Recommended for high efficient finishing of aluminums, coppers, plastics and graphite materials.

B

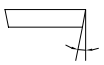
GENERAL TURNING

ISO Turning Indexable Inserts Identification System

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

①Shape Symbol

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



②Relief Angle Symbol

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

③Tolerance Symbol

①	②	③	④	⑤
T	N	M	G	22

④Hole/Chipbreaker Symbol

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

⑤Edge Length Symbol （ISO） (mm)

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

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

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

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

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

⑥Thickness Symble

⑥ ⑦ ⑧

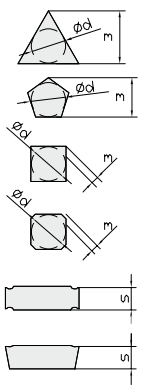
04 08 - HK

⑥ ⑦ ⑧

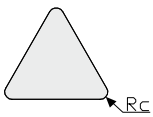
Inscribed Circle Size（mm）

Insert Thickness(S)

Corner Height(m)



⑦Corner Ro Symbol



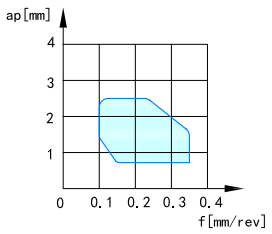
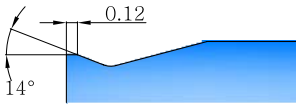
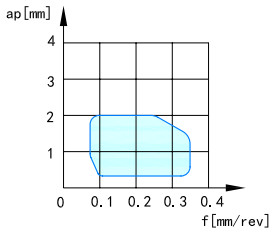
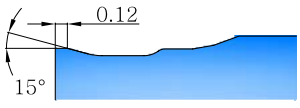
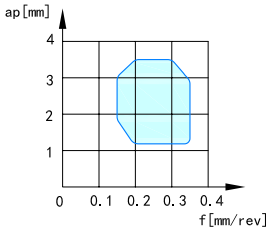
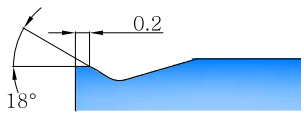
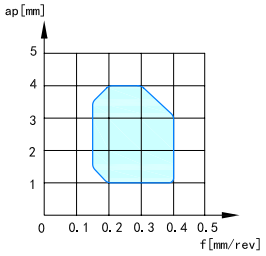
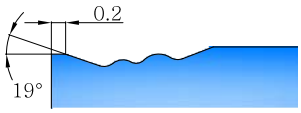
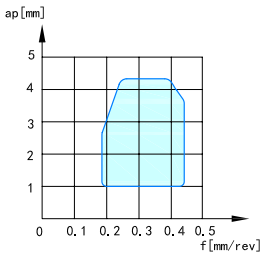
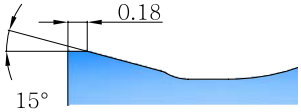
代号	Corner-R（mm）
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2

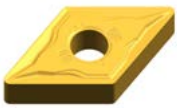
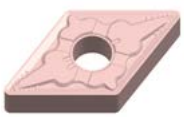
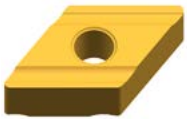
⑧Chipbreaker Symbol

Chipbreaker Symbol

Overview of Turning Inserts

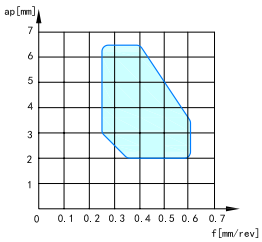
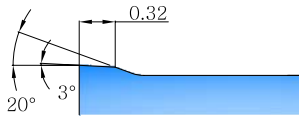
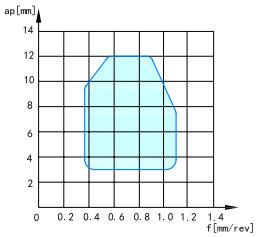
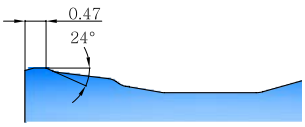
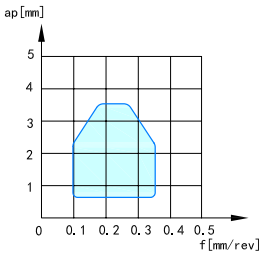
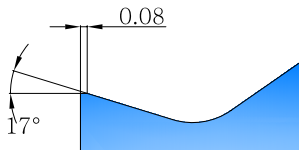
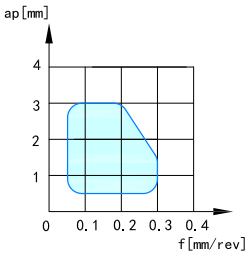
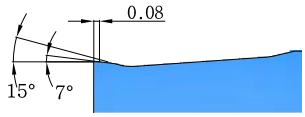
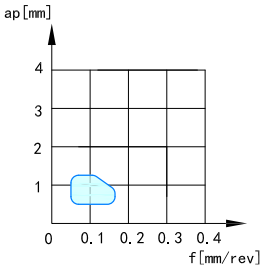
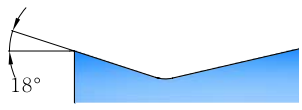
Turning Inserts (Negative)

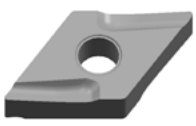
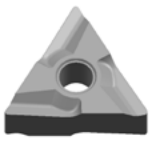
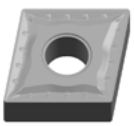
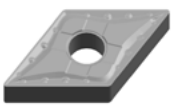
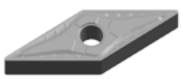
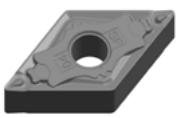
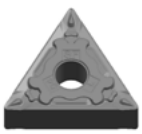
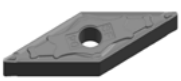
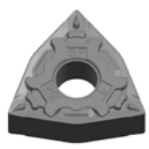
Geometry	Features	Application Range	Cross Section Geometry
GF	• GF for finishing of general steel and alloy steel. • Sharp tool nose and strong cutting edge. Good chip control under small cutting depth.		
QF	• QF for finishing of general steel and alloy steel. • Curved edge, sharp cutting edge, good chip control and fine surface finish due to curved edge.		
GM	• GM for semi-finishing of general steel and alloy steel. • Strong flat cutting edge with good strength.		
QM	• QM for semi-finishing of general steel and alloy steel. • The design of step and waved hump broadens the range of chip breaking applicable geometry range.		
SV	• SV for semi-finishing of general steel and alloy steel. • Throughout groove and wide chip groove make cutting available in unstable working conditions. • Long chip groove allows high depth of cuts.		

	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
	CNMG-GF	DNMG-GF	SNMG-GF	TNMG-GF	VNMG-GF	WNMG-GF
	P028	P032	P036	P040	P044	P046
						
	CNMG-QF	DNMG-QF	SNMG-QF	TNMG-QF	VNMG-QF	WNMG-QF
	P028	P032	P036	P040	P044	P046
						
	CNMG-GM	DNMG-GM	SNMG-GM	TNMG-GM	VNMG-GM	WNMG-GM
	P028	P032	P036	P040	P044	P046
						
	CNMG-QM	DNMG-QM	SNMG-QM	TNMG-QM	VNMG-QM	WNMG-QM
	P029	P033	P037	P041	P044	P046
						
	CNMG$_{R/L}$-SV	DNMG$_{R/L}$-SV	SNMG$_{R/L}$-SV	TNMG$_{R/L}$-SV		WNMG$_{R/L}$-SV
	P029	P033	P037	P041		P047

Overview of Turning Inserts

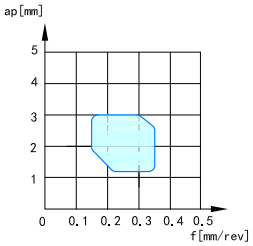
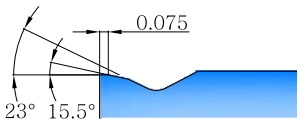
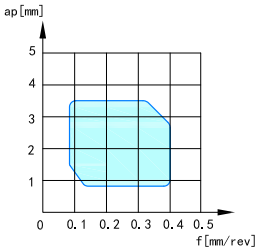
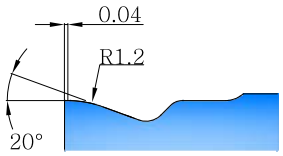
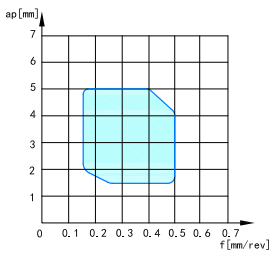
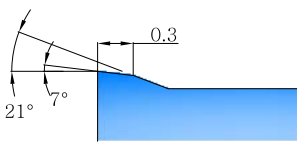
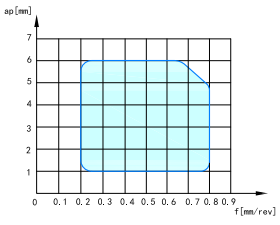
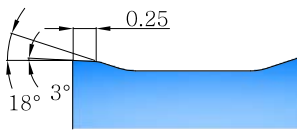
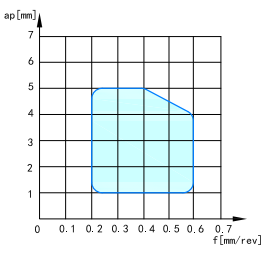
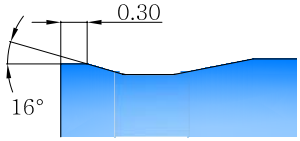
Turning Inserts (Negative)

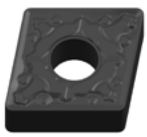
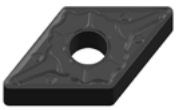
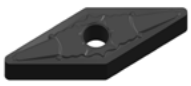
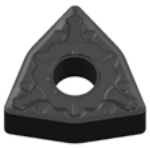
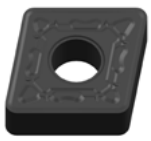
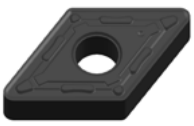
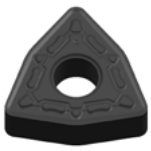
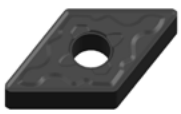
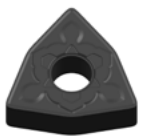
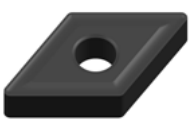
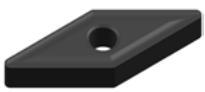
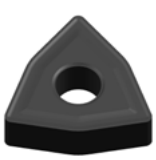
Geometry	Features	Application Range	Cross Section Geometry
QR	• QR for rough cutting action of carbon steel,cast steel and alloy steel. • Variable rake angle and land provides enough edge sharpness and strength at different depth of cut.		
QH	• QH for heavy cutting action of carbon steel, cast steel and alloy steel. • Variable land and progressive chipbreaker space, generating lower cutting force. • Straight edge line with reinforcement balances strength and cutting action.		
TS	• TS for semi-finishing of general steel and alloy steel. • Big rake angle lower cutting force. • Variable groove depth design, with super chip removal.		
TP	• TP for semi-finishing of general steel,alloy steel and cast iron. • Dual rake angle and big cutting edge width design to promote its strength. • Overall pattern design, table and reliable installation. • Arrow chip breaker improves chipbreaking performance during big cutting depth.		
SF	• SF for finishing of stainless steel. • Sharp edge due to results in low cutting forces particularly for thin wall structures and extended shafts.		

	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
	CNMG-QR	DNMG-QR	SNMG-QR	TNMG-QR		WNMG-QR
	P031	P034	P038	P041		P048
						
	CNMM-QH		SNMM-QH			
	P031		P039			
						
		DNMG$_{R/L}$-TS		TNMG$_{R/L}$-TS		
		P033		P041		
						
	CNMG-TP	DNMG-TP	SNMG-TP	TNMG-TP	VNMG-TP	WNMG-TP
	P029	P033	P037	P041	P044	P047
						
	CNMG-SF	DNMG- SF	SNMG- SF	TNMG- SF	VNMG- SF	WNMG-SF
	P028	P032	P036	P040	P044	P046

Overview of Turning Inserts

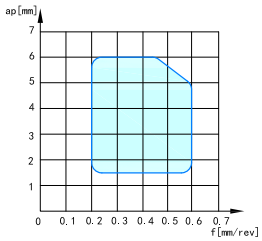
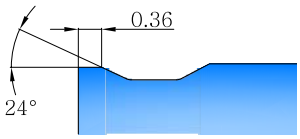
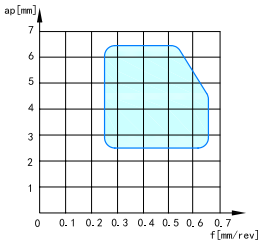
Turning Inserts (Negative)

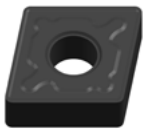
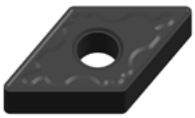
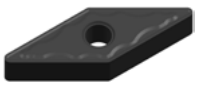
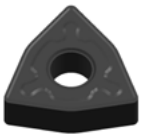
Geometry	Features	Application Range	Cross Section Geometry
SM	• SM for medium cutting of stainless steel and mild steel. • Sharp cutting edge.		
LM	• LM for semi-finishing of stainless steel and high temperature alloy. • Variable rake angle and cutting edge width to ensure its sharpness and strength. • Heart-shaped chip breaker with good chip breaking.		
LR	• LR for stainless steel of roughing. • Small rake angle and big cutting edge width with strong corner. • Big chip breaker width and shallow. • chip breaker depth to ensure good chip removal.		
WMV	• WMV for general steel, alloy steel and castiron. • Large chip breaker with low chip removal resistance. • Excellent sharp cutting edge and strength. • Good surface quality.		
UK	• UK for machining cast iron. • Good Performance After Medium cutting for general conditions.		

	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
	CNMG-SM	DNMG- SM	SNMG- SM	TNMG- SM	VNMG- SM	WNMG-SM
	P029	P033	P037	P041	P044	P047
						
	CNMG-LM	DNMG- LM	SNMG- LM	TNMG- LM	VNMG- LM	WNMG-LM
	P030	P034	P038	P041	P045	P047
						
	CNMG-LR	DNMG-LR	SNMG-LR	TNMG-LR		WNMG-LR
	P030	P034	P038	P042		P048
						
	Wiper	Wiper		Wiper		Wiper
	CNMG-WMV	DNMX-WMV		TNMX-WMV		WNMG-WMV
	P030	P034		P042		P047
						
	CNMG-UK	DNMG-UK	SNMG-UK	TNMG-UK	VNMG-UK	WNMG-UK
	P030	P034	P038	P042	P045	P048

Overview of Turning Inserts

Turning Inserts (Negative)

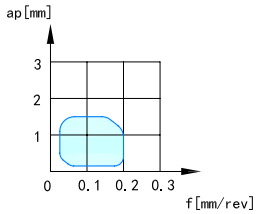
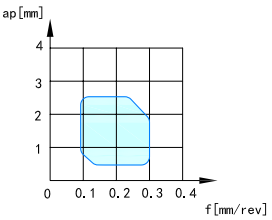
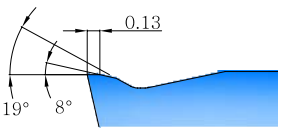
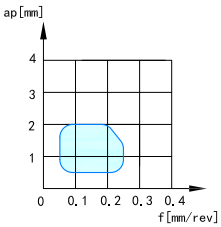
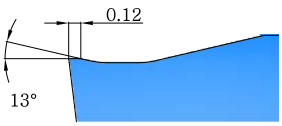
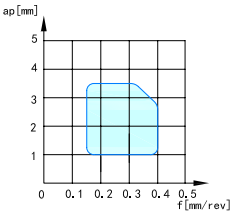
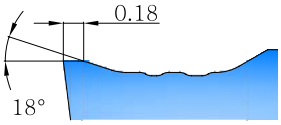
Geometry	Features	Application Range	Cross Section Geometry	
HK	• HK for cast iron heavy cutting. • Strong cutting edge, big chip pocket, good at big cutting depth and width.			
Flat	• Flat-top for cast iron used. • Stable placement. • Strong edge design for intermittent cutting conditions.			

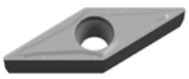
	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
	CNMG-HK	DNMG-HK	SNMG-HK	TNMG- HK	VNMG- HK	WNMG- HK
	P031	P035	P039	P043	P045	P048
						
	CNMA	DNMA	SNMA	TNMA		WNMA
	P031	P035	P039	P043		P048

Overview of Turning Inserts

Turning Inserts（Positive）

5°Clearance Angle

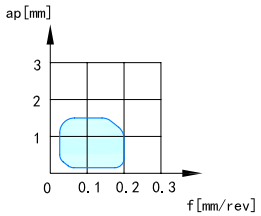
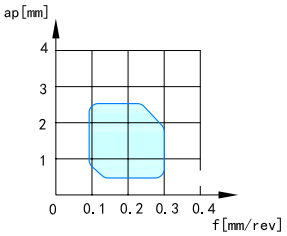
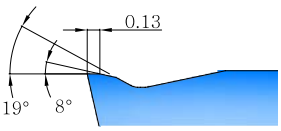
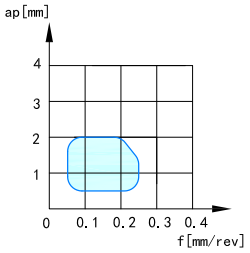
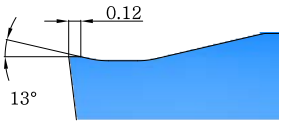
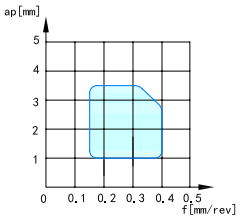
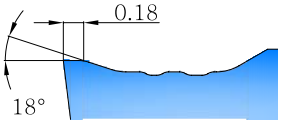
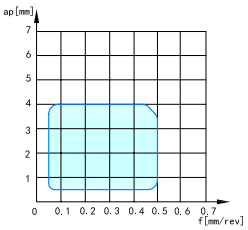
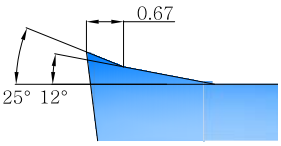
Geometry	Features	Application Range	Cross Section Geometry
MM	• MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality.		
GP	• GP for light cutting of general steel, alloy steel,stainless steel and cast iron. • Strong tool nose due to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

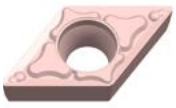
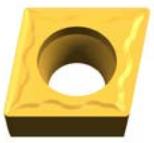
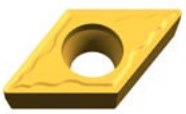
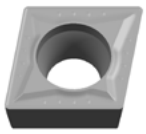
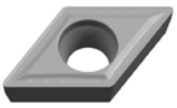
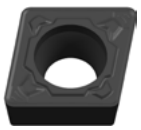
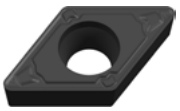
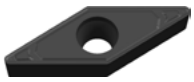
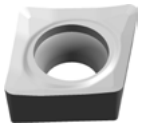
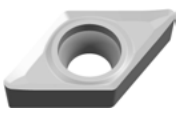
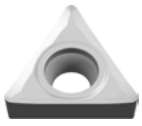
	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
					VBMT-MM	
					P057	
						
					VBMT-GP	
					P057	
						
					VBMT-TP	
					P057	
						
					VBMT-KM	
					P057	

Overview of Turning Inserts

Turning Inserts（Positive）

7°Clearance Angle

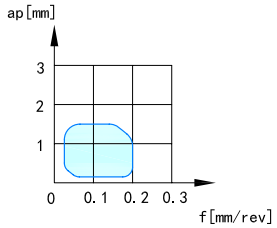
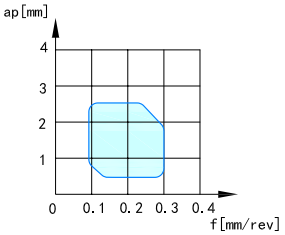
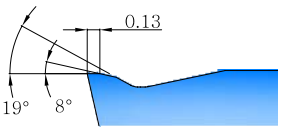
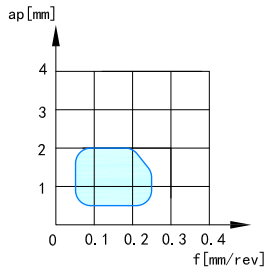
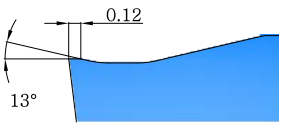
Geometry	Features	Application Range	Cross Section Geometry
MM	• MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality.		
GP	• GP for light cutting of general steel, alloy steel, stainless steel and cast iron. • Strong tool nose due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

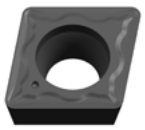
	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
	CCMT-MM	DCMT-MM	SCMT-MM	TCMT-MM		
	P049	P051	P053	P054		
						
	CCMT-GP CCGT-GP	DCMT-GP DCGT-GP	SCMT-GP SCGT-GP	TCMT-GP TCGT-GP	VCMT-GP VCGT-GP	WCMT-GP
	P049	P051	P053	P054	P058	P059
						
	CCMT-TP	DCMT-TP	SCMT-TP	TCMT-TP		
	P049	P051	P053	P054		
						
	CCMT-KM	DCMT-KM	SCMT-KM	TCMT-KM	VCMT-KM	
	P050	P051	P053	P054	P058	
						
	CCGX-AL	DCGX-AL	SCGX-AL	TCGX-AL	VCGX-AL	
	P050	P052	P053	P055	P058	

Overview of Turning Inserts

Turning Inserts（Positive）

11°Clearance Angle

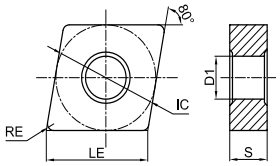
Geometry	Features	Application Range	Cross Section Geometry
MM	• MM for light cutting of general steel, alloy steel and stainless steel. • Sharp cutting edge, enables high surface quality.		
GP	• GP for light cutting of general steel, alloy steel,stainless steel and cast iron. • Strong tool nosedue to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

	80°Rhombic	55°Rhombic	90°Square	60°Regular Triangle	35°Rhombic	80°Trigon
						
				TPMT-MM		
				P056		
						
	CPGT-GP			TPGT-GP		
	P050			P056		
						
				TPMT-TP		
				P056		

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



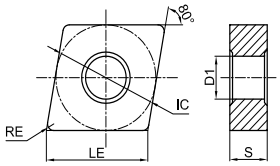
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CNMG090308-GF	9.7	9.525	3.18	3.81	0.8					○																			
	CNMG120404-GF	12.9	12.7	4.76	5.16	0.4					●		○																	
	CNMG120408-GF	12.9	12.7	4.76	5.16	0.8					○		●																	
	CNMG120412-GF	12.9	12.7	4.76	5.16	1.2					●																			
	CNMG090304-QF	9.7	9.525	3.18	3.81	0.4					○		○																	
	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													○					●						
	CNMG120404-GM	12.9	12.7	4.76	5.16	0.4					●		●																	
	CNMG120408-GM	12.9	12.7	4.76	5.16	0.8					●		●																	
	CNMG120412-GM	12.9	12.7	4.76	5.16	1.2					●		●																	
	CNMG120416-GM	12.9	12.7	4.76	5.16	1.6					○		●																	
	CNMG160608-GM	16.1	15.875	6.35	6.35	0.8					●		●																	
	CNMG160612-GM	16.1	15.875	6.35	6.35	1.2					●		●																	
	CNMG160616-GM	16.1	15.875	6.35	6.35	1.6					○		●																	
	CNMG190608-GM	19.3	19.05	6.35	7.94	0.8							○																	
	CNMG190612-GM	19.3	19.05	6.35	7.94	1.2					○		●																	
	CNMG190616-GM	19.3	19.05	6.35	7.94	1.6					●		●																	

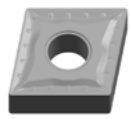
●Stock ○Available Upon Order

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



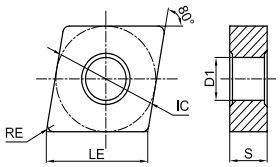
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CNMG090304-QM	9.7	9.525	3.18	3.81	0.4					○		●		○															
	CNMG090308-QM	9.7	9.525	3.18	3.81	0.8					●		○		○															
	CNMG120404-QM	12.9	12.7	4.76	5.16	0.4	●	●	●	●	●	●	●		●		○				●								○	●
	CNMG120408-QM	12.9	12.7	4.76	5.16	0.8	●	●	●	●	●	●	●	●	●		●				●									●
	CNMG120412-QM	12.9	12.7	4.76	5.16	1.2	●	●	●	●	●	●	●		●							●								
	CNMG120416-QM	12.9	12.7	4.76	5.16	1.6				○	○		●		●															
	CNMG160608-QM	16.1	15.875	6.35	6.35	0.8	●	●	●	●	●		●	●	○															
	CNMG160612-QM	16.1	15.875	6.35	6.35	1.2	●	●	●	●	●	○	●		○															
	CNMG190608-QM	19.3	19.05	6.35	7.94	0.8					●	○	●									●								
	CNMG190612-QM	19.3	19.05	6.35	7.94	1.2				●	○		●																	
	CNMG190616-QM	19.3	19.05	6.35	7.94	1.6					●		●																	
	CNMG120404-TP	12.9	12.7	4.76	5.16	0.4																							●	●
	CNMG120408-TP	12.9	12.7	4.76	5.16	0.8																							○	○
	CNMG120408R-SV	12.9	12.7	4.76	5.16	0.8							●																	
	CNMG120408L-SV	12.9	12.7	4.76	5.16	0.8							●																	
	CNMG090304-SM	9.7	9.525	3.18	3.81	0.4											○			●										
	CNMG090308-SM	9.7	9.525	3.18	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											○			●										

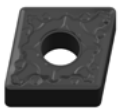
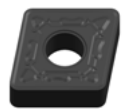
●Stock ○Available Upon Order

Turning Insert (Negative)

CN□□

Rhombic 80° with Hole



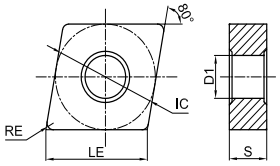
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CNMG120404-LM	12.9	12.7	4.76	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										●	●	●	●	●										
 Wiper	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										●			○	●										
	CNMG120416-LR	12.9	12.7	4.76	5.16	1.6													○	○										
	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



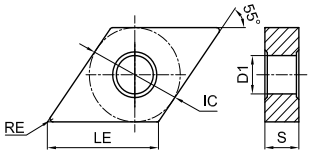
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CNMG120408-QR	12.9	12.7	4.76	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	19.05	6.35	7.94	0.8							●		○														
	CNMG190612-QR	19.3	19.05	6.35	7.94	1.2				○	○		●		●														
	CNMG190616-QR	19.3	19.05	6.35	7.94	1.6	○	○	○	●	○		●		●														
	CNMG190624-QR	19.3	19.05	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															●	○	●						

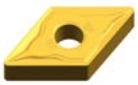
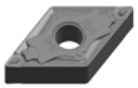
●Stock ○Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



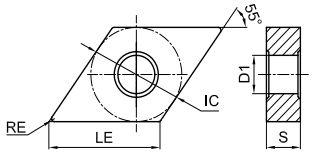
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	DNMG110404-GF	11.6	9.525	4.76	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					●		●																
	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



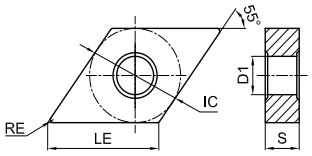
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	DNMG110404-QM	11.6	9.525	4.76	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																						●	●
	DNMG150404R-SV	15.5	12.7	4.76	5.16	0.4																							○
	DNMG150404L-SV	15.5	12.7	4.76	5.16	0.4																							●
	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							●				●												
	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											●		●	●									
	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											○			○									

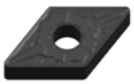
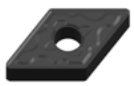
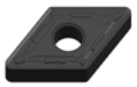
●Stock ○Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



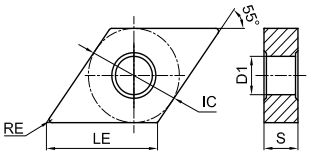
Ordering Code		Dimension (mm)					Coated Carbides																Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	DNMG110404-LM	11.6	9.525	4.76	3.81	0.4										○	○	○	●	●									
	DNMG110408-LM	11.6	9.525	4.76	3.81	0.8											●	●	●	○									
	DNMG150404-LM	15.5	12.7	4.76	5.16	0.4										○	○	○	●	○									
	DNMG150408-LM	15.5	12.7	4.76	5.16	0.8										○	●	●	●	●									
	DNMG150412-LM	15.5	12.7	4.76	5.16	1.2										○		○		○									
	DNMG150604-LM	15.5	12.7	6.35	5.16	0.4										○		●	○	●									
	DNMG150608-LM	15.5	12.7	6.35	5.16	0.8										○	○	○	●	●									
	DNMG150612-LM	15.5	12.7	6.35	5.16	1.2										○		●	○	●									
 Wiper	DNMX150408-WMV	15.5	12.7	4.76	5.16	0.8														○									
	DNMX150412-WMV	15.5	12.7	4.76	5.16	1.2														●									
	DNMX150608-WMV	15.5	12.7	6.35	5.16	0.8														○									
	DNMX150612-WMV	15.5	12.7	6.35	5.16	1.2														○	●	●							
	DNMG150404-UK	15.5	12.7	4.76	5.16	0.4														●		●							
	DNMG150408-UK	15.5	12.7	4.76	5.16	0.8														●	●	●							
	DNMG150412-UK	15.5	12.7	4.76	5.16	1.2														●		○							
	DNMG150604-UK	15.5	12.7	6.35	5.16	0.4														●	○	●							
	DNMG150608-UK	15.5	12.7	6.35	5.16	0.8														●	●	●							
	DNMG150612-UK	15.5	12.7	6.35	5.16	1.2														●	○	○							
	DNMG150616-UK	15.5	12.7	6.35	5.16	1.6														●		●							
	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	○	○	○	●	●	●		○															

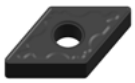
●Stock ○Available Upon Order

Turning Insert (Negative)

DN□□

Rhombic 55° with Hole



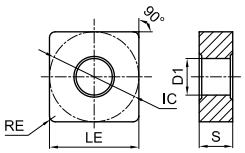
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	DNMG150408-HK	15.5	12.7	4.76	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



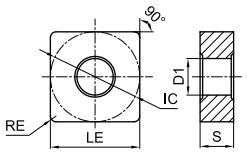
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	SNMG120404-GF	12.7	12.7	4.76	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							●																	
	SNMG190612-GM	19.05	19.05	6.35	7.94	1.2							●																	
	SNMG190616-GM	19.05	19.05	6.35	7.94	1.6							○																	
	SNMG190616-SM	19.05	19.05	6.35	7.94	1.6								○			●													

●Stock ○Available Upon Order

Turning Insert (Negative)

SN□□

Square 90° with Hole



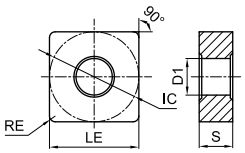
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	SNMG090304-QM	9.525	9.525	3.18	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											●	●												
	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



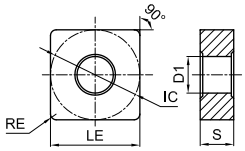
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	SNMG120404-LM	12.7	12.7	4.76	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



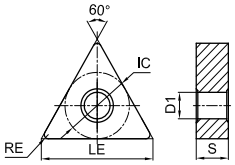
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	SNMG120408-HK	12.7	12.7	4.76	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				●	●		●		●															
	SNMM250924-QH	25.4	25.4	9.52	9.12	2.4	○	○	○	●	○		●		●															
	SNMM250932-QH	25.4	25.4	9.52	9.12	3.2							○		○															
	SNMA090308	9.525	9.525	3.18	3.81	0.8															●									
	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															○									

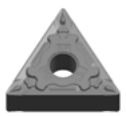
●Stock ○Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



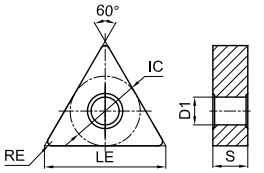
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	TNMG160404-GF	16.5	9.525	4.76	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					●																			
	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					○		○																	
	TNMG160404-SF	16.5	9.525	4.76	3.81	0.4													●	●				●						
	TNMG160408-SF	16.5	9.525	4.76	3.81	0.8													●					●						
	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					○		○																	

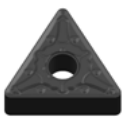
●Stock ○Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



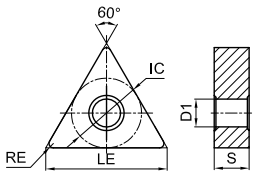
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	TNMG110304-QM	11	6.35	3.18	2.26	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																						○	○
	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							●				○											●	○
	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													○	○										
	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													●	●									

●Stock ○Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



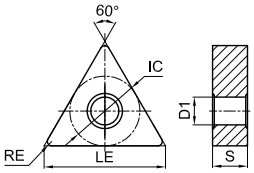
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
 Wiper	TNMX160408-WMV	16.5	9.525	4.76	3.81	0.8															○									
	TNMX160412-WMV	16.5	9.525	4.76	3.81	1.2															○									
	TNMG160404-UK	16.5	9.525	4.76	3.81	0.4															●	●	●							
	TNMG160408-UK	16.5	9.525	4.76	3.81	0.8															●	●	●							
	TNMG160412-UK	16.5	9.525	4.76	3.81	1.2															●		○							
	TNMG160416-UK	16.5	9.525	4.76	3.81	1.6															●	○	○							
	TNMG220408-UK	22	12.7	4.76	5.16	0.8															●		○							
	TNMG220412-UK	22	12.7	4.76	5.16	1.2															●									
	TNMG220416-UK	22	12.7	4.76	5.16	1.6															○		●							
	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									●															
	TNMG330924-QR	33	19.05	9.52	7.94	2.4							○																	

●Stock ○Available Upon Order

Turning Insert (Negative)

TN□□

Triangle 60° with Hole



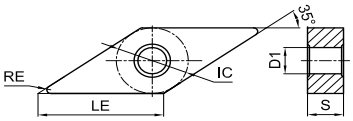
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	TNMG160408-HK	16.5	9.525	4.76	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																	○							
	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															○		●							

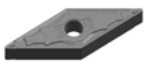
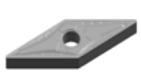
●Stock ○Available Upon Order

Turning Insert (Negative)

VN□□

Rhombic 35° with Hole



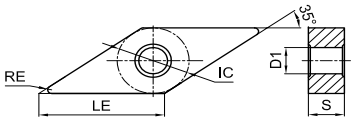
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	VNMG160404-GF	16.6	9.525	4.76	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	●	●	●	●	●	○	●								●								●	○
	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					●		●																	
	VNMG160404-QM	16.6	9.525	4.76	3.81	0.4	●	●	●		●	●	●		●						●								●	●
	VNMG160408-QM	16.6	9.525	4.76	3.81	0.8	●	●	●	●	●	●	●	●	●						●									○
	VNMG160412-QM	16.6	9.525	4.76	3.81	1.2	●	●	●		●		●		●						●									
	VNMG160404-TP	16.6	9.525	4.76	3.81	0.4																							●	●
	VNMG160408-TP	16.6	9.525	4.76	3.81	0.8																							○	○
	VNMG160404-SM	16.6	9.525	4.76	3.81	0.4										○	○	○	●	●										
	VNMG160408-SM	16.6	9.525	4.76	3.81	0.8										○	○		●	○										

●Stock ○Available Upon Order

Turning Insert (Negative)

VN□□

Rhombic 35° with Hole



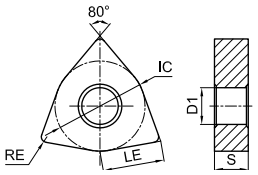
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	VNMG160404-LM	16.6	9.525	4.76	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 80° with Hole



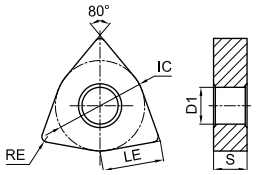
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	WNMG06T304-GF	6.5	9.525	3.97	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													●					●						
	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	●	○	●	●	○		●		○															

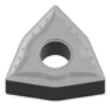
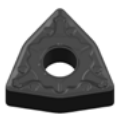
●Stock ○Available Upon Order

Turning Insert (Negative)

WN□□

Trigon 80° with Hole



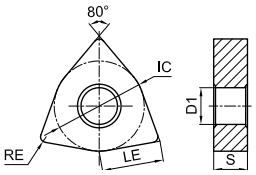
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	WNMG080404-TP	8.7	12.7	4.76	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														●									
	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													○	●									
	WNMG060404-LM	6.5	9.525	4.76	3.81	0.4											○	●	○	●									
	WNMG060408-LM	6.5	9.525	4.76	3.81	0.8											●	●		●									
	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										○	●	○	●	●									
 Wiper	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 80° with Hole



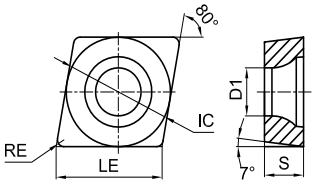
Ordering Code		Dimension (mm)					Coated Carbides																Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	WNMG080404-UK	8.7	12.7	4.76	5.16	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															●	●	○							

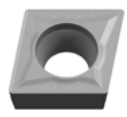
●Stock ○Available Upon Order

Turning Insert (Positive)

CC□□

Rhombic 80° with Hole



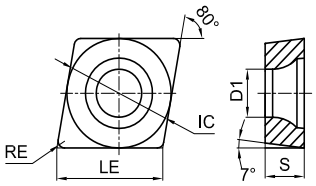
Ordering Code		Dimension (mm)					Coated Carbides																				Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CCMT060202-MM	6.5	6.35	2.38	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																							○	○

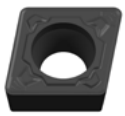
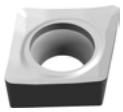
●Stock ○Available Upon Order

Turning Insert (Positive)

CC□□

Rhombic 80° with Hole

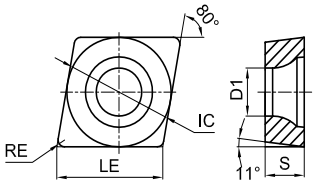


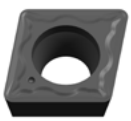
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CCMT060204-KM	6.5	6.35	2.38	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

CP□□

菱形80°有孔



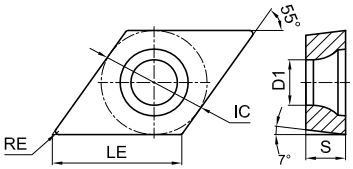
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	CPGT060204-GP	6.5	6.35	2.38	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												●												

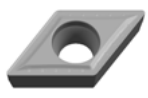
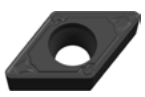
●Stock ○Available Upon Order

Turning Insert (Positive)

DC□□

Rhombic 55° with Hole



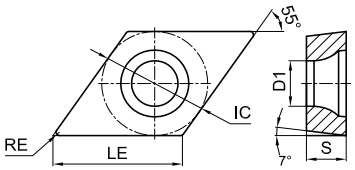
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	DCMT070202-MM	7.8	6.35	2.38	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															●		●							

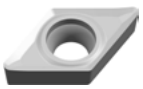
●Stock ○Available Upon Order

Turning Insert (Positive)

DC□□

Rhombic 55° with Hole



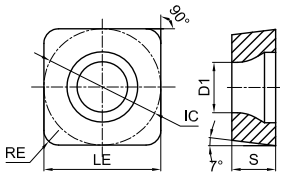
Ordering Code		Dimension (mm)					Coated Carbides																				Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	DCGX070202-AL	7.8	6.35	2.38	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



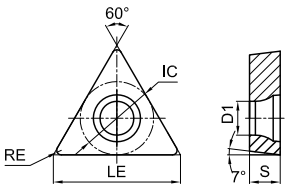
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	SCMT09T304-MM	9.525	9.525	3.97	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)

TC□□

Triangle 60° with Hole



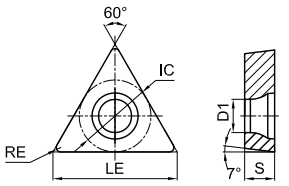
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	TCMT110202-MM	11	6.35	2.38	2.8	0.2	○	○	○										●	●								○	○
	TCMT110204-MM	11	6.35	2.38	2.8	0.4	○	●	●										●	●								●	●
	TCMT110208-MM	11	6.35	2.38	2.8	0.8													●	●									
	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					●		●				●				●		○						
	TCMT220412-GP	22	12.7	4.76	5.56	1.2				●																			
	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														○									
	TCMT090202-TP	9.6	5.56	2.38	2.5	0.2																						○	○
	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)

TC□□

Triangle 60° with Hole



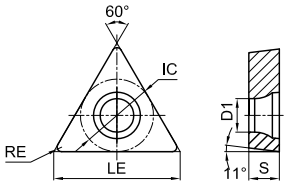
Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	TCGX090204-AL	9.6	5.56	2.38	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 (Positive)

TP□□

Triangle 60° with Hole



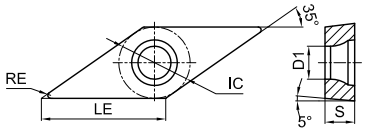
Ordering Code		Dimension (mm)					Coated Carbides																Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	TPMT110202-MM	11	6.35	2.38	2.8	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



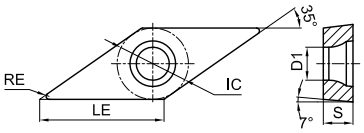
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	VBMT110304-MM	11.2	6.35	3.18	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



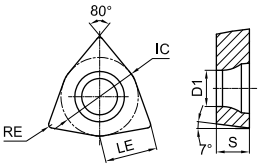
Ordering Code		Dimension (mm)					Coated Carbides																		Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	GP91TM
	VCMT110304-GP	11.2	6.35	3.18	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					●		●				●		●	●	●									○
	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															○									
	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)

WC□□

Trigon 80° with Hole



Ordering Code		Dimension (mm)					Coated Carbides																	Carbides			Cermet	
		LE	IC	S	D1	RE	GPT6110	GPT6120	GPT6130	GP1105	GP1115	GP1120	GP1225	GP1130	GP1135	GM1115	GM1125	GM3215	GM3220	GM3225	GK1115	GK1120	GK1125	GS3115	GN3125	GN9115	GN9120	GN9130	GP31TM	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 Datas (Negative Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
P	Mild Steel	≤HB180	Finishing Machining	Continuous Cutting	GF	GP1115	200-260-360	0.80-1.20-2.50	0.10-0.20-0.35
				Interrupted Cutting		GP1225	180-240-320	0.80-1.20-2.50	0.10-0.20-0.35
				Continuous Cutting	QF	GPT6110	240-300-400	0.40-0.80-2.00	0.08-0.15-0.35
						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
				General		GPT6120	200-280-380	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
				Interrupted Cutting		GPT6130	180-240-320	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
						GP1135	170-220-300	0.40-0.80-2.00	0.08-0.15-0.35
			Finishing Machining	Continuous Cutting	GM	GP1115	180-230-320	1.00-2.00-4.00	0.18-0.22-0.40
				Interrupted Cutting		GP1225	160-210-300	1.00-2.00-4.00	0.18-0.22-0.40
				Continuous Cutting	QM	GP31TM	210-280-330	0.50-1.20-2.50	0.10-0.18-0.30
						GP91TM	200-260-330	0.50-1.50-3.00	0.15-0.22-0.35
						GPT6110	220-280-380	0.80-2.00-4.00	0.15-0.20-0.40
						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
				General		GPT6120	180-250-340	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
				Interrupted Cutting		GPT6130	160-230-300	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
						GP1130	160-210-300	0.80-2.00-4.00	0.15-0.20-0.40
						GP1135	150-190-280	0.80-2.00-4.00	0.15-0.20-0.40
				Continuous Cutting	TP	GP31TM	220-300-380	0.30-1.00-3.00	0.05-0.12-0.28
						GP91TM	200-280-350	0.30-1.20-3.00	0.05-0.15-0.28
				Continuous Cutting	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
				Interrupted Cutting	SV	GP1225	160-200-300	1.00-2.50-4.50	0.18-0.25-0.45
			Rough Finishing	Continuous Cutting	QR	GPT6110	150-220-280	1.50-3.50-6.00	0.20-0.30-0.60
						GP1105	130-190-270	1.50-3.50-6.00	0.20-0.30-0.60
						GP1115	120-180-250	1.50-3.50-6.00	0.20-0.30-0.60
				General		GPT6120	140-210-270	1.50-3.50-6.00	0.20-0.30-0.60
				Interrupted Cutting		GPT6130	120-190-250	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
						GP1130	120-170-250	1.50-3.50-6.00	0.20-0.30-0.60
						GP1135	110-150-230	1.50-3.50-6.00	0.20-0.30-0.60
			Heavy Machining	Continuous Cutting	QH	GPT6110	100-170-230	3.00-6.00-12.0	0.35-0.60-1.10
						GP1105	100-150-240	3.00-6.00-12.0	0.35-0.60-1.10
						GP1115	90-150-210	3.00-6.00-12.0	0.35-0.60-1.10
				General		GPT6120	100-160-220	3.00-6.00-12.0	0.35-0.60-1.10
				Interrupted Cutting		GPT6130	90-150-210	3.00-6.00-12.0	0.35-0.60-1.10
						GP1225	90-140-210	3.00-6.00-12.0	0.35-0.60-1.10
						GP1135	80-130-190	3.00-6.00-12.0	0.35-0.60-1.10

Recommended Cutting Datas (Negative Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
P	Carbon Steel, Alloy Steel	HB180-280	Finishing Machining	Continuous Cutting	GM	GP1115	140-210-300	1.00-2.00-4.00	0.18-0.22-0.40
				Interrupted Cutting		GP1225	120-190-280	1.00-2.00-4.00	0.18-0.22-0.40
				Continuous Cutting	QF	GPT6110	220-270-360	0.40-0.80-2.00	0.08-0.15-0.35
						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
				General		GPT6120	180-250-340	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
				Interrupted Cutting		GPT6130	160-220-300	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
						GP1135	150-200-280	0.40-0.80-2.00	0.08-0.15-0.35
			Finishing Machining	Continuous Cutting	GM	GP1115	140-210-300	1.00-2.00-4.00	0.18-0.22-0.40
				Interrupted Cutting		GP1225	120-190-280	1.00-2.00-4.00	0.18-0.22-0.40
				Continuous Cutting	QM	GP31TM	200-250-330	0.50-1.20-2.50	0.10-0.18-0.30
						GP91TM	180-230-310	0.50-1.50-3.00	0.15-0.20-0.35
						GPT6110	180-250-340	0.80-2.00-4.00	0.15-0.22-0.40
						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
				General		GPT6120	140-230-320	0.80-2.00-4.00	0.15-0.20-0.40
						GP1120	140-210-300	0.80-2.00-4.00	0.15-0.20-0.40
				Interrupted Cutting		GPT6130	120-210-280	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
						GP1130	120-190-280	0.80-2.00-4.00	0.15-0.20-0.40
						GP1135	100-170-260	0.80-2.00-4.00	0.15-0.20-0.40
				Continuous Cutting	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 Cutting	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
				Interrupted Cutting	SV	GP1225	120-180-280	1.00-2.50-4.50	0.18-0.25-0.45
			Rough Finishing	Continuous Cutting	QR	GPT6110	140-210-270	1.50-3.50-6.00	0.20-0.30-0.60
						GP1105	120-180-260	1.50-3.50-6.00	0.20-0.30-0.60
						GP1115	110-170-240	1.50-3.50-6.00	0.20-0.30-0.60
				General		GPT6120	130-200-260	1.50-3.50-6.00	0.20-0.30-0.60
						GPT6130	110-180-240	1.50-3.50-6.00	0.20-0.30-0.60
				Interrupted Cutting		GP1225	110-160-240	1.50-3.50-6.00	0.20-0.30-0.60
						GP1130	110-160-240	1.50-3.50-6.00	0.20-0.30-0.60
						GP1135	100-140-220	1.50-3.50-6.00	0.20-0.30-0.60
			Heavy Machining	Continuous Cutting	QH	GPT6110	90-160-220	3.00-6.00-12.0	0.35-0.60-1.10
						GP1105	90-140-230	3.00-6.00-12.0	0.35-0.60-1.10
						GP1115	80-140-200	3.00-6.00-12.0	0.35-0.60-1.10
				General		GPT6120	90-150-210	3.00-6.00-12.0	0.35-0.60-1.10
				Interrupted Cutting		GPT6130	80-140-200	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

Recommended Cutting Datas (Negative Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
P	Carbon Steel, Alloy Steel	HB280-350	Finishing Machining	Continuous Cutting	GF	GP1115	150-180-250	0.80-1.20-2.50	0.10-0.20-0.35
				Interrupted Cutting		GP1225	130-150-230	0.80-1.20-2.50	0.10-0.20-0.35
				Continuous Cutting	QF	GPT6110	180-220-290	0.40-0.80-2.00	0.08-0.15-0.35
						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
				General		GPT6120	150-200-270	0.40-0.80-2.00	0.08-0.15-0.35
						GP1120	150-180-250	0.40-0.80-2.00	0.08-0.15-0.35
				Interrupted Cutting		GPT6130	130-170-230	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
						GP1130	130-150-230	0.40-0.80-2.00	0.08-0.15-0.35
						GP1135	110-130-210	0.40-0.80-2.00	0.08-0.15-0.35
			Finishing Machining	Continuous Cutting	GM	GP1115	110-170-240	1.00-2.00-4.00	0.18-0.22-0.40
				Interrupted Cutting		GP1225	100-150-220	1.00-2.00-4.00	0.18-0.22-0.40
				Continuous Cutting	QM	GP31TM	180-230-320	0.50-1.20-2.50	0.10-0.18-0.30
						GP91TM	160-210-300	0.50-1.50-3.00	0.15-0.22-0.35
						GPT6110	140-200-270	0.80-2.00-4.00	0.15-0.20-0.40
						GP1105	120-180-250	0.80-2.00-4.00	0.15-0.20-0.40
						GP1115	110-170-240	0.80-2.00-4.00	0.15-0.20-0.40
				General		GPT6120	110-190-260	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
				Interrupted Cutting		GPT6130	100-170-220	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
						GP1130	100-150-220	0.80-2.00-4.00	0.15-0.20-0.40
						GP1135	900-130-200	0.80-2.00-4.00	0.15-0.20-0.40
				Continuous Cutting	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 Cutting	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
				Interrupted Cutting	SV	GP1225	100-140-220	1.00-2.50-4.50	0.18-0.25-0.45
			Rough Finishing	Continuous Cutting	QR	GPT6110	120-190-230	2.00-3.50-6.50	0.20-0.30-0.60
						GP1105	100-150-210	2.00-3.50-6.50	0.20-0.30-0.60
						GP1115	90-150-200	2.00-3.50-6.50	0.20-0.30-0.60
				General		GPT6120	110-180-220	2.00-3.50-6.50	0.20-0.30-0.60
				Interrupted Cutting		GPT6130	90-160-200	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
						GP1130	90-140-200	2.00-3.50-6.50	0.20-0.30-0.60
						GP1135	80-120-180	2.00-3.50-6.50	0.20-0.30-0.60
			Heavy Machining	Continuous Cutting	QH	GPT6110	80-130-190	3.00-6.00-12.0	0.35-0.60-1.10
						GP1105	80-110-190	3.00-6.00-12.0	0.35-0.60-1.10
						GP1115	70-110-170	3.00-6.00-12.0	0.35-0.60-1.10
				General		GPT6120	80-120-180	3.00-6.00-12.0	0.35-0.60-1.10
				Interrupted Cutting		GPT6130	70-110-170	3.00-6.00-12.0	0.35-0.60-1.10
						GP1225	70-100-170	3.00-6.00-12.0	0.35-0.60-1.10
						GP1135	60-90-150	3.00-6.00-12.0	0.35-0.60-1.10

Recommended Cutting Datas (Negative Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
M	Martensitic Ferrite SUS410 SUS430etc.	⩽HB230	Finishing Machining	Continuous Cutting	SF	GS3115	120-190-250	0.10-0.80-1.50	0.08-0.10-0.30
				General		GM3220	100-150-200	0.10-0.80-1.50	0.08-0.12-0.25
			Finishing Machining	Continuous Cutting	SM	GM1115	200-250-300	0.50-1.20-2.00	0.10-0.20-0.40
						GM3215	120-160-200	1.00-2.00-3.00	0.15-0.20-0.30
				General		GM3220	60-130-180	1.00-2.00-3.00	0.15-0.20-0.35
				Interrupted Cutting		GM1125	180-230-280	0.50-1.80-3.00	0.10-0.20-0.40
						GM3225	60-130-180	1.00-2.00-3.00	0.15-0.20-0.35
				Continuous Cutting	LM	GM1115	200-250-300	0.80-1.80-3.50	0.08-0.18-0.40
						GM3215	120-160-200	0.80-1.80-3.50	0.08-0.18-0.30
				General		GM3220	60-130-180	0.80-1.80-3.50	0.08-0.20-0.40
				Interrupted Cutting		GM1125	180-230-280	0.80-1.80-3.50	0.08-0.18-0.40
						GM3225	60-130-180	0.80-1.80-3.50	0.08-0.20-0.40
			Rough Finishing	Continuous Cutting	LR	GM1115	200-250-300	1.50-3.00-5.00	0.15-0.30-0.50
				General		GM3220	60-130-180	1.50-3.00-5.00	0.15-0.30-0.50
				Interrupted Cutting		GM3225	60-130-180	1.50-3.00-5.00	0.15-0.30-0.50
	Austenite SUS201 SUS304 SUS316etc.	⩽HB250	Finishing Machining	Continuous Cutting	SF	GS3115	100-170-230	0.10-0.80-1.50	0.08-0.10-0.30
				General		GM3220	80-130-180	0.10-0.80-1.50	0.08-0.12-0.25
			Finishing Machining	Continuous Cutting	SM	GM1115	180-230-280	0.50-1.20-2.00	0.10-0.20-0.40
						GM3215	120-160-200	1.00-2.00-3.00	0.15-0.20-0.30
				General		GM3220	60-110-150	1.00-2.00-3.00	0.15-0.20-0.35
				Interrupted Cutting		GM1125	180-230-280	0.50-1.80-3.00	0.10-0.20-0.40
						GM3225	60-130-180	1.00-2.00-3.00	0.15-0.20-0.35
				Continuous Cutting	LM	GM1115	200-250-300	0.80-1.80-3.50	0.08-0.18-0.40
						GM3215	120-160-200	0.80-1.80-3.50	0.08-0.18-0.30
				General		GM3220	60-110-150	0.80-1.80-3.50	0.08-0.20-0.40
				Interrupted Cutting		GM1125	180-230-280	0.80-1.80-3.50	0.08-0.18-0.40
						GM3225	60-130-180	0.80-1.80-3.50	0.08-0.20-0.40
			Rough Finishing	Continuous Cutting	LR	GM1115	180-230-280	1.50-3.00-5.00	0.15-0.30-0.50
				General		GM3220	60-110-150	1.50-3.00-5.00	0.15-0.30-0.50
				Interrupted Cutting		GM3225	60-110-150	1.50-3.00-5.00	0.15-0.30-0.50
K	Ferrosteel FC200 FC250 FC300etc.	⩽HB220	Finishing Machining	Continuous Cutting	WMV	GK1115	230-350-500	0.20-0.40-0.80	1.00-2.00-6.00
				Interrupted Cutting		GK1125	220-320-480	0.20-0.40-0.80	1.00-2.00-6.00
				Continuous Cutting	UK	GK1115	230-350-500	0.50-1.50-3.00	0.10-0.20-0.40
				General		GK1120	230-320-500	0.50-1.50-3.00	0.10-0.20-0.40
				Interrupted Cutting		GK1125	220-320-480	0.50-1.50-3.00	0.10-0.20-0.40
			Rough Finishing	Continuous Cutting	HK	GK1115	220-320-480	0.50-2.00-4.00	0.10-0.25-0.50
				General		GK1120	220-300-480	0.50-2.00-4.00	0.10-0.25-0.50
				Interrupted Cutting		GK1125	210-300-450	0.50-2.00-4.00	0.10-0.25-0.50
			Heavy Machining	Continuous Cutting	Flat	GK1115	210-300-450	1.00-2.50-6.00	0.20-0.30-0.60
				General		GK1120	210-280-450	1.00-2.50-6.00	0.20-0.30-0.60
				Interrupted Cutting		GK1125	200-280-430	1.00-2.50-6.00	0.20-0.30-0.60

Recommended Cutting Datas (Negative Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
K	Ferrosteel FCD450 FCD500 FCD600etc.	≤HB300	Finishing Machining	Continuous Cutting	WMV	GK1115	180-260-380	0.20-0.40-0.80	1.00-2.00-6.00
				Interrupted Cutting		GK1125	160-230-350	0.20-0.40-0.80	1.00-2.00-6.00
				Continuous Cutting	UK	GK1115	180-260-380	0.50-1.50-3.00	0.10-0.20-0.40
				General		GK1120	180-260-380	0.50-1.50-3.00	0.10-0.20-0.40
				Interrupted Cutting		GK1125	160-230-350	0.50-1.50-3.00	0.10-0.20-0.40
			Rough Finishing	Continuous Cutting	HK	GK1115	180-240-360	0.50-2.00-4.00	0.10-0.25-0.50
				General		GK1120	180-240-360	0.50-2.00-4.00	0.10-0.25-0.50
				Interrupted Cutting		GK1125	160-230-350	0.50-2.00-4.00	0.10-0.25-0.50
			Heavy Machining	Continuous Cutting	Flat	GK1115	180-220-350	1.00-2.50-6.00	0.20-0.30-0.60
				General		GK1120	180-220-350	1.00-2.50-6.00	0.20-0.30-0.60
				Interrupted Cutting		GK1125	160-230-350	1.00-2.50-6.00	0.20-0.30-0.60

Recommended Cutting Datas (Positive Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
P	Mild Steel	≤HB180	Finishing Machining	Continuous Cutting	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
				General		GPT6110	210-260-340	0.10-0.60-1.50	0.05-0.10-0.20
						GPT6120	180-240-320	0.10-0.60-1.50	0.05-0.10-0.20
				Interrupted Cutting		GPT6130	170-220-280	0.10-0.60-1.50	0.05-0.10-0.20
			Semi-Finishing to Rough-Finish	Continuous Cutting	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
				General		GP1120	170-200-280	0.40-1.00-2.50	0.07-0.12-0.30
				Interrupted Cutting		GP1225	150-180-260	0.40-1.00-2.50	0.07-0.12-0.30
						GP1130	150-180-260	0.40-1.00-2.50	0.07-0.12-0.30
			Finishing Machining	Continuous Cutting	TP	GP31TM	200-250-300	0.30-1.00-3.00	0.05-0.12-0.25
						GP91TM	180-230-300	0.30-1.20-3.00	0.05-0.15-0.25
	Carbon Steel, Alloy Steel	HB180-280	Finishing Machining	Continuous Cutting	MM	GP31TM	200-250-330	0.10-0.50-1.00	0.03-0.10-0.20
						GP91TM	180-230-300	0.10-0.60-1.50	0.03-0.12-0.20
				General		GPT6110	180-220-290	0.10-0.60-1.50	0.05-0.10-0.20
						GPT6120	150-200-280	0.10-0.60-1.50	0.05-0.10-0.20
				Interrupted Cutting		GPT6130	140-180-240	0.10-0.60-1.50	0.05-0.10-0.20
			Semi-Finishing to Rough-Finish	Continuous Cutting	GP	GP31TM	180-210-280	0.30-0.80-1.50	0.05-0.12-0.22
						GP91TM	160-190-270	0.30-1.00-1.80	0.05-0.15-0.22
						GP1115	140-160-240	0.40-1.00-2.50	0.07-0.12-0.30
				General		GP1120	140-160-240	0.40-1.00-2.50	0.07-0.12-0.30
				Interrupted Cutting		GP1225	120-140-220	0.40-1.00-2.50	0.07-0.12-0.30
						GP1130	120-140-220	0.40-1.00-2.50	0.07-0.12-0.30
			Finishing Machining	Continuous Cutting	TP	GP31TM	180-210-280	0.30-1.00-3.00	0.05-0.12-0.25
						GP91TM	160-190-270	0.30-1.20-3.00	0.05-0.15-0.25
		HB280-350	Finishing Machining	Continuous Cutting	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
				General		GPT6110	160-200-260	0.10-0.60-1.50	0.05-0.10-0.20
						GPT6120	130-180-250	0.10-0.60-1.50	0.05-0.10-0.20
				Interrupted Cutting		GPT6130	120-160-210	0.10-0.60-1.50	0.05-0.10-0.20
			Semi-Finishing to Rough-Finish	Continuous Cutting	GP	GP31TM	160-200-270	0.30-0.80-1.50	0.05-0.12-0.22
						GP91TM	130-160-250	0.30-1.00-1.80	0.05-0.15-0.22
						GP1115	120-160-210	0.40-1.00-2.50	0.07-0.12-0.30
				General		GP1120	120-160-210	0.40-1.00-2.50	0.07-0.12-0.30
				Interrupted Cutting		GP1225	100-140-220	0.40-1.00-2.50	0.07-0.12-0.30
						GP1130	100-140-220	0.40-1.00-2.50	0.07-0.12-0.30
			Finishing Machining	Continuous Cutting	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

Recommended Cutting Datas (Positive Inserts)

ISO	Workpiece Materials	Hardness	Application Range	Cutting Mode	Chip Breaker	Grade	Min-Optimum-Max		
							Cutting Speed Vc(m/min)	Cutting Depth ap(mm)	Feeding Rate f(mm/rew)
M	Martensitic Ferrite SUS410 SUS430	⩽HB300	Finishing to Semi-Finishing	Continuous Cutting	MM	GM1115	200-250-300	0.50-0.70-1.50	0.05-0.10-0.20
				General		GM3220	40-80-140	0.50-0.70-1.50	0.05-0.10-0.20
				Interrupted Cutting		GM3225	40-80-140	0.50-0.70-1.50	0.05-0.10-0.20
			Semi-Finishing to Rough-Finish	Continuous Cutting	GP	GM1115	150-200-250	0.40-1.00-2.50	0.07-0.12-0.30
						GM3215	60-100-160	0.40-1.00-2.50	0.07-0.12-0.25
				General		GM3220	40-80-140	0.40-1.00-2.50	0.07-0.12-0.30
				Interrupted Cutting		GM1125	120-150-180	0.40-1.00-2.50	0.07-0.12-0.30
						GM3225	40-80-140	0.40-1.00-2.50	0.07-0.12-0.30
	Austenite SUS201 SUS304 SUS316	⩽HB250	Finishing to Semi-Finishing	Continuous Cutting	MM	GM1115	200-240-300	0.50-0.70-1.50	0.05-0.10-0.20
				General		GM3220	40-70-140	0.50-0.70-1.50	0.05-0.10-0.20
				Interrupted Cutting		GM3225	40-70-140	0.50-0.70-1.50	0.05-0.10-0.20
			Semi-Finishing to Rough-Finish	Continuous Cutting	GP	GM1115	150-190-250	0.40-1.00-2.50	0.07-0.12-0.30
						GM3215	50-90-150	0.40-1.00-2.50	0.07-0.12-0.25
				General		GM3220	40-70-140	0.40-1.00-2.50	0.07-0.12-0.30
				Interrupted Cutting		GM1125	120-140-180	0.40-1.00-2.50	0.07-0.12-0.30
						GM3225	40-70-140	0.40-1.00-2.50	0.07-0.12-0.30
K	Ferrosteel FC200 FC250 FC300etc.	⩽HB250	Finishing to Semi-Finishing	Continuous Cutting	GP	GK1115	180-280-380	0.30-0.80-2.00	0.05-0.12-0.25
				General		GK1120	180-260-380	0.30-0.80-2.00	0.05-0.12-0.25
				Interrupted Cutting		GK1125	160-250-350	0.30-0.80-2.00	0.05-0.12-0.25
			Semi-Finishing to Rough-Finish	Continuous Cutting	KM	GK1115	180-260-360	1.00-2.00-4.00	0.13-0.20-0.40
				General		GK1120	180-240-360	1.00-2.00-4.00	0.13-0.20-0.40
				Interrupted Cutting		GK1125	160-230-340	1.00-2.00-4.00	0.13-0.20-0.40
	Nodular Cast Iron FCD450 FCD500 FCD600etc.	⩽HB270	Finishing to Semi-Finishing	Continuous Cutting	GP	GK1115	160-250-350	0.30-0.80-2.00	0.05-0.12-0.25
				General		GK1120	160-220-350	0.30-0.80-2.00	0.05-0.12-0.25
				Interrupted Cutting		GK1125	140-230-330	0.30-0.80-2.00	0.05-0.12-0.25
			Semi-Finishing to Rough-Finish	Continuous Cutting	KM	GK1115	160-230-330	1.00-2.00-4.00	0.13-0.20-0.40
				General		GK1120	160-200-330	1.00-2.00-4.00	0.13-0.20-0.40
				Interrupted Cutting		GK1125	140-200-310	1.00-2.00-4.00	0.13-0.20-0.40
N	Aluminum	Harden HB90-100	Finishing to Semi-Finishing	Continuous Cutting	AL	GN9115	250-700-970	0.50-1.20-3.00	0.05-0.10-0.30
				General		GN3125	250-680-960	0.50-1.20-3.50	0.05-0.10-0.30
				Interrupted Cutting		GN9120	250-680-960	0.50-1.20-3.50	0.05-0.10-0.30
						GN9130	250-650-950	0.50-1.20-4.00	0.05-0.10-0.30
		Untreated HB60-90		Continuous Cutting		GN9115	1000-1400-2100	0.50-1.20-3.00	0.05-0.10-0.30
				General		GN3125	950-1300-2000	0.50-1.20-3.50	0.05-0.10-0.30
				Interrupted Cutting		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

C

PCBN/PCD TURNING

PCBN/PCD Turning Indexable Inserts Identification System

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

①Shape Symbol

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

②Relief Angle Symbol

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

③Tolerance Symbol

①	②	③	④	⑤
C	C	G	W	09
T	N	G	A	16

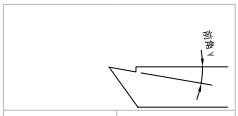
④Hole/Chipbreaker Symbol

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

⑤Edge Length Symbol（ISO）(mm)

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

PCBN/PCD Turning Indexable Inserts Identification System



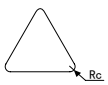
Symbol	Corner-R (mm)
GN	0°
GB	5°
KB	5°

⑧PCD Rake Angle

⑥	⑦	⑧		⑨
T3	04	GB	-	1
04	08	M	-	3

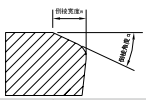
⑥Thickness	
Symbol	Thickness
01	1.59
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

⑦Corner Rc Symbol



Symbol	CR(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

⑧PCBN Edge Type



Symbol	Edge Type
L	Continues Standard
LS	Continues Others
M	Continues Gerenal
H	Interrupted Strength

⑨Number of	
Symbol	Number of
1	1
2	2
3	3

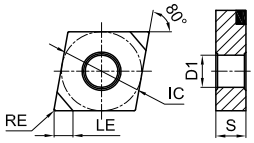
Overview of PCBN/PCD Turning Inserts

Type	Features		Rhombic 80°	Rhombic 55°	Triangle 60°	Rhombic 35°	Trigon 80°	Round 360°
Brazed	•High precision and longer tool life •Wide range of inserttypes •High cost performance	Negative PCBN						
			CNGA	DNGA	TNGA	VNGA	WNGA	
			P061	P061	P062	P062	P063	
		Positive PCBN						
			CCGW	DCGW	TCGW/TPGW	VBGW/VCGW		
			P064	P064	P065	P066		
		Positive PCD						
			CCGW	DCGW	TCGW/TPGW	VCGW		RDEW
			P067	P067	P068-069	P070		P070

PCBN Insert(Negative)

CN□□

Rhombic 80° with Hole

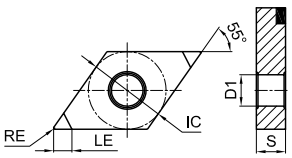


Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	CNGA120404LS-2	2	2.2	12.7	4.76	5.16	0.4	○	●		●		
	CNGA120408LS-2	2	2.2	12.7	4.76	5.16	0.8		●		○		
	CNGA120404M-2	2	2.2	12.7	4.76	5.16	0.4		●	○	○	●	●
	CNGA120408M-2	2	2.2	12.7	4.76	5.16	0.8	○	○	○	●	●	●
	CNGA120412M-2	2	2.2	12.7	4.76	5.16	1.2					●	●
	CNGA120408H-2	2	2.2	12.7	4.76	5.16	0.8					●	

●Standard Stock ○Available upon Order

DN□□

Rhombic 55° with Hole



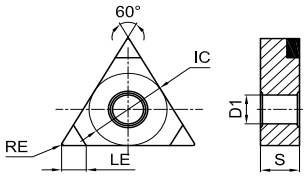
Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	DNGA150404LS-2	2	2.2	12.7	4.76	5.16	0.4	●			●		
	DNGA150404M-2	2	2.2	12.7	4.76	5.16	0.4					●	○
	DNGA150408M-2	2	2.2	12.7	4.76	5.16	0.8	●	●	●		●	●
	DNGA150412M-2	2	2.2	12.7	4.76	5.16	1.2		○			○	●
	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	○				○	

●Standard Stock ○Available upon Order

PCBN Insert(Negative)

TN□□

Triangle 60° with hole

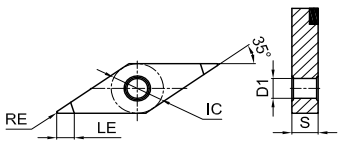


Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	TNGA160404LS-3	3	2.2	9.525	4.76	3.81	0.4				○		
	TNGA160408LS-3	3	2.2	9.525	4.76	3.81	0.8				●		
	TNGA160404M-3	3	2.2	9.525	4.76	3.81	0.4	●		●	●	●	●
	TNGA160408M-3	3	2.2	9.525	4.76	3.81	0.8	○			●	●	●
	TNGA160412M-3	3	2.2	9.525	4.76	3.81	1.2					○	○
	TNGA160408H-3	3	2.2	9.525	4.76	3.81	0.8					○	○

●Standard Stock ○Available upon Order

VN□□

Rhombic 35° with Hole



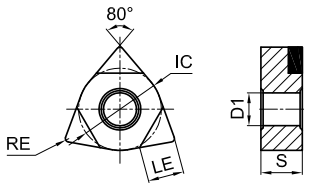
Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	VNGA160404LS-2	2	2.2	9.525	4.76	3.81	0.4				●		
	VNGA160408LS-2	2	2.2	9.525	4.76	3.81	0.8				○		
	VNGA160404M-2	2	2.2	9.525	4.76	3.81	0.4				●	●	●
	VNGA160408M-2	2	2.2	9.525	4.76	3.81	0.8					●	●
	VNGA160412M-2	2	2.2	9.525	4.76	3.81	1.2				●		

●Standard Stock ○Available upon Order

PCBN Insert(Negative)

WN□□

Trigon 80° with hole



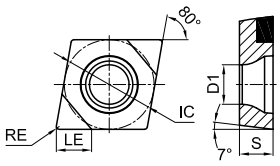
Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	WNGA080404LS-3	3	2.2	12.7	4.76	3.81	0.4				○		
	WNGA080408LS-3	3	2.2	12.7	4.76	3.81	0.8				●		
	WNGA080404M-3	3	2.2	12.7	4.76	3.81	0.4					●	●
	WNGA080408M-3	3	2.2	12.7	4.76	3.81	0.8	●	○	○		●	●
	WNGA080412M-3	3	2.2	12.7	4.76	3.81	1.2		○				●
	WNGA080408H-3	3	2.2	12.7	4.76	3.81	0.8		●			●	

●Standard Stock ○Available upon Order

PCBN Insert （Positive）

CC□□

Rhombic 80° with Hole

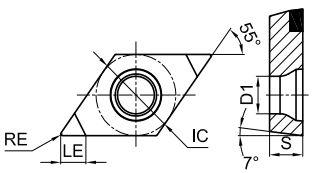


Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	CCGW060202L-2	2	2	6.35	2.38	2.8	0.2					○	
	CCGW060204L-2	2	2	6.35	2.38	2.8	0.4			○	●	●	
	CCGW060208L-2	2	2	6.35	2.38	2.8	0.8		○			○	
	CCGW060204M-2	2	2	6.35	2.38	2.8	0.4					●	
	CCGW060208M-2	2	2	6.35	2.38	2.8	0.8				●		
	CCGW09T304L-2	2	2	9.525	3.97	4.4	0.4	●			●		
	CCGW09T308L-2	2	2	9.525	3.97	4.4	0.8				○	○	
	CCGW09T304M-2	2	2	9.525	3.97	4.4	0.4	●	○	○		●	●
	CCGW09T308M-2	2	2	9.525	3.97	4.4	0.8	●	○	○	●	●	●
	CCGW09T308H-2	2	2	9.525	3.97	4.4	0.8					●	○

●Standard Stock ○Available upon Order

DC□□

Rhombic 55° with Hole



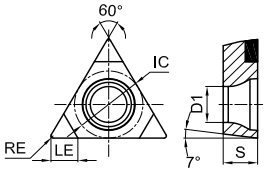
Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	DCGW070202L-2	2	2	6.35	2.38	2.8	0.2					●	
	DCGW070204L-2	2	2	6.35	2.38	2.8	0.4		○		○	●	
	DCGW070204M-2	2	2	6.35	2.38	2.8	0.4					○	
	DCGW070208M-2	2	2	6.35	2.38	2.8	0.8					○	
	DCGW11T304L-2	2	2	9.525	3.97	4.4	0.4	○		○			
	DCGW11T308L-2	2	2	9.525	3.97	4.4	0.8	○			○		
	DCGW11T304M-2	2	2	9.525	3.97	4.4	0.4	●	●	●	●	●	●
	DCGW11T308M-2	2	2	9.525	3.97	4.4	0.8	●	○	●	●	●	●

●Standard Stock ○Available upon Order

PCBN Insert （Positive）

TC□□

Triangle 60° with Hole

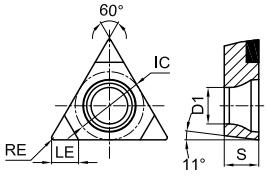


Ordering code		Flute	Dimension (mm)					PCBNGrade			Coating PCBN		
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	TCGW090204L-3	3	2	5.56	2.38	2.8	0.4	●					
	TCGW110304L-3	3	2	6.35	3.18	3.4	0.4	○					
	TCGW110304M-3	3	2	6.35	3.18	3.4	0.4					●	
	TCGW110308M-3	3	2	6.35	3.18	3.4	0.8						○

●Standard Stock ○Available upon Order

TP□□

Triangle 60° with Hole



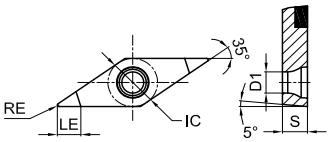
Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	TPGW080202L-1	1	2	4.76	2.38	2.34	0.2		●		○		
	TPGW080204L-1	1	2	4.76	2.38	2.34	0.4				●		
	TPGW080208L-1	1	2	4.76	2.38	2.34	0.8				○		
	TPGW090202L-3	3	2	5.56	2.38	2.8	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	○					
	TPGW110204L-3	3	2	6.35	3.18	2.8	0.4		●		○		
	TPGW110208L-3	3	2	6.35	3.18	2.8	0.8				○		
	TPGW110304L-3	3	2	6.35	3.18	3.4	0.4	●	●	○	●	●	
	TPGW110308L-3	3	2	6.35	3.18	3.4	0.8				●	●	
	TPGW110304M-3	3	2	6.35	3.18	3.4	0.4					○	○
	TPGW110308M-3	3	2	6.35	3.18	3.4	0.8					○	

●Standard Stock ○Available upon Order

PCBN Insert （Positive）

VB□□

Rhombic 35° with Hole

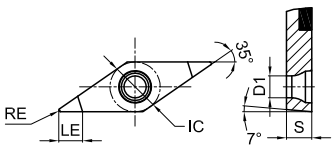


Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	VBGW110302L-2	2	2	6.35	3.18	2.8	0.2			○		○	○
	VBGW110304L-2	2	2	6.35	3.18	2.8	0.4			●	○	●	
	VBGW110308L-2	2	2	6.35	3.18	2.8	0.8					○	○
	VBGW110304M-2	2	2	6.35	3.18	2.8	0.4					○	
	VBGW110308M-2	2	2	6.35	3.18	2.8	0.8					○	
	VBGW160404L-2	2	2	9.525	4.76	4.4	0.4	○				○	
	VBGW160408L-2	2	2	9.525	4.76	4.4	0.8	○				○	
	VBGW160404M-2	2	2	9.525	4.76	4.4	0.4				○	●	○
	VBGW160408M-2	2	2	9.525	4.76	4.4	0.8				●	○	●

●Standard Stock ○Available upon Order

VC□□

Rhombic 35° with Hole



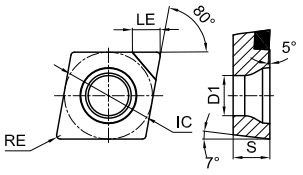
Ordering code		Flute	Dimension (mm)					PCBNGrade		Coating PCBN			
			LE	IC	S	D1	RE	BKN115P	BSN115P	BKC120P	BHC115P	BHC125P	BHC135P
	VCGW110302L-2	2	2	6.35	3.18	2.8	0.2			○			
	VCGW110304L-2	2	2	6.35	3.18	2.8	0.4	●			○		
	VCGW110308L-2	2	2	6.35	3.18	2.8	0.8				○		
	VCGW110304M-2	2	2	6.35	3.18	2.8	0.4	○					
	VCGW110308M-2	2	2	6.35	3.18	2.8	0.8	○					
	VCGW160404L-2	2	2	9.525	4.76	4.4	0.4					○	
	VCGW160408L-2	2	2	9.525	4.76	4.4	0.8					○	
	VCGW160404M-2	2	2	9.525	4.76	4.4	0.4	●					
	VCGW160408M-2	2	2	9.525	4.76	4.4	0.8					●	

●Standard Stock ○Available upon Order

PCD Insert （Positive）

CC□□

Rhombic 80° with Hole

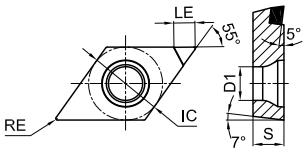


Ordering code		Flute	Dimension (mm)					PCDGrade
			LE	IC	S	D1	RE	DNN125P
	CCGW060202GB-1	1	2.5	6.35	2.38	2.8	0.2	●
	CCGW060204GB-1	1	2.5	6.35	2.38	2.8	0.4	○
	CCGW09T302GB-1	1	3	9.525	3.97	4.4	0.2	●
	CCGW09T304GB-1	1	3	9.525	3.97	4.4	0.4	○
	CCGW09T308GB-1	1	3	9.525	3.97	4.4	0.8	○
	CCGW120404GB-1	1	3	12.7	4.76	5.5	0.4	●
	CCGW120408GB-1	1	3	12.7	4.76	5.5	0.8	○
	CCGW060202KB-1	1	2.5	6.35	2.38	2.8	0.2	●
	CCGW060204KB-1	1	2.5	6.35	2.38	2.8	0.4	○
	CCGW09T302KB-1	1	3	9.525	3.97	4.4	0.2	○
	CCGW09T304KB-1	1	3	9.525	3.97	4.4	0.4	●
	CCGW09T308KB-1	1	3	9.525	3.97	4.4	0.8	○

●Standard Stock ○Available upon Order

DC□□

Rhombic 55° with Hole



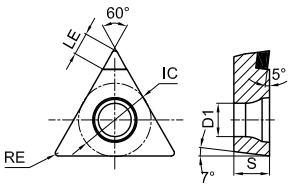
Ordering code		Flute	Dimension (mm)					PCDGrade
			LE	IC	S	D1	RE	DNN125P
	DCGW070202GB-1	1	2.5	6.35	2.38	2.8	0.2	○
	DCGW070204GB-1	1	2.5	6.35	2.38	2.8	0.4	●
	DCGW11T302GB-1	1	3	9.525	3.97	4.4	0.2	○
	DCGW11T304GB-1	1	3	9.525	3.97	4.4	0.4	○
	DCGW11T308GB-1	1	3	9.525	3.97	4.4	0.8	●
	DCGW070202KB-1	1	2.5	6.35	2.38	2.8	0.2	○
	DCGW070204KB-1	1	2.5	6.35	2.38	2.8	0.4	●
	DCGW11T302KB-1	1	3	9.525	3.97	4.4	0.2	○
	DCGW11T304KB-1	1	3	9.525	3.97	4.4	0.4	●
	DCGW11T308KB-1	1	3	9.525	3.97	4.4	0.8	○

●Standard Stock ○Available upon Order

PCD Insert （Positive）

TC□□

Triangle 60° with hole



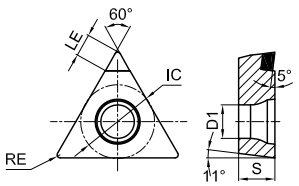
Ordering code		Flute	Dimension (mm)					PCDGrade
			LE	IC	S	D1	RE	DNN125P
	TCGW080202GB-1	1	2.5	4.76	2.38	2.34	0.2	○
	TCGW080204GB-1	1	2.5	4.76	2.38	2.34	0.4	●
	TCGW090202GB-1	1	2.5	5.56	2.38	2.8	0.2	○
	TCGW090204GB-1	1	2.5	5.56	2.38	2.8	0.4	●
	TCGW110302GB-1	1	2.5	6.35	3.18	3.4	0.2	○
	TCGW110304GB-1	1	2.5	6.35	3.18	3.4	0.4	●
	TCGW080202KB-1	1	2.5	4.76	2.38	2.34	0.2	○
	TCGW080204KB-1	1	2.5	4.76	2.38	2.34	0.4	●
	TCGW090202KB-1	1	2.5	5.56	2.38	2.8	0.2	○
	TCGW090204KB-1	1	2.5	5.56	2.38	2.8	0.4	●
	TCGW110302KB-1	1	2.5	6.35	3.18	3.4	0.2	○
	TCGW110304KB-1	1	2.5	6.35	3.18	3.4	0.4	●

●Standard Stock ○Available upon Order

PCD Insert （Positive）

TP□□

Triangle 60° with hole



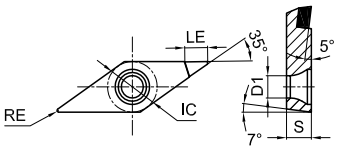
Ordering code		Flute	Dimension (mm)					PCDGrade
			LE	IC	S	D1	RE	DNN125P
	TPGW080202GB-1	1	2.5	4.76	2.38	2.34	0.2	○
	TPGW080204GB-1	1	2.5	4.76	2.38	2.34	0.4	●
	TPGW090202GB-1	1	2.5	5.56	2.38	2.8	0.2	○
	TPGW090204GB-1	1	2.5	5.56	2.38	2.8	0.4	●
	TPGW110302GB-1	1	2.5	6.35	3.18	3.4	0.2	○
	TPGW110304GB-1	1	2.5	6.35	3.18	3.4	0.4	●
	TPGW160402GB-1	1	3	9.525	4.76	4.4	0.2	○
	TPGW160404GB-1	1	3	9.525	4.76	4.4	0.4	○
	TPGW160408GB-1	1	3	9.525	4.76	4.4	0.8	●
	TPGW080202KB-1	1	2.5	4.76	2.38	2.34	0.2	○
	TPGW080204KB-1	1	2.5	4.76	2.38	2.34	0.4	●
	TPGW090202KB-1	1	2.5	5.56	2.38	2.8	0.2	○
	TPGW090204KB-1	1	2.5	5.56	2.38	2.8	0.4	●
	TPGW110302KB-1	1	2.5	6.35	3.18	3.4	0.2	○
	TPGW110304KB-1	1	2.5	6.35	3.18	3.4	0.4	●
	TPGW160402KB-1	1	3	9.525	4.76	4.4	0.2	○
	TPGW160404KB-1	1	3	9.525	4.76	4.4	0.4	●
	TPGW160408KB-1	1	3	9.525	4.76	4.4	0.8	○

●Standard Stock ○Available upon Order

PCD Insert （Positive）

VC□□

Rhombic 35° with Hole

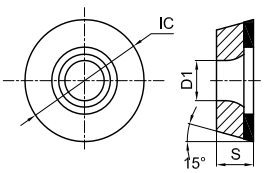


Ordering code		Flute	Dimension (mm)					PCDGrade
			LE	IC	S	D1	RE	DNN125P
	VCGW110302GB-1	1	3	6.35	3.18	2.8	0.2	○
	VCGW110304GB-1	1	3	6.35	3.18	2.8	0.4	●
	VCGW160402GB-1	1	3	9.525	4.76	4.4	0.2	○
	VCGW160404GB-1	1	3	9.525	4.76	4.4	0.4	●
	VCGW160408GB-1	1	3	9.525	4.76	4.4	0.8	○
	VCGW110302KB-1	1	3	6.35	3.18	2.8	0.2	○
	VCGW110304KB-1	1	3	6.35	3.18	2.8	0.4	●
	VCGW160402KB-1	1	3	9.525	4.76	4.4	0.2	○
	VCGW160404KB-1	1	3	9.525	4.76	4.4	0.4	●
	VCGW160408KB-1	1	3	9.525	4.76	4.4	0.8	○

●Standard Stock ○Available upon Order

RD□□

Round 360° with hole



Ordering code		Flute	Dimension (mm)			PCDGrade
			IC	S	D1	DNN125P
	RDEW080300GN-1	1	8	3.18	2.94	○
	RDEW100300GN-1	1	10	3.18	4.6	●
	RDEW120400GN-1	1	12	4.76	4.4	○
	RDEW160400GN-1	1	16	4.76	5.5	●

●Standard Stock ○Available upon Order

Recommended Cutting Datas

PCBN insert

ISO	Workpiece Material	Hardness	Cutting Range	Appli-cation	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
	Nodular cast iron	QT450~QT700	Finishing	General	BKC120P	150-300-500	0.10-0.20-0.50	0.05-0.12-0.30
H	Hardened Material	⩾HRC50	Finishing	Continous	BHC115P	120-150-220	0.05-0.10-0.20	0.05-0.10-0.20
	Hardened Material	⩾HRC50	Finishing-Rounging	General	BHC125P	100-130-180	0.05-0.10-0.50	0.05-0.10-0.20
	Hardened Material	⩾HRC50	Finishing-Semi-finishing	interrupt	BHC135P	80-100-150	0.05-0.10-0.40	0.05-0.10-0.20
S	Powder Metallurgy	HRB50~90	Finishing	Continous	BSN115P	50-150-300	0.05-0.20-0.50	0.05-0.12-0.30

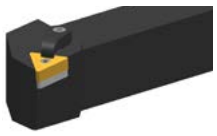
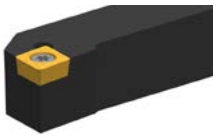
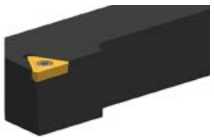
PCD insert

ISO	Workpiece Material	Cutting Range	Appli-cation	Grade	Min-Optimum-Max		
					Vc(m/min)	ap(mm)	f(mm/rev)
N	Aluminum Alloy	Finishing	General	DNN125P	300-1200-3000	0.05-0.20-0.50	0.05-0.10-0.20
	Copper Alloy	Finishing	General	DNN125P	200-500-1000	0.05-0.40-2.00	0.05-0.10-0.20
	plastics	Finishing	General	DNN125P	100-600-1000	0.10-0.40-2.00	0.05-0.10-0.40
	Wood and inorganic	Finishing	General	DNN125P	200-2000-4000	0.10-0.50-2.00	0.05-0.10-0.40
	Cemented Alloy	Finishing	General	DNN125P	10-20-30	0.05-0.20-0.50	0.05-0.10-0.20
	Graphite	Finishing	General	DNN125P	100-300-600	0.10-0.40-2.00	0.10-0.25-1.00

D

TURNING TOOLHOLDERS

Overview of Turning Toolholders

MCBNR/L	MCLNR/L	MDJNR/L	MDPNN	MDQNR/L
P076	P076	P077	P077	P078
				
MSBNR/L	MSKNR/L	MSSNR/L	MTENN	MTFNR/L
P078	P079	P079	P080	P080
				
MTGNR/L	MTJNR/L	MVJNR/L	MVQNR/L	MWLNR/L
P081	P081	P082	P082	P083
				
SCLCR/L	SDJCR/L	SSDCN	STGCR/L	SVJCR/L
P084	P084	P085	P085	P086
				
SWLCR/L	SCLCR/L	SCKCR/L	SCLCR/L-A16	SDUCR/L
P087	P090	P090	P091	P091
				
SDQCR/L	SDXCR/L	SSKCR/L	STUCR/L	STWCR/L
P092	P092	P093	P093	P094
				
STFCR/L	SVUCR/L	SWLCR/L	SCLPR/L	STFPR/L
P094	P095	P095	P096	P096
				

External Turning Toolholder Identification System

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

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

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

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

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

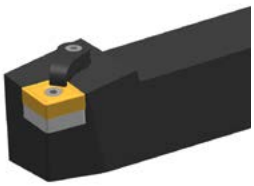
⑥Tool Saction	
8	8
10	10
12	12
16	16
20	20
25	25
32	32

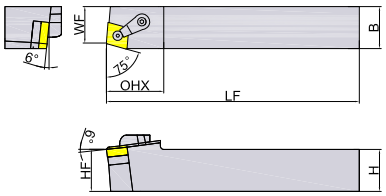
⑦Tool Length	
D	60
E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200

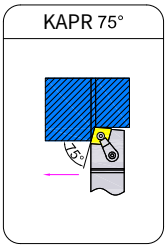
⑧Cutting Edge Length(mm)						
Insert IC(mm)	Insert Shape					
	Square	Triangle	Round	80° Rhombic	55° Rhombic	35° Rhombic
6	-	-	06	-	-	-
6.35	-	11	-	06	07	11
7.94	-	13	-	-	-	-
8	-	-	08	-	-	-
9.525	09	16	-	09	11	16
10	-	-	10	-	-	-
12	-	-	12	-	-	-
12.7	-	22	-	12	15	-
15.875	15	27	-	16	-	-
16	-	-	16	-	-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

External Turning Toolholder（Negative）

MCBNR/L



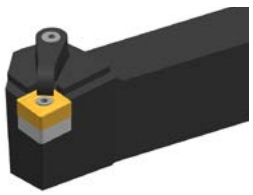


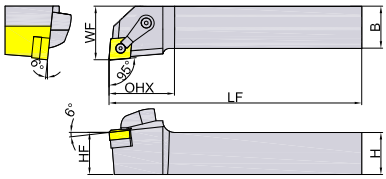


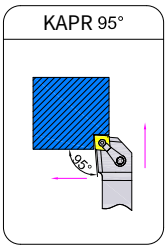
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MCBNR/L2020K12	20	20	125	32	20	17	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L	●	○
MCBNR/L2525M12	25	25	150	32	25	22	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L	●	●
MCBNR/L3232P12	32	32	170	32	32	27	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	●
MCBNR/L2525M16	25	25	150	42	25	22	CN**1606**	DCN1604M	SPM080220F	CAM03	SDM060250	TH30L	●	○
MCBNR/L3232P19	32	32	170	42	32	27	CN**1906**	DCN1904M	SPM100240F	CAM05	SDM080350F	TH40L	●	●

●Stock ○Available upon Order

MCLNR/L





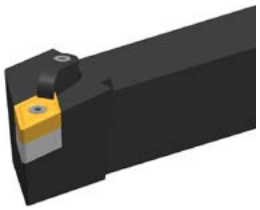


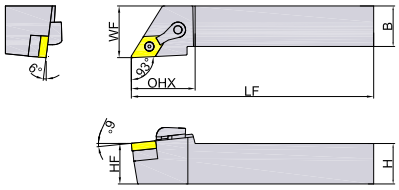
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MCLNR/L2020K12	20	20	125	32	20	25	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L	●	●
MCLNR/L2525M12	25	25	150	32	25	32	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L	●	●
MCLNR/L3232P12	32	32	170	32	32	40	CN**1204**	DCN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	●
MCLNR/L2525M16	25	25	150	42	25	32	CN**1606**	DCN1604M	SPM080220F	CAM03	SDM060250	TH30L	●	●
MCLNR/L3232P16	32	32	170	42	32	40	CN**1606**	DCN1604M	SPM080220F	CAM03	SDM060280	TH30L	●	●
MCLNR/L3232P19	32	32	170	42	32	40	CN**1906**	DCN1904M	SPM100240F	CAM05	SDM080350F	TH40L	●	●

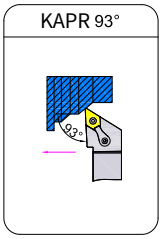
●Stock ○Available upon Order

External Turning Toolholder（Negative）

MDJNR/L



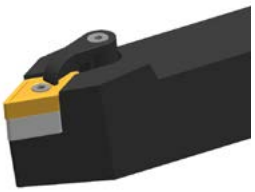


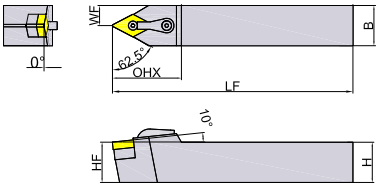


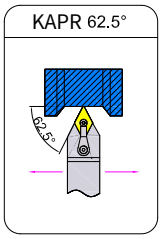
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MDJNR/L2020K11	20	20	125	32	20	25	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L	●	●
MDJNR/L2020K1504	20	20	125	38	20	25	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L	●	●
MDJNR/L2525M1504	25	25	150	38	25	32	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060250	TH25L TH30L	●	●
MDJNR/L2525M1506	25	25	150	38	25	32	DN**1506**	DDN1504M	SPM060190	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





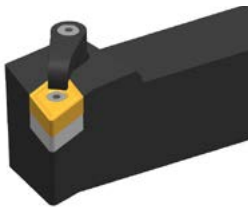


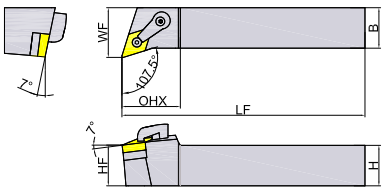
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock
	H	B	LF	OHX	HF	WF							
MDPNN2020K11	20	20	125	35	20	10	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L	●
MDPNN2020K1504	20	20	125	42	20	10	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L	●
MDPNN2525M1504	25	25	150	42	25	12.5	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060250	TH25L TH30L	●
MDPNN2525M1506	25	25	150	42	25	12.5	DN**1506**	DDN1504M	SPM060190	CAM03	SDM060250	TH25L TH30L	●
MDPNN3232P1506	32	32	170	42	32	16	DN**1506**	DDN1504M	SPM060190	CAM03	SDM060280	TH25L TH30L	●

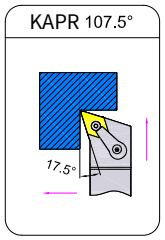
●Stock ○Available upon Order

External Turning Toolholder（Negative）

MDQNR/L



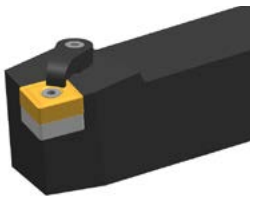


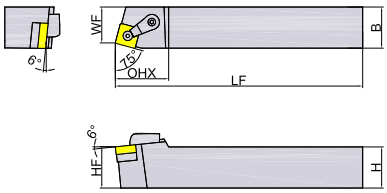


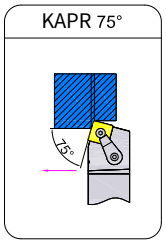
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MDQNR/L2020K11	20	20	125	32	20	25	DN**1104**	DDN1103M	SPM050130	CAM02	SDM060200	TH20L TH30L	●	○
MDQNR/L2020K1504	20	20	125	36	20	25	DN**1504**	DDN1504M	SPM060170	CAM03	SDM060200	TH25L TH30L	●	○
MDQNR/L2525M1504	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/L





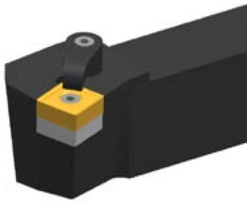


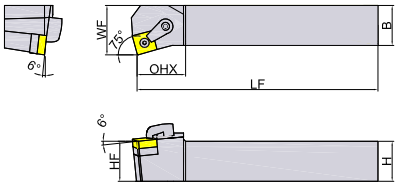
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MSBNR/L2020K12	20	20	125	32	20	17	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L	●	○
MSBNR/L2525M12	25	25	150	32	25	22	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L	●	○
MSBNR/L3232P12	32	32	170	32	32	27	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	○
MSBNR/L2525M15	25	25	150	42	25	22	SN**1506**	DSN1504M	SPM080220F	CAM03	SDM060250	TH30L	●	○
MSBNR/L3232P19	32	32	170	42	32	27	SN**1906**	DSN1904M	SPM100240F	CAM05	SDM080350F	TH40L	●	●

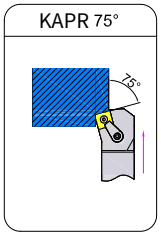
●Stock ○Available upon Order

External Turning Toolholder（Negative）

MSKNR/L



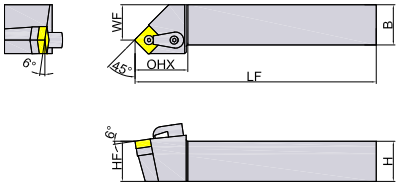


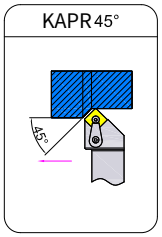


Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MSKNR/L2020K12	20	20	125	32	20	25	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L	●	○
MSKNR/L2525M12	25	25	150	32	25	32	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L	●	○
MSKNR/L3232P12	32	32	170	32	32	40	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	○
MSKNR/L2525M15	25	25	150	42	25	32	SN**1506**	DSN1504M	SPM080220F	CAM03	SDM060250	TH30L	●	○
MSKNR/L3232P19	32	32	170	42	32	40	SN**1906**	DSN1904M	SPM100240F	CAM05	SDM080350F	TH40L	●	○

●Stock ○Available upon Order

MSSNR/L



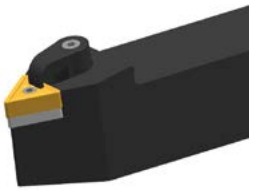


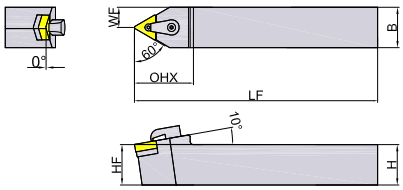
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MSSNR/L2020K12	20	20	125	32	20	17	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060200	TH25L TH30L	●	●
MSSNR/L2525M12	25	25	150	32	25	22	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060250	TH25L TH30L	●	●
MSSNR/L3232P12	32	32	170	32	32	27	SN**1204**	DSN1204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	○
MSSNR/L2525M15	25	25	150	42	25	22	SN**1506**	DSN1504M	SPM080220F	CAM03	SDM060250	TH30L	●	○
MSSNR/L3232P19	32	32	170	42	32	27	SN**1906**	DSN1904M	SPM100240F	CAM05	SDM080350F	TH40L	●	●

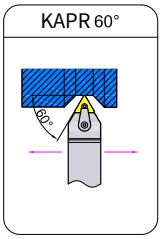
●Stock ○Available upon Order

External Turning Toolholder（Negative）

MTENN



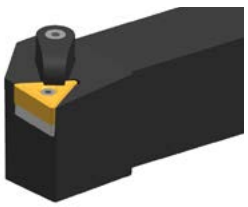


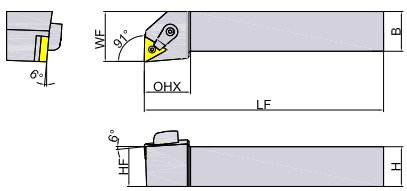


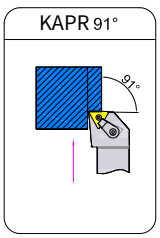
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock
	H	B	LF	OHX	HF	WF							
MTENN2020K16	20	20	125	32	20	10	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060200	TH20L TH30L	●
MTENN2525M16	25	25	150	32	25	12.5	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●
MTENN3232P16	32	32	170	32	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/L





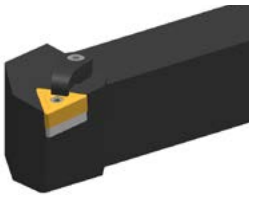


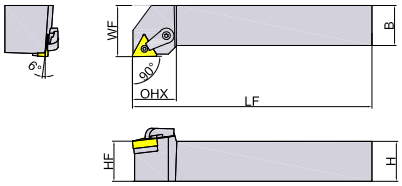
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MTFNR/L2020K16	20	20	125	32	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	○
MTFNR/L2525M16	25	25	150	32	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	○
MTFNR/L3232P16	32	32	170	32	32	40	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L	●	○
MTFNR/L3232P22	32	32	170	38	32	40	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	○

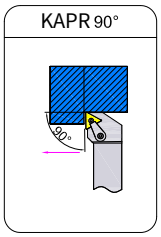
●Stock ○Available upon Order

External Turning Toolholder（Negative）

MTGNR/L



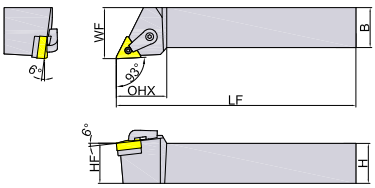


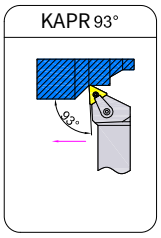


Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MTGNR/L2020K16	20	20	125	32	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	○
MTGNR/L2525M16	25	25	150	32	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	●
MTGNR/L3232P16	32	32	170	32	32	40	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L	●	○
MTGNR/L3232P22	32	32	170	38	32	40	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	○

●Stock ○Available upon Order

MTJNR/L



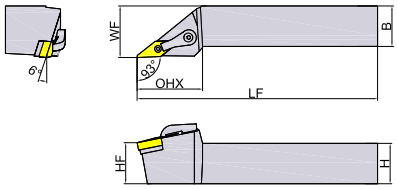


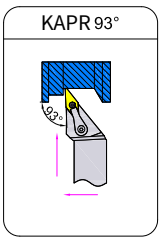
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MTJNR/L2020K16	20	20	125	32	20	25	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	●
MTJNR/L2525M16	25	25	150	32	25	32	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	●
MTJNR/L3232P16	32	32	170	32	32	40	TN**1604**	DTN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L	●	○
MTJNR/L3232P22	32	32	170	38	32	40	TN**2204**	DTN2204M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	●

●Stock ○Available upon Order

External Turning Toolholder（Negative）

MVJNR/L

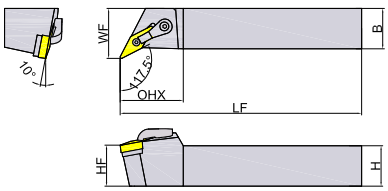


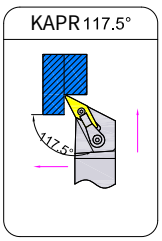


Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MVJNR/L2020K16	20	20	125	42	20	25	VN**1604**	DVN1603M	SPM050130	CAM04	SDM060250	TH20L TH30L	●	●
MVJNR/L2525M16	25	25	150	42	25	32	VN**1604**	DVN1603M	SPM050130	CAM04	SDM060250	TH20L TH30L	●	●
MVJNR/L3232P16	32	32	170	42	32	40	VN**1604**	DVN1603M	SPM050130	CAM04	SDM060280	TH20L TH30L	●	●

●Stock ○Available upon Order

MVQNR/L



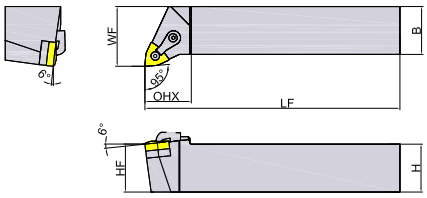


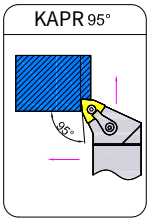
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MVQNR/L2020K16	20	20	125	42	20	25	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	●
MVQNR/L2525M16	25	25	150	42	25	32	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060250	TH20L TH30L	●	●
MVQNR/L3232P16	32	32	170	42	32	40	VN**1604**	DVN1603M	SPM050130	CAM02	SDM060280	TH20L TH30L	●	●

●Stock ○Available upon Order

External Turning Toolholder（Negative）

MWLNR/L



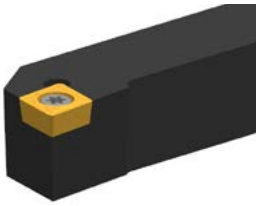


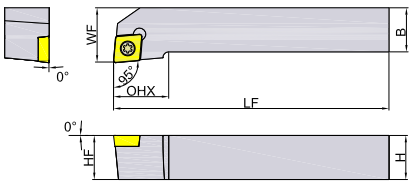
Ordering Code	Dimension (mm)						Insert	Shim	Pin	Clamp	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF							R	L
MWLNR/L2525M06T3	25	25	150	28	25	32	WN**06T3**	DWN0603M	SPM050130	CAM01	SDM050200	TH20L TH30L	●	●
MWLNR/L2020K0604	20	20	125	28	20	25	WN**0604**	DWN0603M	SPM050130	CAM01	SDM050200	TH20L TH30L	●	●
MWLNR2525M0604	20	20	150	28	25	32	WN**0604**	DWN0603M	SPM050130	CAM01	SDM050200	TH20L TH30L	●	
MWLNR/L2020K08	20	20	125	32	20	25	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	32	32	40	WN**0804**	DWN0804M	SPM060170	CAM02	SDM060280	TH25L TH30L	●	●

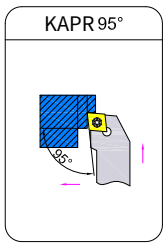
●Stock ○Available upon Order

External Turning Toolholder(Positive)

SCLCR/L



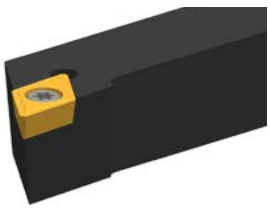


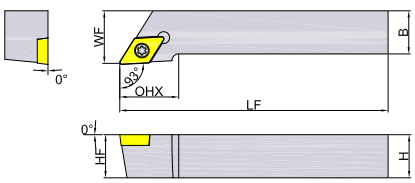


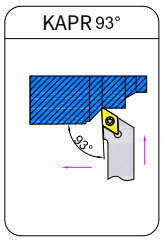
Ordering Code	Dimension (mm)						Insert	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF				R	L
SCLCR/L1010F06	10	10	80	12	10	12	CC**0602**	SI60M025060-03510	TT08P	●	●
SCLCR/L1212H09	12	12	100	16	12	16	CC**09T3**	SI60M040100-05812	TT15P	●	○
SCLCR/L1616H09	16	16	100	16	16	20	CC**09T3**	SI60M040100-05812	TT15P	●	●
SCLCR/L2020K09	20	20	125	16	20	25	CC**09T3**	SI60M040100-05812	TT15P	●	●
SCLCR/L2525M12	25	25	150	20	25	32	CC**1204**	SI60M050120-07012	TT20P	●	●

●Stock ○Available upon Order

SDJCR/L





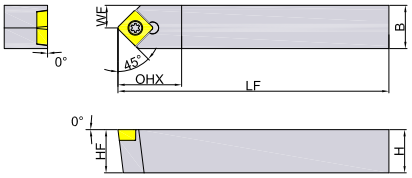


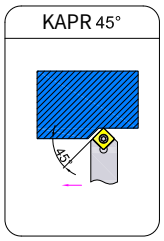
Ordering Code	Dimension (mm)						Insert	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF				R	L
SDJCR/L1010F07	10	10	80	15	10	12	DC**0702**	SI60M025060-03510	TT08P	●	●
SDJCR1212H07	12	12	100	15	12	16	DC**0702**	SI60M025060-03510	TT08P	●	
SDJCR/L1616H11	16	16	100	20	16	20	DC**11T3**	SI60M040100-05812	TT15P	●	●
SDJCR/L2020K11	20	20	125	20	20	25	DC**11T3**	SI60M040100-05812	TT15P	●	●
SDJCR/L2525M11	25	25	150	20	25	32	DC**11T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

External Turning Toolholder(Positive)

SSDCN

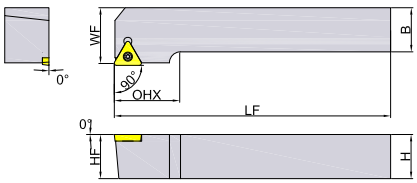


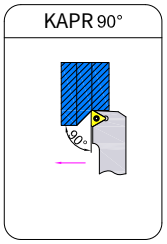


Ordering Code	Dimension (mm)						Insert	Screw	Wrench	Stock
	H	B	LF	OHX	HF	WF				
SSDCN1212H09	12	12	80	15	12	6	SC**09T3**	SI60M040100-05812	TT15P	●
SSDCN1616H09	16	16	100	15	16	8	SC**09T3**	SI60M040100-05812	TT15P	●
SSDCN2020K09	20	20	125	15	20	10	SC**09T3**	SI60M040100-05812	TT15P	○
SSDCN2525M12	25	25	150	20	25	12.5	SC**1204**	SI60M050120-07012	TT20P	●

●Stock ○Available upon Order

STGCR/L



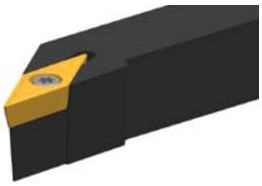


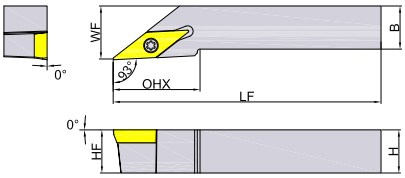
Ordering Code	Dimension (mm)						Insert	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF				R	L
STGCR1010F09	10	10	80	12	10	12	TC**0902**	SI60M022060-03008	TT06P	●	
STGCR/L1212H11	12	12	100	16	12	16	TC**1102**	SI60M025060-03510	TT08P	●	○
STGCR/L1616H11	16	16	100	20	16	20	TC**1102**	SI60M025060-03510	TT08P	●	●
STGCR/L2020K16	20	20	125	25	20	25	TC**16T3**	SI60M040100-05812	TT15P	●	●
STGCR/L2525M16	25	25	150	25	25	32	TC**16T3**	SI60M040100-05812	TT15P	●	●

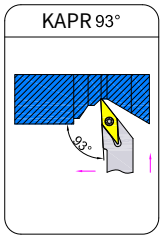
●Stock ○Available upon Order

External Turning Toolholder(Positive)

SVJCR/L





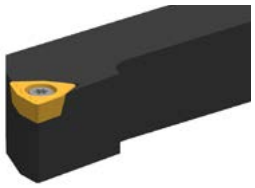


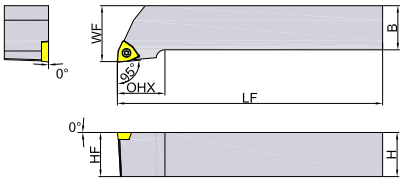
Ordering Code	Dimension (mm)						Insert	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF				R	L
SVJCR1212H11	12	12	100	25	12	16	VC**1103**	SI60M025060-03510	TT08P	●	
SVJCR/L1616H11	16	16	100	25	16	20	VC**1103**	SI60M025060-03510	TT08P	●	●
SVJCR/L2020K16	20	20	125	35	20	25	VC**1604**	SI60M040100-05812	TT15P	●	●
SVJCR/L2525M16	25	25	150	35	25	32	VC**1604**	SI60M040100-05812	TT15P	●	●

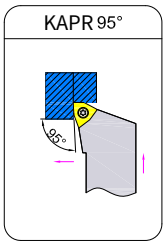
●Stock ○Available upon Order

External Turning Toolholder(Positive)

SWLCR/L







Ordering Code	Dimension (mm)						Insert	Screw	Wrench	Stock	
	H	B	LF	OHX	HF	WF				R	L
SWLCR/L1212H06	12	12	100	15	12	16	WC**06T3**	SI60M040100-05812	TT15P	●	●
SWLCR/L1616H06	16	16	100	15	16	20	WC**06T3**	SI60M040100-05812	TT15P	●	●
SWLCR/L2020K06	20	20	125	15	20	25	WC**06T3**	SI60M040100-05812	TT15P	●	●
SWLCR/L2525M06	25	25	150	20	25	32	WC**06T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

Internal Turning Toolholders Identification System

S 16 M S C

① ② ③ ④ ⑤

① Tool Material	
A	Steel with coolant hole
C	Carbide shank
E	Carbide bar with coolant hole
S	Steel shank

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

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

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

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

L C R 09

⑥ ⑦ ⑧ ⑨

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

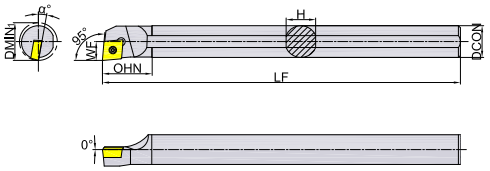
⑧Hand of Tool	
R	Right Hand
L	Left Hand

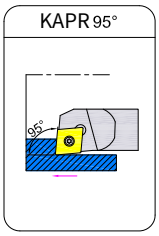
⑦Insert Clearanoe Angle	
C	7°
B	5°
N	0°
P	11°

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

Internal Turning Toolholder

SCLCR/L

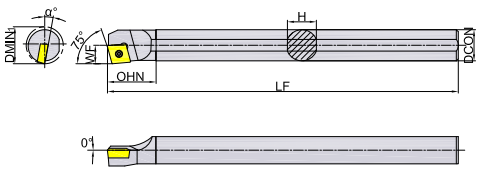


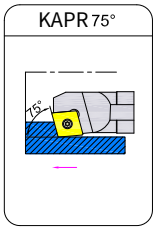


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-SCLCR/L06	10	8	5.5	125	12	7	13	CC**0602**	SI60M025060-03510	TT08P	●	●
S10K-SCLCR/L06	12	10	6.5	125	15	9	12	CC**0602**	SI60M025060-03510	TT08P	●	●
S12M-SCLCR/L06	16	12	8	150	18	11	10	CC**0602**	SI60M025060-03510	TT08P	●	●
S12M-SCLCR/L09	16	12	8	150	18	11	12	CC**09T3**	SI60M040100-05812	TT15P	●	●
S16Q-SCLCR/L09	20	16	10	180	24	15	10	CC**09T3**	SI60M040100-05812	TT15P	●	●
S20R-SCLCR/L09	25	20	12	200	30	18	8	CC**09T3**	SI60M040100-05812	TT15P	●	●
S25S-SCLCR/L09	32	25	16	250	38	23	6	CC**09T3**	SI60M040100-05812	TT15P	●	●
S25S-SCLCR/L12	32	25	16	250	38	23	8	CC**1204**	SI60M050120-07012	TT20P	●	●

●Stock ○Available upon Order

SCKCR/L



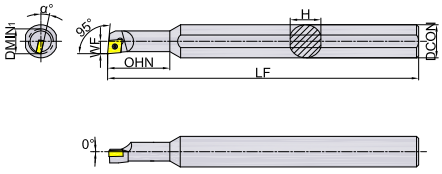


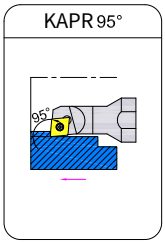
Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-SCKCR/L06	10	8	5.5	125	12	7	13	CC**0602**	SI60M025060-03510	TT08P	●	○
S10K-SCKCR/L06	12	10	6.5	125	15	9	12	CC**0602**	SI60M025060-03510	TT08P	●	○
S12M-SCKCR/L06	16	12	8	150	18	11	10	CC**0602**	SI60M025060-03510	TT08P	○	○
S12M-SCKCR/L09	16	12	8	150	18	11	12	CC**09T3**	SI60M040100-05812	TT15P	●	○
S16Q-SCKCR/L09	20	16	10	180	24	15	10	CC**09T3**	SI60M040100-05812	TT15P	●	○
S20R-SCKCR/L09	25	20	12	200	30	18	8	CC**09T3**	SI60M040100-05812	TT15P	○	○
S25S-SCKCR/L09	32	25	16	250	38	23	6	CC**09T3**	SI60M040100-05812	TT15P	●	○

●Stock ○Available upon Order

Internal Turning Toolholder

SCLCR/L-A16

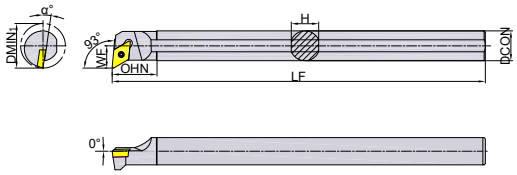


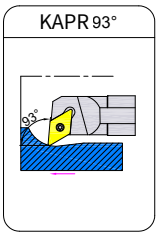


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S07M-SCLCR/L06-A16	9	16	4.25	150	18	15	15	CC**0602**	SI60M025060-03510	TT08P	●	○
S08M-SCLCR/L06-A16	10	16	5	150	20	15	13	CC**0602**	SI60M025060-03510	TT08P	●	○
S10M-SCLCR/L06-A16	13	16	6	150	26	15	12	CC**0602**	SI60M025060-03510	TT08P	●	●
S12M-SCLCR/L06-A16	15	16	7	150	28	15	10	CC**0602**	SI60M025060-03510	TT08P	●	○

●Stock ○Available upon Order

SDUCR/L



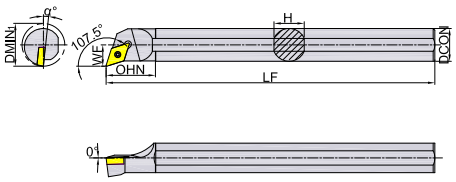


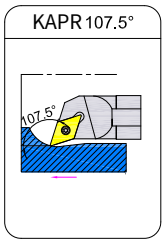
Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S10K-SDUCR/L07	12	10	7	125	15	9	10	DC**0702**	SI60M025060-03510	TT08P	●	●
S12M-SDUCR/L07	16	12	9	150	18	11	8	DC**0702**	SI60M025060-03510	TT08P	●	●
S16Q-SDUCR/L07	20	16	11	180	24	15	6	DC**0702**	SI60M025060-03510	TT08P	●	●
S16Q-SDUCR/L11	20	16	11	180	24	15	6	DC**11T3**	SI60M040100-05812	TT15P	●	●
S20R-SDUCR/L11	25	20	13	200	30	18	6	DC**11T3**	SI60M040100-05812	TT15P	●	●
S25S-SDUCR/L11	32	25	16	250	38	23	4	DC**11T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

Internal Turning Toolholder

SDQCR/L

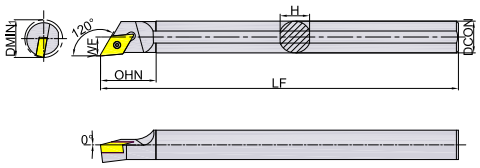


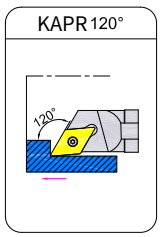


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S10K-SDQCR/L07	12	10	7	125	15	9	10	DC**0702**	SI60M025060-03510	TT08P	●	○
S12M-SDQCR/L07	16	12	9	150	18	11	8	DC**0702**	SI60M025060-03510	TT08P	●	○
S16Q-SDQCR/L07	20	16	11	180	24	15	6	DC**0702**	SI60M025060-03510	TT08P	●	○
S16Q-SDQCR/L11	20	16	11	180	24	15	6	DC**11T3**	SI60M040100-05812	TT15P	●	●
S20R-SDQCR/L11	25	20	13	200	30	18	6	DC**11T3**	SI60M040100-05812	TT15P	●	○
S25S-SDQCR/L11	32	25	16	250	38	23	4	DC**11T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

SDXCR/L



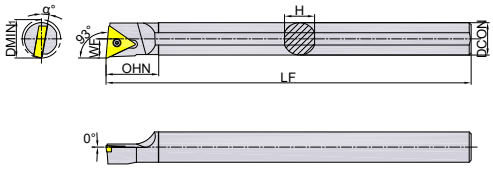


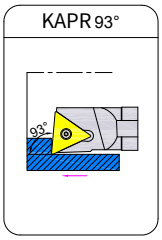
Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-SDXCR/L07	10	8	5.5	125	12	7	12	DC**0702**	SI60M025060-03510	TT08P	●	○
S10K-SDXCR/L07	12	10	6.5	125	15	9	10	DC**0702**	SI60M025060-03510	TT08P	●	○
S12M-SDXCR/L07	16	12	8	150	18	11	8	DC**0702**	SI60M025060-03510	TT08P	●	○
S16Q-SDXCR/L07	20	16	10	180	24	15	6	DC**0702**	SI60M040100-05812	TT08P	●	○
S20R-SDXCR/L11	25	20	12	200	30	18	6	DC**11T3**	SI60M040100-05812	TT15P	●	●
S25S-SDXCR/L11	32	25	14	250	38	23	4	DC**11T3**	SI60M040100-05812	TT15P	●	○

●Stock ○Available upon Order

Internal Turning Toolholder

SSKCR/L

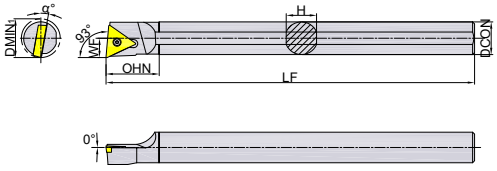


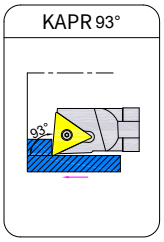


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S12M-SSKCR/L09	16	12	9	150	18	11	10	SC**09T3**	SI60M040100-05812	TT15P	○	○
S16Q-SSKCR/L09	20	16	11	180	24	15	10	SC**09T3**	SI60M040100-05812	TT15P	●	○
S20R-SSKCR/L09	25	20	13	200	30	18	8	SC**09T3**	SI60M040100-05812	TT15P	●	○
S25S-SSKCR/L12	32	25	17	250	38	23	6	SC**1204**	SI60M050120-07012	TT20P	○	○

●Stock ○Available upon Order

STUCR/L



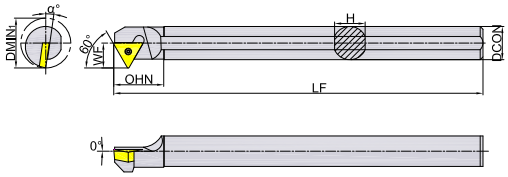


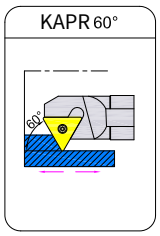
Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-STUCR/L09	10	8	5.5	125	12	7	15	TC**0902**	SI60M022060-03008	TT06P	●	○
S10K-STUCR/L09	12	10	6.5	125	15	9	13	TC**0902**	SI60M022060-03008	TT06P	●	○
S10K-STUCR/L11	12	10	6.5	125	15	9	12	TC**1102**	SI60M025060-03510	TT08P	●	○
S12M-STUCR/L11	16	12	8	150	18	11	10	TC**1102**	SI60M025060-03510	TT08P	●	○
S16Q-STUCR/L11	20	16	10	180	24	15	8	TC**1102**	SI60M025060-03510	TT08P	●	○
S20R-STUCR11	25	20	12	200	30	18	6	TC**1102**	SI60M025060-03510	TT08P	●	
S20R-STUCR/L16	25	20	12	200	30	18	4	TC**16T3**	SI60M040100-05812	TT15P	●	○
S25S-STUCR16	32	25	16	250	38	23	6	TC**16T3**	SI60M040100-05812	TT15P	●	

●Stock ○Available upon Order

Internal Turning Toolholder

STWCR/L

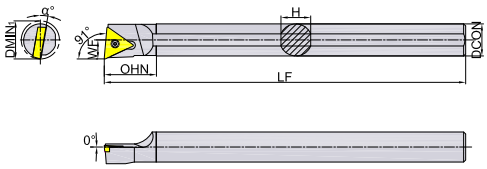


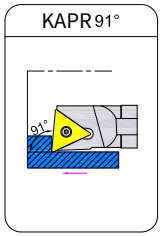


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-STWCR/L09	10	8	6	125	12	7	15	TC**0902**	SI60M022060-03008	TT06P	●	○
S10K-STWCR/L11	12	10	8	125	15	9	10	TC**1102**	SI60M025060-03510	TT08P	●	○
S12M-STWCR/L11	16	12	9	150	18	11	8	TC**1102**	SI60M025060-03510	TT08P	●	○
S16Q-STWCR/L11	20	16	11	180	24	15	6	TC**1102**	SI60M025060-03510	TT08P	○	○
S20R-STWCR11	25	20	13	200	30	18	4	TC**1102**	SI60M025060-03510	TT08P	○	
S20R-STWCR/L16	25	20	15	200	30	18	8	TC**16T3**	SI60M040100-05812	TT15P	○	○
S25S-STWCR/L16	32	25	17	250	38	23	6	TC**16T3**	SI60M040100-05812	TT15P	●	○

●Stock ○Available upon Order

STFCR/L



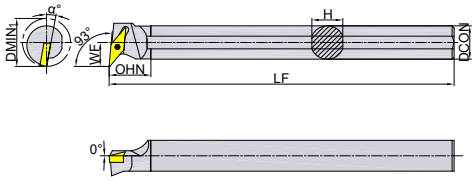


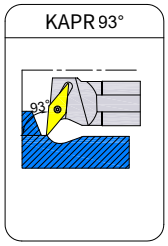
Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-STFCR/L09	10	8	5.5	125	12	7	15	TC**0902**	SI60M022060-03008	TT06P	●	○
S10K-STFCR/L09	12	10	6.5	125	15	9	10	TC**0902**	SI60M022060-03008	TT06P	●	●
S12M-STFCR/L09	16	12	8	150	18	11	8	TC**0902**	SI60M022060-03008	TT06P	●	○
S12M-STFCR/L11	16	12	8	150	18	11	6	TC**1102**	SI60M025060-03510	TT08P	●	●
S16Q-STFCR/L11	20	16	10	180	24	15	4	TC**1102**	SI60M025060-03510	TT08P	●	●
S20R-STFCR/L11	25	20	12	200	30	18	8	TC**1102**	SI60M025060-03510	TT08P	●	●
S20R-STFCR/L16	25	20	12	200	30	18	6	TC**16T3**	SI60M040100-05812	TT15P	●	○
S25S-STFCR/L16	32	25	16	250	18	23		TC**16T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

Internal Turning Toolholder

SVUCR/L

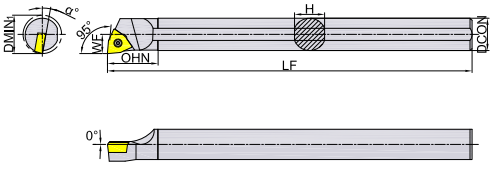


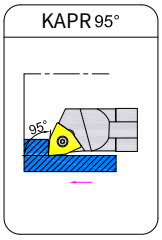


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S16Q-SVUCR/L11	20	16	12	180	25	15	10	VC**1103**	SI60M025060-03510	TT08P	●	○
S20R-SVUCR/L11	25	20	16	200	25	18	8	VC**1103**	SI60M025060-03510	TT08P	●	●
S25S-SVUCR/L16	33	25	20	250	32	23	8	VC**1604**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

SWLCR/L



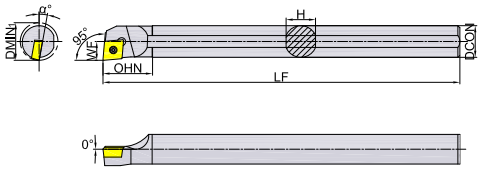


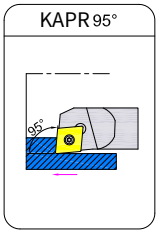
Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S12M-SWLCR/L06	16	12	8	150	18	11	12	WC**06T3**	SI60M040100-05812	TT15P	●	●
S16Q-SWLCR/L06	20	16	10	180	24	14.8	10	WC**06T3**	SI60M040100-05812	TT15P	●	●
S20R-SWLCR/L06	25	20	12	200	30	18.4	8	WC**06T3**	SI60M040100-05812	TT15P	●	●
S25S-SWLCR/L06	32	25	16	250	38	23.4	6	WC**06T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

Internal Turning Toolholder

SCLPR/L

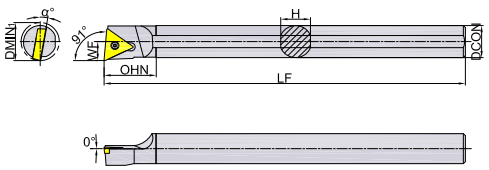


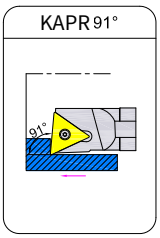


Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock	
	DMIN1	DCON	WF	LF	OHN	H	α°				R	L
S08K-SCLPR/L06	10	8	5.5	125	12	7	13	CP**0602**	SI60M025060-03510	TT08P	●	●
S10K-SCLPR/L06	12	10	6.5	125	15	9	12	CP**0602**	SI60M025060-03510	TT08P	●	●
S12M-SCLPR/L06	16	12	8	150	18	11	10	CP**0602**	SI60M025060-03510	TT08P	●	●
S12M-SCLPR/L09	16	12	8	150	18	11	12	CP**09T3**	SI60M040100-05812	TT15P	●	●
S16Q-SCLPR/L09	20	16	10	180	24	15	10	CP**09T3**	SI60M040100-05812	TT15P	●	●
S20R-SCLPR/L09	25	20	12	200	30	18	8	CP**09T3**	SI60M040100-05812	TT15P	●	○
S25S-SCLPR/L09	32	25	16	250	38	23	6	CP**09T3**	SI60M040100-05812	TT15P	●	●

●Stock ○Available upon Order

STFPR/L





Ordering Code	Dimensions (mm)							Insert	Screw	Wrench	Stock
	DMIN1	DCON	WF	LF	OHN	H	α°				R
S10K-STFPR1102	12	10	6.5	125	15	9	12	TP**1102**	SI60M025060-03510	TT08P	●
S12M-STFPR1102	16	12	8	150	18	11	10	TP**1102**	SI60M025060-03510	TT08P	●
S16Q-STFPR1102	20	16	10	180	24	15	8	TP**1102**	SI60M025060-03510	TT08P	●
S20R-STFPR1102	25	20	12	200	30	18	6	TP**1102**	SI60M025060-03510	TT08P	○
S20R-STFPR16T3	25	20	12	200	30	18	4	TP**16T3**	SI60M040100-05812	TT15P	●
S25S-STFPR16T3	32	25	16	250	38	23	6	TP**16T3**	SI60M040100-05812	TT15P	○

●Stock ○Available upon Order

E

PARTING AND GROOVING TOOLS

Parting and Grooving Series Insert Identification System

GZ. GK Series Insert Identification System

①Series
GK
GZ

②Number of Cutting Edge
S=Single
D=Double

③Insert Width
30=3.0mm
40=4.0mm

④Corner Radius
02=0.2mm
04=0.4mm
20=2.0mm

⑤Hand of Insert
R=Right Hand
L=Left Hand
□=Neutral

⑥Lead Angle
15=15°

⑦Geometry	
First Character	Second Character
F=Low Feed	C=Cutting off
M=Medium feed	T=Turning
R=High Feed	G=Grooving
O=Optimize for Special Range	R=Profiling

Parting and Grooving Series Insert Identification System

GB Series Insert Identification System

①Series
GB

②Insert Type
R= Full Radius
□= Squaring

③Insert Size	
3	IC=9.525mm
4	IC=12.7mm

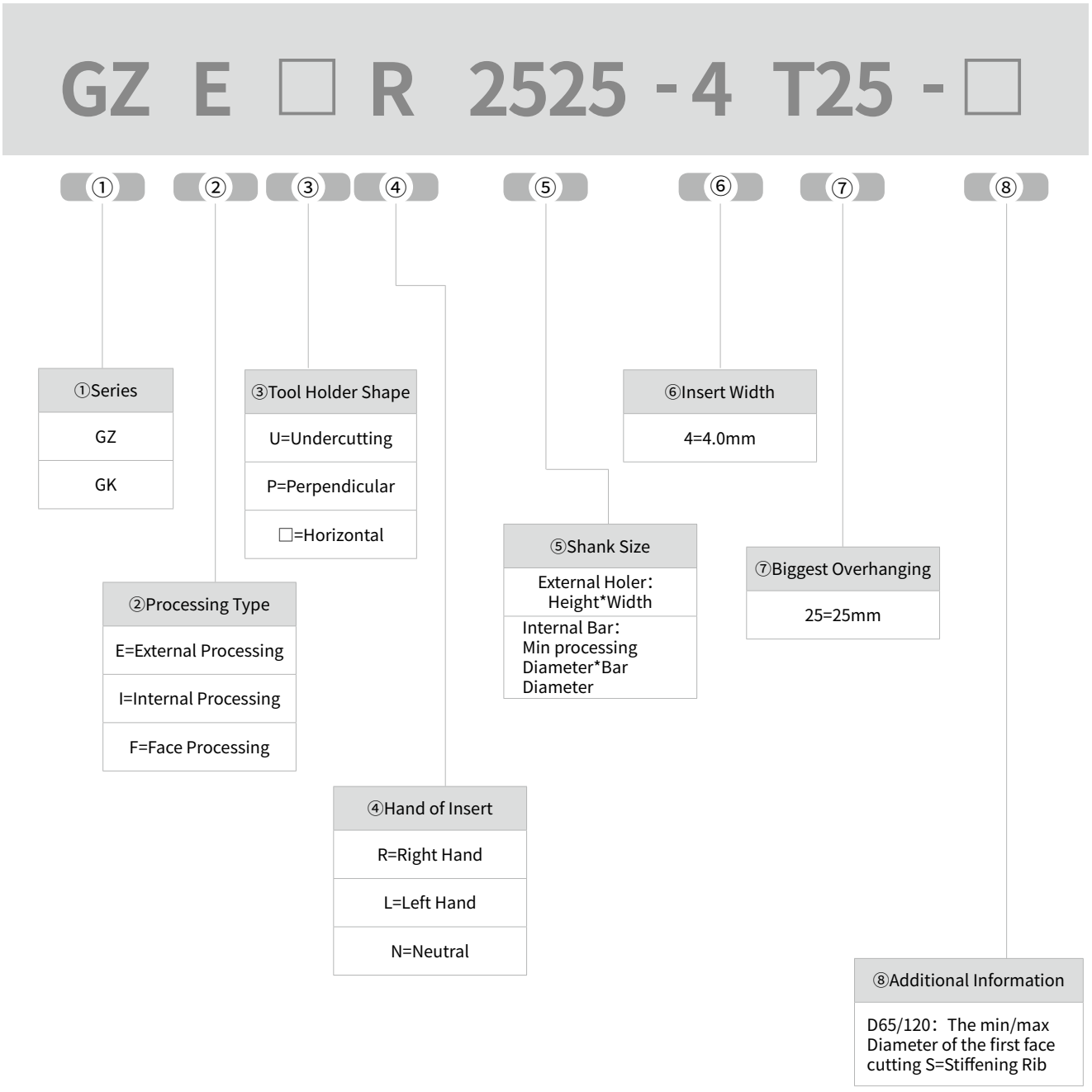
④Insert Width
125=1.25mm

⑤Hand of Insert
R=Right Hand
L=Left Hand

⑥Corner Radius
0.2=0.2mm

Parting and Grooving Series Tool holder Identification System

GZ, GK Series Tool Holder Identification System



Parting and Grooving Series Tool holder Identification System

GB Series Tool Holder Identification System

GB E R 2525 M 4-□

① ② ③ ④ ⑤ ⑥ ⑦

①Series
GB

③Hand of Insert
R=Right Hand
L=Left Hand

⑤Tool Holder Length	
Symbol	Length
K	125mm
M	150mm
Q	180mm
R	200mm

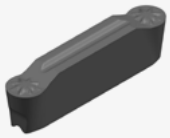
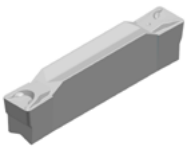
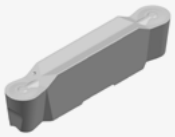
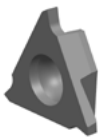
②Processing Type
E=External Processing
I=Internal Processing

④Shank Size
External Holder: Height*Width
Internal Bar: Min processing Diameter*Bar Diameter

⑥Insert Size	
3	IC=9.525mm
4	IC=12.7mm

⑦Groove Size	
15	1.0≤W<2.5
25	2.5≤W<3.3
35	3.3≤W
Only for external holders with GB4 inserts	

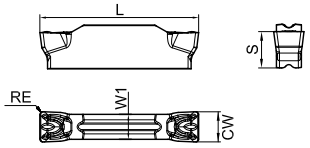
Overview of Parting and Grooving Inserts

Shape	Geometry	Application	Width	Page
	MT	Medium Turning	2.0-8.0 (mm)	P113
	MR	Medium Profiling	2.0-8.0 (mm)	P113
	FG	Precision Grooving	3.0-6.0 (mm)	P114
	OR	Precision Profiling	3.0-6.0 (mm)	P114
	GB	Precision Grooving	0.5-4.3 (mm)	P115

Parting and Grooving Inserts

MT

Medium Turning Inserts



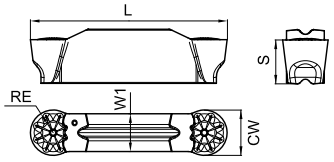
Ordering Code		Dimension (mm)					Coated Carbides		
		CW±0.05	RE±0.05	L	W1	S	GP1225	GK1115	GA4230
	GKD2002-MT	2.0	0.2	16.0	1.2	3.5	●	●	●
	GKD2502-MT	2.5	0.2	18.5	2.0	3.85	●	●	●
	GKD3004-MT	3.0	0.4	21.2	2.35	4.8	●	●	●
	GKD4004-MT	4.0	0.4	21.0	3.3	4.8	●	●	●
	GKD5004-MT	5.0	0.4	26.0	4.1	5.8	●	●	●
	GKD5008-MT	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	○	●	○

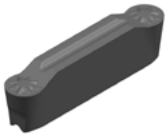
◎For tools, see page 118 to page 122.

●Stock ○Available upon order

MR

Medium Profiling Inserts



Ordering Code		Dimension (mm)					Coated Carbides			
		CW±0.05	RE±0.05	L	W1	S	GP1105	GP1225	GK1115	GA4230
	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	○	○	○	○

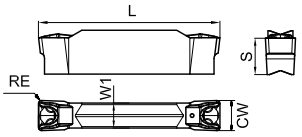
◎For tools, see page 118 to page 122.

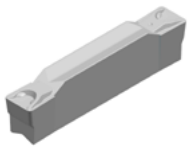
●Stock ○Available upon order

Parting and Grooving Inserts

FG

Precision Grooving Inserts



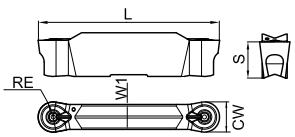
Ordering Code		Dimension (mm)					Coated Carbides	Carbide
		CW±0.02	RE±0.05	L	W1	S	GS3125	GS9125
	GZD3002-FG	3.0	0.2	20.4	2.3	4.6	●	○
	GZD3004-FG	3.0	0.4	20.4	2.3	4.6	●	○
	GZD4002-FG	4.0	0.2	24.0	3.3	4.8	○	○
	GZD4004-FG	4.0	0.4	24.0	3.3	4.8	●	●
	GZD5002-FG	5.0	0.2	24.0	3.3	4.8	●	○
	GZD5004-FG	5.0	0.4	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	●	●

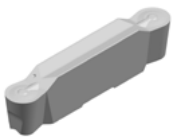
◎For tools, see page 123.

●Stock ○Available upon order

OR

Precision Profiling Inserts



Ordering Code		Dimension (mm)					Coated Carbides
		CW±0.02	RE±0.05	L	W1	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	○

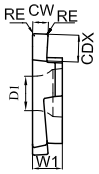
◎For tools, see page 123.

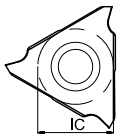
●Stock ○Available upon order

Parting and Grooving Inserts

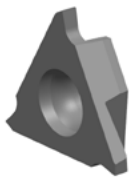
GB

Precision Grooving Inserts





Ordering Code	Dimension (mm)						Coated Carbides
	CW±0.025	CDX	RE	IC	W1	D1	GA4230
GB3050R-005	0.50	1.0	0.05	9.525	3.18	4.4	●
GB3075R-010	0.75	2.0	0.1	9.525	3.18	4.4	●
GB3080R-005	0.80	2.0	0.05	9.525	3.18	4.4	○
GB3095R-010	0.95	2.0	0.1	9.525	3.18	4.4	○
GB3100R-005	1.00	2.0	0.05	9.525	3.18	4.4	●
GB3100R-010	1.00	2.0	0.1	9.525	3.18	4.4	○
GB3120R-010	1.20	2.0	0.1	9.525	3.18	4.4	○
GB3120R-020	1.20	2.0	0.2	9.525	3.18	4.4	○
GB3125R-010	1.25	2.0	0.1	9.525	3.18	4.4	●
GB3140R-010	1.40	2.0	0.1	9.525	3.18	4.4	○
GB3140R-020	1.40	2.0	0.2	9.525	3.18	4.4	○
GB3140L-020	1.40	2.0	0.2	9.525	3.18	4.4	●
GB3150R-010	1.50	2.0	0.1	9.525	3.18	4.4	○
GB3150R-020	1.50	2.0	0.2	9.525	3.18	4.4	●
GB3150L-020	1.50	2.0	0.2	9.525	3.18	4.4	●
GB3200R-010	2.00	2.5	0.1	9.525	3.18	4.4	○
GB3200R-020	2.00	2.5	0.2	9.525	3.18	4.4	○
GB3200L-020	2.00	2.5	0.2	9.525	3.18	4.4	○
GB3250R-010	2.50	2.5	0.1	9.525	3.18	4.4	○
GB3250L-010	2.50	2.5	0.1	9.525	3.18	4.4	○
GB3250L-020	2.50	2.5	0.2	9.525	3.18	4.4	●
GB3300R-020	3.00	2.5	0.2	9.525	3.18	4.4	○
GB3300L-020	3.00	2.5	0.2	9.525	3.18	4.4	○



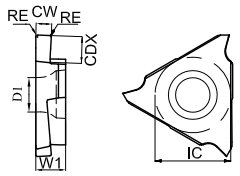
◎For tools, see page 124 to page 125.

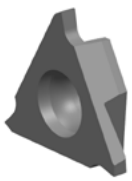
●Stock ○Available upon order

Parting and Grooving Inserts

GB

Precision Grooving Inserts



Ordering Code		Dimension (mm)						Coated Carbides
		CW±0.025	CDX	RE	IC	W1	D1	GA4230
	GB4125R -020	1.25	2.0	0.2	12.7	4.76	5.5	○
	GB4150R -010	1.50	3.5	0.1	12.7	4.76	5.5	●
	GB4150R -020	1.50	3.5	0.2	12.7	4.76	5.5	●
	GB4150L -020	1.50	3.5	0.2	12.7	4.76	5.5	○
	GB4175R -020	1.75	3.5	0.2	12.7	4.76	5.5	○
	GB4185R -020	1.85	3.5	0.2	12.7	4.76	5.5	○
	GB4200R -020	2.00	3.5	0.2	12.7	4.76	5.5	●
	GB4200L -020	2.00	3.5	0.2	12.7	4.76	5.5	●
	GB4200R -030	2.00	3.5	0.3	12.7	4.76	5.5	●
	GB4210R -050	2.10	4.0	0.5	12.7	4.76	5.5	○
	GB4220R -030	2.20	4.0	0.3	12.7	4.76	5.5	●
	GB4250R -030	2.50	4.0	0.3	12.7	4.76	5.5	○
	GB4250L -030	2.50	4.0	0.3	12.7	4.76	5.5	○
	GB4265R -030	2.65	4.0	0.3	12.7	4.76	5.5	○
	GB4280R -030	2.80	5.0	0.3	12.7	4.76	5.5	○
	GB4300R -030	3.00	4.0	0.3	12.7	4.76	5.5	●
	GB4300L -030	3.00	4.0	0.3	12.7	4.76	5.5	●
	GB4350R -030	3.50	5.0	0.3	12.7	4.76	5.5	○
	GB4400R -040	4.00	5.0	0.4	12.7	4.76	5.5	○
	GB4400L -040	4.00	5.0	0.4	12.7	4.76	5.5	○
	GB4430R -040	4.30	5.0	0.4	12.7	4.76	5.5	○

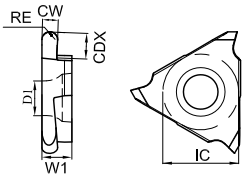
◎For tools, see page 124 to page 125.

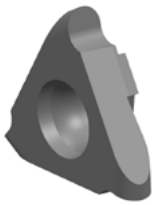
●Stock ○Available upon order

Parting and Grooving Inserts

GBR

Precision Profiling Inserts



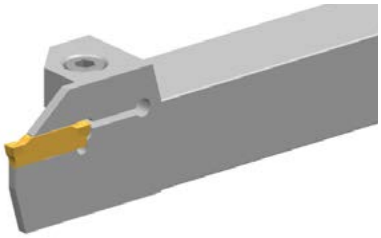
Ordering Code		Dimension (mm)						Coated Carbides
		CW±0.025	CDX	RE	IC	W1	D1	GA4230
	GBR4100R -050	1.00	2.0	0.5	12.7	4.76	5.5	○
	GBR4100L -050	1.00	2.0	0.5	12.7	4.76	5.5	○
	GBR4150R -075	1.50	3.5	0.75	12.7	4.76	5.5	●
	GBR4150L -075	1.50	3.5	0.75	12.7	4.76	5.5	○
	GBR4200R -100	2.00	3.5	1.0	12.7	4.76	5.5	○
	GBR4200L -100	2.00	3.5	1.0	12.7	4.76	5.5	○
	GBR4250R -125	2.50	4.0	1.25	12.7	4.76	5.5	○
	GBR4250L -125	2.50	4.0	1.25	12.7	4.76	5.5	○
	GBR4300R -150	3.00	4.0	1.5	12.7	4.76	5.5	○
	GBR4300L -150	3.00	4.0	1.5	12.7	4.76	5.5	○
	GBR4400R -200	4.00	5.0	2.0	12.7	4.76	5.5	○
	GBR4400L -200	4.00	5.0	2.0	12.7	4.76	5.5	○

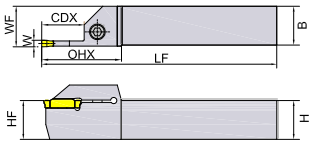
◎For tools, see page 124 to page 125.

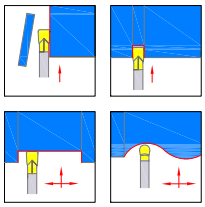
●Stock ○Available upon order

GK Series

External Holders for Parting and Grooving







The picture is Right Hand Holder

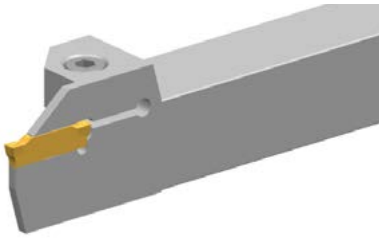
Ordering Code	Dimension(mm)						Insert	Screw	Wrench	stock	
	W	CDX	H=HF	B	LF	WF				R	L
GKER/L1616-2T14	2.0	14	16	16	100	17	GKD20…	SCAM050120H	TH40LH	●	●
GKER/L2020-2T14	2.0	14	20	20	125	21	GKD20…	SCAM050200H	TH40LH	●	●
GKER/L2525-2T14	2.0	14	25	25	150	26	GKD20…	SCAM060200H	TH50LH	●	●
GKER/L1616-2.5T16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

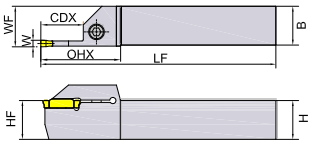
Remark：SCAM060200H Stands for M6X20

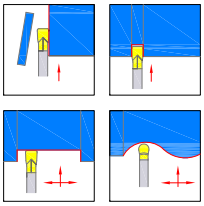
●Stock ○Available upon order

GK Series

External Holders for Parting and Grooving







The picture is Right Hand Holder

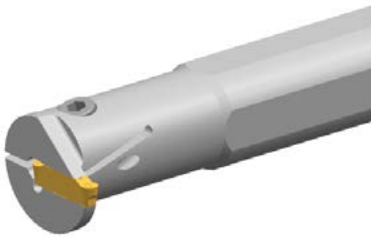
Ordering Code	Dimension(mm)						Insert	Screw	Wrench	stock	
	W	CDX	H=HF	B	LF	WF				R	L
GKER/L2020-5T23	5.0	23	20	20	125	21	GKD50…	SCAM050200H	TH40LH	●	●
GKER/L2020-5T15	5.0	15	20	20	125	21	GKD50…	SCAM050200H	TH40LH		○
GKER/L2525-5T23	5.0	23	25	25	150	26	GKD50…	SCAM060200H	TH50LH	●	●
GKER/L2525-5T15	5.0	15	25	25	150	26	GKD50…	SCAM060200H	TH50LH	●	●
GKER/L3225-5T23	5.0	23	32	25	170	26	GKD50…	SCAM060200H	TH50LH	●	●
GKER/L3232-5T23	5.0	23	32	32	170	33	GKD50…	SCAM060200H	TH50LH	●	●
GKER/L3232-5T15	5.0	15	32	32	170	33	GKD50…	SCAM060200H	TH50LH	●	●
GKER/L2020-6T23	6.0	23	20	20	125	21	GKD60…	SCAM050200H	TH40LH	●	○
GKER/L2525-6T23	6.0	23	25	25	150	26	GKD60…	SCAM060200H	TH50LH	●	●
GKER/L2525-6T15	6.0	15	25	25	150	26	GKD60…	SCAM060200H	TH50LH	●	●
GKER/L3225-6T23	6.0	23	32	25	170	26	GKD60…	SCAM060200H	TH50LH	●	●
GKER/L3232-6T23	6.0	23	32	32	170	33	GKD60…	SCAM060200H	TH50LH	●	●
GKER/L2525-8T28	8.0	28	25	25	150	26.5	GKD80…	SCAM060200H	TH50LH	●	○
GKER/L2525-8T15	8.0	15	25	25	150	26.5	GKD80…	SCAM060200H	TH50LH	○	○
GKER/L3232-8T28	8.0	28	32	32	170	33.5	GKD80…	SCAM060200H	TH50LH	●	○

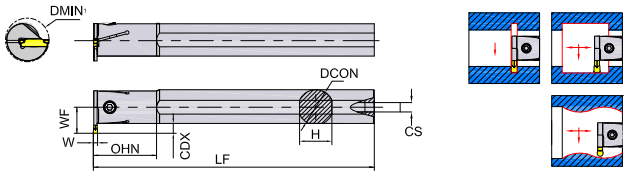
Remark：SCAM060200H Stands for M6X20

●Stock ○Available upon order

GK Series

Internal Holders for Grooving





The picture is Right Hand Holder

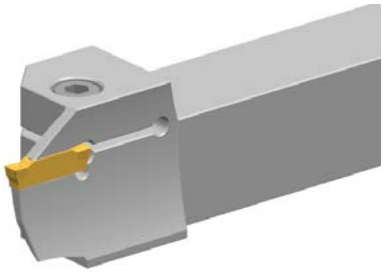
Ordering Code	Dimension(mm)								Insert	Screw	Wrench	stock	
	W	CDX	DMIN1	DCON	WF	LF	OHN	H				R	L
GKIR/L2016-2T04	2.0	4	20	16	12	125	35	15	GKD20…	SCAM050200H	TH40LH	●	●
GKIR/L2520-2T05	2.0	5	25	20	14.5	150	45	18	GKD20…	SCAM050200H	TH40LH	●	●
GKIR/L2925-2T05	2.0	5	29	25	17	200	45	23	GKD20…	SCAM060200H	TH50LH	●	●
GKIR/L2520-2.5T05	2.5	5	25	20	14.5	150	45	18	GKD25…	SCAM060200H	TH50LH	●	○
GKIR/L2925-2.5T05	2.5	5	29	25	17	200	45	23	GKD25…	SCAM060200H	TH50LH	●	●
GKIR/L2520-3T06	3.0	6	25	20	15.5	150	45	18	GKD30…	SCAM060200H	TH50LH	●	●
GKIR/L3125-3T06	3.0	6	31	25	18.5	200	45	23	GKD30…	SCAM060200H	TH50LH	●	●
GKIR/L3732-3T06	3.0	6	37	32	21.5	250	65	30	GKD30…	SCAM050200H	TH40LH	●	●
GKIR/L2520-4T06	4.0	6	25	20	15.5	150	45	18	GKD40…	SCAM050200H	TH40LH	●	●
GKIR/L3125-4T06	4.0	6	31	25	18.5	200	45	23	GKD40…	SCAM060200H	TH50LH	●	●
GKIR/L3732-4T06	4.0	6	37	32	21.5	250	65	30	GKD40…	SCAM060200H	TH50LH	●	●
GKIR/L3125-5T08	5.0	8	31	25	19.5	200	45	23	GKD50…	SCAM060200H	TH50LH	●	●
GKIR/L3732-5T08	5.0	8	37	32	21.5	250	65	30	GKD50…	SCAM060200H	TH50LH	●	●
GKIR/L3125-6T08	6.0	8	31	25	19.5	200	45	23	GKD60…	SCAM060200H	TH50LH	●	○
GKIR/L3732-6T08	6.0	8	37	32	21.5	250	65	30	GKD60…	SCAM060200H	TH50LH	●	●
GKIR/L3732-8T10	8.0	10	37	32	23.4	250	65	30	GKD80…	SCAM060200H	TH50LH	○	○
GKIR/L4540-8T10	8.0	10	45	40	27.2	300	70	37	GKD80…	SCAM060200H	TH50LH	○	○

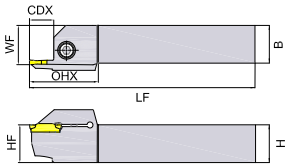
Remark：SCAM060200H Stands for M6X20

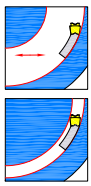
●Stock ○Available upon order

GK Series

Face Grooving Holders-Horizontal







The picture is Right Hand Holder

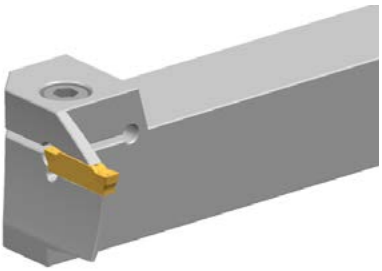
Ordering Code	Dimension(mm)							Insert	Screw	Wrench	stock	
	H=HF	B	LF	WF	CDX	DMIN1	DMAX1				R	L
GKFR/L2525-2T12D75	25	25	150	26	12	75	100	GKD20···	SCAM060200H	TH50LH		○
GKFR/L2525-2T12D90	25	25	150	26	12	90	150	GKD20···	SCAM060200H	TH50LH	●	○
GKFR/L2525-3T15D68	25	25	150	26	15	68	100	GKD30···	SCAM060200H	TH50LH	●	○
GKFR/L2525-3T15D90	25	25	150	26	15	90	160	GKD30···	SCAM060200H	TH50LH	●	○
GKFR/L2020-4T15D62	20	20	150	26	15	62	120	GKD40···	SCAM060200H	TH50LH	●	○
GKFR/L2525-4T15D62	25	25	150	26	15	62	120	GKD40···	SCAM060200H	TH50LH	●	●
GKFR/L2525-4T15D112	25	25	150	26	15	112	200	GKD40···	SCAM060200H	TH50LH	●	●
PGKFR25254T25D62DA	25	25	150	26	25	62	120	GKD40···	SCAM060200H	TH50LH	○	
PGKFL25255T10D150DA	25	25	150	26	10	150	300	GKD50···	SCAM060200H	TH50LH		●
GKFR/L2525-5T25D68	25	25	150	26	25	68	95	GKD50···	SCAM060200H	TH50LH	○	○
GKFR/L2525-5T25D85	25	25	150	26	25	85	130	GKD50···	SCAM060200H	TH50LH	○	○
GKFR/L2525-6T25D68	25	25	150	26	25	68	100	GKD60···	SCAM060200H	TH50LH		○
GKFR/L2525-6T25D88	25	25	150	26	25	88	180	GKD60···	SCAM060200H	TH50LH	●	●
GKFR/L2525-8T25D45	25	25	150	26	25	45	80	GKD80···	SCAM060200H	TH50LH	○	

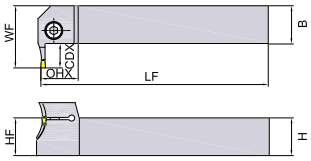
Remark：SCAM060200H Stands for M6X20

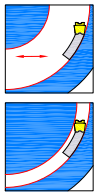
●Stock ○Available upon order

GK Series

Face Grooving Holders-Horizontal







The picture is Right Hand Holder

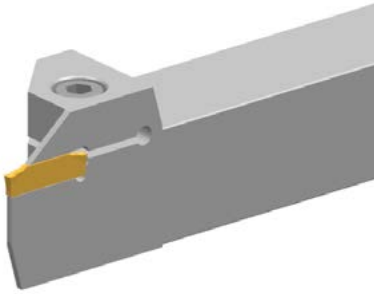
Ordering Code	Dimension(mm)							Insert	Screw	Wrench	stock	
	H=HF	B	LF	WF	CDX	DMIN1	DMAX1				R	L
GKFPR/L2525-4T15D60	25	25	150	26	15	75	100	GKD40…	SCAM060200H	TH50LH	●	●
GKFPR/L2525-4T15D112	25	25	150	26	15	90	150	GKD40…	SCAM060200H	TH50LH	●	●

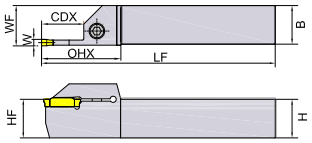
Remark：SCAM060200H Stands for M6X20

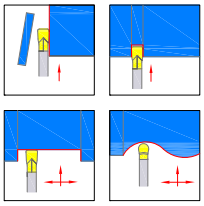
●Stock ○Available upon order

GZ Series

External Holders for Parting, Grooving, Turning and Profiling







The picture is Right Hand Holder

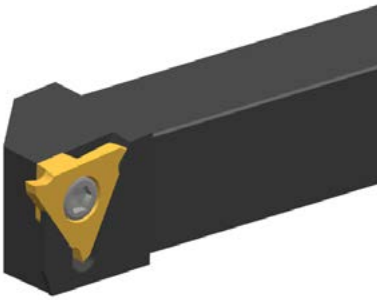
Ordering Code	Dimension(mm)						Insert	Screw	Wrench	stock	
	W	CDX	H=HF	B	LF	WF				R	L
GZER/L2020-3T20	3.0	20	20	20	125	21	GZD30···	SCAM050200H	TH40LH	●	●
GZER/L2525-3T20	3.0	20	25	25	150	26	GZD30···	SCAM060200H	TH50LH	●	●
GZER/L3225-3T20	3.0	20	32	25	170	26	GZD30···	SCAM060200H	TH50LH	○	○
GZER/L2020-4T25	4.0	25	20	20	125	21	GZD40···	SCAM050200H	TH40LH	●	○
GZER/L2020-4T25	5.0	25	20	20	125	21.5	GZD50···	SCAM050200H	TH40LH	●	○
GZER/L25254T20	4.0	20	25	25	150	26	GZD40···	SCAM050200H	TH40LH	●	
GZER/L25254T20	5.0	20	25	25	150	26.5	GZD50···	SCAM050200H	TH40LH	●	
GZER/L2525-4T25	4.0	25	25	25	150	26	GZD40···	SCAM060200H	TH50LH	●	●
GZER/L2525-4T25	5.0	25	25	25	150	26.5	GZD50···	SCAM060200H	TH50LH	●	●
GZER/L3225-4T25	4.0	25	32	25	170	26	GZD40···	SCAM060200H	TH50LH	●	●
GZER/L3225-4T25	5.0	25	32	25	170	26.5	GZD50···	SCAM060200H	TH50LH	●	●
GZER/L2525-6T32	6.0	32	25	25	150	26	GZD60···	SCAM060300H	TH50LH	●	●
GZER/L3225-6T32	6.0	32	32	25	170	26	GZD60···	SCAM060300H	TH50LH	○	○

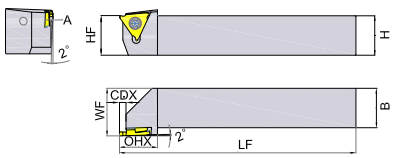
Remark：SCAM060200H Stands for M6X20

●Stock ○Available upon order

GB Series

External Holders for Grooving





The picture is Right Hand Holder

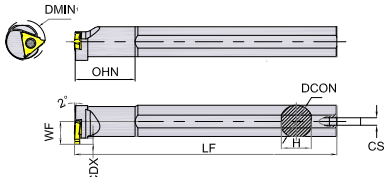
Ordering Code	Dimension(mm)						Insert	Screw	Wrench	stock	
	H=HF	B	LF	WF	A	CDX				R	L
GBER/L2020K3	20	20	125	25	—	2.5	GB3···	SI60M 035120-05310	PTT15PH	●	○
GBER/L2525M3	25	25	150	30	—	2.5	GB3···	SI60M 035120-05310	PTT15PH	●	●
GBER/L2020K4-15	20	20	125	25	1.0	4.0	GB4··· (1.0≤W<2.5)	SI60M 050120-07217	PTT20PH	●	●
GBER/L2525M4-15	25	25	150	30	1.0	4.0	GB4··· (1.0≤W<2.5)	SI60M 050120-07217	PTT20PH	●	●
GBER/L2020K4-25	20	20	125	25	2.0	4.5	GB4··· (2.5≤W<3.3)	SI60M 050120-07217	PTT20PH	●	○
GBER/L2525M4-25	25	25	150	30	2.0	4.5	GB4··· (2.5≤W<3.3)	SI60M 050120-07217	PTT20PH	○	○
GBER/L2020K4-35	20	20	125	25	3.0	5.5	GB4··· (3.3≤W<4.8)	SI60M 050120-07217	PTT20PH	○	○
GBER/L2525M4-35	25	25	150	30	3.0	5.5	GB4··· (3.3≤W<4.8)	SI60M 050120-07217	PTT20PH	●	○

Remark：SI60M 035120··· stands for M3.5X12.

●Stock ○Available upon order

GB Series

Internal Bars for Grooving



The picture is Right Hand Holder

Ordering Code	Dimension(mm)						Insert	Screw	Wrench	stock	
	DMIN1	DCON	H	LF	WF	CDX				R	L
GBIR/L2620Q3	26	20	18	180	13	3	GB3···	SI60M035120-05310	PTT15PH	●	○
GBIR/L3525R4	35	25	23	200	17.5	4.5	GB4···	SI60M 050120-07217	PTT20PH	●	●

Remark：SI60M 035120··· stands for M3.5X12.

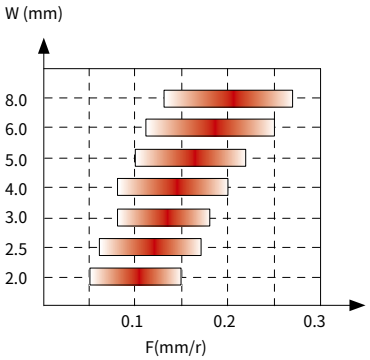
●Stock ○Available upon order

Recommended Cutting Datas

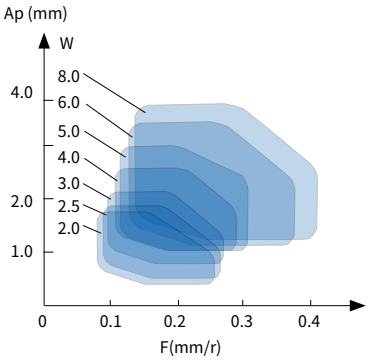
Recommend Feed

MT

⊙ Radial Feed

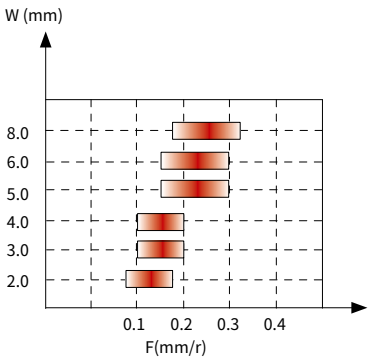


⊙ Axial Feed

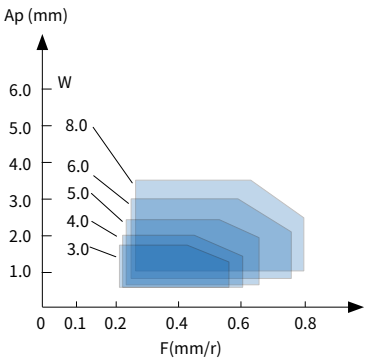


MR

⊙ Radial Feed

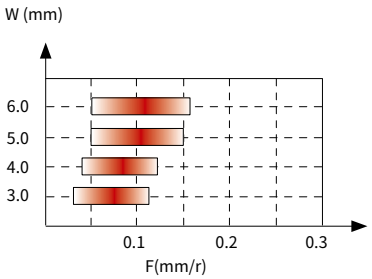


⊙ Axial Feed

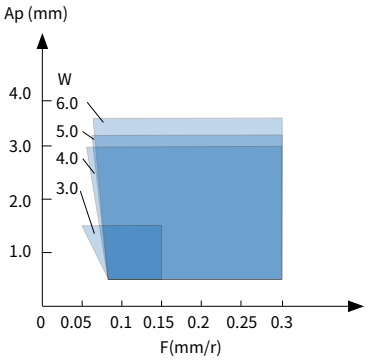


FG

⊙ Radial Feed

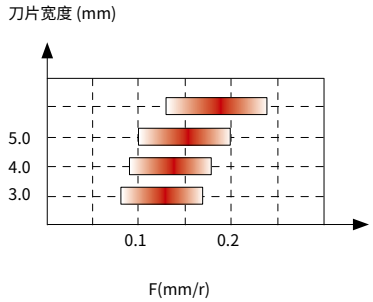


⊙ Axial Feed

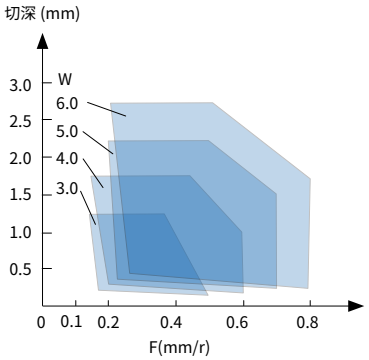


OR

⊙ Radial Feed



⊙ Axial Feed



GB

ISO	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	①.0.05~0.10 ②.0.05~0.10	①.0.05~0.12 ②.0.05~0.10	①.0.05~0.12 ②.0.05~0.10
	Alloy Steel	①.0.03~0.07	①.0.04~0.08 ②.0.04~0.08	①.0.05~0.90 ②.0.05~0.90	①.0.05~0.10 ②.0.05~0.10	①.0.05~0.10 ②.0.05~0.10
M	Stainless Steel	①.0.03~0.07	①.0.04~0.08 ②.0.04~0.08	①.0.05~0.90 ②.0.05~0.90	①.0.05~0.10 ②.0.05~0.10	①.0.05~0.10 ②.0.05~0.10
K	Cast Iron	①.0.03~0.08	①.0.04~0.09 ②.0.04~0.09	①.0.05~0.10 ②.0.05~0.10	①.0.05~0.12 ②.0.05~0.10	①.0.05~0.12 ②.0.05~0.10

①Radial Feed ②Axial Feed

Recommended Cutting Datas

Recommended Cutting Speed

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

F

THREADING TOOLS

Threading Insert Identification System

16 E R 1.50 ISO - TC

① ② ③ ④ ⑤ ⑥

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

③Hand of Insert
R=Right
L= Left
□=R&L

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

⑥Additional Information
Geometry or Teeth

②Thread Style
E=External
I=Internal
□=E&I

④Pitch		
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

S E R 2525 M 16 A

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	R&L

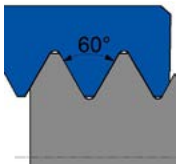
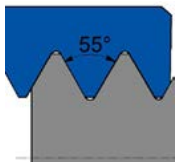
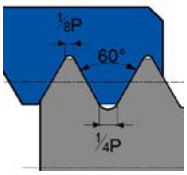
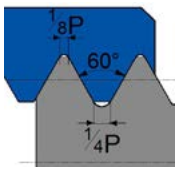
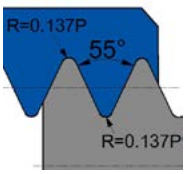
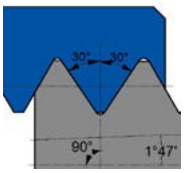
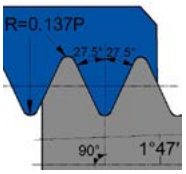
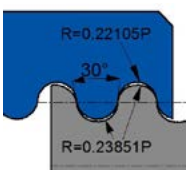
④Shank Size(mm)	
External Holder	
Shank Size	hxb
2525	25x25
Internal Bar	
Shank Size	Diameter
0025	Diameter 25

⑤Thread	
H	100
K	125
M	150
N	160
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

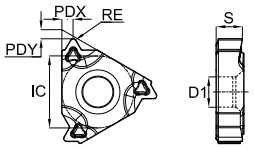
⑦Additional	
A	Steel holder with inner coolant
C	Carbide holder
E	Carbide holder with inner coolant
□	Steel holder without inner coolant

Overview of Threading Inserts

Application	Thread Type	Thread Sketch	ThreadCode	Pitch	Page
For general industry	Partial Profile 60° Thread		60°	0.5-5.0 (mm)	P123
	Partial Profile 55° Thread		55°	48-5 (TPI)	P124
	ISO Metric Thread		ISO	1.0-5.0 (mm)	P126
	UN Thread		UN	24-8 (TPI)	P128
Thread for pipe fittings and couplings for gas, water and sewage.	Whitworth Thread		W	19-11 (TPI)	P129
	NPT Thread		NPT	27-8 (TPI)	P130
Thread for pipe fittings and couplings for gas, steam and water lines.	BSPT Thread		BSPT	28-11 (TPI)	P131
Thread for pipe couplings in food and fire fighting industry	Round Thread(DIN 405)		RD	10-4 (TPI)	P132

Partial Profile 60°

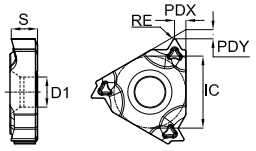
▶ External



Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	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

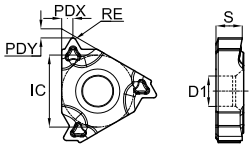


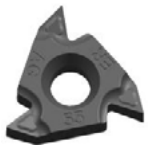
Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	08 IRA60-TC	0.5-1.5	0.6	0.7	0.08	5.00	2.25	2.68	●
	11 IRA60-TC	0.5-1.5	0.8	0.9	0.08	6.35	3.00	3.2	●
	16 IRA60-TC	0.5-1.5	0.8	0.9	0.08	9.525	3.47	4	○
	16 IRAG60-TC	0.5-3.0	1.1	1.5	0.08	9.525	3.47	4	●
	16 IRG60-TC	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°

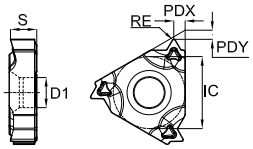
▶ External

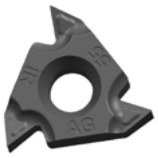


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	16 ERA55-TC	48-16	0.8	0.9	0.08	9.525	3.47	4	○
	16 ERAG55-TC	48-8	1.1	1.5	0.08	9.525	3.47	4	●
	16 ERG55-TC	14-8	1.2	1.7	0.21	9.525	3.47	4	●
	22 ERN55-TC	7-5	1.7	2.5	0.44	12.7	4.71	5	○

●Stock ○Available Up Order

▶ Internal

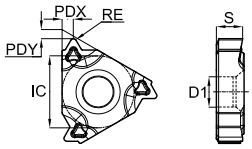


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	11 IRA55-TC	48-16	0.8	0.9	0.08	6.35	3.00	3.2	●
	16 IRA55-TC	48-16	0.8	0.9	0.08	9.525	3.47	4	○
	16 IRAG55-TC	48-8	1.1	1.5	0.08	9.525	3.47	4	●
	16 IRG55-TC	14-8	1.2	1.7	0.21	9.525	3.47	4	●
	22 IRN55-TC	7-5	1.7	2.5	0.44	12.7	4.71	5	○

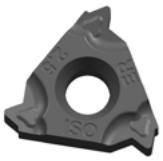
●Stock ○Available Up Order

Metric 60°

▶ External

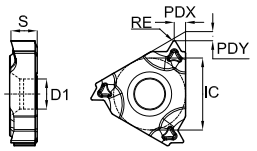


Ordering Code	Pitch (mm)	Dimension (mm)						Coated Carbide
		PDY	PDX	RE	IC	S	D1	GM3225
16 ER1.00ISO-TC	1.00	0.8	0.7	0.14	9.525	3.47	4	●
16 ER1.25ISO-TC	1.25	0.8	0.9	0.18	9.525	3.47	4	●
16 ER1.50ISO-TC	1.50	0.8	1.0	0.22	9.525	3.47	4	●
16 ER1.75ISO-TC	1.75	1.2	1.2	0.25	9.525	3.47	4	●
16 ER2.00ISO-TC	2.00	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

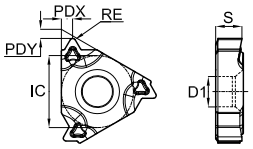


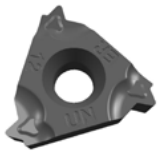
Ordering Code	Pitch (mm)	Dimension (mm)						Coated Carbide
		PDY	PDX	RE	IC	S	D1	GM3225
11 IR1.00ISO-TC	1.00	0.8	0.7	0.07	6.35	3.00	3.2	●
11 IR1.25ISO-TC	1.25	0.8	0.9	0.09	6.35	3.00	3.2	●
11 IR1.50ISO-TC	1.50	0.8	1.0	0.11	6.35	3.00	3.2	●
11 IR1.75ISO-TC	1.75	0.9	1.1	0.13	6.35	3.00	3.2	○
11 IR2.00ISO-TC	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°

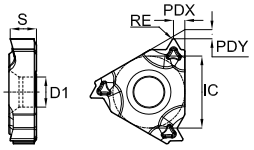
▶ External

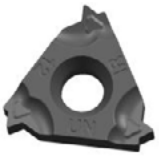


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	16 ER24UN-TC	24	0.8	0.8	0.15	9.525	3.47	4	●
	16 ER20UN-TC	20	0.8	0.9	0.18	9.525	3.47	4	●
	16 ER18UN-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 ER16UN-TC	16	0.9	1.1	0.23	9.525	3.47	4	●
	16 ER14UN-TC	14	1.2	1.5	0.26	9.525	3.47	4	●
	16 ER12UN-TC	12	1.2	1.5	0.31	9.525	3.47	4	●
	16 ER8UN-TC	8	1.3	1.7	0.46	9.525	3.47	4	○

●Stock ○Available Up Order

▶ Internal

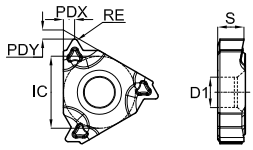


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	11 IR20UN-TC	20	0.8	0.9	0.09	6.35	3.00	3.2	○
	11 IR18UN-TC	18	0.8	1.0	0.10	6.35	3.00	3.2	●
	16 IR24UN-TC	24	0.8	0.8	0.08	9.525	3.47	4	○
	16 IR20UN-TC	20	0.8	0.9	0.09	9.525	3.47	4	○
	16 IR18UN-TC	18	0.8	1.0	0.10	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 IR8UN-TC	8	1.3	1.7	0.23	9.525	3.47	4	●

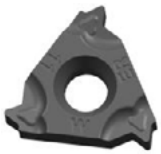
●Stock ○Available Up Order

Whitworth 55°

▶ External

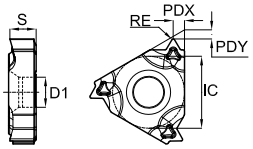


Ordering Code	Pitch (mm)	Dimension (mm)						Coated Carbide
		PDY	PDX	RE	IC	S	D1	GM3225
16 ER19W-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
16 ER18W-TC	18	0.8	1.0	0.18	9.525	3.47	4	○
16 ER16W-TC	16	0.9	1.1	0.20	9.525	3.47	4	○
16 ER14W-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
16 ER12W-TC	12	1.2	1.5	0.28	9.525	3.47	4	○
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	○

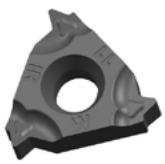


●Stock ○Available Up Order

▶ Internal



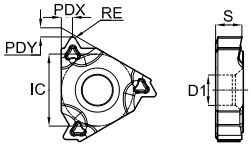
Ordering Code	Pitch (mm)	Dimension (mm)						Coated Carbide
		PDY	PDX	RE	IC	S	D1	GM3225
11 IR19W-TC	19	0.9	1.1	0.19	6.35	3.00	3.2	●
11 IR14W-TC	14	0.9	1.1	0.27	6.35	3.00	3.2	●
16 IR19W-TC	19	0.8	1.0	0.17	9.525	3.47	4	○
16 IR18W-TC	18	0.8	1.0	0.18	9.525	3.47	4	○
16 IR16W-TC	16	0.9	1.1	0.2	9.525	3.47	4	○
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	○

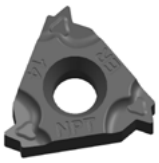


●Stock ○Available Up Order

NPT 60°

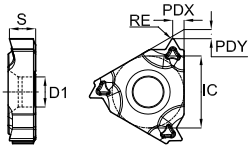
▶ External

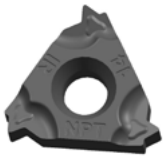


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	16 ER27NPT-TC	27	0.7	0.8	0.13	9.525	3.47	4	○
	16 ER18NPT-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 ER14NPT-TC	14	1.2	1.5	0.22	9.525	3.47	4	●
	16 ER11.5NPT-TC	11.5	1.2	1.5	0.25	9.525	3.47	4	●
	16 ER8NPT-TC	8	1.3	1.8	0.30	9.525	3.47	4	○

●Stock ○Available Up Order

▶ Internal

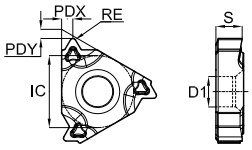


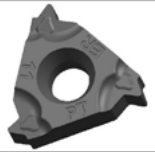
Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	11 IR18NPT-TC	18	0.8	1.0	0.20	6.35	3.00	3.2	●
	16 IR27NPT-TC	27	0.7	0.8	0.13	9.525	3.47	4	○
	16 IR18NPT-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 IR14NPT-TC	14	1.2	1.5	0.22	9.525	3.47	4	●
	16 IR11.5NPT-TC	11.5	1.2	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°

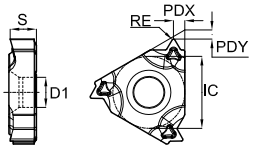
▶ External

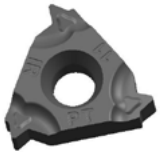


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	16 ER28BSPT-TC	28	0.7	0.8	0.11	9.525	3.47	4	○
	16 ER19BSPT-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER14BSPT-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER11BSPT-TC	11	1.2	1.5	0.30	9.525	3.47	4	●

●Stock ○Available Up Order

▶ Internal

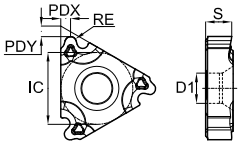


Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	11 IR19BSPT-TC	19	0.8	1.0	0.18	6.35	3.00	3.2	●
	11 IR14BSPT-TC	14	0.9	1.1	0.24	6.35	3.00	3.2	○
	16 IR28BSPT-TC	28	0.7	0.8	0.11	9.525	3.47	4	○
	16 IR19BSPT-TC	19	0.8	1.0	0.17	9.525	3.47	4	○
	16 IR14BSPT-TC	14	1.2	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°

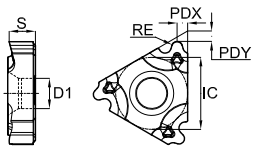
▶ External



Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	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	○

●Stock ○Available Up Order

▶ Internal



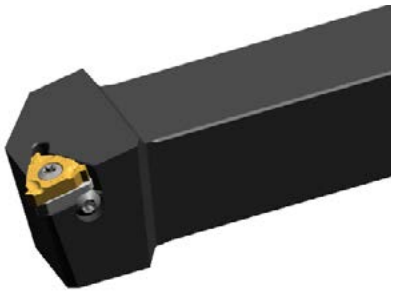
Ordering Code		Pitch (mm)	Dimension (mm)						Coated Carbide
			PDY	PDX	RE	IC	S	D1	GM3225
	16 IR8RD-TC	8	1.4	1.3	0.70	9.525	3.47	4	○
	16 IR6RD-TC	6	1.4	1.5	0.936	9.525	3.47	4	○

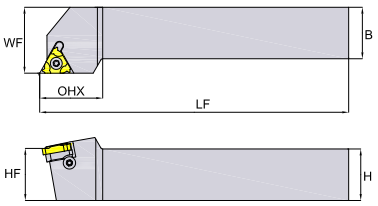
●Stock ○Available Up Order

Thread Turning Tool holders

SER/LSeries

External Tool Holders





Ordering Code	Dimension(mm)						Insert	Insert screw	Shim	Shim Screw	Wrench	Wrench for Shim Screw	Stock	
	H	B	LF	WF	HF	OHX							R	L
SER/L1212F11	12	12	80	14	12	16	11ER/L···	SI60M025080-03510	\	\	TT08PH	\	○	○
SER/L1212F16	12	12	80	16	12	21	16ER/L···	SI60M035090-05312	\	\	TT15PH	\	○	
SER/L1616H16	16	16	100	20	16	24	16ER/L···	SI60M035120-05316	DEN16P25SH	SSBM030060H	TT15PH	TH25LH	●	●
SER/L2020K16	20	20	125	25	20	27	16ER/L···	SI60M035120-05316	DEN16P25SH	SSBM030060H	TT15PH	TH25LH	●	○
SER/L2525M16	25	25	150	32	25	32	16ER/L···	SI60M035120-05316	DEN16P25SH	SSBM030060H	TT15PH	TH25LH	●	●
SER/L3232P16	32	32	170	40	32	31	16ER/L···	SI60M035120-05316	DEN16P25SH	SSBM030060H	TT15PH	TH25LH	●	○
SER/L2525M22	25	25	150	32	25	31	22ER/L···	SI60M040160-07013	DEN22P25R/LSH	SSBM030060H	TT20PH	TH25LH	●	○
SER/L3232P22	32	32	170	40	32	32	22ER/L···	SI60M040160-07013	DEN22P25R/LSH	SSBM040060H	TT20PH	TH30LH	●	○
SER/L4040R22	40	40	200	50	40	32	22ER/L···	SI60M040160-07013	DEN22P25R/LSH	SSBM040060H	TT20PH	TH30LH	○	○
SER/L3232P27	32	32	170	40	32	33	27ER/L···	SI60M050160-07212	DEN27P25SH	SSBM040060H	TT20PH	TH30LH	●	
SER/L4040R27	40	40	200	50	40	33	27ER/L···	SI60M050160-07212	DEN27P25SH	SSBM040060H	TT20PH	TH30LH	○	

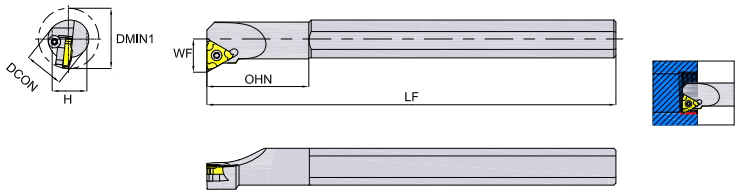
Remark： S160M035120-05316 is meaning of M3.5X12

●Stock ○Available Up Order

Thread Turning Tool holders

SIR/LSeries

Internal Tool holders



Ordering Code	Dimension(mm)						Insert	Indert screw	Shim	Shim Screw	Wrench	Wrench for Shim Screw	Stock	
	DMIN1	DCON	H	LF	WF	OHN							R	L
SIR/L0008K08	9.9	8	7	125	4.95	20	08IR/L···	SI60M022050-03008	\	\	TT06PH	\	●	
SIR/L0010K11	13	10	9	125	6.5	25	11IR/L···	SI60M025060-03510	\	\	TT08PH	\	●	
SIR/L0010K11-A16	13	16	15	125	6.5	30	11IR/L···	SI60M025060-03510	\	\	TT08PH	\	●	○
SIR/L0012K11	15	12	11	125	7.4	28	11IR/L···	SI60M025060-03510	\	\	TT08PH	\	●	○
SIR/L0012K11-A16	15	16	15	125	7.4	36	11IR/L···	SI60M025060-03510	\	\	TT08PH	\	○	○
SIR/L0013M16	19	16	15	150	9.4	32	16IR/L···	SI60M035090-05312	\	\	TT15PH	\	●	○
SIR/L0016Q16	21	16	15	180	10.8	40	16IR/L···	SI60M035090-05312	\	\	TT15PH	\	●	
SIR/L0020Q16	24	20	18	180	13.1	40	16IR/L···	SI60M035120-05316	DIN16P25SH	SSBM030060H	TT15PH	TH25LH	●	○
SIR/L0025R16	29	25	23	200	15.6	45	16IR/L···	SI60M035120-05316	DIN16P25SH	SSBM030060H	TT15PH	TH25LH	●	○
SIR/L0032S16	38	32	30	250	19.1	50	16IR/L···	SI60M035120-05316	DIN16P25SH	SSBM030060H	TT15PH	TH25LH	●	○
SIR/L0040T16	44	40	38	300	23.1	55	16IR/L···	SI60M035120-05316	DIN16P25SH	SSBM030060H	TT15PH	TH25LH	○	○
SIR/L0050U16	60	50	48	350	28.1	50	16IR/L···	SI60M035120-05316	DIN16P25SH	SSBM030060H	TT15PH	TH25LH	○	○
SIR/L0020Q22	26	20	18	180	13.2	40	22IR/L···	SI60M040120-07010	\	\	TT15PH	\	●	
SIR/L0025R22	32	25	23	200	16.4	46	22IR/L···	SI60M040160-07013	DIN22P25R/LSH	SSBM040060H	TT15PH	TH30L	●	
SIR/L0032S22	39	32	30	250	19.9	50	22IR/L···	SI60M040160-07013	DIN22P25R/LSH	SSBM040060H	TT15PH	TH30L	●	○
SIR/L0040T22	47	40	38	300	23.9	55	22IR/L···	SI60M040160-07013	DIN22P25R/LSH	SSBM040060H	TT15PH	TH30L	○	○
SIR/L0050U22	57	50	48	350	28.9	70	22IR/L···	SI60M040160-07013	DIN22P25R/LSH	SSBM040060H	TT15PH	TH30L	○	○
SIR/L0032S27	42	32	30	250	20.9	50	27IR/L···	SI60M050160-07212	DIN27P25SH	SSBM040060H	TT20PH	TH30L	○	○
SIR/L0040T27	50	40	38	300	25	55	27IR/L···	SI60M050160-07212	DIN27P25SH	SSBM040060H	TT20PH	TH30L	○	○
SIR/L0050U27	60	50	48	350	30.1	70	27IR/L···	SI60M050160-07212	DIN27P25SH	SSBM040060H	TT20PH	TH30L	○	○

Remark：SI60M035140-05338 is meaning of M3.5×14

●Stock ○Available Up Order

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	14	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

▶ 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

▶ 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

▶ 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.

Cutting Speed Recommendation Table

ISO	Workpiece Material			Workpiece Material	Cutting Range	Cutting way	Geometry	Grade	Cutting Speed Vc（m/min）
P	Carbon Steel	Low-carbon (C=0.1-0.25%)		HB125	Finishing、Semi-finishing	Continuous Cutting	TC	GM3225	120-160-230
		Medium-carbon (C=0.25-0.55%)		HB150					100-150-195
		High-carbon (C=0.55-0.80%)		HB170					90-140-180
	Low-alloy Steel	Non-hardened		HB180					100-130-180
		Hardened and tempered		HB275					75-100-140
		Hardened and tempered		HB350					60-80-130
	High-alloy Steel	Annealed		HB200					80-110-140
		Hardened and tempered		HB325					70-90-115
	Steel Castings	Unalloyed		HB180					180-200-220
		Low-alloy		HB200					70-110-150
		High-alloy		HB225					60-100-120
		Manganese steel (12-14% Mn)		HB250					30-40-50
M	Stainless Steel	Austenitic		HB180	Finishing、Semi-finishing	Continuous Cutting	TC	GM3225	90-120-140
		Ferritic/Martensitic		HB200					70-140-170
		Duplex stainless steel		HB230					60-90-120
K	Malleable Cast Iron	Ferritic		HB130	Finishing、Semi-finishing	Continuous Cutting	TC	GM3225	110-130-170
		Pearlitic		HB230					85-100-145
	Gray Cast Iron	Low tensile strength		HB180					100-120-160
		High tensile strength		HB260					80-100-140
	Nodular Cast Iron	Ferritic		HB160					110-125-160
		Ferritic		HB250					80-100-120
N	Wrought Aluminum Alloys	Non aging		HB60	Finishing、Semi-finishing	Continuous Cutting	TC	GM3225	350-500-700
		Aged		HB100					300-400-500
	Cast Aluminum Alloys	Non aging		HB75					300-450-500
		Aged		HB90					200-290-400
		Containing silicon (13-22% Si)		HB130					100-200-300
	Copper and Copper Alloys	Brass		HB90					100-220-300
		Bronze and non-leaded copper		HB100					80-180-255
S	Heat-resistant Alloys	Iron base	Annealed	HB200	Finishing、Semi-finishing	Continuous Cutting	TC	GM3225	35-45-60
			Aged	HB280					25-35-50
		Nickel base and cobalt base	Annealed	HB250					15-25-30
			Aged	HB350					10-15-25
			Cast	HB320					10-13-20
	Titanium Alloys	Commercial pure (99.5% Ti)		400Rm					140-150-170
		α+β alloys		1050Rm					50-60-70
H	High Hardness Materials	Hardened steel		HRC55	Finishing、Semi-finishing	Continuous Cutting	TC	GM3225	40-45-50
		Chilled cast iron		HB400					30-40-50

G

G-NOTCH TOOLS

G-NOTCH Series Inserts Identification System

G-NOTCH Series Grooving Inserts Identification System

G N G P 3 M150 R

① ② ③ ④ ⑤ ⑥ ⑦

①Company Mark
G=GESAC

②Type of Insert
N=Notch

③Insert style
G=Grooving
R=Full Radius

④Additional Information
P=Positive
□=Fla

⑤Insert Size		
	mm	inch
2	3.81	.150
3	4.95	.195

⑥Groove Size
Metric：M150 = 1.5mm
Inch：125 = 0.125inch

⑦Hand of Insert
R=Right Hand
L=Left Hand

G-NOTCH Series Inserts Identification System

G-NOTCH Series Threading Inserts Identification System

①Company Mark
G=GESAC

②Type of Insert
N=Notch

③Insert style
T=60°Thread

④Additional Information
P=Positive

⑤Insert Size		
	mm	inch
2	3.81	.150
3	4.95	.195

⑥Hand of Insert
R=Right Hand
L=Left Hand

G-NOTCH Holder Identification System

G-NOTCH External Holder Identification System

G	N	S	R	2525	M	3
①	②	③	④	⑤	⑥	⑦

①Company Mark

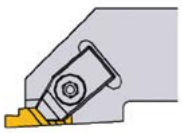
G=GESAC

②Clamping System

N=Notch

③Insert Mounting Location

S=Side



④Hand of Tool

L=Left Hand

R=Right Hand

⑤Shank Size

Windth	Height
12	12
16	16
20	20
25	25
32	32

⑥Shank length

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

⑦Right Hand

	mm	inch
2	3.81	.150
3	4.95	.195

G-NOTCH Holder Identification System

G-NOTCH External Holder Identification System

G N A R 25 M 3

① ② ③ ④ ⑤ ⑥ ⑦

①Company Mark
G=GESAC

③Holder Type
A=Steel With Coolant
S=Steel without Coolant

⑤Shank Size
12 = 12 mm 16 = 16 mm 20 = 20 mm 25 = 25 mm 32 = 32 mm

②Clamping System
N=Notch


④Hand of Tool
L=Left hand

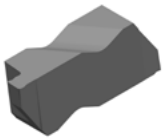
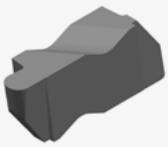
R=Right hand


⑦Right Hand		
	mm	inch
2	3.81	.150
3	4.95	.195
		

⑥Shank length	
D	60
E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200

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

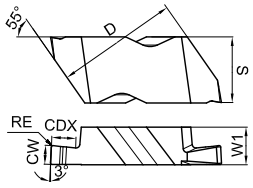
Overview of G-Notch Series Inserts

Application	Type	Shape	Width/Pitch	Page
Precision Grooving	GNGP		1.00-3.50 (mm)	P147
Precision Profiling	GNR		2.00-3.18 (mm)	P149
Threading	GNTP		0.70-5.00(mm) 36-5(TPI)	P149

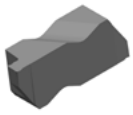
G-Notch Series Insert

GNGP

Precision Grooving Inserts（positive rake angle）



Ordering code	Dimension (mm)						Insert Size	Coating
	CW±0.025	RE	CDX	S	W1	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	○

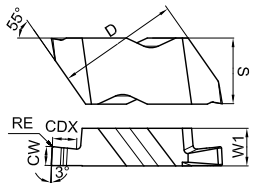


●Stock ○Avaliable Upon Order

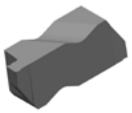
G-Notch Series Insert

GNGP

Precision Grooving Inserts（positive rake angle）



Ordering code		Dimension (mm)						Insert Size	Coating
		CW±0.025	RE	CDX	S	W1	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	○

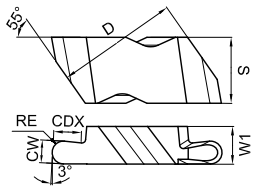


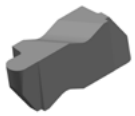
●Stock ○Avaliable Upon Order

G-Notch Series Insert

GNR

Precision Profiling Insert



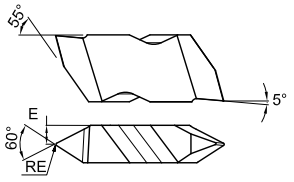
Ordering code		Dimension (mm)						Insert Size	Coating
		CW±0.025	RE	CDX	S	W1	D		GM3225
	GNR3M100R	2.00	1.00	2.39	8.74	4.95	16.1	3	○
	GNR3M150R	3.00	1.50	3.81	8.74	4.95	16.1	3	○
	GNR3047L	2.39	1.19	3.81	8.74	4.95	16.1	3	○
	GNR3047R	2.39	1.19	3.81	8.74	4.95	16.1	3	○
	GNR3062R	3.18	1.59	3.81	8.74	4.95	16.1	3	○

●Stock ○Avaliable Upon Order

G-Notch Series Insert

GNTP

60° Threading insert with rake angle



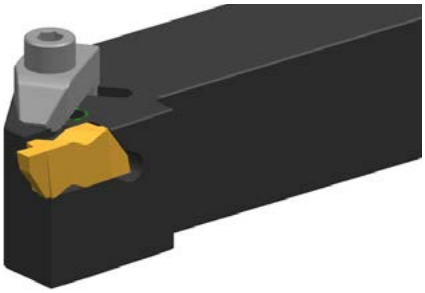
Ordering code		Pitch				Dimension (mm)		Insert Size	Coating
		External mm	Internal mm	External TPI	Internal TPI	RE	E		GM3225
	GNTP2L	0.70-3.00	1.25-3.50	8-36	7-20	0.10	1.91	2	○
	GNTP2R	0.70-3.00	1.25-3.50	8-36	7-20	0.10	1.91	2	○
	GNTP3L	1.25-4.00	2.00-5.00	4-20	5-12	0.17	2.49	3	○
	GNTP3R	1.25-4.00	2.00-5.00	4-20	5-12	0.17	2.49	3	●
	GNTP3004R	1.25-4.00	2.00-5.00	5-36	5-12	0.10	2.49	3	○

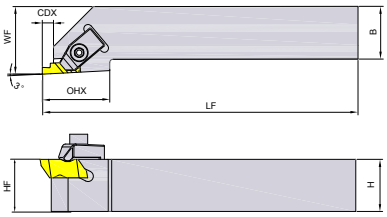
●Stock ○Avaliable Upon Order

External Holder

G-Notch Series

GNS





The Picture is Right Hand Holder

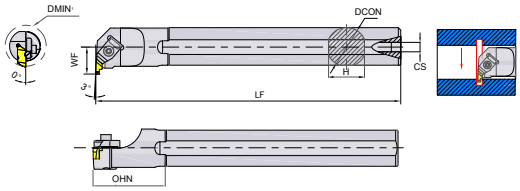
Ordering code	Dimension (mm)						Insert	Screw	Clamp	Wrench	Stock
	H	B	WF	LF	OHX	CDX					
GNSR1616H2	16	16	20	100	19	3.5	GN.2R	SCAM040120H	CAN02RH	TH30LH	●
GNSR2020K2	20	20	25	125	19	3.5	GN.2R	SCAM040120H	CAN02RH	TH30LH	○
GNSR2525M2	25	25	32	150	19	3.5	GN.2R	SCAM040120H	CAN02RH	TH30LH	○
GNSR2020K3	20	20	25	125	32	5.3	GN.3R	SCAM050200H	CAN03RH	TH40LH	●
GNSR2525M3	25	25	32	150	32	5.3	GN.3R	SCAM050200H	CAN03RH	TH40LH	●
GNSL1616H2	16	16	20	100	19	3.5	GN.2L	SCAM040120H	CAN02LH	TH30LH	○
GNSL2020K2	20	20	25	125	19	3.5	GN.2L	SCAM040120H	CAN02LH	TH30LH	○
GNSL2525M2	25	25	32	150	19	3.5	GN.2L	SCAM040120H	CAN02LH	TH30LH	○
GNSL2020K3	25	20	25	125	32	5.3	GN.3L	SCAM050200H	CAN03LH	TH40LH	○
GNSL2525M3	25	25	32	150	32	5.3	GN.3L	SCAM050200H	CAN03LH	TH40LH	●

●Stock ○Avaliable Upon Order

Internal Holder

G-Notch Series

GNA



The Picture is Right Hand Holder

Ordering code	Dimension (mm)					Insert	Screw	Clamp	Wrench	Stock
	DCON	DMIN1	LF	WF	CS					
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 ○Avaliable Upon Order

Recommended Cutting Datas

Recommend feed

Width W(mm)	Feed f(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)

Recommend cutting speed

ISO	Workpiece Material	Hardness (HB)	Cutting Speed Vc (m/min)
			GM3225
P	Low Carbon Steel	80– 170	110 (70-180)
	High Carbon Steel	170– 250	110 (70-160)
	Low-alloy Steel	140– 260	110 (60-160)
	High-alloy Steel	180– 300	110 (60-160)
M	Ferritic/Martensitic	150– 270	100 (40-180)
	Austenitic	150– 270	100 (40-180)
K	Malleable Cast Iron	150– 230	180 (70-300)
	Gray Cast Iron	150– 230	180 (70-300)
	Nodular Cast Iron	160– 260	160 (60-300)
S	Heat-resistant Alloy	130– 400	
	Titanium Alloys	130– 400	

H

APPENDIX

Geometry Comparison Table

ISO	Tool Type	Application	Gesec	Sandvik	Seco	Iscar	Kenemetal	Walter	Mitsubishi	Sumitomo	Tungaloy	Kyocera	Taegutec	Korloy
P	Negative	Finishing	QF	PF QF LC	FF1 FF2 MF2	NF F3P	FP FN	FP5	LP SA SY SH	LU SU SE	TS TSF ZF	PP HQ CQ XQ	FA FG	VL VF VB
		Semi-finishing (L&R)	TS	K						UM HM	P S	25R	VF	
		Semi-finishing	QM TP	PM QM	M3 MF5	TF GN M3P	MP MN	MP3 MP5	MA MP	GU GE UX	TM DM AM	PQ PG PS GS PT	MC MP PC MT	VM LP MP GM
		Semi-finishing with Wiper	WMV	WMX WM	W-M3	WG	MW	NM	MW	GUW	SW ASW	WE WQ	WT	LW
		Rough-finish	QR	PR	M5 M6 MR6 MR7	NR T3P	RP RN	RP5 RP7	RP GH	MU ME MX	TH THS	GT PH	RT	GR
		Heavy Turning	QH	HR	RR9	R3P	RH	NRR	HX HV	HU HW HF	TU TUS		HT HY HD HZ	VT VH
	Positive	Finishing	MM	PF UF	MF2 F1	PF F3P	FP LF	FP4	FP FV LP	LU LB SU	PSF PS PSS	PP XQ	FA FG	VF VL
		Semi-finishing	TP GP	PM UM	M3 F2	PP SM 14	MP	MP4	MP MV	SF MU	PM	HQ	PC MT	HMP MP C25
		Rough-finish	KM	PR UR	M5		MF	RP4						
M	Negative	Finishing	SF	MF	MF1	VL SF F3M	FP FS LF	NF4 NMS	FH SH LM	SU EF	SF	MQ GU	EA	HA VP2
		Semi-finishing	SM LM	23 MM QM	M1 MF3 MF4	TF PP M3M	MS MP	NM4	MM MS MA	EX GU	SM	MS MU HU	FG SF EM MP	GS HS MM
		Rough-finish	LR	MR	M5 MF5	NM R3M	RP	NR4 NR5	RM RK GH	EM MU	SH	TK ST	ET	VM RM
	Positive	Finishing	MM	UF MF	F1	PF	LF	PM	FM LM	SU	PSF	GQ	FG	HFP VP1
		Semi-finishing-Roughing	MM GP	UM MM	MF2	SM	MF	PM5	MM MV None	MU	PS PM	MQ	SA	HMP C25

Geometry Comparison Table

ISO	Tool Type	Application	Gesec	Sandvik	Seco	Iscar	Kenemetal	Walter	Mitsubishi	Sumitomo	Tungaloy	Kyocera	Taegutec	Korloy
K	Negative	Semi-finishing	UK	KF KM	M4	GN	FN UN	MK5	LK MK GK	UZ UX	CF CM Standard	KQ KG C Standard	KT	MK GR VR
		Semi-finishing with Wiper	WMV	WMX WM	W-M3	WG	MW	NM	MW	GUW	SW ASW	WE WQ	WT	LW
		Rough-finish	HK	KR	M5 M6	NR	UN RP	RK5 RK7	GH RK	GZ	CH	KH GC ZS	RT	RK
	Positive	Finishing-Semi-Finishing	MM GP	KF KM		14 19	MF	FK6 MK4	MK Standard	MU	CM	GK		HMP
		Rough-finish	KM	KM KR	M5		MP	RK4 RK6	Flat	US	Flat		MT	C25
N	Positive	General Machining	AL	AL	AL	AS	HP	PM2	AZ	AG	AL	AH	FL	AK

Grade comparison table

ISO	Coating	Code	Gesec	Sandvik	Seco	Iscar	Kenemetal	Walter	Mitsubishi	Sumitomo	Tungaloy	Kyocera	Taegutec	Korloy
P	CVD	P01	GPT6110	GC4205 GC4305	TP0500 TP0501 TP1000	IC9150 IC8150	KCP05B KC9105	WPP05S WPP05	UE6105 UE6005	AC810P	T9205 T9115 T9015	CA510 CA5505	TT8105 TT8115	NC3010
		P10	GPT6110	GC4215 GC4315 GC4415	TP0500 TP0501 TP1500 TP1501	IC9150 IC8150	KCP10B KC9110 KC9315	WPP10S WPP10	UE6010 UE6110 MC6015	AC810P AC8025P AC820P	T9215 T9115 T9015	CA515 CA5515	TT8105 TT8115	NC3010 NC3215
		P20	GPT6120 GPT6130	GC4225 GC4325 GC4425	TP1500 TP1501 TP2500 TP2501 TP2000	IC9250 IC8250	KCP25B KC9125 KC9225 KC9325	WPP20S WPP20	UE6120 UE6020 MC6025	AC820P	T9225 T9125 T9025	CA525 CA5525	TT8125 TT8115 TT5100	NC3225 NC3120
		P30	GPT6120 GPT6130 GP1135	GC4235 GC4335	TP2500 TP2501 TP3501 TP3500	IC635 IC9350 IC8350	KCP30B KC9140 KC9240	WPP30S WPP30	MC6035 UE6035	AC830P AC630M	T9235 T9135	CA530 CA5535	TT8125 TT5100 TT8135 TT7100	NC3030 NC5330
		P40	GP1135	GC4240 GC4335	TP3500 TP40	IC635	KCP40B KC9240	WPP30S WPP30	MC6035 UH6400	AC830P AC630M	T9235 T9135	CA530 CA5535	TT5100 TT8135 TT7100	NC3030 NC5330
	PVD	P01										PR1005		
		P10		GC1525 GC1025	CP200 TH1000 TS2000	IC250 IC507 IC570	KCU10 KC5010 KC5510		MS6015 VP10MF		AH710	PR1005 PR1115 PR1215		PC8110
		P20	GM3325	GC1525 GC1020 GC1125 GC1025	CP250 TS2500	IC908 IC928 IC1008 IC1028 IC3028	KCU25 KC5025 KC5525		VP15TF VP20MF	AC520U	AH710 AH330	PR930 PR1025 PR1115 PR1215 PR1425 PR1225	TT9020 TT7010 TT7220	PC5300 PC8115
		P30	GM3325	GC1125 GC1025	CP500	IC928 IC1008 IC1028 IC3028	KC5525		VP15TF VP20MF	AC530U	GH330 GH730 AH120 AH330 AH740	PR1025 RR1225 PR1535	TT8020 TT9020 TT7220	
		P40	GM3325	GC1145 GC2145	CP500	IC928 IC1008 IC1028	KC5525		VP15TF VP20MF		AH140		TT8020	

Grade comparison table

ISO	Coating	Code	Gesec	Sandvik	Seco	Iscar	Kenemetal	Walter	Mitsubishi	Sumitomo	Tungaloy	Kyocera	Taegutec	Korloy
M	PVD	M10	GM3315	GC1105 GC1115 GC1525 G15		IC520	KCS10	WXM10	VP10RT	AC510U	AH110 AH8005	PR1025 PR1215	TT5080	PC8105
		M20	GM3220	GC1025 GC1115 GC1125 GC1525 G30	TS2000 TS2500 CP200	IC520 IC507 IC807 IC907	KC5010 KC5510 KCU10	WSM10 WSM10S	VP10RT VP15TF VP20MF VP20RT UP20M	AC520U	AH120 AH630 AH8015 SH725 GH330	PR930 PR1025 PR1125 PR1215 PR1425 PR1225	TT9030 TT8010	PC8110 PC8115
		M30	GM3220 GM3325	GC1125 GC2035	TS2500 CP200 CP500	IC520 IC507 IC807 IC907 IC308 IC3028	KC5025 KC5525 KCU25	WSM20 WSM21 WSM20S	VP15TF VP20MF VP20RT UP20M MP7035	AC530U AC6040M	AH630 AH725 SH725 SH730 GH730	PR1125 PR1225 PR1535	TT9080 TT8020	PC5300 PC9030
		M40	GM3325	GC1125 GC2035	CP500 CP600	IC3028 IC308 IC908 IC928	KC5025 KC5525 KCU25	WSM30 WSM30S	MP7035	AC6040M	AH645			PC5400
	CVD	M10	GM1115	GC2015 GC2220		IC9250 IC520M	KCM15B	WAM10	MC7015	AC610M		CA6515	TT9215	NC9115
		M20	GM1115	GC1515 GC2015 GC2025 GC2220	TM2000 TP200	IC9025 IC9350 IC4050	KCM15B KCM25B	WAM20	MC7015 US7020 MC7025	AC6020M AC630M	T6120	CA6525	TT9215 TT9225	NC9125 NC9025 NC5330
		M30	GM1230	GC2040 GC235	TM2000 TM4000 TP40	IC9350 IC4050 IC635	KCM25B KCM35B	WAM20	MC7025 US735	AC6030M AC630M AC830P	T6130		TT9225 TT9235	NC9135
		M40	GM1230	GC235	TM4000	IC635	KCM35B KCP40B		US735				TT9235	
K	CVD	K01	GK1215	GC3205	TK1001 TH1500 TK1000	IC5005 IC8150	KCP05B KCP10B KCL05B	WKK10S WAK10	UC5105 MC5005	AC4010K AC405K	T5105	CA310 CA4010 CA4505 CA5505	TT7005	NC6205 NC6210
		K10	GK1215 GK1220	GC3205 GC3210 GC3215	TK1001 TK2001 TK2000 TP0500 TP1500	IC5005 IC5010	KCK15B TN5015B	WKK10S WAK10	UC5105 UC5115 MC5005 MC5015	AC4015K AC405K AC415K	T515 T5105 T5115	CA315 CA4515 CA4010 CA4115 CA4120	TT7005 TT7015	NC6205 NC6210 NC315K
		K20	GK1215 GK1220 GK1225	GC4325 GC3215 GC3220 GC3225	TK2001 TP2500	IC5010	KCK20B KCP25B	WKK10S WKK20S WAK10 WAK20	UC5115 MC5015	AC4015K AC415K AC420K	T5115 T5125	CA315 CA4515 CA4115 CA4120 CA4515	TT7015 TT7310	NC6215 NC315K NC5330 PC5300
		K30	GK1225	GC3040 GC4335	TK2001 TP2500 TP200			WAK30 WKP30S	UC5115 MC5015	AC420K AC820P	T5125	CA320 CA4120		NC5330 PC5300
N	PVD	N01	GN3125	H10 H13A			K605			H1 H2	KS05F	KW10		H01
		N10	GN3125		890 H15	IC20	K313 K110M THM	WK10	HTi10	EH10 EH510	TH10 H10T	KW10 GW15	K10	
		N20	GN3125		HX KX 883 H15 H25	IC20	K715 KMF K600			G10E EH20 EH520	KS15F		K20	
		N30			H25 883		G13 THR							

Cermet Grade comparison table

ISO	Coating	Code	Gesec	Sandvik	Seco	Iscar	Kenemetal	Mitsubishi	Sumitomo	Tungaloy	Kyocera	Taegutec	Korloy
P	None	P01				IC20N	KT1120	NX1010	T110A T1000A	NS520	TN610		CN20
		P10	GP91TM	CT5015	TP1020	IC20N IC75T	KT1120 KT175	NX2525	T1200A T1500A	NS520 NS9530	TN610 TN60	CT3000	CN20 CN1000 CN1500
		P20	GP91TM	CT5015	TP1020	IC20N IC75T IC30N	KT125	NX2525 NX3035	T1200A T1500A	NS9530 NS530 NS730	TN620 TN90	CT3000	CN1000 CN1500 CN2000
		P30				IC75T IC30N		NX3035 NX4545	T250A	NS740			CN2500
	PVD	P01-P20	GP31TM	GC1525	TP1030	IC520N IC530N	KT315 KTP10	AP25N VP25N MP3025 VP45N	T1500Z T2000Z T3000Z	J530 GT9530 GT530 GT730	PV710 PV720	PV3010	CC1500 CC2500

PCBN&PCD Grade comparison table

ISO	Code	Gesec	Sandvik	Seco	Iscar	Kenemetal	Walter	Mitsubishi	Sumitomo	Tungaloy	Kyocera	Taegutec	Korloy
K	K01	BKN115P BKC120P	CB7525	CBN050C CBN300P	IB50 IB85	KB1630 KB1345	WCB80	MB710	BN500 BNC500 BN7000	BX910 BX930 BX950	KBN475	TB730	KB370
	K10	BKN115P	CB50 CB7050	CBN20 CBN200 CBN300	IB55	KB9610	WCB50	MB5015 MB4020	BN7000 BN500	BX470 BX480 BX950	KBN60M KBN900	KB90A	KB350
	K20	BKN115P		CBN350 CBN500 CBN600	IB90	KB9640	WCB80	BC5030 MB730 MBS140	BN7000 BNS800	BXC90 BX90S	KBN900		DBS800
H	H01	BHC115P	CB20	CBN050C CBN010 CBN10 CBN100	IB25HC IB20H	KB1610	WCB30	BC8105 MB810	BNC2010 BNC100 BN1000 BN2000 BNX10	BXM10 BX310 BXC30	KBN05M KBM10M KBN510	TB610 KB50	KB410 KB1000
	H10	BHC115P BHC125P	CB7105 CB7015 CB50 CB7050	CBN160C CBN150 CBN060K CBN200	IB50	KB9610 KB5610 KB1615 KB1625	WCB50	BC8110 MBC010 MB825	BNC2010 BNC2020 BNC160 BNC200 BN2000	BXM10 BX330	KBN05M KBM10M KBN25M KBN510 KBN525	TB650 KB50	DNC250 KB320 KB2000
	H20	BHC125P	CB7115 CB7025 CB7525	CBN400C CBN300P CH2540 CBN350 CBN500	IB25HA IB55	KB5625 KB1340	WCB80	BC8120 MBC020 MB8025	BNC2020 BNC200 BNX20	BXM20 BXC50 BX380	KBN25M KBN30M KBN35M KBN900	TB670	KB420
	H30	BHC135P	CB7525	CH3515	IB55	KB9640 KB5630		BC8130 MB835	BNC300 BN350 BNX25	BXM20 BXC50 BXA20	KBN30M KBN35M KBN900	TB730 KB90A	DNC350 KB335 KB425
S	S01	BSN115P		CBN200		KB5630	WCB80	MB4020	BN7000	BX470 BX480	KBN65M KBN70M KBN570 KBN65B	KB90 KB90A	KB370
N	N01		CD05	PCD05		KD1405 PD100		MD205	DA1000 DA90	DX180 DX160	KPD001	TD810	DP200
	N10	DNN125P	CD10	PCD10	ID5	KD1415 KD1400	WD10	MD220	DA1000 DA150	DX140 DX110	KPD001 KPD010 KPD230 KPD250		DP200
	N20	DNN125P		PCD20		KD1425		MD230	DA1000 DA2200	DX120	KPD001 KPD010 KPD230 KPD250	KP300	DP150
	N30			PCD30 PCD30M		KD1400		MD2030	DA1000 DA2200	DX110			DP90

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