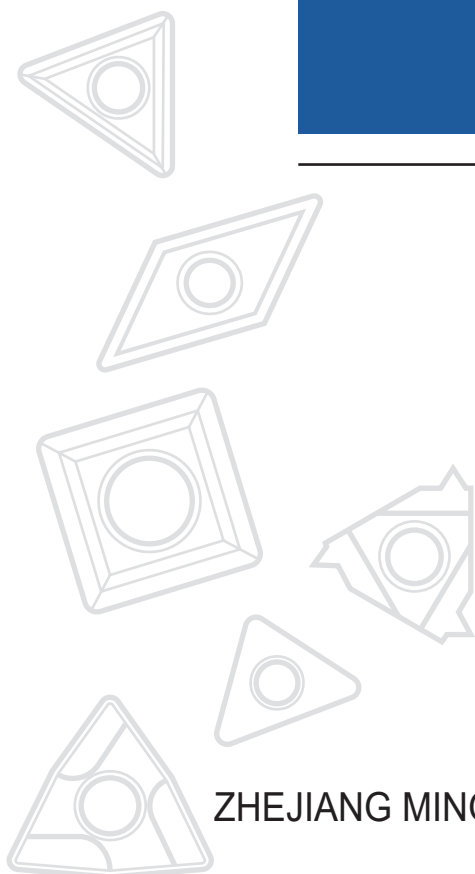


MingHong

浙江鸣鸿精密技术有限公司
Zhejiang MingHong Precision Co. Ltd

CARBIDE INSERTS CATELOGE



ZHEJIANG MINGHONG PRECISION TECHNOLOGY CO., LTD

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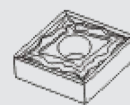
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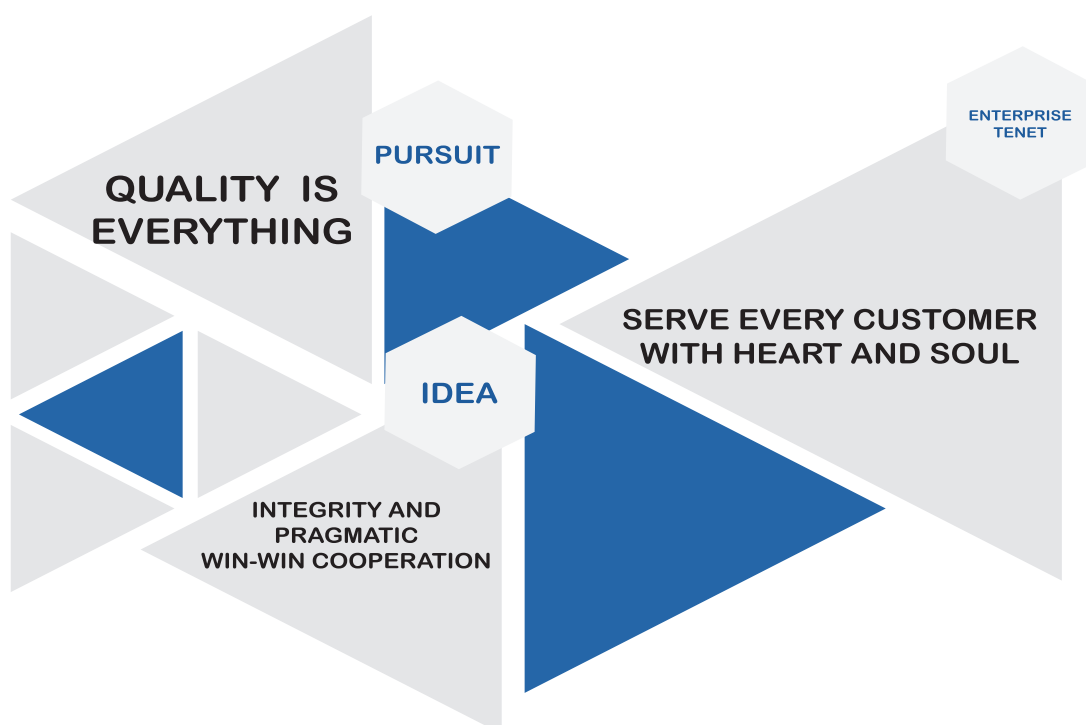
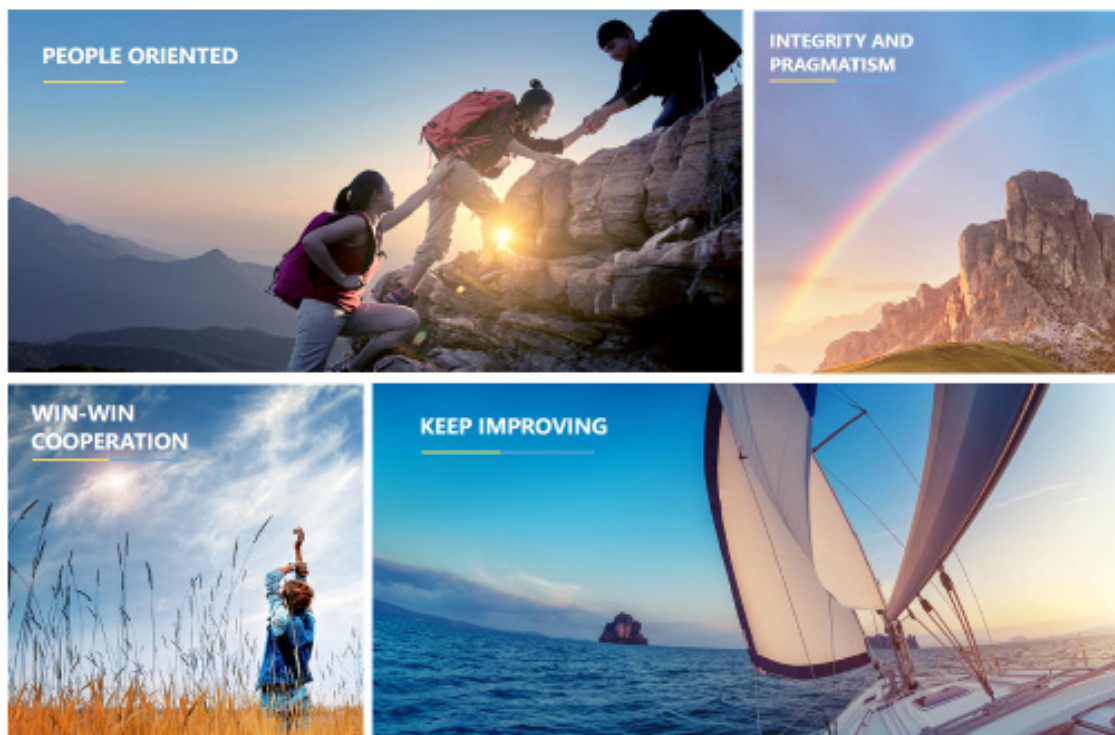
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浙江鸣鸿精密技术有限公司
Zhejiang MingHong Precision Co. Ltd

CORE VALUES



ABOUT MINGHONG

Zhejiang Minghong Precision Technology Co., Ltd. is a high-tech enterprise integrating independent research and development and production of high-precision cutting tools, headquartered in Linping District, Hangzhou City, Zhejiang Province, China.

The company is committed to the advancement and development of industry technology, and has more than 10 years of experience in the production of high-precision cutting tools. In 2022, the company officially launched the factory direct sales business to provide global customers with overall solutions for precision cutting tools.

The company's products are widely used in 3C consumer electronics, molds, graphite, automobiles, medical equipment and other processing and manufacturing fields. Customers are located in China, South Korea, Japan, Russia and other countries and regions, and strive to build a dedicated, professional and dedicated modern enterprise.

All the staff of the company adhere to the tenet of strict requirements and innovation, pay attention to every commitment, focus on every detail, keep improving, produce excellent products, and win unanimous praise from many customers.



ISO9001 Certification

Unified Code For Cutting Condition And Tool Dimension

Different companies use different unit codes among cutting tool samples, causing inconvenience to the users. In the hope of bringing convenience to users by making manufactures use unified codes for their products, Japan knife Guild and Japan Superhard Knife Guild have developed a set of unified unitcodes

Cutting condition and unit code

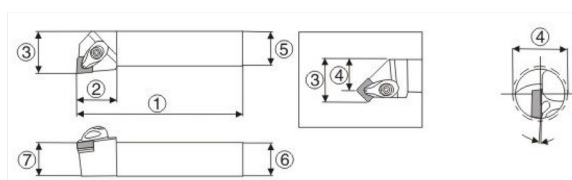
Turning	Cutting speed		Feed amount		Cutting depth		Cutting edge width		Machined workpiece diameter	
	Vc	m/min	f	mm/rev	ap	mm	W	mm	φDm	mm
	Cutting power		Specific cutting resistance		Theoretical surface roughness		Corner arc radius		Rotation speed	
	Pc	kW	kc	MPa	h	μm	rε	mm	n	min ⁻¹

Milling	Cutting speed		Feed speed		Unit feed amount of cutting edge		Feed amount		Number of cutting edge	
	Vc	m/min	Vf	mm/min	fz	mm/t	f	mm/rev	Z	
	Axial cutting depth		Radial cutting depth		Periodic feed		Cutting power		Specific cutting resistance	
	ap	mm	ae	mm	pf	mm	Pc	kW	kc	MPa
	Chip discharge		Rotation speed							
	Q	cm ³ /min	n	min						

Turning	Cutting speed		Feed speed		Feed amount		Diameter		Cutting power	
	Vc	m/min	f	mm/rev	f	mm/rev	φDc	mm	Pc	kW
	Torque		Thrust		Specific cutting resistance		Depth of boring		Rotation speed	
	Mc	N·m	Tc	N	Kc	MPa	rε	mm	n	min ⁻¹

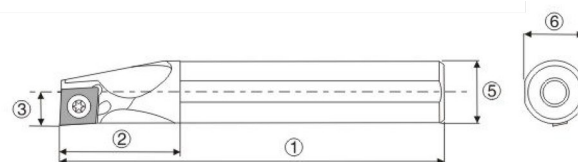
Dimension code for turning tool

•Outer circle turning tool



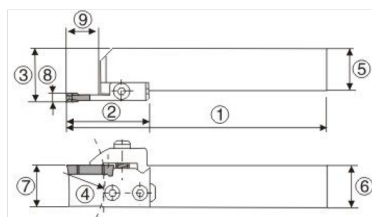
①	②	③	④	⑤	⑥	⑦
Full length	Length of neck	Tool nose distance	Tool nose distance	Cutter bar width	Cutter bar height	Tool nose height
L ₁	L ₂	f	f ₁	b	h	h ₁

•Inner hole turning tool



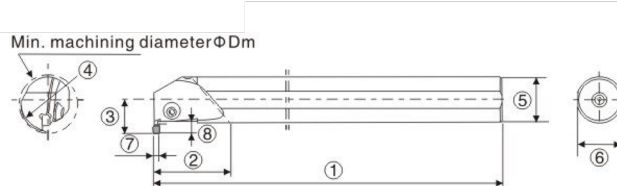
①	②	③	④	⑤	⑥
Full length	Length of neck	Tool nose distance	Min. machining diameter	Cutter bar diameter	Cutter bar height
L ₁	L ₂	f	φDm	φDs	h

•Grooving(outer circle,end face)tuning tool



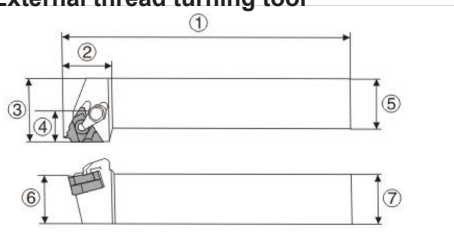
①	②	③	④	⑤	⑥	⑦	⑧	⑨
Full length	Length of neck	Tool nose distance	Max. machining diameter	Cutter bar width	Cutter bar height	Tool nose height	Cutting edge width	Max grooving depth
L ₁	L ₂	f	φDm	b	H	h ₁	w	ar

•Grooving(inner hole)tuning tool



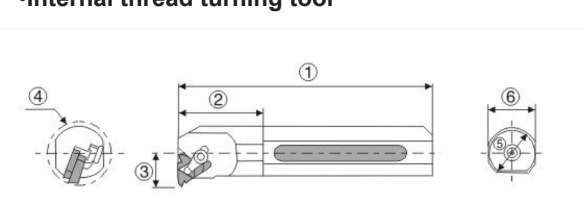
①	②	③	④	⑤	⑥	⑦	⑧
Full length	Length of neck	Tool nose distance	Max. machining diameter	Cutter bar diameter	Cutter bar height	Cutting edge width	Max grooving depth
L ₁	L ₂	f	φDm	φDs	h	w	ar

•External thread turning tool



①	②	③	④	⑤	⑥	⑦
Full length	Length of neck	Tool nose distance	Neck width	Cutter bar width	Cutter bar height	Tool nose height
L ₁	L ₂	f	-	b	h	h ₁

•Internal thread turning tool



①	②	③	④	⑤	⑥
Full length	Length of neck	Tool nose distance	Min. machining diameter	Cutter bar diameter	Cutter bar height
L ₁	L ₂	f	φDm	φDs	h

Unified Code For Cutting Condition And Tool Dimension

Dimension code for milling cutter

•Disc type milling cutter

Figure 1

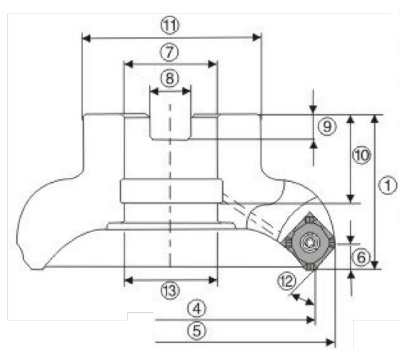


Figure 2

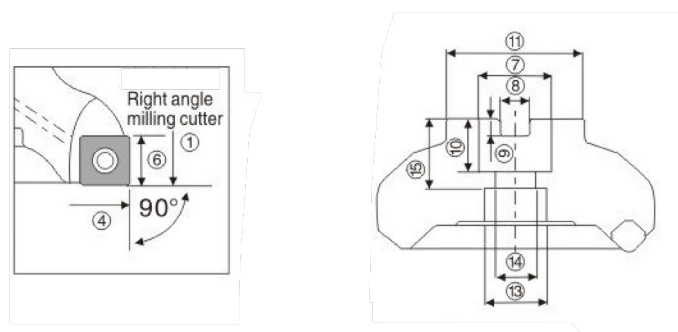


Figure 3

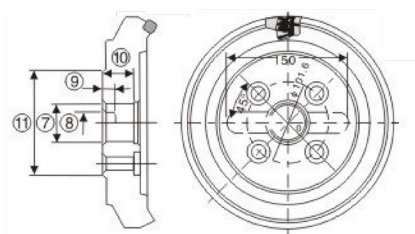
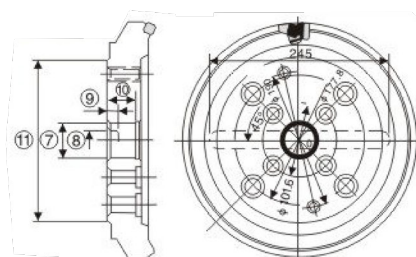
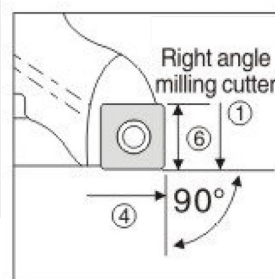
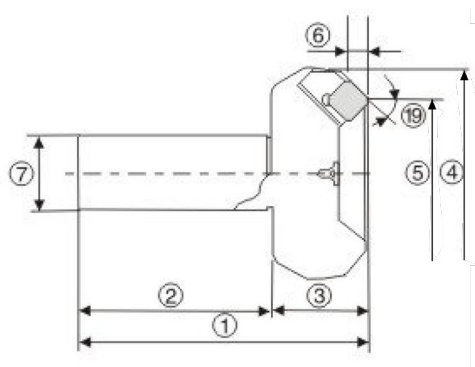


Figure 4



①	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
Mill height	Outer diameter	Max outer diameter	Max cutting depth	Bore diameter	End face keyseat width	End face keyseat depth	Mounting hole height	Shaft sleeve diameter	Cutting edge angle	Screw base diameter	Thread hole diameter	Thread hole height
Lf	φD_c	φD_1	ap	d	a	b	l	φD_b	k	φd_1	φd_2	l ₁

•Cutter bar type miling cutter



①	②	③	④	⑤	⑥	⑦	⑧
Full length	Cutting bar length	Mill height	Outer diameter	Max outer diameter	Max cutting depth	Cutter bar diameter	Cutting edge angle
L	l _s	Lf	φD_c	φD_1	ap	φD_s	K

Indicating Method Of Insert Model

T	N	M	G	16
C	C	G	T	09
1	2	3	4	5

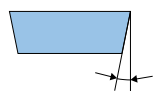
•Insert model code labeling method
(Based on 1998:JIS-B4120-1998 ISO 1832/AM1)

1- Shape Code

Code	Shape	Tool nose angle(degree)	Graphics
H	Regular hexagon	120°	
O	Regular octagon	135°	
P	Regular pentagon	108°	
S	Square	90°	
T	Regular triangle	60°	
c	Rhombus	80°	
D		55°	
E		75°	
F		50°	
M		86°	
V		35°	
Y	Polygon	25°	
w	Hexagon	80°	
L	Rectangle	90°	
A	Parallelogram	85°	
B		82°	
K		55°	
R	Circle	-	

2- Clearance Angle Code

Code	Clearance angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
0	Other



(Note)the smaller angle is the tool nose angle in rhomb and parallelogram inserts.

*The inscribed circle diameter uses the metric system for models with MO.

3- Grade Code

Code (class)	Allowance(mm)		
	Tool nose height (m)	Thickness (s)	Inscribed circle diameter (φd)
A	±0.005	±0.025	±0.025
F	±0.005	±0.025	±0.013
C	±0.013	±0.025	±0.025
H	±0.013	±0.025	±0.013
E	±0.025	±0.025	±0.025
G	±0.025	±0.13	±0.025
J	±0.005	±0.025	±0.005~ ±0.13
K	±0.013	±0.025	±8:15
L	±0.025	±0.025	±0.05~ ±0.13
M	±0.08~ ±0.18	±0.13	±0.05~ ±0.13
N	±0.08~ ±0.18	±0.025	±0.05~ ±0.13
U	±0.13~ ±0.38	±0.13	±0.08~ ±0.25

4- Groove · Hole Code

Code	With/without hole	Hole shape	Chip breaker groove	Shape
N	No	-	No	
R			Single-sided	
F			Double-sided	
A	Yes	Cylindrical hole	No	
M			Single-sided	
G			Double-sided	
W		Part of the cylindrical hole, single-sided 40°~60°	No	
T			Single-sided	
Q		Part of the cylindrical hole, double-sided 40°~60°	No	
U			Double-sided	
B		Part of the cylindrical hole, single-sided 70°~90°	No	
H			Single-sided	
C		Part of the cylindrical hole, double-sided 70°~90°	No	
J			Double-sided	
X			-	

5- Cutting Edge Length & Inscribed Circle Code

*								Inscribed circle diameter
Code	Dimension	Code	Dimension	Code	Dimension	Code	Dimension	
		03	3.97	03	4			3.97
		04	4.76	04	4.8			4.76
*05	5	-	-	-	-	-	-	5
		05	5.56	05	-			5.56
*06	6	-	-	-	-	-	-	6
		06	6.2	06	6.5	04	4.3	6.35
		07	7.94	08	8.1	05	5.4	7.94
*08	8	-	-	-	-	-	-	8
*09	9.525	09	9.525	09	9.7	06	6.5	9.525
*10	10	-	-	-	-	-	-	10
*12	12	-	-	-	-	-	-	12
*12	12.7	12	12.7	12	12.9	08	8.7	12.7
*15	15.875	15	15.875	16	16.1	10	10.9	15.875
*16	16	-	-	-	-	-	-	16
*19	19.05	-	-	-	-	33	-	19.05
*20	20	-	-	-	-	-	-	20
		22	22.225	22	22.6	38	38.5	22.225
-25	25	-	-	-	-	-	-	25
25	25.4	25	25.4	25	25.8		31	25.4
31	31.75	31	31.75	32	32.2	55	55	31.75
*32	32	-	-	-	-	-	-	32

Indicating Method Of Insert Model

04	08			-TM
T3	04	F	M	-JS
6	7	8	9	10

•Dimension precision for different shapes at J,K,L,M,N and U grade

Insert with a tool nose angle more than 55°

(Unit: mm)

Standard inscribed circle	Inscribed circle diameter (inscribed circle) allowance		Tool nose height (m) allowance		Applicable insert shape
	J K L M N (Grade)	U (Grade)	J K L M N (Grade)	U (Grade)	
6.35	±0.05	±0.08	±0.08	±0.13	H  T 
9.525					O  W 
12.7	±0.08	±0.13	±0.13	±0.2	P  R 
15.875	±0.1	±0.18	±0.15	±0.27	S 
19.05					C, E, M 
25.4	±0.13	±0.25	±0.18	±0.38	
31.75	±0.15	±0.25	±0.2	±0.38	
32					

For the thickness of the insert, because the cutting edge of most inserts with chip breaker groove is lower than the upper surface, the thickness shown in all outline dimensional drawings on the following pages equals to the size s in the drawings.

M grade insert with a toolnose angle of 55°(D shape), 35°(V shape)and 25°(Y shape)

(Unit: mm)

Standard inscribed circle	Inscribed circle diameter (inscribed circle) allowance	Tool nose height (m) allowance	Applicable insert shape
6.35	±0.05	±0.11	D 
9.525			
12.7			
15.875	±0.1	±0.18	V 
19.05			
6.35	±0.05	±0.16	Y 
9.525			

Negative rake angle



Positive rake angle

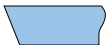


6- Thickness Code

Code	Corner arc radius r_ϵ (mm)
X1	1.39
01	1.59
T1	1.79
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

(Arbitrary code)

8- Principal Cutting Edge Shape Code

Code	Cutting edge state	shape
00	Sharp edge	
02	Arc edge	
04	Negative chamfer angle	
08	Composite passivated edge	

7- Corner Arc Radius Code

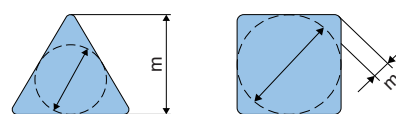
Code	Corner arc radius r_ϵ (mm)
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2
24	2.4
28	2.8
32	3.2

(Arbitrary code)

9- Direction Code

Code	Direction	shape
R	Right	
L	Left	
N	No	

Inscribed circle diameter (ϕd) and tool nose height (m)

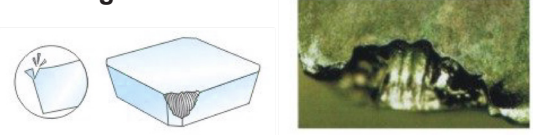
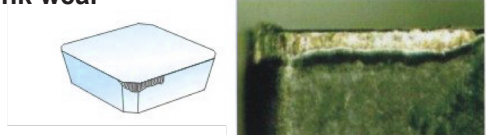
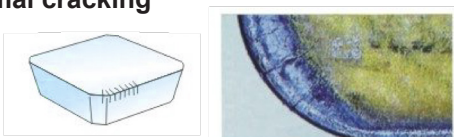
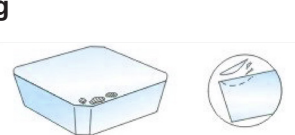


(Supplementary code)

10- Chip Breaker Groove Code

Code	Application
TM	Semi finish cutting, Basic choice
HQ	Finishing, Semi finishing
CQ	Finishing to Semi finishing
GS	Semi finishing to roughing, Special for stainless steel
HA	Light alloy stainless steel processing
HS	Semi finishing, Special for stainless steel
MQ	Finishing
MA	Moderate cutting, Universal groove profile
MS	Moderate cutting, Stainless steel, Soft steel, Hard-to-cut material
PM	Semi finishing
PR	Moderate cutting

Turning — FAQ

Tool damage	Causes	Solutions
Crater wear 	○ Unsuitable insert material ○ Excessive cutting amount	○ Select harder material ○ Reduce cutting amount ○ Reduce cutting speed
Breakage 	○ Unsuitable insert material ○ Excessive feed ○ Poor cutting edge strength ○ Poor cutter bar rigidity	○ Select material with better toughness ○ Reduce feed ○ Select an insert with high grinding quality or chamfered edge ○ Select a larger cutter bar
Plastic deformation 	○ Unsuitable insert material ○ Excessive cutting amount ○ Overtemperature of cutting	○ Select material with higher strength ○ Reduce cutting condition ○ Select material with high thermal conductivity
Flank wear 	○ Excessive hardness of the machined workpiece compared to the tool ○ When machining a machined workpiece with a hardened surface ○ Incorrect insert material ○ Excessive cutting speed ○ Clearance angle too small ○ Feed speed too low	○ Select harder material ○ Reduce cutting speed ○ Select a larger clearance angle ○ Increase feed
Thermal cracking 	○ Thermal expansion and contraction caused by the cutting temperature ○ Unsuitable insert material ※ Especially during milling	○ Adopt dry cutting ○ Use enough coolant for necessary wet cutting. ○ Select material with higher toughness
Tipping 	○ Unsuitable insert material ○ Excessive feed ○ Reduced cutting edge strength ○ Poor cutter bar rigidity	○ Select material with higher toughness ○ Reduce feed ○ Select an insert with high grinding quality or chamfered edge ○ Select a larger cutter bar
Notch wear 	○ Surface hardened machined workpiece ○ Friction generated due to bad cutting geometrical shape ○ (Vibration generated)	○ Select harder material ○ Improve chip control with large rake angle
Peeling 	○ Build-up separation ○ Poor cut chip control	○ Improve chip control with large rake angle ○ Apply large chip-hold groove
Completely broken 	○ With the wear progresses, the cutting edge of the insert cannot proceed machining due to breakage ○ Fulltool nose breakage	○ Reduce feed ○ Reduce cutting depth ○ Select insert material with higher toughness ○ Select more enhanced chip breaker groove type ○ Select thicker insert
Crater wear 	○ Cutting speed too low ○ The material of the machined workpiece easily reacts with the cutting tool	○ Increase cutting speed ○ Select insert with bigger inclined angle ○ Select material with better toughness

Coating/CVD — Chemical Coating

•For turning use

	STEEL P	STAINLESS STEEL M	CAST IRON K
05	MH8011		
10			
15	MH8018		MH2018
20		MH5011	
25			MH2028
30		MH5018	
35	MH8028		
40			

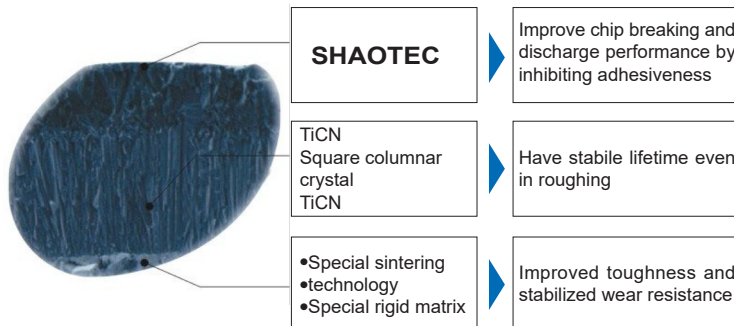
The CVD coating is prepared by taking carbide as the matrix and coating 3-16 μm thick CVD coating materials, such as TiCN and Al_2O_3 on the matrix surface by the chemical vapor deposition (CVD) method. Because the CVD coating has better such characteristics as wear resistance, heat resistance, oxidation resistance and chemical stability than carbide, the CVD coated cutting tool has long lifetime and is suitable for high speed machining. The new surface leveling technology "Shao Tec" promoted in the main coating materials reduces the phenomenon of microscopic stress concentration, while reducing the surface friction coefficient, especially in adhesiveness resistance, wear resistance and tipping resistance, greatly improving the performance of cutting tool materials.

SHAOTEC

MH8000 SERIES

CVD material for steel milling

With the compactness strengthening technology and the columnar crystal stabilizing technology, MH8011 and MH8018 have significantly reduced small tipping, which is the main cause of cutting edge damage with the stability of lifetime improved to the limit, and are highly reliable universal material. Coupled with the application of the new surface leveling technology "Shao Tec", the leap of lifetime stability is realized.

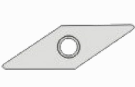
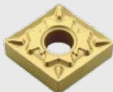
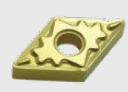
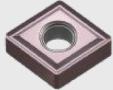
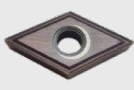
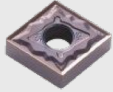
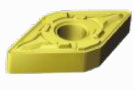
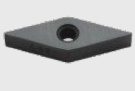


•For turning use

Application	Material	Matrix			Coating		Characteristics
	ISO classification code	Proportion	Hardness (HRA)	Flexural strength (GPa)	Main components	Thickness (μm)	
 STEEL	SHAOTEC MH8008	13.9	91.0	2.5	Square columnar crystal TiCN +Al ₂ O ₃	16	Material for steel processing Due to the application of the new surface leveling technology "Shao Tec", the performance of the tool material is significantly improved. The cracks developed on the coating are inhibited and the tipping resistance is improved by using the columnar crystal stabilizing technology, which unifies the size and orientation of the columnar crystal. At the same time, the compactness strengthening technology makes the coating compactness improved amazingly. MH8008: while maintaining the wear resistance and tipping resistance and it can be widely used in the machining field. MH8018: In light moderate intermittent machining, the tipping resistance is greatly improved and the ifetime is stable.
	P10-P20						
	SHAOTEC MH8018	13.7	90.0	2.6		16	
	P20-P30						
	MH8028	13.5	89.0	2.6	Ultrafine columnar crystal TiCN+ Al ₂ O ₃	14	
	P30-P40						

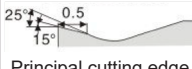
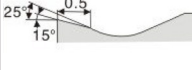
Chip Breaker Shape Setting List

Negative (positive) turning insert (hole)

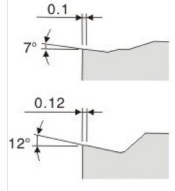
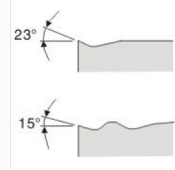
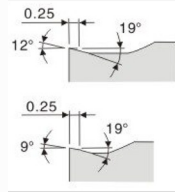
Chip Breaker	C	D	S	T	W	V
Negative						
	80° Negative	55° Negative	90° Negative	60° Negative	80° Negative	35° Negative
TM						
HQ						
CQ						
GS						
MA						
MS						
HA						
HS						
PR						
PM						
MS						
--						

Chip Breaker Shape Setting List

Chip breaker for turning

Geometric Appearance	Cutting Edge	Application Range		Characteristics	
		Feed rate(mm/rev) 0.00~6.3	Cutting depth(mm) 0.1~13		
H Series	HA 		0.03~0.3	0.5~2.5	Light alloy, stainless steel processing •Sharp cutting edge,reduce cutting resistance •High designed strength of the principal cutting edge •Suitable for low-carbon steel, stainless steel and aluminum alloy machining
H Series	HS 		0.1~0.4	1.0~4.0	Stainless steel semi finishing •Designed uniquely for stainless steel machining with longer cutting lifetime •The cutting edge of the chip breaker groove is designed to have large rake angle, so the wear resistance is enhanced.
G Series	GS 		0.15~0.5	1.5~5.5	Stainless steel semi finishing roughing •Chip breaker groove special for stainless steel
Aluminum alloy machining Series	AL 		0.03~0.4	0.1~4.0	Aluminum alloy machining, Semi finishing •Large rake angle and low cutting resistance, the cutting edge is ensured to have long service life during continuous aluminum alloy turning. •High-speed finishing
For moderate cutting	MA 	Tool nose part  Principal cutting edge part 	0.1~0.5	0.9~4.0	Use the first recommended chip breaker groove for moderate cutting of carbonsteel and alloy steel Use the second recommended chip breaker groove for cast iron finishing and light cutting M grade double-sided chip breaker groove. Most suitable in general fields. End edge shape with high cutting sharpness.
For moderate cutting	MS 	Tool nose part  Principal cutting edge part 	0.1~0.5	0.9~4.0	Use the first recommended chip breaker groove for cutting stainless steel, soft steel and hard-to-cut material M grade double-sided chip breaker groove. Sharp cutting edge with high cutting sharpness. Full peripheral chip breaker groove shape with high universality.
For cast iron cutting	-- 		0.1~0.5	0.9~4.0	Use the first recommended chip breaker groove for cast iron near heavy cutting M grade double-sided insert chip breaker groove. (flat-top) It has high edge strength and stable insert landing and is most suitable for unstable cutting, such as intermittent

Selection Standard Of Chip Breaker(Negative)

Geometric Appearance	Cutting Edge	Application Range		Characteristics
		Feed rate(mm/rev) 0.00~6.3	Cutting depth(mm) 0.1~13	
Finishing~Semi finishing 		0.15~0.4	0.05~3.0	Chip treatment is good when performing machining with different cutting depth, such as profiling. It is also suitable for lifting machining with a wall surface.
Finishing 		0.05~0.2	0.5~1.5	Large rake angle. Low resistance helps to realize good cutting.
Finishing~Semi finish 		0.1~0.3	0.5~2.0	Positive angle cutting edge ensures outstanding sharpness and tool nose strength. It is also beneficial to preventing the damage of cutting edge by the workpiece side wall.

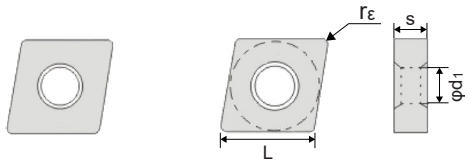
Material	Characteristic
MH8008	Suitable for finishing and semi finishing of carbon steel and alloy steel with better wear resistance than 9018
MH8018	Widely used in carbon steel and alloy steel machining, wide machining range and first choice for steel part machining
MH8028	Suitable for carbon steel and alloy steel. Better roughness than 9018 in roughing and gravity cutting under unfavorable conditions.
MH5011	Ultrafine alloy designation combined with the coating has excellent wear resistance, is suitable for nonferrous metal machining such as aluminum alloy and copper, semi finishing and finishing of cast iron and also can be used for quenched steel machining and is especially good for thread and cutting groove machining.
MH5018	Designation special for stainless steel machining, ultrafine alloy designation, combined with the coating, have excellent toughness and anti-caking and wear resistance, suitable for stainless steel machining, especially austenitic stainless steel. Also suitable for cutting heat-resistant alloy steel under low speed condition.
MH2018	The insert has excellent wear resistance and toughness, and is suitable for finishing and semi finishing of ordinary iron and ductile cast iron.
MH60	Cermet cutter has high hardness and is suitable for semi finishing and finishing of various steel parts and iron casting; It has low affinity with the machined workpiece material and is not susceptible to build-up edge; Chemical stability is good; Heat resistance and wear resistance are good.
K01	The cutting edge is designed to consider both cutting sharpness and strength. The unique groove profile is designed to effectively reduce the friction between the cutting and the rake face, so that it is more suitable for continuous and intermittent aluminum alloy profiling.

Turning Insert(Negative)

CN□□

Rhomb with hole (Negative Rake Angle)

80°



CNMG 12 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	0903□□	1204□□	1606□□	1906□□	2509□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

Product stock ▲ Main grade reserve stock ○ Make-to-order

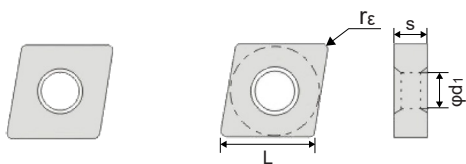
Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing~Semi finishing		CNMG090404-HQ	9.7	9.525	3.18	3.81	0.4	○	○											
		CNMG090408-HQ	9.7	9.525	3.18	3.81	0.8	○	○											
		CNMG120404-HQ	12.9	12.7	4.76	5.16	0.4	▲	▲											
		CNMG120408-HQ	12.9	12.7	4.76	5.16	0.8	▲	▲											
		CNMG120412-HQ	12.9	12.7	4.76	5.16	1.2	○	○											
		CNMG120404-CQ	12.9	12.7	4.76	5.16	0.4	▲	▲											
		CNMG120408-CQ	12.9	12.7	4.76	5.16	0.8	▲	▲											
		CNMG120412-CQ	12.9	12.7	4.76	5.16	1.2	○	○											
		CNMG160608-CQ	16.1	5.875	6.35	6.35	0.8	○	○											
		CNMG160612-CQ	16.1	5.875	6.35	6.35	1.2	○	○											
		CNMG120404-CQ	12.9	12.7	4.76	5.16	0.4				▲									
		CNMG120408-CQ	12.9	12.7	4.76	5.16	0.8				▲									
		CNMG120412-CQ	12.9	12.7	4.76	5.16	1.2				▲									
		CNMG120408-CQ	12.9	12.7	4.76	5.16	0.4					▲								
		CNMG120408-CQ	12.9	12.7	4.76	5.16	0.8					▲								
		CNMG120404-TF	12.9	12.7	4.76	5.16	0.4						▲							
CNMG120408-TF		12.9	12.7	4.76	5.16	0.8						▲								
Semi finishing		CNMG120404-TM	12.9	12.7	4.76	5.16	0.4	▲	▲											
		CNMG120408-TM	12.9	12.7	4.76	5.16	0.8	▲	▲											
		CNMG120412-TM	12.9	12.7	4.76	5.16	1.2	○	○											
		CNMG120416-TM	12.9	12.7	4.76	5.16	1.6	○	○											
		CNMG160612-TM	16.1	15.875	6.35	6.35	1.2	○	○											
		CNMG190608-TM	19.3	19.05	6.35	7.94	0.8	○	○											
		CNMG190612-TM	19.3	19.05	6.35	7.94	1.2	○	○											

Turning Insert(Negative)

CN□□

Rhomb with hole (Negative Rake Angle)

80°



CNMG 12 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	0903□□	1204□□	1606□□	1906□□	2509□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

Product stock ▲ Main grade reserve stock ○ Make-to-order

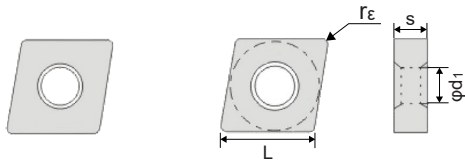
Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		CNMG120404-TM	12.9	12.7	4.76	5.16	0.4				▲									
		CNMG120408-TM	12.9	12.7	4.76	5.16	0.8				▲									
		CNMG120412-TM	12.9	12.7	4.76	5.16	1.2				▲									
		CNMG120404-TM	12.9	12.7	4.76	5.16	0.4					▲								
		CNMG120408-TM	12.9	12.7	4.76	5.16	0.8					▲								
		CNMG160404-TM	16.1	15.875	6.35	6.35	0.4					▲								
		CNMG160408-TM	16.1	15.875	6.35	6.35	0.8					▲								
	Moderate		CNMG160608-ZS	16.1	15.875	6.35	6.35	0.8				▲								
CNMG160612-ZS			16.1	15.875	6.35	6.35	1.2				▲									
CNMG160616-ZS			16.1	15.875	6.35	6.35	1.6				○									
		CNMG120404-PR	12.9	12.7	4.76	5.16	0.4	▲	▲											
		CNMG120408-PR	12.9	12.7	4.76	5.16	0.8	▲	▲											
		CNMG120412-PR	12.9	12.7	4.76	5.16	1.2	▲	▲											
Semi finishing		CNMG120404-PM	12.9	12.7	4.76	5.16	0.4	▲	▲											
		CNMG120408-PM	12.9	12.7	4.76	5.16	0.8	▲	▲											
		CNMG120412-PM	12.9	12.7	4.76	5.16	1.2	▲	▲											
Finishing		CNMG120404-MQ	12.9	12.7	4.76	5.16	0.4										▲			
		CNMG120408-MQ	12.9	12.7	4.76	5.16	0.8										▲			
Finishing~Semi finishing		CNMG120404-MM	12.9	12.7	4.76	5.16	0.4										▲			
		CNMG120408-MM	12.9	12.7	4.76	5.16	0.8										▲			
		CNMG120404-HA	12.9	12.7	4.76	5.16	0.4							▲	▲		▲			
		CNMG120408-HA	12.9	12.7	4.76	5.16	0.8							▲	▲		▲			
		CNMG120412-HA	12.9	12.7	4.76	5.16	1.2							○	○		○			

Turning Insert(Negative)

CN□□

Rhomb with hole (Negative Rake Angle)

80°



CNMG 12 04 04 - □□

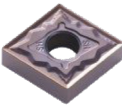
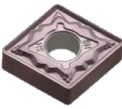
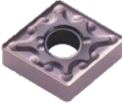
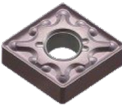
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	0903□□	1204□□	1606□□	1906□□	2509□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

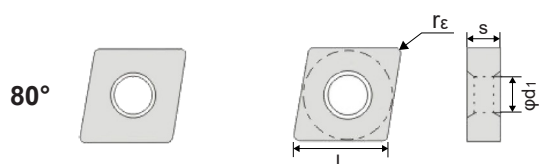
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi Finishing~roughing		CNMG120404-GS	12.9	12.7	4.76	5.16	0.4							▲	▲					
		CNMG120408-GS	12.9	12.7	4.76	5.16	0.8							▲	▲					
		CNMG120412-GS	12.9	12.7	4.76	5.16	1.2							○	○					
		CNMG160608-GS	16.1	15.875	6.35	6.35	0.8							○	○					
		CNMG160612-GS	16.1	15.875	6.35	6.35	1.2							○	○					
		CNMG190612-GS	19.3	19.05	6.35	7.94	1.2							○	○					
		CNMG190616-GS	19.3	19.05	6.35	7.94	1.6							○	○					
Semi Finishing		CNMG120404-HS	12.9	12.7	4.76	5.16	0.4							▲	▲					
		CNMG120408-HS	12.9	12.7	4.76	5.16	0.8							▲	▲					
		CNMG120412-HS	12.9	12.7	4.76	5.16	1.2							○	○					
		CNMG160612-HS	16.1	15.875	6.35	6.35	1.2							○	○					
		CNMG160616-HS	16.1	15.875	6.35	6.35	1.6							○	○					
		CNMG190612-HS	19.3	19.05	6.35	7.94	1.2							○	○					
		CNMG190616-HS	19.3	19.05	6.35	7.94	1.6							○	○					
		CNMG120404-HS	12.9	12.7	4.76	5.16	0.4										▲			
		CNMG120408-HS	12.9	12.7	4.76	5.16	0.8										▲			
	Moderate		CNMG120404-MA	12.9	12.7	4.76	5.16	0.4							▲	▲				
CNMG120408-MA			12.9	12.7	4.76	5.16	0.8							▲	▲					
CNMG120412-MA			12.9	12.7	4.76	5.16	1.2							○	○					
CNMG120416-MA			12.9	12.7	4.76	5.16	1.6							○	○					
CNMG160608-MA			16.1	15.875	6.35	6.35	0.8							○	○					
CNMG160612-MA			16.1	15.875	6.35	6.35	1.2							○	○					
CNMG160616-MA			16.1	15.875	6.35	6.35	1.6							○	○					
CNMG190612-MA			19.3	19.05	6.35	7.94	1.2							○	○					
CNMG190616-MA			19.3	19.05	6.35	7.94	1.6							○	○					
		CNMG120404-MA	12.9	12.7	4.76	5.16	0.4										▲			
		CNMG120408-MA	12.9	12.7	4.76	5.16	0.8										▲			

Turning Insert(Negative)

CN□□

Rhomb with hole (Negative Rake Angle)



CNMG 12 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	0903□□	1204□□	1606□□	1906□□	2509□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

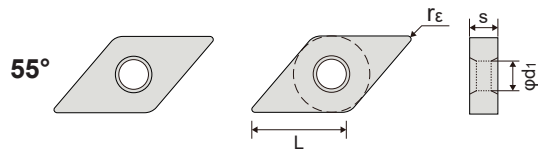
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		CNMG120408-MS	12.9	12.7	4.76	5.16	0.8										▲			
		CNMG09T304-MS	9.7	9.525	3.18	3.81	0.4							○	○					
		CNMG09T308-MS	9.7	9.525	3.18	3.81	0.8							○	○					
		CNMG120404-MS	12.9	12.7	4.76	5.16	0.4							▲	▲					
		CNMG120408-MS	12.9	12.7	4.76	5.16	0.8							▲	▲					
		CNMG120412-MS	12.9	12.7	4.76	5.16	1.2							○	○					
		CNMG160608-MS	16.1	15.875	6.35	6.35	0.8							○	○					
		CNMG160612-MS	16.1	15.875	6.35	6.35	1.2							○	○					
		CNMG160616-MS	16.1	15.875	6.35	6.35	1.6							○	○					
		CNMG190612-MS	19.3	19.05	6.35	7.94	1.2							○	○					
		CNMG190616-MS	19.3	19.05	6.35	5.16	1.6							○	○					
		CNMG120404-MS	12.9	12.7	4.76	5.16	0.4												▲	
		CNMG120408-MS	12.9	12.7	4.76	5.16	0.8												▲	
		CNMG120412-MS	12.9	12.7	4.76	5.16	1.2												▲	
		CNMG120404	12.9	12.7	4.76	5.16	0.4												▲	
		CNMG120408	12.9	12.7	4.76	5.16	0.8												▲	
		CNMG120412	12.9	12.7	4.76	5.16	1.2												▲	

Turning Insert(Negative)

DN□□

Rhomb with hole (Negative Rake Angle)



DNMG 15 04 04 - □□

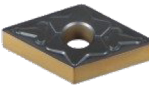
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	1104 □□	1504 □□	1506 □□
φd1(mm)	3.81	5.16	5.16

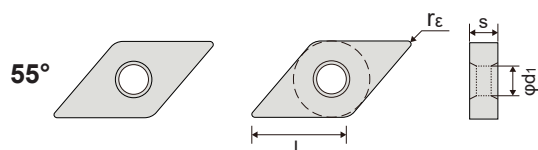
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing-Semi finishing		DNMG110402-HQ	11.6	9.525	4.76	3.81	0.2	○	○											
		DNMG150404-HQ	15.5	12.7	4.76	5.16	0.4	▲	▲											
		DNMG150408-HQ	15.5	12.7	4.76	5.16	0.8	▲	▲											
		DNMG150412-HQ	15.5	12.7	4.76	5.6	1.2	▲	▲											
		DNMG150604-HQ	15.5	12.7	6.35	5.16	0.4	○	○											
		DNMG150608-HQ	15.5	12.7	6.35	5.16	0.8	○	○											
		DNMG150612-CQ	15.5	12.7	6.35	5.16	1.2	○	○											
		DNMG150404-CQ	15.5	12.7	4.76	5.16	0.4	▲	▲											
		DNMG150408-CQ	15.5	12.7	4.76	5.16	0.8	▲	▲											
		DNMG150412-CQ	15.5	12.7	4.76	5.16	1.2	○	○											
		DNMG150604-CQ	15.5	12.7	6.35	5.16	0.4	○	○											
		DNMG150608-CQ	15.5	12.7	6.35	5.16	0.8	○	○											
DNMG150612-CQ		15.5	12.7	6.35	5.16	1.2														
Semi finishing		DNMG150404-TM	15.5	12.7	4.76	5.16	0.4	▲	▲											
		DNMG150408-TM	15.5	12.7	4.76	5.16	0.8	▲	▲											
		DNMG150412-TM	15.5	12.7	4.76	5.16	1.2	▲	▲											
		DNMG150416-TM	15.5	12.7	4.76	5.16	1.6	○	○											
		DNMG150604-TM	15.5	12.7	6.35	5.16	0.4	▲	▲											
		DNMG150608-TM	15.5	12.7	6.35	5.16	0.8	▲	▲											
		DNMG150612-TM	15.5	12.7	6.35	5.16	1.2	▲	▲											
		DNMG150616-TM	15.5	12.7	6.35	5.16	1.6	○	○											
		DNMG150404-TM	12.9	12.7	4.76	5.16	0.4				▲									
		DNMG150408-TM	12.9	12.7	4.76	5.16	0.8				▲									
Semi finishing		DNMG150604-PM	15.5	12.7	4.76	5.16	0.4		▲	▲		▲								
		DNMG150608-PM	15.5	12.7	4.76	5.16	0.8		▲	▲		▲								
		DNMG150612-PM	15.5	12.7	4.76	5.16	1.2		○	○		○								

Turning Insert(Negative)

DN□□

Rhomb with hole (Negative Rake Angle)



DNMG 15 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	1104 □□	1504 □□	1506 □□
φd1(mm)	3.81	5.16	5.16

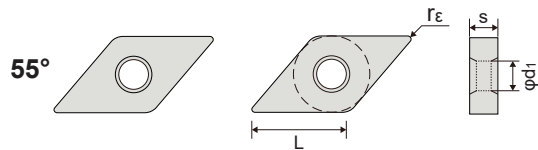
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		DNMG150404-PM	12.9	12.7	4.76	5.16	0.4					▲								
		DNMG150408-PM	12.9	12.7	4.76	5.16	0.8					▲								
		DNMG150404-PR	15.5	12.7	4.76	5.16	0.4	▲	▲											
		DNMG150408-PR	15.5	12.7	4.76	5.16	0.8	▲	▲											
		DNMG150412-PR	15.5	12.7	4.76	5.16	1.2	▲	▲											
Finishing-Semi finishing		DNMG150404-HA	15.5	12.7	4.76	5.16	0.4							▲	▲					
		DNMG150408-HA	15.5	12.7	4.76	5.16	0.8							▲	▲					
		DNMG150604-HA	15.5	12.7	6.35	5.16	0.4							○	○					
		DNMG150608-HA	15.5	12.7	6.35	5.16	0.8							○	○					
Semi finishing~roughing		DNMG150404-GS	15.5	12.7	4.76	5.16	0.4							▲	▲					
		DNMG150408-GS	15.5	12.7	4.76	5.16	0.8							▲	▲					
		DNMG150412-GS	15.5	12.7	4.76	5.16	1.2							▲	▲					
		DNMG150604-GS	15.5	12.7	6.35	5.16	0.4							○	○					
		DNMG150608-GS	15.5	12.7	6.35	5.16	0.8							○	○					
		DNMG150612-GS	15.5	12.7	6.35	5.16	1.2							○	○					
Semi finishing		DNMG150404-HS	15.5	12.7	4.76	5.16	0.4							▲	▲					
		DNMG150408-HS	15.5	12.7	4.76	5.16	0.8							▲	▲					
		DNMG150412-HS	15.5	12.7	4.76	5.16	1.2							○	○					
		DNMG150604-HS	15.5	12.7	6.35	5.16	0.4							○	○					
		DNMG150608-HS	15.5	12.7	6.35	5.16	0.8							○	○					
		DNMG150612-HS	15.5	12.7	6.35	5.16	1.2							○	○					

Turning Insert(Negative)

DN□□

Rhomb with hole (Negative Rake Angle)



DNMG 15 04 04 - □□

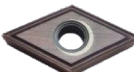
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

CN□□	1104 □□	1504 □□	1506 □□
φd1(mm)	3.81	5.16	5.16

Product stock ▲ Main grade reserve stock ○ Make-to-order

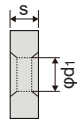
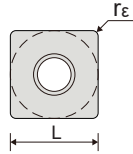
Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		DNMG110412-MA	11.6	9.525	4.76	3.81	1.2							○	○					
		DNMG150404-MA	15.5	12.7	4.76	5.16	0.4							▲	▲					
		DNMG150408-MA	15.5	12.7	4.76	5.16	0.8							▲	▲					
		DNMG150412-MA	15.5	12.7	4.76	5.16	1.2							▲	▲					
		DNMG150604-MA	15.5	12.7	6.35	5.16	0.4							○	○					
		DNMG150608-MA	15.5	12.7	6.35	5.16	0.8							○	○					
		DNMG150612-MA	15.5	12.7	6.35	5.16	1.2							○	○					
		DNMG150616-MA	15.5	12.7	6.35	5.16	1.6							○	○					
		DNMG150404-MS	15.5	12.7	4.76	5.16	0.4							▲	▲					
		DNMG150408-MS	15.5	12.7	4.76	5.16	0.8							▲	▲					
		DNMG150412-MS	15.5	12.7	4.76	5.16	1.2							▲	▲					
		DNMG150604-MS	15.5	12.7	6.35	5.16	0.4							○	○					
		DNMG150608-MS	15.5	12.7	6.35	5.16	0.8							○	○					
		DNMG150612-MS	15.5	12.7	6.35	5.16	1.2							○	○					
		DNMG150404-MS	15.5	12.7	4.76	5.16	0.4												▲	
		DNMG150408-MS	15.5	2.7	4.76	5.16	0.8												▲	
		DNMG150412-MS	15.5	12.7	4.76	5.16	1.2												▲	
		DNMG150404	15.5	12.7	4.76	5.16	0.4												▲	
		DNMG150408	15.5	12.7	4.76	5.16	0.8												▲	
		DNMG150412	15.5	12.7	4.76	5.16	1.2												○	
		DNMG150604	15.5	12.7	6.35	5.16	0.4												▲	
		DNMG150608	15.5	12.7	6.35	5.16	0.8												▲	
		DNMG150612	5.5	2.7	6.35	5.16	1.2												○	

Turning Insert(Negative)

SN

Square with hole (Negative Rake Angle)

90°

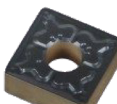
SNMG 12 04 04 - Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN	0903	1204	1506	1906	2509	3109
φd1(mm)	3.81	5.16	6.35	7.93	9.12	8.80

Product stock ▲ Main grade reserve stock ○ Make-to-order

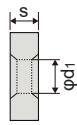
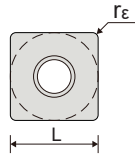
Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		SNMG090304-TM	9.525	9.525	3.18	3.81	0.4	○	○											
		SNMG090308-TM	9.525	9.525	3.18	3.81	0.8	○	○											
		SNMG120404-TM	12.7	12.7	4.76	5.16	0.4	▲	▲											
		SNMG120408-TM	12.7	12.7	4.76	5.16	0.8	▲	▲											
		SNMG120412-TM	12.7	12.7	4.76	5.16	1.2	▲	▲											
		SNMG120416-TM	12.7	12.7	4.76	5.16	1.6	○	○											
		SNMG150608-TM	15.9	15.9	6.35	6.35	0.8	○	○											
		SNMG150612-TM	15.9	15.9	6.35	6.35	1.2	○	○											
		SNMG190608-TM	19.1	19.1	6.35	7.94	0.8	○	○											
		SNMG190612-TM	19.1	19.1	6.35	7.94	1.2	○	○											
		SNMG120404-TM	12.7	12.7	4.76	5.16	0.4				▲									
		SNMG120408-TM	12.7	12.7	4.76	5.16	0.8				▲									
		SNMG120412-TM	12.7	12.7	4.76	5.16	1.2				○									
		SNMG120404L-S	12.9	12.7	4.76	5.16	0.4				▲									
		SNMG120408L-S	12.9	12.7	4.76	5.16	0.8				▲									
		SNMG120412L-S	12.9	12.7	4.76	5.16	1.2				▲									
		SNMG120404R-S	12.7	12.7	4.76	5.16	0.4				▲									
		SNMG120408R-S	12.7	12.7	4.76	5.16	0.8				▲									
		SNMG120412R-S	12.7	12.7	4.76	5.16	1.2				▲									
		SNMG120408L-S	12.7	12.7	4.76	5.16	0.8						▲							
	SNMG120408R-S	12.7	12.7	4.76	5.16	0.8						▲								

Turning Insert(Negative)

SN

Square with hole (Negative Rake Angle)

90°

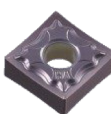
SNMG 12 04 04 - Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN	0903	1204	1506	1906	2509	3109
φd1(mm)	3.81	5.16	6.35	7.93	9.12	8.80

Product stock ▲ Main grade reserve stock ○ Make-to-order

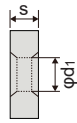
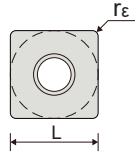
Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		SNMG120404-PM	12.7	12.7	4.76	5.16	0.4	▲	▲											
		SNMG120408-PM	12.7	12.7	4.76	5.16	0.8	▲	▲											
		SNMG120412-PM	12.7	12.7	4.76	5.16	1.2	▲	▲											
Moderate		SNMG120404-PR	12.7	12.7	4.76	5.16	0.4	▲	▲											
		SNMG120408-PR	12.7	12.7	4.76	5.16	0.8	▲	▲											
		SNMG120412-PR	12.7	12.7	4.76	5.6	1.2	▲	▲											
Finishing~Semi finishing		SNMG120404-HA	12.7	12.7	4.76	5.16	0.4						▲	▲						
		SNMG120408-HA	12.7	12.7	4.76	5.16	0.8						▲	▲						
		SNMG120412-HA	12.7	12.7	4.76	5.16	1.2						○	○						
Semi finishing		SNMG090304-HS	9.525	9.525	3.18	3.81	0.4						○	○						
		SNMG090308-HS	9.525	9.525	3.18	3.81	0.8						○	○						
		SNMG120404-HS	12.7	12.7	4.76	5.16	0.4						▲	▲						
		SNMG120408-HS	12.7	12.7	4.76	5.16	0.8						▲	▲						
		SNMG120412-HS	12.7	12.7	4.76	5.16	1.2						○	○						
		SNMG150612-HS	15.9	15.9	6.35	6.35	1.2						○	○						
		SNMG150616-HS	15.9	15.9	6.35	6.35	1.6						○	○						
		SNMG190612-HS	19.1	19.1	6.35	7.94	1.2						○	○						
		SNMG190616-HS	19.1	19.1	6.35	7.94	1.6						○	○						
Semi finishing		SNMG120404L-S	12.7	12.7	4.76	5.16	0.4						▲	▲						
		SNMG120408L-S	12.7	12.7	4.76	5.16	0.8						▲	▲						
		SNMG120412L-S	12.7	12.7	4.76	5.16	1.2						▲	▲						
		SNMG120404R-S	12.7	12.7	4.76	5.16	0.4						▲	▲						
		SNMG120408R-S	12.7	12.7	4.76	5.16	0.8						▲	▲						
		SNMG120412R-S	12.7	12.7	4.76	5.16	1.2						▲	▲						

Turning Insert(Negative)

SN

Square with hole (Negative Rake Angle)

90°

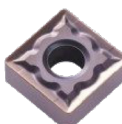
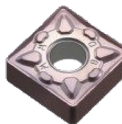
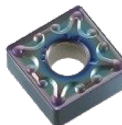
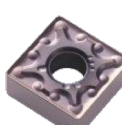
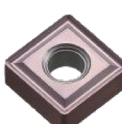
SNMG 12 04 04 - Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN	0903	1204	1506	1906	2509	3109
φd1(mm)	3.81	5.16	6.35	7.93	9.12	8.80

Product stock ▲ Main grade reserve stock ○ Make-to-order

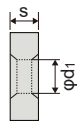
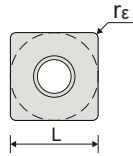
Insert Appearance		Model	Dimension					P						M					K	
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing~roughing		SNMG120404-GS	12.7	12.7	4.76	5.16	0.4							▲	▲					
		SNMG120408-GS	12.7	12.7	4.76	5.16	0.8							▲	▲					
		SNMG120412-GS	12.7	12.7	4.76	5.16	1.2							▲	▲					
		SNMG120416-GS	12.7	12.7	4.76	5.16	1.6							○	○					
		SNMG190612-GS	19.1	19.1	6.35	7.94	1.2							○	○					
Finishing~Semi finishing		SNMG120404-MM	12.7	12.7	4.76	5.16	0.4										▲			
		SNMG120408-MM	12.7	12.7	4.76	5.16	0.8										▲			
Moderate		SNMG120404-MA	12.7	12.7	4.76	5.16	0.4											▲		
		SNMG120408-MA	12.7	12.7	4.76	5.16	0.8											▲		
		SNMG120404-MA	12.7	12.7	4.76	5.16	0.4											▲		
		SNMG120408-MA	12.7	12.7	4.76	5.16	0.8											▲		
		SNMG120404-MA	12.7	12.7	4.76	5.16	0.4							▲	▲					
		SNMG120408-MA	12.7	12.7	4.76	5.16	0.8							▲	▲					
		SNMG120412-MA	12.7	12.7	4.76	5.16	1.2							▲	▲					
		SNMG120416-MA	12.7	12.7	4.76	5.16	1.6							○	○					
		SNMG150608-MA	15.9	15.9	6.35	6.35	0.8							○	○					
		SNMG150612-MA	15.9	15.9	6.35	6.35	1.2							○	○					
		SNMG150616-MA	15.9	15.9	6.35	6.35	1.6							○	○					
		SNMG190612-MA	19.1	19.1	6.35	7.94	1.2							○	○					
	SNMG190616-MA	19.1	19.1	6.35	7.94	1.6							○	○						
		SNMG120404-MS	12.7	12.7	4.76	5.16	0.4											▲		
		SNMG120408-MS	12.7	12.7	4.76	5.16	0.8											▲		

Turning Insert(Negative)

SN

Square with hole (Negative Rake Angle)

90°

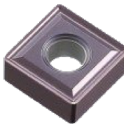
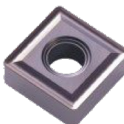
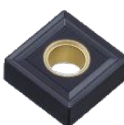
SNMG 12 04 04 - Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN	0903	1204	1506	1906	2509	3109
φd1(mm)	3.81	5.16	6.35	7.93	9.12	8.80

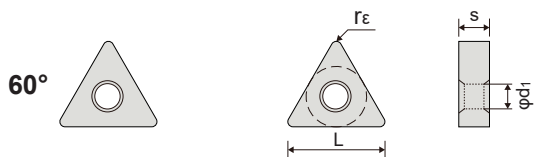
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		SNMG120404-MS	12.7	12.7	4.76	5.16	0.4							▲	▲					
		SNMG120408-MS	12.7	12.7	4.76	5.16	0.8							▲	▲					
		SNMG120412-MS	12.7	12.7	4.76	5.16	1.2							▲	▲					
		SNMG120416-MS	12.7	12.7	4.76	5.16	1.6							○	○					
		SNMG090304-MS	9.525	9.525	3.18	3.81	0.4							○	○					
		SNMG090308-MS	9.525	9.525	3.18	3.81	0.8							○	○					
		SNMG120404-MS	12.7	12.7	4.76	5.16	0.4							▲	▲					
		SNMG120408-MS	12.7	12.7	4.76	5.16	0.8							▲	▲					
		SNMG120412-MS	12.7	12.7	4.76	5.16	1.2							▲	▲					
		SNMG120416-MS	12.7	12.7	4.76	5.16	1.6							○	○					
		SNMG150612-MS	15.9	15.9	6.35	6.35	1.2							○	○					
		SNMG150616-MS	15.9	15.9	6.35	6.35	1.6							○	○					
		SNMG190616-MS	19.1	19.1	6.35	7.94	1.6							○	○					
		SNMG120404-MS	12.7	12.7	4.76	5.16	0.4												▲	
		SNMG120408-MS	12.7	12.7	4.76	5.16	0.8												▲	
		SNMG120412-MS	12.7	12.7	4.76	5.16	1.2												▲	
		SNMG120404	12.7	12.7	4.76	5.16	0.4												▲	
		SNMG120408	12.7	12.7	4.76	5.16	0.8												▲	
		SNMG120412	12.7	12.7	4.76	5.16	1.2												▲	

Turning Insert(Negative)

TN □□

Triangle with hole (Negative Rake Angle)



TNMG 16 04 04 - □□

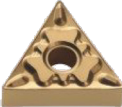
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN□□	1103□□	1603□□	1604□□	2204□□
φd1(mm)	2.26	3.81	3.81	5.16

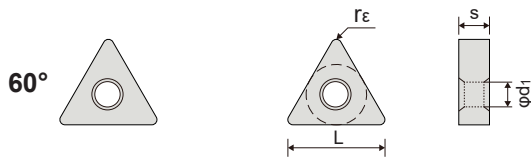
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing-Semi finishing		TNMG110404-HQ	11	6.35	4.76	2.26	0.4	○	○											
		TNMG110408-HQ	11	6.35	4.76	2.26	0.8	○	○											
		TNMG160404-HQ	16.5	9.525	4.76	3.81	0.4	▲	▲											
		TNMG160408-HQ	16.5	9.525	4.76	3.81	0.8	▲	▲											
		TNMG160412-HQ	16.5	9.525	4.76	3.81	1.2	○	○											
		TNMG110404-HQ	11	6.35	4.76	2.26	0.4				▲									
		TNMG110408-HQ	11	6.35	4.76	2.26	0.8				▲									
		TNMG160404-HQ	16.5	9.525	4.76	3.81	0.4					▲								
		TNMG160408-HQ	16.5	9.525	4.76	3.81	0.8					▲								
		TNMG160404-CQ	16.5	9.525	4.76	3.81	0.4				▲									
		TNMG160408-CQ	16.5	9.525	4.76	3.81	0.8				▲									
		TNMG160412-CQ	16.5	9.525	4.76	3.81	1.2				○									
		TNMG160404-CQ	16.5	9.525	4.76	3.81	0.4	▲	▲											
		TNMG160408-CQ	16.5	9.525	4.76	3.81	0.8	▲	▲											
		TNMG160412-CQ	16.5	9.525	4.76	3.81	1.2	○	○											
		TNMG220408-CQ	22	12.7	4.76	5.16	0.8	○	○											
		TNMG220412-CQ	22	12.7	4.76	5.16	1.2	○	○											
		TNMG160404-CQ	16.5	9.525	4.76	3.81	0.4					▲								
TNMG160408-CQ		16.5	9.525	4.76	3.81	0.8					▲									

Turning Insert(Negative)

TN □□

Triangle with hole (Negative Rake Angle)



TNMG 16 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN□□	1103□□	1603□□	1604□□	2204□□
φd1(mm)	2.26	3.81	3.81	5.16

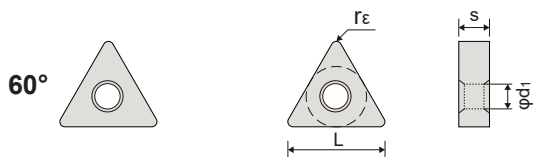
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		TNMG160404-TM	16.5	9.525	4.76	3.81	0.4	▲	▲											
		TNMG160408-TM	16.5	9.525	4.76	3.81	0.8	▲	▲											
		TNMG160412-TM	16.5	9.525	4.76	3.81	1.2	▲	▲											
		TNMG220408-TM	22	12.7	4.76	5.16	0.8	○	○											
		TNMG220412-TM	22	12.7	4.76	5.16	1.2	○	○											
		TNMG220416-TM	22	12.7	4.76	5.16	1.6	○	○											
		TNMG160404-TM	16.5	9.525	4.76	3.81	0.4					▲								
		TNMG160408-TM	16.5	9.525	4.76	3.81	0.8					▲								
		TNMG160404-CM	16.5	9.53	4.76	3.81	0.4	▲	▲											
		TNMG160408-CM	16.5	9.53	4.76	3.81	0.8	▲	▲											
		TNMG160412-CM	16.5	9.53	4.76	3.81	1.2	▲	▲											
		TNMG160404-CM	16.5	9.53	4.76	3.81	0.4					▲								
		TNMG160408-CM	16.5	9.53	4.76	3.81	0.8					▲								
		TNMG160412-CM	16.5	9.53	4.76	3.81	1.2					○								
		TNMG160404R-S	16.5	9.525	4.76	3.81	0.4	▲	▲											
		TNMG160404L-S	16.5	9.525	4.76	3.81	0.4	▲	▲											
		TNMG160408R-S	16.5	9.525	4.76	3.81	0.8	▲	▲											
		TNMG160408L-S	16.5	9.525	4.76	3.81	0.8	▲	▲											
		TNMG220404R-S	22	12.7	4.76	5.16	0.4	○	○											
		TNMG220404L-S	22	12.7	4.76	5.16	0.4	○	○											
		TNMG220408R-S	22	12.7	4.76	5.16	0.8	○	○											
		TNMG220408L-S	22	12.7	4.76	5.16	0.8	○	○											

Turning Insert(Negative)

TN □□

Triangle with hole (Negative Rake Angle)



TNMG 16 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN□□	1103□□	1603□□	1604□□	2204□□
φd1(mm)	2.26	3.81	3.81	5.16

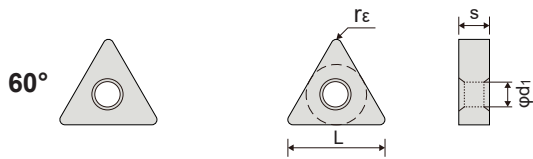
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		TNMG160404R-S	16.5	9.525	4.76	3.81	0.4					▲								
		TNMG160408R-S	16.5	9.525	4.76	3.81	0.8					▲								
		TNMG160412R-S	16.5	9.525	4.76	3.81	1.2					▲								
		TNMG160404L-S	16.5	9.525	4.76	3.81	0.4					▲								
		TNMG160408L-S	16.5	9.525	4.76	3.81	0.8					▲								
		TNMG160412L-S	16.5	9.525	4.76	3.81	1.2					▲								
		TNMG160404R-S	16.5	9.525	4.76	3.81	0.4						▲							
		TNMG160408R-S	16.5	9.525	4.76	3.81	0.8						▲							
		TNMG160404L-S	16.5	9.525	4.76	3.81	0.4						▲							
		TNMG160408L-S	16.5	9.525	4.76	3.81	0.8						▲							
Semi finishing		TNMG160404-PM	16.5	9.525	4.76	3.81	0.4	▲	▲											
		TNMG160408-PM	16.5	9.525	4.76	3.81	0.8	▲	▲											
		TNMG160412-PM	16.5	9.525	4.76	3.81	1.2	▲	▲											
		TNMG220408-PM	22	12.7	4.76	5.16	0.8	▲	▲											
		TNMG220412-PM	22	12.7	4.76	5.16	1.2	▲	▲											
		TNMG160408-PM	16.5	9.525	4.76	3.81	0.8					▲								
		TNMG160412-PM	16.5	9.525	4.76	3.81	1.2					▲								
		TNMG220408-PM	22	12.7	4.76	5.16	0.8					▲								
		TNMG220412-PM	22	12.7	4.76	5.16	1.2					▲								
	Moderate		TNMG160404-PR	16.5	9.525	4.76	3.81	0.4	▲	▲										
TNMG160408-PR			16.5	9.525	4.76	3.81	0.8	▲	▲											
TNMG160412-PR			16.5	9.525	4.76	3.81	1.2	▲	▲											

Turning Insert(Negative)

TN □ □

Triangle with hole (Negative Rake Angle)



TNMG 16 04 04 - □ □

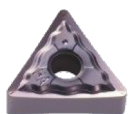
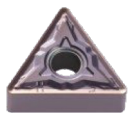
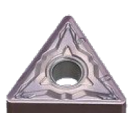
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN □ □	1103 □ □	1603 □ □	1604 □ □	2204 □ □
φd1(mm)	2.26	3.81	3.81	5.16

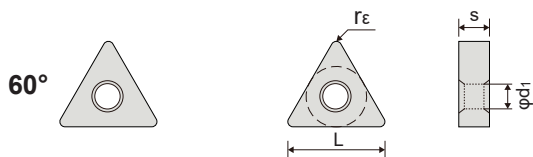
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing		TNMG160404-MQ	16.5	9.53	4.76	3.81	0.4							▲						
		TNMG160408-MQ	16.5	9.53	4.76	3.81	0.8							▲						
		TNMG160412-MQ	16.5	9.53	4.76	3.81	1.2							▲						
		TNMG160404-MQ	16.5	9.53	4.76	3.81	0.4									▲				
		TNMG160408-MQ	16.5	9.53	4.76	3.81	0.8										▲			
Finishing~Semi finishing		TNMG160404-HA	16.5	9.525	4.76	3.81	0.4						▲	▲						
		TNMG160408-HA	16.5	9.525	4.76	3.81	0.8						▲	▲						
		TNMG160412-HA	16.5	9.525	4.76	3.81	1.2						▲	▲						
		TNMG160404-HA	16.5	9.525	4.76	3.81	0.4										▲			
		TNMG160408-HA	16.5	9.525	4.76	3.81	0.8											▲		
Semi finishing~roughing		TNMG160404-GS	16.5	9.525	4.76	3.81	0.4							▲	▲					
		TNMG160408-GS	16.5	9.525	4.76	3.81	0.8							▲	▲					
		TNMG160412-GS	16.5	9.525	4.76	3.81	1.2							▲	▲					
Semi finishing		TNMG160404-HS	16.5	9.525	4.76	3.81	0.4							▲	▲					
		TNMG160408-HS	16.5	9.525	4.76	3.81	0.8							▲	▲					
		TNMG160412-HS	16.5	9.525	4.76	3.81	1.2							▲	▲					
		TNMG220408-HS	22	12.7	4.76	5.16	0.8							○	○					
		TNMG220412-HS	22	12.7	4.76	5.16	1.2							○	○					
		TNMG160404-HS	16.5	9.525	4.76	3.81	0.4										▲			
		TNMG160408-HS	16.5	9.525	4.76	3.81	0.8											▲		

Turning Insert(Negative)

TN □□

Triangle with hole (Negative Rake Angle)



TNMG 16 04 04 - □□

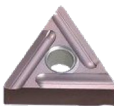
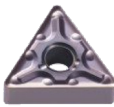
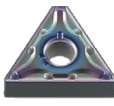
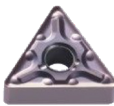
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN□□	1103□□	1603□□	1604□□	2204□□
φd1(mm)	2.26	3.81	3.81	5.16

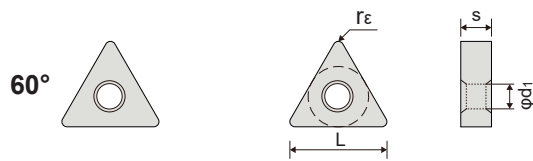
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		TNMG160404R-S	16.5	9.525	4.76	3.81	0.4										▲			
		TNMG160408R-S	16.5	9.525	4.76	3.81	0.8										▲			
		TNMG160404L-S	16.5	9.525	4.76	3.81	0.4										▲			
		TNMG160408L-S	16.5	9.525	4.76	3.81	0.8										▲			
Moderate		TNMG160404-MA	16.5	9.525	4.76	3.81	0.4						▲	▲						
		TNMG160408-MA	16.5	9.525	4.76	3.81	0.8						▲	▲						
		TNMG160412-MA	16.5	9.525	4.76	3.81	1.2						▲	▲						
		TNMG160416-MA	16.5	9.525	4.76	3.81	1.6						○	○						
		TNMG220408-MA	22	12.7	4.76	5.16	0.8						○	○						
		TNMG220412-MA	22	12.7	4.76	5.16	1.2						○	○						
		TNMG220416-MA	22	12.7	4.76	5.16	1.6						○	○						
		TNMG270608-MA	27.5	15.9	6.35	6.35	0.8						○	○						
		TNMG270612-MA	27.5	15.9	6.35	6.35	1.2						○	○						
		TNMG160404-MA	16.5	9.525	4.76	3.81	0.4											▲		
		TNMG160408-MA	16.5	9.525	4.76	3.81	0.8											▲		
		TNMG160404-MA	16.5	9.525	4.76	3.81	0.4						▲	▲						
		TNMG160408-MA	16.5	9.525	4.76	3.81	0.8						▲	▲						
		TNMG160412-MA	16.5	9.525	4.76	3.81	1.2						▲	▲						
		TNMG160416-MA	16.5	9.525	4.76	3.81	1.6						○	○						
		TNMG220408-MA	22	12.7	4.76	5.16	0.8						○	○						
		TNMG220412-MA	22	12.7	4.76	5.16	1.2						○	○						
		TNMG220416-MA	22	12.7	4.76	5.16	1.6						○	○						
		TNMG270608-MA	27.5	15.9	6.35	6.35	0.8						○	○						
		TNMG270612-MA	27.5	15.9	6.35	6.35	1.2						○	○						
		TNMG160404-MA	16.5	9.525	4.76	3.81	0.4										▲			
		TNMG160408-MA	16.5	9.525	4.76	3.81	0.8										▲			

Turning Insert(Negative)

TN □ □

Triangle with hole (Negative Rake Angle)



TNMG 16 04 04 - □ □

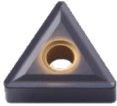
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN □ □	1103 □ □	1603 □ □	1604 □ □	2204 □ □
φd1(mm)	2.26	3.81	3.81	5.16

Product stock ▲ Main grade reserve stock ○ Make-to-order

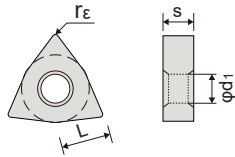
Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		TNMG160404-MS	16.5	9.525	4.76	3.81	0.4											▲		
		TNMG160408-MS	16.5	9.525	4.76	3.81	0.8											▲		
		TNMG160404-MS	16.5	9.525	4.76	3.81	0.4											▲		
		TNMG160408-MS	16.5	9.525	4.76	3.81	0.8											▲		
		TNMG160404-MS	16.5	9.525	4.76	3.81	0.4							▲	▲					
		TNMG160408-MS	16.5	9.525	4.76	3.81	0.8							▲	▲					
		TNMG160412-MS	16.5	9.525	4.76	3.81	1.2							▲	▲					
		TNMG220408-MS	22	12.7	4.76	5.16	0.8							○	○					
		TNMG220412-MS	22	12.7	4.76	5.16	1.2							○	○					
		TNMG160404-JMS	16.5	9.53	4.76	3.81	0.4								▲		▲			
		TNMG160408-JMS	16.5	9.53	4.76	3.81	0.8								▲		▲			
		TNMG160412-JMS	16.5	9.53	4.76	3.81	1.2								▲		▲			
		TNMG160404-JMS	16.5	9.53	4.76	3.81	0.4											▲		
		TNMG160408-JMS	16.5	9.53	4.76	3.81	0.8											▲		
		TNMG160404-MS	16.5	9.525	4.76	3.81	0.4										▲			
		TNMG160408-MS	16.5	9.525	4.76	3.81	0.8										▲			
		TNMG160412-MS	16.5	9.525	4.76	3.81	1.2										▲			
		TNMG220408-MS	22	12.7	4.76	5.16	0.8										▲			
		TNMG220412-MS	22	12.7	4.76	5.16	1.2										▲			
		TNMG160404	16.5	9.525	4.76	3.81	0.4										▲			
TNMG160408		16.5	9.525	4.76	3.81	0.8										▲				
TNMG160412		16.5	9.525	4.76	3.81	1.2										▲				
TNMG220408		22	12.7	4.76	5.16	0.8										▲				
TNMG220412		22	12.7	4.76	5.16	1.2										▲				

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

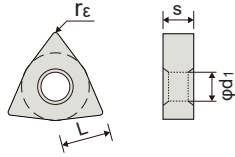
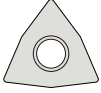
Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		WNMG060404-TM	6.5	9.525	4.76	3.81	0.4	○	○											
		WNMG060408-TM	6.5	9.525	4.76	3.81	0.8	○	○											
		WNMG080404-TM	8.7	12.7	4.76	5.16	0.4	▲	▲											
		WNMG080408-TM	8.7	12.7	4.76	5.16	0.8	▲	▲											
		WNMG080412-TM	8.7	12.7	4.76	5.16	1.2	▲	▲											
		WNMG080416-TM	8.7	12.7	4.76	5.16	1.6	○	○											
		WNMG080404-TM	8.7	12.7	4.76	5.16	0.4	○	○		▲									
		WNMG080408-TM	8.7	12.7	4.76	5.16	0.8	○	○		▲									
		WNMG080412-TM	8.7	12.7	4.76	5.16	1.2	▲	▲		▲									
		WNMG080404-TM	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408-TM	8.7	12.7	4.76	5.16	0.8					▲								
Finishing~Semi finishing		WNMG06T304-HQ	6.5	9.525	3.97	3.81	0.4	○	○											
		WNMG06T308-HQ	6.5	9.525	3.97	3.81	0.8	○	○											
		WNMG060404-HQ	6.5	9.525	4.76	3.81	0.4	○	○											
		WNMG060408-HQ	6.5	9.525	4.76	3.81	0.8	○	○											
		WNMG080404-HQ	8.7	12.7	4.76	5.16	0.4	▲	▲											
		WNMG080408-HQ	8.7	12.7	4.76	5.16	0.8	▲	▲											
		WNMG080412-HQ	8.7	12.7	4.76	5.16	1.2	▲	▲											
		WNMG080404-HQ	8.7	12.7	4.76	5.16	0.4				▲									
		WNMG080408-HQ	8.7	12.7	4.76	5.16	0.8				▲									
		WNMG080404-HQ	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408-HQ	8.7	12.7	4.76	5.16	0.8					▲								

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

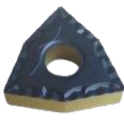
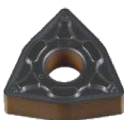
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

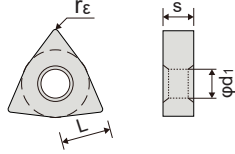
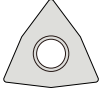
Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing~Semi finishing		WNMG080404-CQ	8.7	12.7	4.76	5.16	0.4	▲	▲											
		WNMG080408-CQ	8.7	12.7	4.76	5.16	0.8	▲	▲											
		WNMG080412-CQ	8.7	12.7	4.76	5.16	1.2	▲	▲											
Semi finishing		WNMG080404-CQ	8.7	12.7	4.76	5.16	0.4				▲									
		WNMG080408-CQ	8.7	12.7	4.76	5.16	0.8				▲									
		WNMG080412-CQ	8.7	12.7	4.76	5.16	1.2				▲									
		WNMG080404-CM	8.7	12.7	4.76	5.16	0.4	▲	▲											
		WNMG080408-CM	8.7	12.7	4.76	5.16	0.8	▲	▲											
		WNMG080412-CM	8.7	12.7	4.76	5.16	1.2	▲	▲											
		WNMG080404-CM	8.7	12.7	4.76	5.16	0.4				▲									
		WNMG080408-CM	8.7	12.7	4.76	5.16	0.8				▲									
		WNMG080412-CM	8.7	12.7	4.76	5.16	1.2				▲									
		WNMG080404L-S	8.7	12.7	4.76	5.16	0.4		▲	▲										
		WNMG080408L-S	8.7	12.7	4.76	5.16	0.8		▲	▲										
		WNMG080412L-S	8.7	12.7	4.76	5.16	1.2		▲	▲										
		WNMG080404R-S	8.7	12.7	4.76	5.16	0.4		▲	▲										
		WNMG080408R-S	8.7	12.7	4.76	5.16	0.8		▲	▲										
		WNMG080412R-S	8.7	12.7	4.76	5.16	1.2		▲	▲										

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

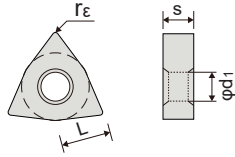
Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		WNMG060404L-S	8.7	12.7	4.76	5.16	0.4				▲									
		WNMG060408L-S	8.7	12.7	4.76	5.16	0.8				▲									
		WNMG060412L-S	8.7	12.7	4.76	5.16	1.2				▲									
		WNMG080404R-S	8.7	12.7	4.76	5.16	0.4				▲									
		WNMG080408R-S	8.7	12.7	4.76	5.16	0.8				▲									
		WNMG080412R-S	8.7	12.7	4.76	5.16	1.2				▲									
		WNMG080404L-S	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408L-S	8.7	12.7	4.76	5.16	0.8					▲								
		WNMG080404R-S	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408R-S	8.7	12.7	4.76	5.16	0.8					▲								
		WNMG080404-MT	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408-MT	8.7	12.7	4.76	5.16	0.8					▲								
		WNMG080404-PM	8.7	12.7	4.76	5.16	0.4	▲	▲											
		WNMG080408-PM	8.7	12.7	4.76	5.16	0.8	▲	▲											
		WNMG080412-PM	8.7	12.7	4.76	5.16	1.2	▲	▲											
		WNMG080404-PM	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408-PM	8.7	12.7	4.76	5.16	0.8					▲								
		WNMG080408-PM	8.7	12.7	4.76	5.16	0.8					▲								
		WNMG080412-PM	8.7	12.7	4.76	5.16	1.2					▲								

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

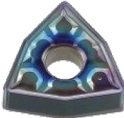
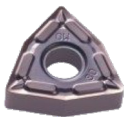
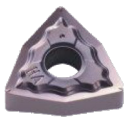
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

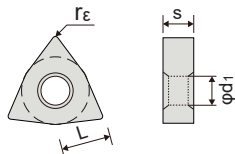
Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		WNMG080404-PR	8.7	12.7	4.76	5.16	0.4	▲	▲											
		WNMG080408-PR	8.7	12.7	4.76	5.16	0.8	▲	▲											
		WNMG080412-PR	8.7	12.7	4.76	5.16	1.2	▲	▲											
Roughing		WNMG080408-PR	8.7	12.7	4.76	5.16	0.8				▲									
		WNMG080412-PR	8.7	12.7	4.76	5.16	1.2				▲									
Moderate		WNMG080408-ZM	8.7	12.7	4.76	5.6	0.8				▲									
		WNMG080412-ZM	8.7	12.7	4.76	5.16	1.2				▲									
		WNMG080404-TF	8.7	12.7	4.76	5.16	0.4					▲								
		WNMG080408-TF	8.7	12.7	4.76	5.16	0.8					▲								
Finishing		WNMG080404-MQ	8.7	12.7	4.76	5.16	0.4							▲						
		WNMG080408-MQ	8.7	12.7	4.76	5.16	0.8							▲						
		WNMG080412-MQ	8.7	12.7	4.76	5.16	1.2							▲						
		WNMG080404-MQ	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408-MQ	8.7	12.7	4.76	5.16	0.8										▲			
Finishing~Semi finishing		WNMG060404-HA	6.5	9.525	4.76	3.81	0.4						○	○						
		WNMG060408-HA	6.5	9.525	4.76	3.81	0.8						○	○						
		WNMG080404-HA	8.7	12.7	4.76	5.6	0.4						▲	▲						
		WNMG080408-HA	8.7	12.7	4.76	5.16	0.8						▲	▲						
		WNMG080412-HA	8.7	12.7	4.76	5.16	1.2							○	○					

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

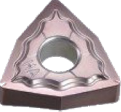
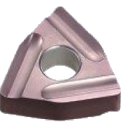
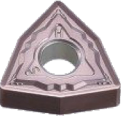
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

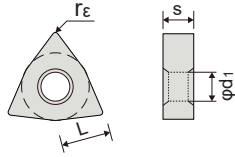
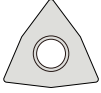
Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing-Semi finishing		WNMG080404-HA	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408-HA	8.7	12.7	4.76	5.16	0.8										▲			
Semi finishing		WNMG060404-GS	6.5	9.525	4.76	3.81	0.4							○	○					
		WNMG060408-GS	6.5	9.525	4.76	3.81	0.8							○	○					
		WNMG060412-GS	6.5	9.525	4.76	3.81	0.8							○	○					
		WNMG080404-GS	8.7	12.7	4.76	5.16	0.4							▲	▲					
		WNMG080408-GS	8.7	12.7	4.76	5.16	0.8							▲	▲					
		WNMG080412-GS	8.7	12.7	4.76	5.16	1.2							○	○					
Semi finishing		WNMG080404L-S	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408L-S	8.7	12.7	4.76	5.16	0.8										▲			
		WNMG080404R-S	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408R-S	8.7	12.7	4.76	5.16	0.8										▲			
Semi finishing		WNMG080404-HS	8.7	12.7	4.76	5.16	0.4							▲	▲					
		WNMG080408-HS	8.7	12.7	4.76	5.16	0.8							▲	▲					
		WNMG080412-HS	8.7	12.7	4.76	5.16	1.2							▲	▲					
		WNMG080404-HS	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408-HS	8.7	12.7	4.76	5.16	0.8										▲			

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

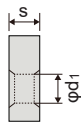
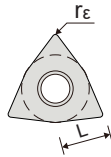
Insert Appearance		Model	Dimension					P					M					K	
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018
Moderate		WNMG080404-MT	8.7	12.7	4.76	5.16	0.4												
		WNMG080408-MT	8.7	12.7	4.76	5.16	0.8												
		WNMG080412-MT	8.7	12.7	4.76	5.16	1.2												
		WNMG060404-MA	6.5	9.525	4.76	3.81	0.4						○	○					
		WNMG060408-MA	6.5	9.525	4.76	3.81	0.8						○	○					
		WNMG060412-MA	6.5	9.525	4.76	3.81	0.8						○	○					
		WNMG080404-MA	8.7	12.7	4.76	5.16	0.4						▲	▲					
		WNMG080408-MA	8.7	12.7	4.76	5.16	0.8						▲	▲					
		WNMG080412-MA	8.7	12.7	4.76	5.16	1.2						▲	▲					
		WNMG080416-MA	8.7	12.7	4.76	5.16	1.6						○	○					
		WNMG100612-MA	8.7	12.7	4.76	5.16	1.6						○	○					
		WNMG080404-MA	8.7	12.7	4.76	5.16	0.4											▲	
		WNMG080408-MA	8.7	12.7	4.76	5.16	0.8											▲	
		WNMG080404-MA	8.7	12.7	4.76	5.16	0.4											▲	
		WNMG080408-MA	8.7	12.7	4.76	5.16	0.8											▲	
		WNMG080404-MM	8.7	12.7	4.76	5.16	0.4											▲	
		WNMG080408-MM	8.7	12.7	4.76	5.16	0.8											▲	

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

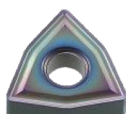
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

Product stock ▲ Main grade reserve stock ○ Make-to-order

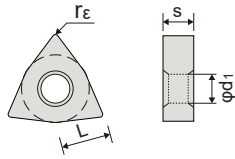
Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		WNMG080404-MM	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408-MM	8.7	12.7	4.76	5.16	0.8										▲			
		WNMG060404-MS	6.5	9.525	4.76	3.81	0.4							○	○					
		WNMG060408-MS	6.5	9.525	4.76	3.81	0.8							○	○					
		WNMG080404-MS	8.7	12.7	4.76	5.16	0.4							▲	▲					
		WNMG080408-MS	8.7	12.7	4.76	5.16	0.8							▲	▲					
		WNMG080412-MS	8.7	12.7	4.76	5.6	1.2							▲	▲					
		WNMG080404-MS	8.7	12.7	4.76	5.16	0.4										▲			
		WNMG080408-MS	8.7	12.7	4.76	5.16	0.8										▲			
		WNMG080404-MS	8.7	12.7	4.76	5.16	0.4											▲		
		WNMG080408-MS	8.7	12.7	4.76	5.16	0.8											▲		
		WNMG080404-JMS	8.7	12.7	4.76	5.16	0.4												▲	
		WNMG080408-JMS	8.7	12.7	4.76	5.16	0.8												▲	
		WNMG080412-JMS	8.7	12.7	4.76	5.16	1.2												▲	
		WNMG080404-JMS	8.7	12.7	4.76	5.16	0.4										▲			
WNMG080408-JMS		8.7	12.7	4.76	5.16	0.8										▲				

Turning Insert(Negative)

WN□□

Hexagon with hole (Negative Rake Angle)

80°



WNMG 08 04 04 - □□

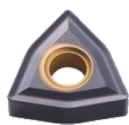
Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

WN□□	0604□□	0804□□	1006□□	1306□□
φd1(mm)	3.81	5.16	6.35	7.93

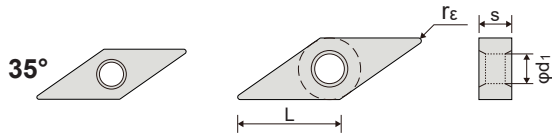
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Moderate		WNMG080404-MS	8.7	12.7	4.76	5.16	0.4												▲	
		WNMG080408-MS	8.7	12.7	4.76	5.16	0.8												▲	
		WNMG080412-MS	8.7	12.7	4.76	5.16	1.2												▲	
		WNMG080404	8.7	12.7	4.76	5.16	0.4												▲	
		WNMG080408	8.7	12.7	4.76	5.16	0.8												▲	
		WNMG080412	8.7	12.7	4.76	5.16	1.2												▲	

Turning Insert(Negative)

VN ☐ ☐

Rhomb with hole (Negative Rake Angle)

VNMG 16 04 04 - ☐ ☐Cutting edge
length

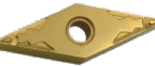
Thickness

Corner arc
radiusChip breaker
codeVN ☐ ☐1604 ☐ ☐

φd1(mm)

3.81

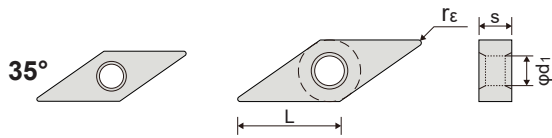
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Semi finishing		VNMG160404-TM	16.6	9.525	4.76	3.81	0.4	▲	▲											
		VNMG160408-TM	16.6	9.525	4.76	3.81	0.8	▲	▲											
		VNMG160412-TM	16.6	9.525	4.76	3.81	1.2	○	○											
		VNMG160404-TM	16.6	9.525	4.76	3.81	0.4				▲									
		VNMG160408-TM	16.6	9.525	4.76	3.81	0.8				▲									
		VNMG160412-TM	16.6	9.525	4.76	3.81	1.2				○									
Finishing~Semi finishing		VNMG160404-HQ	16.6	9.525	4.76	3.81	0.4	▲	▲											
		VNMG160408-HQ	16.6	9.525	4.76	3.81	0.8	▲	▲											
		VNMG160412-HQ	16.6	9.525	4.76	3.81	1.2	▲	▲											
Moderate		VNMG160404-MA	16.6	9.525	4.76	3.81	0.4						▲	▲						
		VNMG160408-MA	16.6	9.525	4.76	3.81	0.8						▲	▲						
		VNMG160404-MS	16.6	9.525	4.76	3.81	0.4						▲	▲						
		VNMG160408-MS	16.6	9.525	4.76	3.81	0.8						▲	▲						
		VNMG160412-MS	16.6	9.525	4.76	3.81	1.2						○	○						

Turning Insert(Negative)

VN □□

Rhomb with hole (Negative Rake Angle)



VNMG 16 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

VN □□

1604 □□

φd1(mm)

3.81

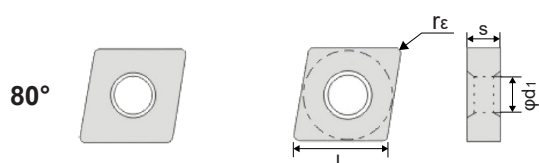
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P						M					K	
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing		VNMG160404-HA	16.6	9.525	4.76	3.81	0.4							▲	▲					
		VNMG160408-HA	16.6	9.525	4.76	3.81	0.8							▲	▲					
Semi finishing		VNMG160404-HS	16.6	9.525	4.76	3.81	0.4							▲	▲					
		VNMG160408-HS	16.6	9.525	4.76	3.81	0.8							▲	▲					
		VNMG160404-PM	16.6	9.525	4.76	3.81	0.4	▲	▲											
		VNMG160408-PM	16.6	9.525	4.76	3.81	0.4	▲	▲											
Moderate		VNMG160404-MS	16.6	9.525	4.76	3.81	0.4												▲	
		VNMG160408-MS	16.6	9.525	4.76	3.81	0.4												▲	
		VNMG160404	16.6	9.525	4.76	3.81	0.4												▲	
		VNMG160408	16.6	9.525	4.76	3.81	0.4												▲	

Turning Insert(Negative)

CN□□

Rhomb with hole (Negative Rake Angle)



CNGA 12 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

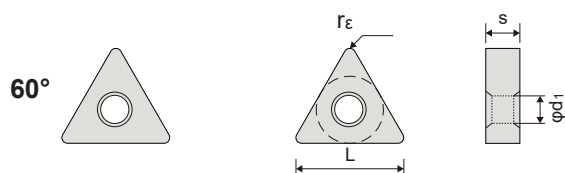
CN□□	0903□□	1204□□	1606□□	1906□□	2509□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance	Model	Dimension					Cermet	
		L	φl.C	S	φd1	r	MH50	MH40
	CNGA120404	12.7	12.7	4.76	5.16	0.4		▲
	CNGA120408	12.7	12.7	4.76	5.16	0.8		▲
	CNGA120412	12.7	12.7	4.76	5.16	1.2		
	CNGA120404	12.7	12.7	4.76	5.16	0.4	▲	
	CNGA120408	12.7	12.7	4.76	5.16	0.8	▲	
	CNGA120412	12.7	12.7	4.76	5.16	1.2		

TN□□

Triangle with hole (Negative Rake Angle)



TNGA 16 04 04 - □□

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

SN□□	1103□□	1603□□	1604□□	2204□□
φd1(mm)	2.26	3.81	3.81	5.16

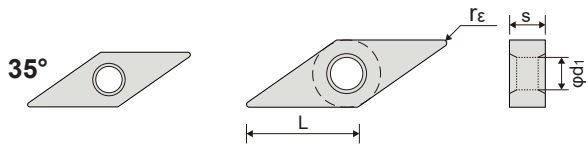
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance	Model	Dimension					Cermet	
		L	φl.C	S	φd1	r	MH50	MH40
	TNGA160402	16.5	9.525	4.76	3.81	0.2		
	TNGA160404	16.5	9.525	4.76	3.81	0.4		▲
	TNGA160408	16.5	9.525	4.76	3.81	0.8		▲
	TNGA160402	16.5	9.525	4.76	3.81	0.2		
	TNGA160404	16.5	9.525	4.76	3.81	0.4	▲	
	TNGA160408	16.5	9.525	4.76	3.81	0.8	▲	

Turning Insert(Negative)

VN □ □

Rhomb with hole (Negative Rake Angle)



VNGA 16 04 04 - □ □

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

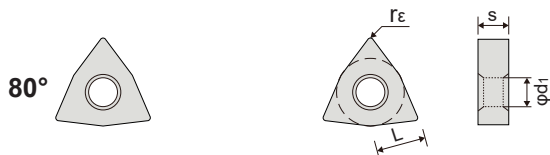
VN □ □	1604 □ □
φd1(mm)	3.81

Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance	Model	Dimension					Cermet	
		L	φl.C	S	φd1	r	MH50	MH40
	VNGA160402	16.6	9.525	4.76	3.81	0.2		
	VNGA160404	16.6	9.525	4.76	3.81	0.4	▲	
	VNGA160408	16.6	9.525	4.76	3.81	0.8	▲	
	VNGA160402	16.6	9.525	4.76	3.81	0.2		
	VNGA160404	16.6	9.525	4.76	3.81	0.4		▲
	VNGA160408	16.6	9.525	4.76	3.81	0.8		▲

WN □ □

Hexagon with hole (Negative Rake Angle)



WNGA 08 04 04 - □ □

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

WN □ □	0604 □ □	0804 □ □	1006 □ □	1306 □ □
φd1(mm)	3.81	5.16	6.35	7.93

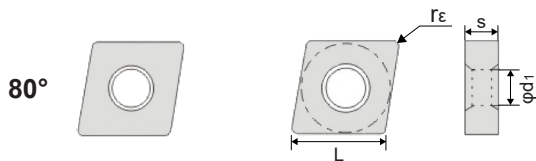
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance	Model	Dimension					Cermet	
		L	φl.C	S	φd1	r	MH50	MH40
	WNGA080404	8.7	12.7	4.76	5.16	0.4		▲
	WNGA080408	8.7	12.7	4.76	5.16	0.8		▲
	WNGA080412	8.7	12.7	4.76	5.16	1.2		
	WNGA080404	8.7	12.7	4.76	5.16	0.4	▲	
	WNGA080408	8.7	12.7	4.76	5.16	0.8	▲	
	WNGA080412	8.7	12.7	4.76	5.16	1.2		

Turning Insert(Positive)

CC□□

Rhomb with hole (7° Positive Rake Angle)



CCMT 06 02 02 - □□

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

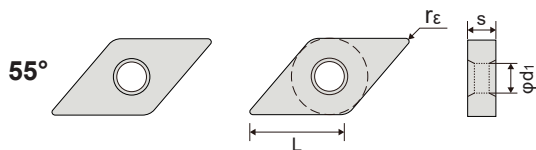
CN□□	0903□□	1204□□	1606□□	1906□□	2509□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing~Semi finishing		CCMT060202	6.4	6.35	2.38	2.8	0.2								▲		▲			
		CCMT060204	6.4	6.35	2.38	2.8	0.4								▲		▲			
		CCMT060208	6.4	6.35	2.38	2.8	0.8								▲		▲			
		CCMT09T302	9.7	9.525	3.97	4.4	0.2								▲		▲			
		CCMT09T304	9.7	9.525	3.97	4.4	0.4								▲		▲			
		CCMT09T308	9.7	9.525	3.97	4.4	0.8								▲		▲			
		CCMT120404	12.9	12.7	4.76	5.56	0.4								▲		▲			
		CCMT120408	12.9	12.7	4.76	5.56	0.8								▲		▲			
		CCMT120412	12.9	12.7	4.76	5.56	1.2								○		○			

DC□□

Rhomb with hole (7° Positive Rake Angle)



DCMT 07 02 02 - □□

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

DC □ T(W)	0702 □□	11T3 □□
φd1(mm)	2.8	4.4

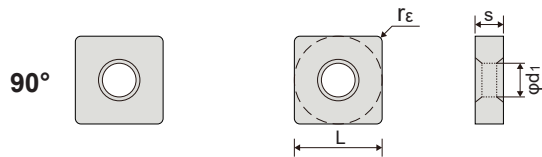
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M				K			
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing~Semi finishing		DCMT070202-HMP	7.8	6.35	2.38	2.8	0.2								▲		▲			
		DCMT070204-HMP	7.8	6.35	2.38	2.8	0.4								▲		▲			
		DCMT070208-HMP	7.8	6.35	2.38	2.8	0.8								▲		▲			
		DCMT11T302-HMP	11.6	9.525	3.97	4.4	0.2								▲		▲			
		DCMT11T304-HMP	11.6	9.525	3.97	4.4	0.4								▲		▲			
		DCMT11T308-HMP	11.6	9.525	3.97	4.4	0.8								▲		▲			
		DCMT11T312-HMP	11.6	9.525	3.97	4.4	1.2								○		○			

Turning Insert(Positive)

SC □ □

Square with hole (7° Positive Rake Angle)



SCMT 12 04 04 - □ □

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

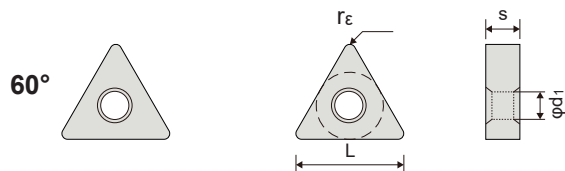
SC □ T(W)	0702 □ □	09T3 □ □	1204 □ □
φd1(mm)	3.4	4.4	5.5

Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M				K			
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing~Semi finishing		SCMT09T304-HMP	9.525	9.525	3.97	4.4	0.4								▲					
		SCMT09T308-HMP	9.525	9.525	3.97	4.4	0.8									▲				
		SCMT120404-HMP	12.7	12.7	4.76	5.56	0.4									▲				
		SCMT120408-HMP	12.7	12.7	4.76	5.56	0.8									▲				

TC □ □

Triangle with hole (7° Positive Rake Angle)



TCMT 09 02 02 - □ □

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

TC □ T	0801 □ □	0802 □ □ J08	0902 □ □	1102 □ □	16T3 □ □
φd1(mm)	2.7	2.3	2.5	2.8	4.4

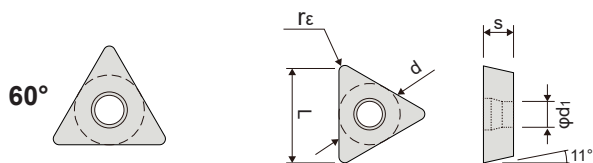
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M				K			
			L	φl.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing~Semi finishing		TCMT090204	9.6	5.56	2.38	2.5	0.4								▲		▲			
		TCMT090208	9.6	5.56	2.38	2.5	0.8								▲		▲			
		TCMT110202	11	6.35	2.38	2.8	0.2								▲		▲			
		TCMT110204	11	6.35	2.38	2.8	0.4								▲		▲			
		TCMT110208	11	6.35	2.38	2.8	0.8								▲		▲			
		TCMT16T302	16.5	9.525	3.97	4.4	0.2								▲		▲			
		TCMT16T304	16.5	9.525	3.97	4.4	0.4								▲		▲			
		TCMT16T308	16.5	9.525	3.97	4.4	0.8								▲		▲			

Turning Insert(Positive)

TP □□

Triangle with hole (Positive Rake Angle)



TPMT 11 03 04 - □□

Cutting edge length

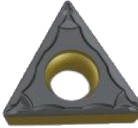
Thickness

Corner arc radius

Chip breaker code

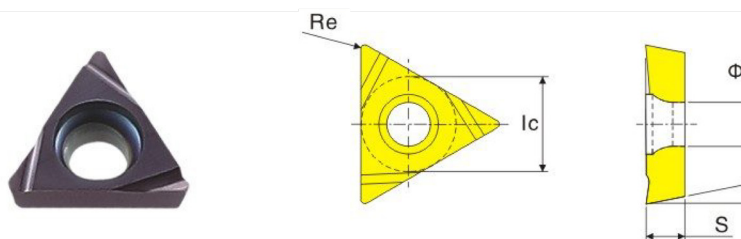
TP □ T □ □	0601 □ □	0802 □ □	0902 □ □	1103 □ □	16T3 □ □
φd1(mm)	3.97	4.76	5.56	6.35	9.525

Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension				P					M				K		Cermets	
			L	φI.C	S	φd	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018
Semi finishing		TPMT080202L	4.97	2.38	2.5	0.2		▲						▲					
		TPMT080202R	4.97	2.38	2.5	0.2		▲						▲					
		TPMT080204L	4.97	2.38	2.5	0.4		▲						▲					
		TPMT080204R	4.97	2.38	2.5	0.4		▲						▲					
		TPMT090202L	5.56	2.38	2.6	0.2		▲						▲					
		TPMT090202R	5.56	2.38	2.6	0.2		▲						▲					
		TPMT090204L	5.56	2.38	2.6	0.4		▲						▲					
		TPMT090204R	5.56	2.38	2.6	0.4		▲						▲					
		TPMT110202L	6.35	2.38	2.8	0.2		▲						▲					
		TPMT110202R	6.35	2.38	2.8	0.2		▲						▲					
		TPMT110204L	6.35	2.38	2.8	0.4		▲						▲					
		TPMT110204R	6.35	2.38	2.8	0.4		▲						▲					
		TPMT110302L	6.35	3.18	3.4	0.2		▲						▲					
		TPMT110302R	6.35	3.18	3.4	0.2		▲						▲					
		TPMT110304L	6.35	3.18	3.4	0.4		▲						▲					
		TPMT110304R	6.35	3.18	3.4	0.4		▲						▲					
		TPMT160304L	9.525	3.97	4.4	0.4		▲						▲					
		TPMT160304R	9.525	3.97	4.4	0.4		▲						▲					
		TPMT160308L	9.525	3.97	4.4	0.8		▲						▲					
		TPMT160308R	9.525	3.97	4.4	0.8		▲						▲					

Turning Insert

TPGH □□□ - F

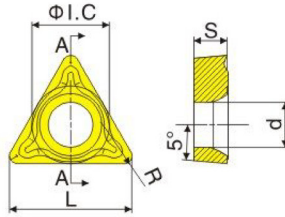


Product stock ▲ Main grade reserve stock ○ Make-to-order

Model		Specification and dimension(mm)				Grade										Uncoated		
						P					M						K	
		φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018
Finishing	TPGH080201L-F	4.76	2.38	2.3	0.1							▲						
	TPGH080202L-F	4.76	2.38	2.3	0.2							▲						
	TPGH080204L-F	4.76	2.38	2.3	0.4							▲						
	TPGH090201L-F	5.56	2.38	3.2	0.1							▲						
	TPGH090202L-F	5.56	2.38	3.2	0.2							▲						
	TPGH090204L-F	5.56	2.38	3.2	0.4							▲						
	TPGH110202L-F	6.35	3.18	3.3	0.2							▲						
	TPGH110204L-F	6.35	3.18	3.3	0.4							▲						

Turning Insert

TBMT □□□ - DP



Product stock ▲ Main grade reserve stock ○ Make-to-order

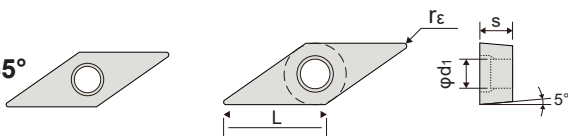
Model		Specification and dimension(mm)					Grade												Uncoated
							P					M				K			
		L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	
Finishing	TBMT060104-DP	6.0	3.97	1.58	2.3	0.4							▲						

Turning Insert(Positive)

VB □□

Rhomb with hole (5° Positive Rake Angle)

35°



VBMT 11 03 02 - □□

Cutting edge length

Thickness

Corner arc radius

Chip breaker code

VB □ T	1103 □□	1604 □□
Φd1(mm)	2.8	4.4

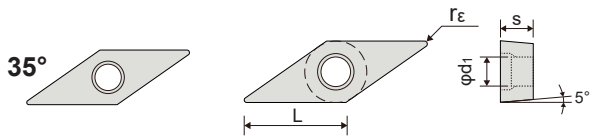
Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing		VBMT110302-MV	11	6.35	3.18	2.8	0.2								▲					
		VBMT110304-MV	11	6.35	3.18	2.8	0.4									▲				
		VBMT110308-MV	11	6.35	3.18	2.8	0.8										▲			
		VBMT160404-MV	16.5	9.525	4.76	4.4	0.4										▲			
		VBMT160408-MV	16.5	9.525	4.76	4.4	0.8											▲		

Turning Insert(Positive)

VC □ □

Rhomb with hole (7° Positive Rake Angle)



VCMT 11 03 02 - □ □

Cutting edge
length

Thickness

Corner arc
radiusChip breaker
code

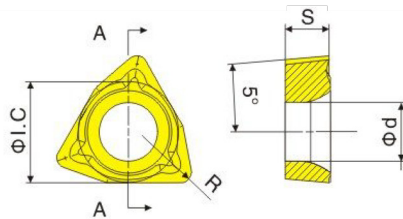
VC □ T	0802 □ □	1103 □ □	1604 □ □	2205 □ □
φd1(mm)	2.3	2.8	4.4	5.5

Product stock ▲ Main grade reserve stock ○ Make-to-order

Insert Appearance		Model	Dimension					P					M					K		
			L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	MH2028
Finishing		VCMT110302-MV	11	6.35	3.18	2.8	0.2								▲					
		VCMT110304-MV	11	6.35	3.18	2.8	0.4								▲					
		VCMT160404-MV	16	9.525	4.76	4.4	0.4								▲					
		VCMT160408-MV	16	9.525	4.76	4.4	0.8								▲					

Turning Insert

WBMT □ □ □ - DP



Product stock ▲ Main grade reserve stock ○ Make-to-order

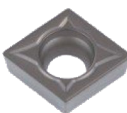
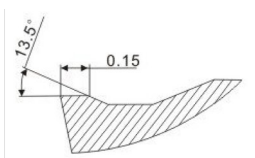
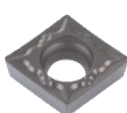
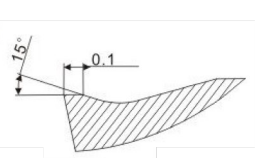
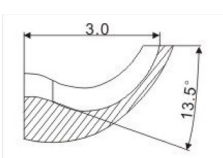
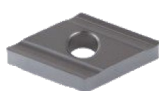
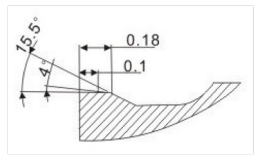
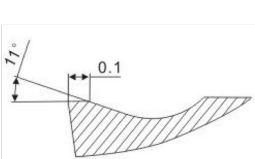
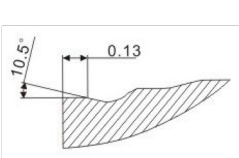
Model		Specification and dimension(mm)					Grade										Uncoated		
							P					M				K			
		L	φI.C	S	φd	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018
Finishing	WBMT060104L-DP	6	3.97	1.62	2.35	0.4								▲					

Cermet Insert

Turning insert Grade

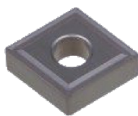
Grade	Main Components	Density (g/cm ³)	Hardness (HRA)	Flexural Strength (Mpa)	Toughness (Mpa · m ^{0.5})	Application Field
MH60	TiCN+NbC	6.65	92.5	1800	7.3	Suitable for light finishing-semi finishing of alloy steel, soft steel and cast iron; Precision machining. Commonly used in turning and milling. As a thread cutter, it has a good surface roughness and is suitable for machining medium and low carbon steel.

Turning Insert Chip Breaker

Groove profile name and geometric angle			Characteristics
MT		CCMT09T3 	○ Semi finishing ○ Steel, stainless steel and cast iron ○ Universal tough rake face
FG		CCMT09T3 	○ Finishing ○ Steel, stainless steel and cast iron ○ Low cutting force
R-VF		DNMG1504 	○ Moderate and heavy machining ○ Steel and stainless steel ○ Large rake angle to reduce cutting force
R-S		DNMG1504 	○ Semi finishing ○ Steel and stainless steel ○ Large rake angle to reduce cutting force
TC		CCMT09T3 	○ Finishing ○ Steel and stainless steel ○ Good chip breaking and discharge performance
TS		WNMG0804 	○ Finishing ○ Steel ○ Sharp cutting edge

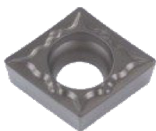
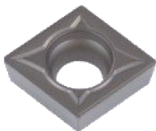
Cermet insert(Negative)

CN□□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	CNMG120404-MT	12.9	12.7	4.76	5.16	0.4	
	CNMG120408-MT	12.9	12.7	4.76	5.16	0.8	
	CNMG120404-TC	12.9	12.7	4.76	5.16	0.4	
	CNMG120408-TC	12.9	12.7	4.76	5.16	0.8	

Cermet insert (Positive)

CC□□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	CCMT060202-FG	6.5	6.35	2.38	2.8	0.2	
	CCMT060204-FG	6.5	6.35	2.38	2.8	0.4	
	CCMT09T304-FG	9.7	9.525	3.97	4.4	0.4	
	CCMT09T308-FG	9.7	9.525	3.97	4.4	0.8	
	CCMT060204-MT	6.5	6.35	2.38	2.8	0.4	
	CCMT09T304-MT	9.7	9.525	3.97	4.4	0.4	
	CCMT09T308-MT	9.7	9.525	3.97	4.4	0.8	
	CCMT09T304-TC	9.7	9.525	3.97	4.4	0.4	
	CCMT09T308-TC	9.7	9.525	3.97	4.4	0.8	

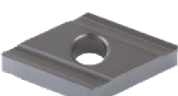
Cermet insert(Positive)

DC□□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	DCMT070204-FG	7.8	6.35	2.38	2.8	0.4	
	DCMT11T304-FG	11.6	9.525	3.97	4.4	0.4	
	DCMT11T308-FG	11.6	9.525	3.97	4.4	0.8	
	DCMT11T304-MT	11.6	9.525	3.97	4.4	0.4	
	DCMT11T308-MT	11.6	9.525	3.97	4.4	0.8	

Cermet insert(Negative)

DN□□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	DNMG150404-MT	15.5	12.7	4.76	5.16	0.4	
	DNMG150408-MT	15.5	12.7	4.76	5.16	0.8	
	DNMG150404L/R-VF	15.5	12.7	4.76	5.16	0.4	
	DNMG150408L/R-VF	15.5	12.7	4.76	5.16	0.8	
	DNMG150404L/R-S	15.5	12.7	4.76	5.16	0.4	
	DNMG150408L/R-S	15.5	12.7	4.76	5.16	0.8	

Cermet insert(Positive)

SC□□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	SCMT09T304-MT	9.525	9.525	3.97	4.4	0.4	
	SCMT09T308-MT	9.525	9.525	3.97	4.4	0.8	

Cermet insert(Positive)

TC □□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	TCMT090202-MT	9.6	5.56	2.38	2.5	0.2	
	TCMT090204-MT	9.6	5.56	2.38	2.5	0.4	
	TCMT110202-MT	11	6.35	2.38	2.8	0.2	
	TCMT110204-MT	11	6.35	2.38	2.8	0.4	

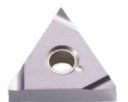
Cermet insert (Positive)

TP □□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	TPMT110304-FG	11	6.35	2.38	2.8	0.4	

Cermet insert (Negative)

TN □□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	TNMG160402R-F	16.5	9.525	4.76	3.81	0.2	
	TNMG16040R-F	16.5	9.525	4.76	3.81	0.4	
	TNMG160408R-F	16.5	9.525	4.76	3.81	0.8	
	TNMG160402L-F	16.5	9.525	4.76	3.81	0.2	
	TNMG160404L-F	16.5	9.525	4.76	3.81	0.4	
	TNMG160408L-F	16.5	9.525	4.76	3.81	0.8	
	TNMG160402R-C	16.5	9.525	4.76	3.81	0.2	
	TNMG160404R-C	16.5	9.525	4.76	3.81	0.4	
	TNMG160408R-C	16.5	9.525	4.76	3.81	0.8	
	TNMG160402L-C	16.5	9.525	4.76	3.81	0.2	
	TNMG160404L-C	16.5	9.525	4.76	3.81	0.4	
	TNMG160408L-C	16.5	9.525	4.76	3.81	0.8	
	TNMG160402R-P	16.5	9.525	4.76	3.81	0.2	
	TNMG160404R-P	16.5	9.525	4.76	3.81	0.4	
	TNMG160408R-P	16.5	9.525	4.76	3.81	0.8	
	TNMG160402L-P	16.5	9.525	4.76	3.81	0.2	
	TNMG160404L-P	16.5	9.525	4.76	3.81	0.4	
	TNMG160408L-P	16.5	9.525	4.76	3.81	0.8	

Cermet insert(Negative)

TN □□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	TNMG160404-MT	16.5	9.525	4.76	3.81	0.4	
	TNMG160408-MT	16.5	9.525	4.76	3.81	0.8	
	TNMG160404-TC	16.5	9.525	4.76	3.81	0.4	
	TNMG160408-TC	16.5	9.525	4.76	3.81	0.8	
	TNMG160404L-VF	16.5	9.525	4.76	3.81	0.4	
	TNMG160404R-VF	16.5	9.525	4.76	3.81	0.4	
	TNMG160408L-VF	16.5	9.525	4.76	3.81	0.8	
	TNMG160408R-VF	16.5	9.525	4.76	3.81	0.8	
	TNMG160404L-S	16.5	9.525	4.76	3.81	0.4	
	TNMG160404R-S	16.5	9.525	4.76	3.81	0.4	
	TNMG160408L-S	16.5	9.525	4.76	3.81	0.8	
	TNMG160408R-S	16.5	9.525	4.76	3.81	0.8	

VN □□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	VNMG160404-MT	16.6	9.525	4.76	3.81	0.4	
	VNMG160408-MT	16.6	9.525	4.76	3.81	0.8	

SC □□

Insert Appearance	Model	Dimension					Grade
		L	D	S	d1	R	MH60
	WNMG060404-FG	6.5	9.525	4.76	3.81	0.4	
	WNMG080404-MT	8.7	12.7	4.76	5.16	0.4	
	WNMG080408-MT	8.7	12.7	4.76	5.16	0.8	
	WNMG080404-TS	8.7	12.7	4.76	5.16	0.4	
	WNMG080404-TC	8.7	12.7	4.76	5.16	0.4	

Cermet Insert

Recommended machining parameters

Model		Recommended Cutting Parameters		Cutting Speed		
		Feed (mm/rev)	Cutting depth (mm)	MH60		
CNMG	120404 MT	0.15-0.40	1.0-4.0	280	220	
	120408 MT	0.17-0.55	1.2-4.5			
	120404 TC	0.15-0.40	0.5-3.5	310	140	
DNMG	150404 MT	0.15-0.40	0.8-3.5	280	220	
	150404 R-VF	0.10-0.35	0.7-4.0	310		
	150404 R-S	0.20-0.40	1.5-4.0			
TNMG	160404 MT	0.17-0.35	1.0-3.0	280	220	
	160408 MT	0.17-0.35	1.2-3.5			
	160404 R-VF	0.10-0.30	0.7-3.0			
	160404 R-S	0.15-0.30	1.0-3.0	310		
	160404 L-S	0.15-0.30	0.8-3.0			
	160404 TC	0.15-0.40	1.5-3.5	310	140	
VNMG	160404 MT	0.15-0.36	0.8-2.5			
	160408 MT	0.17-0.36	1.0-2.5	280	220	
WNMG	060404 FG	0.07-0.20	0.5-2.0	310	230	
	080404 MT	0.12-0.40	1.0-3.5	280	220	
	080408 MT	0.17-0.55	1.2-3.5			
	080404 TS	0.08-0.20	0.3-1.5	280		
	080404 TC	0.15-0.30	1.5-3.5	310	140	
CCMT	060202 FG	0.10-0.25	0.6-2.4	320		
	060204 FG	0.05-0.15	0.3-1.5	310	230	
	060204 MT	0.07-0.20	0.5-2.0	280	210	
	09T304 MT	0.10-0.25	0.7-3.0			
	09T304 FG	0.07-0.20	0.4-2.0	310	230	
	09T304 TC	0.08-0.3	0.5-3.0	280		
DCMT	070204 FG	0.08-0.20	0.4-1.5			
	11T304 FG	0.10-0.25	0.6-1.5	310	240	
	11T304 MT	0.10-0.25	0.7-3.0			
SCMT	09T304 MT	0.10-0.25	0.7-3.0	280	210	
TCMT	090204 MT	0.10-0.25	0.6-2.0	280	210	
	110204 MT	0.10-0.25	0.6-2.5			
TPMT	110304 FG	0.07-0.20	0.4-1.5	310	230	

P Steel
 M Stainless steel
 K Cast iron

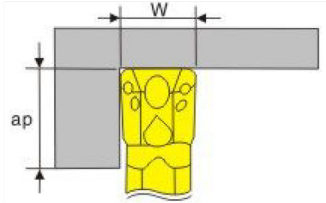
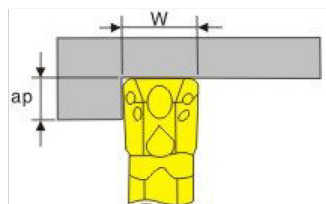
Cermet Insert

Geometry appearance of chip breaker

MGM(G)N-M	MGMN-G	MRMN-M
		
- Unique chip breaker groove design, making cutting more balanced by using one central chip breaker groove instead of a conventional flat-end one. - Special surface convex points, facilitate chip control during outer circle cutting and obtain smoother chip flow. - The chip breaker groove is designed to be used for turning & grooving.	- The special design of the chip breaker groove narrows chip flow to improve its control. - The chip breaker groove is designed especially for grooving.	- The circular design is used for profiling - Can be used for grind undercut machining

Turning and grooving

• Selection Of Insert

Feed rate	
-Take the insert specification and lathe performance into consideration when determining the max feed rate value ($F_{max} = W \times 0.075$) -F_{max} shall not exceed the radius of R angle of the insert; -During grooving, the problem of chip discharge can be solved by step-by-step machining with small cutting depth.	
Cutting depth	
-The Min cutting depth shouldn't be less than the tool nose radius of the insert -The Max cutting depth depends on the cutting load of the lathe. -The deviation and clearance angle of the machined workpiece can be improved by using inserts of different shapes.	

• Precautions For Turning

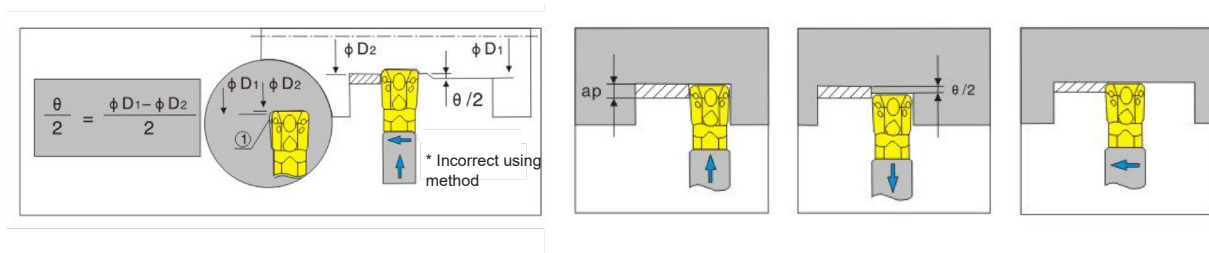
- ▶▶ The MGT tool is designed to produce lateral cutting force through the clearance angle of the insert, which makes it more advantageous than the ISO standard insert.
- ▶▶ The MGT standard insert has a "sleeking" effect to improve the surface roughness.

Cermet Insert

Turning and grooving

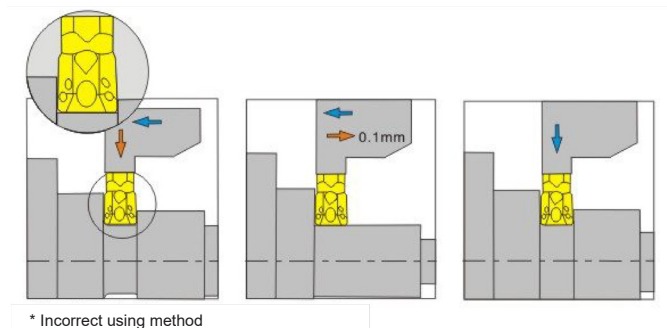
• Precautions For Finishing (Final quality compensation)

- ▶▶ Transverse cutting axially after reaching the desired final diameter along the radial direction for grooving may cause real machining deviation to the machined workpiece. In this case, machining compensation is necessary to obtain the desired final diameter according to the formula.
- ▶▶ Eliminate the machining deviation (which is usually produced during final turning) along the machining direction as shown in the above figure by using the clearance angle and obtain excellent surface toughness without deviation. Please machine along the following machining direction.
 - 1) Grooving until the final workpiece diameter is reached.
 - 2) The retracting distance is $\theta/2$.
 - 3) Continuously transverse turning along the final diameter.



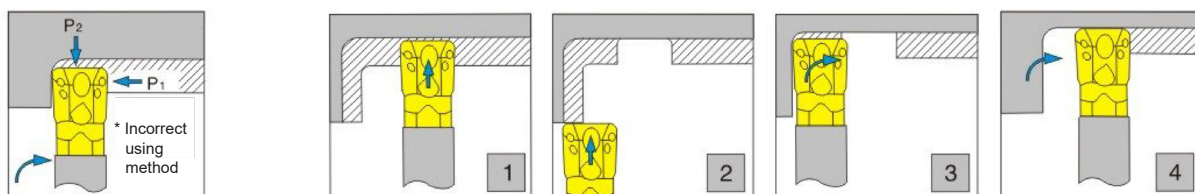
• Precautions For Finishing (Final quality compensation)

- ▶▶ As a multifunctional tool, the MGT tool can be applied to grooving and turning. When using the MGT tool, remember that the tool imitates the ISO standard turning in applications, i.e. using positive clearance angle during machining, therefore, the cutting force and depth of the tool are exerted in the same machining, which will cause insert wear to a certain extent and the grooving process cannot reach the required final diameter after turning. In order to eliminate diameter deviation, move the tool 0.1mm rightwards and then return to the original position.



• Precautions For Finishing (Final quality compensation)

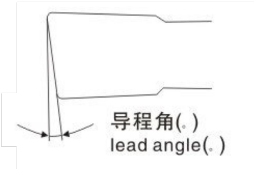
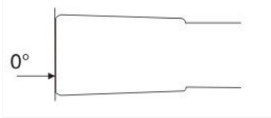
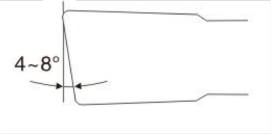
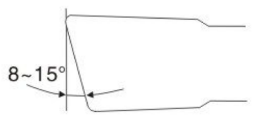
- ▶▶ When grooving, the MGT tool will produce synthetic unbalanced cutting of the load (as shown in the Fig.) in the directions of radial and axial cutting depth, while the load will cause insert and cutter bar damage.



Cermet Insert

Turning and grooving

• Insert

Lead Angle Application	0°Lead Angle(non-directional)	4°~8°Lead Angle	8°~15°Lead Angle
			
4°-Tube(tube and hollow bar) 6°-Tube and solid bar 8°-Solid bar 15°-Small diameter solid bar	•Solid bar workpiece cutting •There will be residues at the center during cutting •Avoid deviation from the cutting direction of the machined workpiece during cutting •Suitable for major diameter cutting	•Reduce central residue when cutting solid bar workpieces •Reduce burrs when cutting tubes and hollow bars	•Minor diameter hollow bar workpiece cutting •Reduce central residue when cutting minor diameter solid bar workpieces

• Insert Selection

►► In order to match the insert with the cutting conditions, the following factors need to be considered:

·Insert width·chip breaker groove·Material and tool nose radius R

►► The relationship between the cutting depth and the cutting width

·The non-directional insert with a 0°lead angle is most suitable for machining with relatively big cutting depth.

.Ordinary alloy steel,Max cutting depth=cutting width W×0.8.

►► Insert with a lead angle

·In order to reduce burrs, it is recommended to use an insert with a lead angle. Though a big-lead angle insert can reduce burrs, the service life of the tool may be reduced. If the burr level is acceptable, it is recommended to use a non-directional insert.

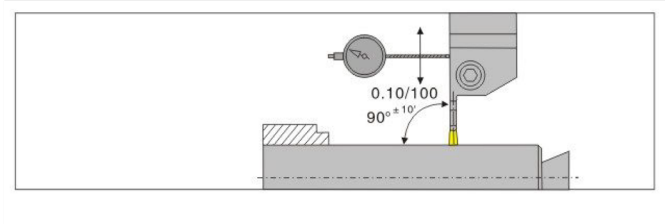


Cermet Insert

Turning and grooving

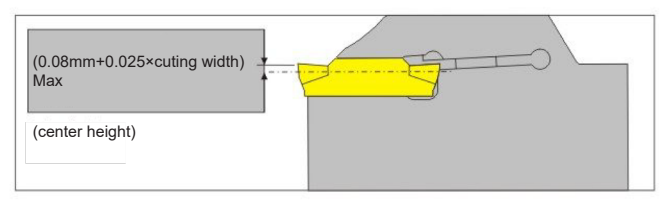
• Cutter Bar Setting

- ▶▶ The cutter bar must be installed precisely at the cutting position, making it perpendicular (90°) to the machining shaft to reduce vibration to the largest extent.



• Cutting Setting

- ▶▶ The height of the insert cutting edge needs to be set with in $\pm 0.1\text{mm}$ from the axis.
 - Machining close to the clamping part as much as possible during processing to reduce vibration.



• Note

- ▶▶ Make sure the cutting speed is consistent with the feed speed
 - Use an appropriate amount of cutting fluid to have better cutting performance
 - Clean the insert and cutter seat thoroughly before mounting the insert

• Usage

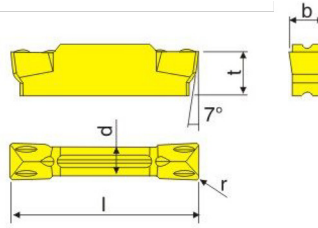
- ▶▶ Please replace the insert immediately in case of tool wear to avoid the damage of the machined workpiece.
 - Please replace with a new cutter bar in case of cutter bar base wear to ensure stable clamping.
 - Do not grind the insert base.

• Selection Of Chip Breaker Groove

- ▶▶ Our chip breaker groove is designed to make chip flow narrow during grooving. A narrow chip flow usually has the following advantages:
 - Reduce the friction between the chip and the machined workpiece. Obtain A favorable surface roughness usually.
 - A good chip flow can reduce chip load, so that the operator can improve the feed rate.

Grooving Insert

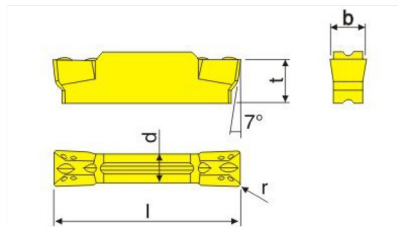
MGMN □□ - G



Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide												
							P					M				K		MHA	
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018
Grooving	MGMN150-G	1.5	0.15	16	1.2	3.5	▲						▲						▲
	MGMN200-G	2	0.2	16	1.6	3.5	▲						▲					▲	
	MGMN250-G	2.5	0.2	18.5	2	3.85	▲						▲					▲	
	MGMN300-G	3	0.4	21	2.35	4.8	▲						▲					▲	
	MGMN400-G	4	0.4	21	3.3	4.8	○						○					○	

MGMN □□ - M

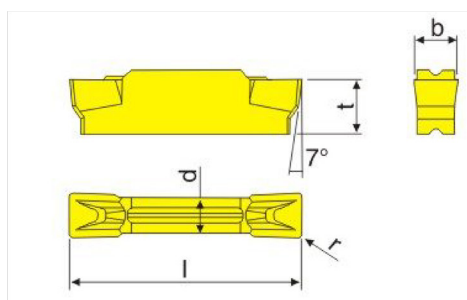


Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide													
							P				M				K		MHA			
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
Grooving Turning	MGMN200-M	2	0.2	16	1.6	3.5	▲						▲	▲						▲
	MGMN250-M	2.5	0.2	18.5	2	3.85	▲						▲	▲						▲
	MGMN300-M	3	0.4	21	2.35	4.8	▲						▲	▲						▲
	MGMN400-M	4	0.4	21	3.3	4.8	▲						▲	▲						▲
	MGMN500-M	5	0.4	26	4.1	5.8	▲						▲	▲						▲
	MGMN600-M	6	0.8	26	5	5.8	○						○	○						○

Grooving Insert

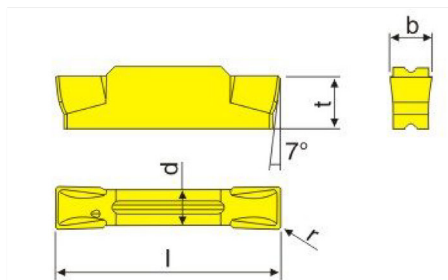
MGMN □□ - T



Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide												
							P					M				K	MHA		
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018
Grooving	MGMN200-T	2	0.2	16	1.6	3.5		▲						▲					
	MGMN300-T	3	0.4	21	2.35	4.8		▲						▲					
	MGMN400-T	4	0.4	21	3.3	4.8		▲						▲					
	MGMN500-T	5	0.4	26	4.1	5.8		▲						▲					

MGMN □□ - H

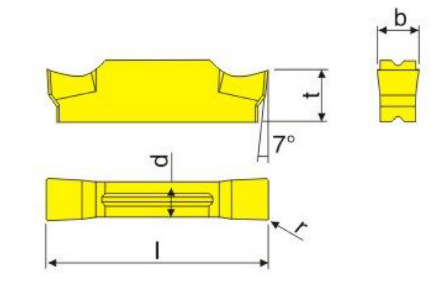


Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide													
							P					M				K	MHA			
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
Grooving	MGMN200-H	2	0.2	16	1.6	3.5	▲							▲						▲
	MGMN300-H	3	0.4	21	2.35	4.8	▲							▲						▲
	MGMN400-H	4	0.4	21	3.3	4.8	▲							▲						▲
	MGMN500-H	5	0.4	26	4.1	5.8	▲							▲						▲

Grooving Insert

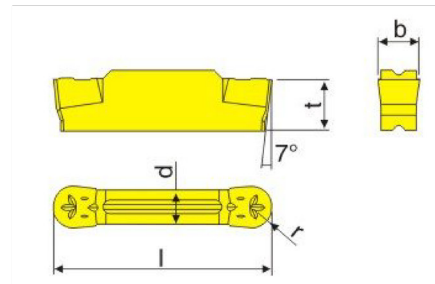
MGGN □□□ - JH



Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide										MHA		
							P					M				K			
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018
Grooving	MGGN150-JH	1.5	0.15	16	1.2	3.5								▲					
	MGGN200-JH	2	0.2	16	1.6	3.5								▲					
	MGGN250-JH	2.5	0.2	18.5	2	3.85								▲					
	MGGN300-JH	3	0.4	21	2.35	4.8								▲					
	MGGN400-JH	4	0.4	21	3.3	4.8								▲					
	MGGN500-JH	5	0.4	26	4.1	5.8								▲					
	MGGN600-JH	6	0.4	26	4.1	5.8								▲					

MRMN □□ - M

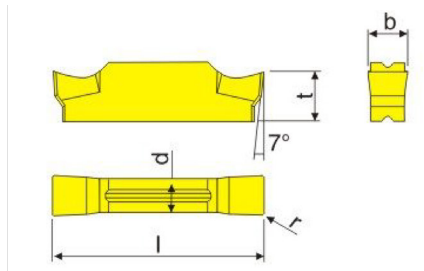


Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide													
							P					M			K		MHA			
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
Grind undercut profile	MRMN200-M	2	1	16	1.6	3.5		▲					▲							▲
	MRMN300-M	3	1.5	21	2.35	4.8		▲					▲							▲
	MRMN400-M	4	2	21	3.3	4.8		▲					▲							▲
	MRMN500-M	5	2.5	26	4.1	5.8		▲					▲							▲
	MRMN600-M	6	3	26	5	5.8		○					○							○

Grooving Insert

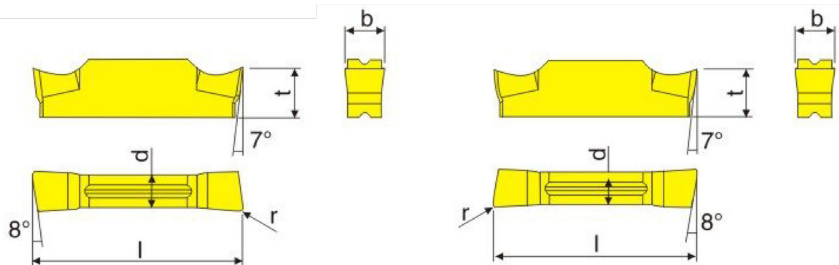
MGGN □□ - JM



Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide														
							P				M				K		MHA				
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028	
Grooving	MGGN150-JM	1.5	0.15	16	1.2	3.5		▲					▲	▲							▲
	MGGN200-JM	2	0.2	16	1.6	3.5		▲					▲	▲							▲
	MGGN250-JM	2.5	0.2	18.5	2	3.85		▲					▲	▲							▲
	MGGN300-JM	3	0.4	21	2.35	4.8		▲					▲	▲							▲
	MGGN400-JM	4	0.4	21	3.3	4.8		▲					○	▲							▲
	MGGN500-JM	5	0.4	26	4.1	5.8		○					○	○							○

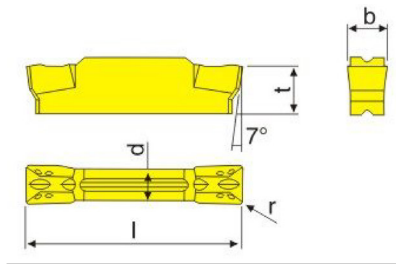
MGGN □□ - 8



Product stock ▲ Main grade reserve stock ○ Make-to-order

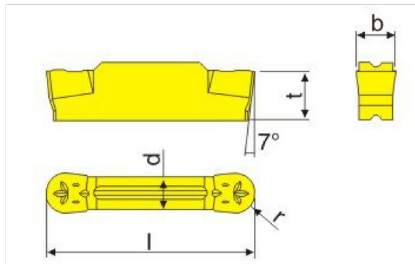
Application	Model	Specification and dimension(mm)					Coated Carbide										MHA			
		b	r	l	d	t	P					M			K					
							MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
Grooving	MGGN150L-8	1.5	-	16	1.2	3.5		▲					▲	▲						▲
	MGGN150R-8							▲						▲	▲					▲
	MGGN200L-8	2	-	16	1.6	3.5		▲					▲	▲					▲	
	MGGN200R-8							▲						▲	▲					▲
	MGGN250L-8	2.5	-	18.5	2	3.85		▲					▲	▲					▲	
	MGGN250R-8							▲						▲	▲					▲
	MGGN300L-8	3	-	21	2.35	4.8		▲					▲	▲					▲	
	MGGN300R-8							▲						▲	▲					▲
	MGGN400L-8	4	-	21	3.3	4.8		▲					▲	▲					▲	
	MGGN400R-8							▲						▲	▲					▲
	MGGN500L-8	5	-	26	4.1	5.8		○					○	○					○	
	MGGN500R-8							○						○	○					○

Grooving Insert

MGMN $\square\square$ - G - AL

Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide										Uncoated Carbide			
							P					M					K	H01		
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018	MH2028
Grooving Turning	MGMN150-G-AL	1.5	0.15	16	1.2	3.5														▲
	MGMN200-G-AL	2	0.2	16	1.6	3.5														▲
	MGMN250-G-AL	2.5	0.2	18.5	2	3.85														▲
	MGMN300-G-AL	3	0.4	21	2.35	4.8														▲
	MGMN400-G-AL	4	0.4	21	3.3	4.8														▲
	MGMN500-G-AL	5	0.4	26	4.1	5.8														▲

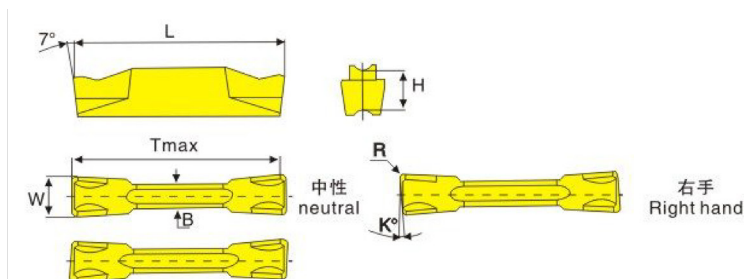
MRMN $\square\square$ - M-AL

Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Specification and dimension(mm)					Coated Carbide										Uncoated Carbide			
							P					M				K	H01			
		b	r	l	d	t	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
Grooving	MRMN200-M-AL	2	1	16	1.6	3.5														▲
	MRMN300-M-AL	3	1.5	21	2.35	4.8														▲
	MRMN400-M-AL	4	2	21	3.3	4.8														▲
	MRMN500-M-AL	5	2.5	26	4.1	5.8														▲
	MRMN600-M-AL	6	3	26	5	5.8														○

Grooving Insert

TDC □ - □□□

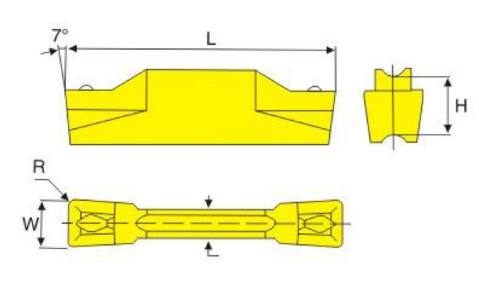


Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Cutter Seat Dimension	W ± 0.05	R	B	L	K	H	Tmax	Coated Carbide										Uncoated Carbide												
										P					M				K		H01											
										MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018	MH2028									
Grooving	TDC2	2	2.0	0.2	1.7	20.0	-	4.7	19							▲																
	TDC2-6R/L						6									▲																
	TDC 2-8R/L						8									▲																
	TDC 2-15R/L						15									▲																
	TDC2-15RS/L					19.6	15									▲																
	TDC3	3	3.0	0.2	2.4	20.0	-									▲																
	TDC3-6R/L						6									▲																
	TDC3-6RS/LS					19.6	6									▲																
	DC3-15R/L					20.0	15									▲																
	TDC3-15RS/LS					19.6	15									▲																
	TDC4	4	4.0	0.3	3.0	25.0	-									▲																
	TDC4-4R/L						4									▲																
	TDC4-15R/L						15									▲																
	TDC5	5	5.0	0.3	4.0	20.0	-									5.2					24	▲										
	TDC5-4R						4															▲										
	TDC6	6	6.0	0.3	5.0	25.0	-															▲										
	TDC8	8	8.0	0.4	6.0	30.0	-	6.4	29								○															

Grooving Insert

TDT □ - □□□

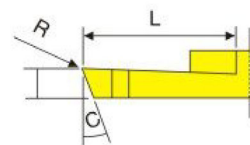
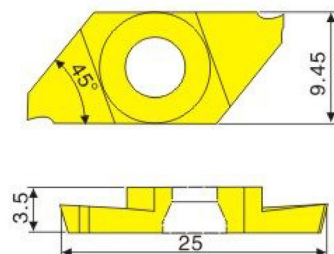
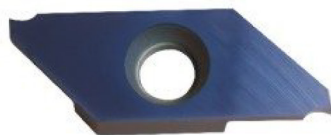


Product stock ▲ Main grade reserve stock ○ Make-to-order

Application	Model	Cutter Seat Dimension	W ± 0.05	R	B	L	H	Coated Carbide										Uncoated Carbide		
								P					M			K		H01		
								MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018
Grooving	TDT 2.65E-0.15	3	2.65	0.15	2.2	20.0	4.7								▲					
	TDT 3.00E-0.20		3.00	0.20												▲				
	TDT 3.00E-0.40			0.40												▲				
	TDT3.15E-0.15		3.15	0.15												▲				
	TDT4.00E-0.40	4	4.00	0.40	3.0										▲					
	TDT 4.00E-0.80			0.80											▲					
	TDT 4.15E-0.15		4.15	0.15												▲				
	TDT4.78E-0.55	5	4.78	0.55	4.0	25.0	5.2								▲					
	TDT 5.00E-0.40		5.00	0.40												▲				
	TDT 5.00E-0.80			0.80											▲					
	TDT5.15E-0.15		5.15	0.15													▲			
	TDT6.00E-0.80	6	6.00	0.80	5.0										▲					
	TDT6.00E-1.20			1.20											▲					
	TDT8.00E-0.80	8	8.00	0.80	6.0										○					
	TDT8.00E-1.20			1.20											○					
	TDT 10.00E-0.80	10	10.00	0.8	8.0	30.0	6.4								○					
	TDT 10.00E-1.20			1.2											○					
	TDT 10.00E-2.00			2.0											○					

Grooving Insert

CT□□□.□□□

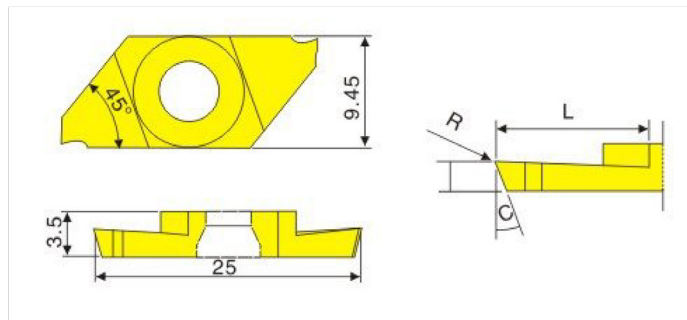
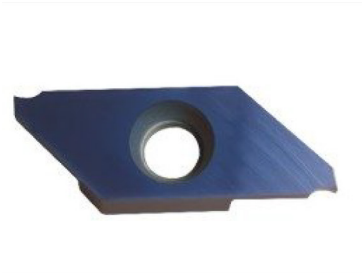


Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	R	W	L	C	Max cut-off	MH5018	MH60	MHA
CTPA0.7FR	0.2	1.7	20.0	-	19	▲		▲
CTPA1.0FR				6		▲		▲
CTPA1.5FR				8		▲		▲
CTPA2.0FR				15		▲		▲
CTPA0.7FRN			19.6	15		▲		▲
CTPA1.0FRN	0.2	2.4	20.0	-		▲		▲
CTPA1.5FRN				6		▲		▲
CTPA2.0FRN			19.6	6		▲		▲
CTPA0.7FL			20.0	15		▲		▲
CTPA1.0FL			19.6	15		▲		▲
CTPA1.5FL	0.3	3.0	25.0	-		▲		▲
CTPA2.0FL				4		▲		▲
CTPA0.7FLN				15		▲		▲
CTPA1.0FLN	0.3	4.0	20.0	-	24	▲		▲
CTPA1.5FLN				4		▲		▲
CTPA2.0FLN	0.3	5.0	25.0	-		▲		▲

Grooving Insert

CT□□□.□□□



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	R	W	L	C	Max cut-off	MH5018	MH60	MHA
CTP0.7FR	0.2	1.7	20.0	-	19	▲		▲
CTP1.0FR				6		▲		▲
CTP1.5FR				8		▲		▲
CTP2.0FR				15		▲		▲
CTP0.7FRN			19.6	15		▲		▲
CTP1.0FRN	0.2	2.4	20.0	-		▲		▲
CTP1.5FRN				6		▲		▲
CTP2.0FRN			19.6	6		▲		▲
CTP0.7FL			20.0	15		▲		▲
CTP1.0FL			19.6	15		▲		▲
CTP1.5FL	0.3	3.0	25.0	-		▲		▲
CTP2.0FL				4		▲		▲
CTP0.7FLN				15		▲		▲
CTP1.0FLN	0.3	4.0	20.0	-	24	▲		▲
CTP1.5FLN				4		▲		▲
CTP2.0FLN	0.3	5.0	25.0	-		▲		▲

Grooving Insert

GR



Fig. A Single-head

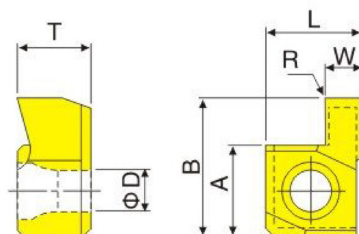
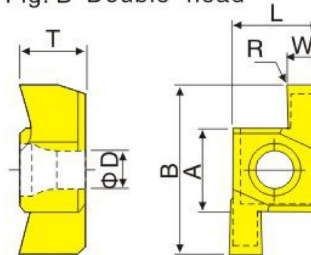


Fig. B Double-head



Product stock ▲ Main grade reserve stock ○ Make-to-order

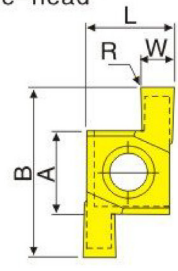
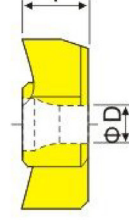
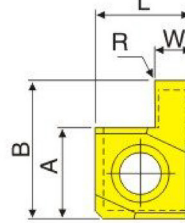
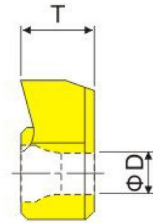
Model	Dimension							Grade		
	W	A	B	T	φD	L	R	MH5018	MH60	MHA
6GR/L100	1.0	4.76	6.4	2.34	2.3	5.56	0.2	▲		▲
6GR/L110	1.1							▲		▲
6GR/L120	1.2							▲		▲
6GR/L130	1.3							▲		▲
6GR/L140	1.4							▲		▲
6GR/L150	1.5							▲		▲
6GR/L160	1.6							▲		▲
6GR/L170	1.7							▲		▲
6GR/L180	1.8							▲		▲
6GR/L190	1.9							▲		▲
6GR/L200	2.0							▲		▲
7GR/L100	1.0	5.56	7.36	3.08	2.58	5.56		▲		▲
7GR/L110	1.1							▲		▲
7GR/L120	1.2							▲		▲
7GR/L130	1.3							▲		▲
7GR/L140	1.4							▲		▲
7GR/L150	1.5							▲		▲
7GR/L160	1.6							▲		▲
7GR/L170	1.7							▲		▲
7GR/L180	1.8							▲		▲
7GR/L190	1.9							▲		▲
7GR/L200	2.0							▲		▲
8GR/L100	1.0	5.56	10.16	3.87	2.58	6.15		▲		▲
8GR/L110	1.1							▲		▲
8GR/L120	1.2							▲		▲
8GR/L130	1.3							▲		▲
8GR/L140	1.4							▲		▲
8GR/L150	1.5							▲		▲
8GR/L160	1.6							▲		▲
8GR/L170	1.7							▲		▲
8GR/L180	1.8							▲		▲
8GR/L190	1.9							▲		▲
8GR/L200	2.0							▲		▲
8GR/L210	2.1							▲		▲
8GR/L220	2.2							▲		▲
8GR/L230	2.3							▲		▲
8GR/L240	2.4							▲		▲
8GR/L250	2.5							▲		▲
8GR/L260	2.6							▲		▲
8GR/L270	2.7	▲	▲							

Grooving Insert

GR

Fig. A Single-head

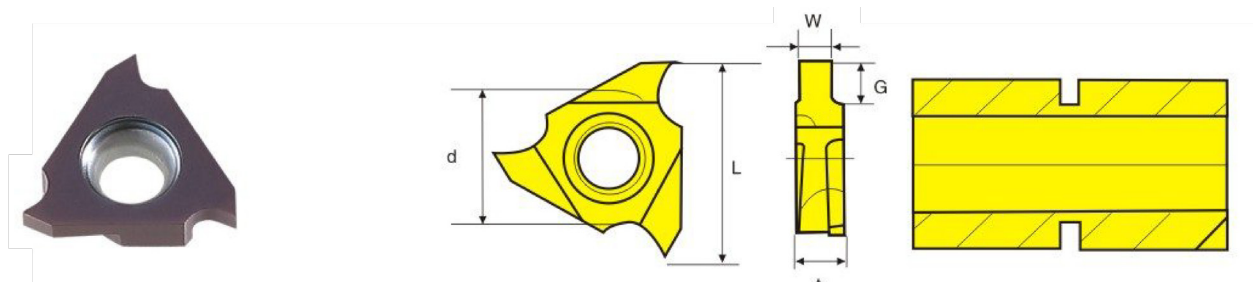
Fig. B Double-head



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension							Grade		
	W	A	B	T	φD	L	R	MH5018	MH60	MHA
8GR/L280	2.8	5.56	10.16	3.87	2.58	6.15	0.2	▲		▲
8GR/L290	2.9							▲		▲
8GR/L300	3.0							▲		▲
8GR/L310	3.1							▲		▲
8GR/L320	3.2							▲		▲
8GR/L330	3.3							▲		▲
8GR/L340	3.4							▲		▲
8GR/L350	3.5							▲		▲
9GR/L100	1.0	6.35	12.95	4.66	2.86	7.74		▲		▲
9GR/L110	1.1							▲		▲
9GR/L120	1.2							▲		▲
9GR/L130	1.3							▲		▲
9GR/L140	1.4							▲		▲
9GR/L150	1.5							▲		▲
9GR/L160	1.6							▲		▲
9GR/L170	1.7							▲		▲
9GR/L180	1.8							▲		▲
9GR/L190	1.9							▲		▲
9GR/L200	2.0							▲		▲
9GR/L210	2.1							▲		▲
9GR/L220	2.2							▲		▲
9GR/L230	2.3							▲		▲
9GR/L240	2.4							▲		▲
9GR/L250	2.5							▲		▲
9GR/L260	2.6							▲		▲
9GR/L270	2.7							▲		▲
9GR/L280	2.8							▲		▲
9GR/L290	2.9							▲		▲
9GR/L300	3.0							▲		▲
9GR/L310	3.1							▲		▲
9GR/L320	3.2							▲		▲
9GR/L330	3.3							▲		▲
9GR/L340	3.4							▲		▲
9GR/L350	3.5							▲		▲
9GR/L360	3.6							▲		▲
9GR/L370	3.7							▲		▲
9GR/L380	3.8							▲		▲
9GR/L390	3.9							▲		▲
9GR/L400	4.0							▲		▲

Grooving Insert

TDF ☐ ☐ R/L

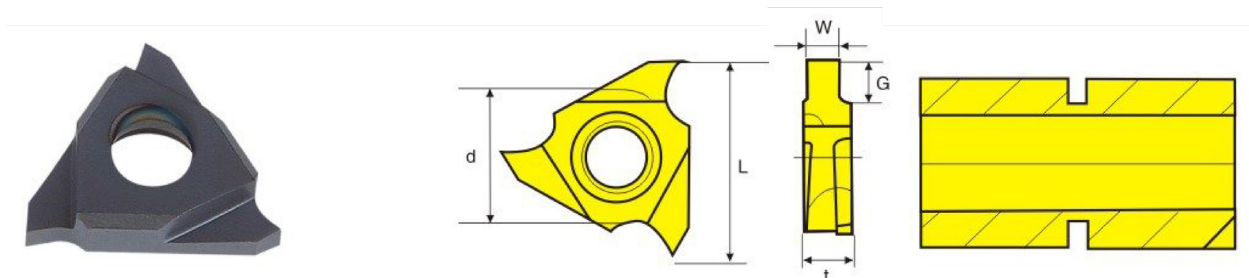
Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	L	W	G	d	t	MH5018	MH60	MHA
TGF32R/L 030	16	0.30	0.9	3/8	3.18	▲	▲	▲
TGF32R/L 040		0.40	1.3			▲	▲	▲
TGF32R/L 050		0.50	1.3			▲	▲	▲
TGF32R/L 060		0.60	1.9			▲	▲	▲
TGF32R/L 065		0.65	1.9			▲	▲	▲
TGF32R/L 070		0.70	1.9			▲	▲	▲
TGF32R/L 075		0.75	1.9			▲	▲	▲
TGF32R/L 080		0.80	1.9			▲	▲	▲
TGF32R/L 085		0.85	1.9			▲	▲	▲
TGF32R/L 090	16	0.9	1.9	3/8	3.18	▲	▲	▲
TGF32R/L 095		0.95	1.9			▲	▲	▲
TGF32R/L 100		1.00	2.3			▲	▲	▲
TGF32R/L 110	16	1.10	2.3	3/8	3.18	▲	▲	▲
TGF32R/L 115		1.15	2.3			▲	▲	▲
TGF32R/L 120		1.20	2.3			▲	▲	▲
TGF32R/L 125		1.25	2.3			▲	▲	▲
TGF32R/L 130		1.30	2.3			▲	▲	▲
TGF32R/L 135		1.35	2.3			▲	▲	▲
TGF32R/L 140		1.40	2.3			▲	▲	▲
TGF32R/L 145		1.45	2.3			▲	▲	▲
TGF32R/L 150		1.50	2.3			▲	▲	▲
TGF32R/L 155		1.55	2.3			▲	▲	▲
TGF32R/L 160		1.60	2.3			▲	▲	▲
TGF32R/L 165		1.65	2.3			▲	▲	▲
TGF32R/L 170		1.70	2.3			▲	▲	▲
TGF32R/L 175		1.75	2.3			▲	▲	▲
TGF32R/L 180		1.80	2.3			▲	▲	▲

Order example: TGF32R150 100PCS

Grooving Insert

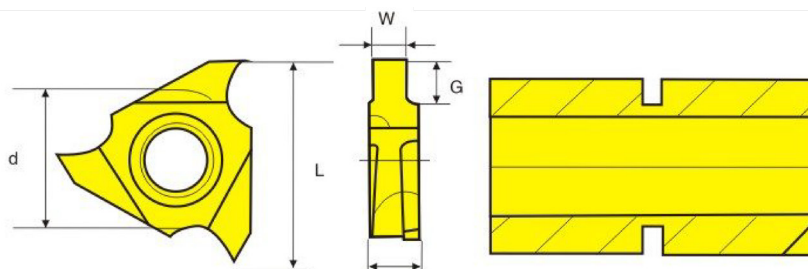
TDF □□ R/L



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	L	W	G	d	t	MH5018	MH60	MHA
TGF32R/L 190	16	1.90	2.8	3/8	3.18	▲	▲	▲
TGF32R/L 195		1.95	2.8			▲	▲	▲
TGF32R/L 200		2.00	2.8			▲	▲	▲
TGF32R/L 210		2.10	2.8			▲	▲	▲
TGF32R/L 215		2.15	2.8			▲	▲	▲
TGF32R/L 220		2.20	2.8			▲	▲	▲
TGF32R/L 225		2.25	2.8			▲	▲	▲
TGF32R/L 230		2.30	2.8			▲	▲	▲
TGF32R/L 240		2.40	2.8			▲	▲	▲
TGF32R/L 245		2.45	2.8			▲	▲	▲
TGF32R/L 250		2.50	2.8			▲	▲	▲
TGF32R/L 260		2.60	2.8			▲	▲	▲
TGF32R/L 270		2.70	2.8			▲	▲	▲
TGF32R/L 275		2.75	2.8			▲	▲	▲
TGF32R/L 280		2.80	2.8			▲	▲	▲
TGF32R/L 290		2.90	2.8			▲	▲	▲
TGF32R/L 300		3.00	2.8			▲	▲	▲

Grooving Insert

TDF ☐ ☐ R/L

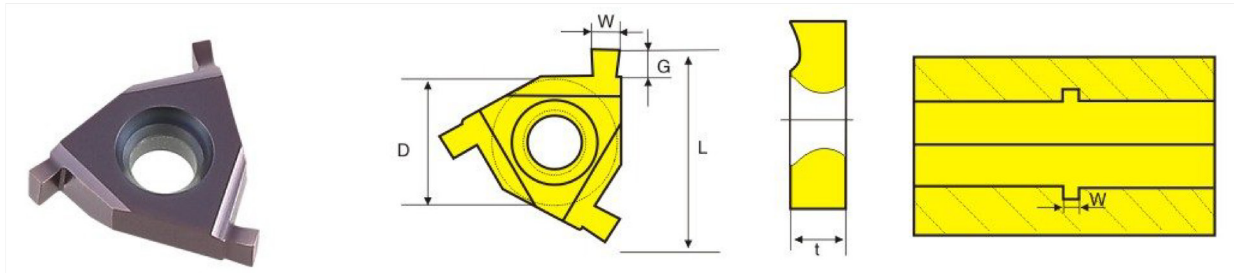
Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	L	W	G	d	t	MH5018	MH60	MHA
TGF43R/L 100	22	1.00	2.6	1/2	4.76	▲	▲	▲
TGF43R/L 125		1.25	2.6			▲	▲	▲
TGF43R/L 150		1.50	2.6			▲	▲	▲
TGF43R/L 175		1.75	2.6			▲	▲	▲
TGF43R/L 180		1.80	2.6			▲	▲	▲
TGF43R/L 200	22	2.00	4.1	1/2	4.76	▲	▲	▲
TGF43R/L 230		2.30	4.1			▲	▲	▲
TGF43R/L 250		2.50	4.1			▲	▲	▲
TGF43R/L 275		2.75	4.1			▲	▲	▲
TGF43R/L 280		2.80	4.1			▲	▲	▲
TGF43R/L 300		3.00	4.1			▲	▲	▲
TGF43R/L 325		3.25	4.1			▲	▲	▲
TGF43R/L 345		3.45	4.1			▲	▲	▲
TGF43R/L 350	22	3.50	5.2	1/2	4.76	▲	▲	▲
TGF43R/L 375		3.75	5.2			▲	▲	▲
TGF43R/L 395		3.95	5.2			▲	▲	▲
TGF43R/L 400		4.00	5.2			▲	▲	▲
TGF43R/L 450		4.50	5.2			▲	▲	▲
TGF43R/L 470		4.70	5.2			▲	▲	▲

Order example: TGF43 R300 100PCS

Grooving Insert

ER(IR) / IL(EL)

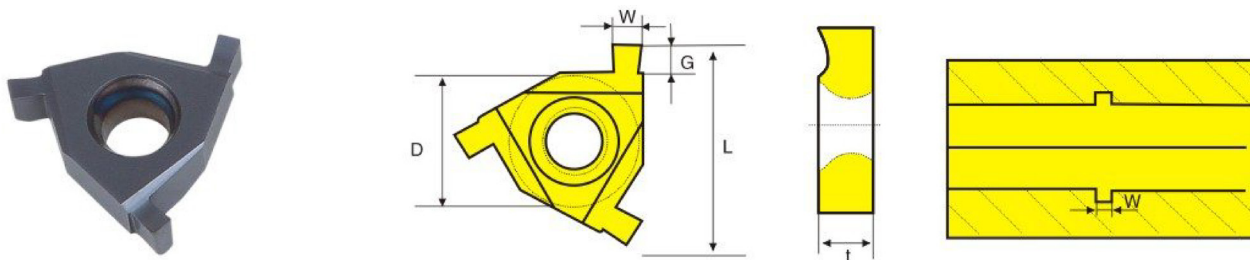


Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	L	W	G	d	t	MH5018	MH60	MHA
ER/IL(IR/EL) 0.75	08	0.75	0.8	3/16	2.2	▲	▲	▲
ER/IL(IR/EL) 0.80		0.80	0.8			▲	▲	▲
ER/IL(IR/EL) 0.85		0.85	0.8			▲	▲	▲
ER/IL(IR/EL) 0.90		0.90	0.8			▲	▲	▲
ER/IL(IR/EL) 1.00		1.00	0.8			▲	▲	▲
ER/IL(IR/EL) 0.80	11	0.80	1.2	1/4	3.2	▲	▲	▲
ER/IL(IR/EL) 0.85		0.85	1.2			▲	▲	▲
ER/IL(IR/EL) 0.90		0.90	1.2			▲	▲	▲
ER/IL(IR/EL) 1.00		1.00	1.2			▲	▲	▲
ER/IL(IR/EL) 1.10		1.10	1.2			▲	▲	▲
ER/IL(IR/EL) 1.20		1.20	1.2			▲	▲	▲
ER/IL(IR/EL) 1.25		1.25	1.2			▲	▲	▲
ER/IL(IR/EL) 1.30		1.30	1.2			▲	▲	▲
ER/L(IR/EL) 1.40		1.40	1.2			▲	▲	▲
ER/IL(IR/EL) 1.50		1.50	1.2			▲	▲	▲
ER/IL(IR/EL) 2.00		2.00	1.2			▲	▲	▲
ER/IL(IR/EL) 0.80	16	0.80	1.4	3/8	3.65	▲	▲	▲
ER/IL(IR/EL) 0.90		0.90	1.4			▲	▲	▲
ER/IL(IR/EL) 1.00		1.00	1.4			▲	▲	▲
ER/IL(IR/EL) 1.05		1.05	1.8			▲	▲	▲
ER/IL(IR/EL) 1.10		1.10	1.8			▲	▲	▲

Grooving Insert

ER(IR) / IL(EL)



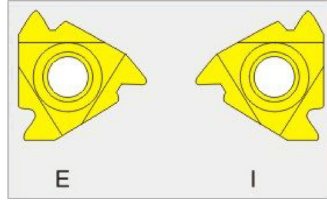
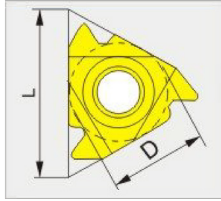
Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade		
	L	W	G	d	t	MH5018	MH60	MHA
ER/IL(IR/EL) 1.20	16	1.20	1.80	3/8	3.65	▲	▲	▲
ER/IL(IR/EL) 1.25		1.25	1.80			▲	▲	▲
ER/IL(IR/EL) 1.30		1.30	1.80			▲	▲	▲
ER/IL(IR/EL) 1.35		1.35	1.80			▲	▲	▲
ER/IL(IR/EL) 1.40		1.40	1.80			▲	▲	▲
ER/IL(IR/EL) 1.45		1.45	1.80			▲	▲	▲
ER/IL(IR/EL) 1.50		1.50	1.80			▲	▲	▲
ER/IL(IR/EL) 1.55		1.55	2.0			▲	▲	▲
ER/IL(IR/EL) 1.60		1.60	2.0			▲	▲	▲
ER/IL(IR/EL) 1.65		1.65	2.0			▲	▲	▲
ER/IL(IR/EL) 1.70		1.70	2.0			▲	▲	▲
ER/IL(IR/EL) 1.75		1.75	2.0			▲	▲	▲
ER/IL(IR/EL) 1.80		1.80	2.0			▲	▲	▲
ER/IL(IR/EL) 1.85		1.85	2.0			▲	▲	▲
ER/IL(IR/EL) 1.90		1.90	2.0			▲	▲	▲
ER/IL(IR/EL) 2.00		2.00	2.0			▲	▲	▲
ER/IL(IR/EL) 2.05		2.05	2.2			▲	▲	▲
ER/IL(IR/EL) 2.10		2.10	2.2			▲	▲	▲
ER/IL(IR/EL) 2.15		2.15	2.2			▲	▲	▲
ER/IL(IR/EL) 2.20		2.20	2.2			▲	▲	▲
ER/IL(IR/EL) 2.25		2.25	2.2			▲	▲	▲
ER/IL(IR/EL) 2.30		2.30	2.2			▲	▲	▲
ER/IL(IR/EL) 2.40		2.40	2.2			▲	▲	▲
ER/IL(IR/EL) 2.50		2.50	2.2			▲	▲	▲
ER/IL(IR/EL) 2.55		2.55	2.0			▲	▲	▲
ER/IL(IR/EL) 2.60		2.60	2.0			▲	▲	▲
ER/IL(IR/EL) 2.70		2.70	2.0			▲	▲	▲
ER/IL(IR/EL) 2.80		2.80	2.0			▲	▲	▲
ER/IL(IR/EL) 2.90		2.90	2.0			▲	▲	▲
ER/IL(IR/EL) 3.00		3.00	2.0			▲	▲	▲

Order example: 16 ER/IL 1.50 100PCS or 16 IR/EL 1.50 100PCS

Model Description Of Indexable Threading Insert

16 E R 1.5 ISO



Dimension	
L(mm)	D
8	3/16"
11	1/4"
16	3/8"
22	1/2"
27	5/8"

External Processing Type	
E	External thread
I	Internal thread

Rotation direction of thread	
R	Right hand
L	Left hand

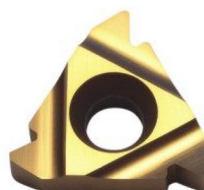
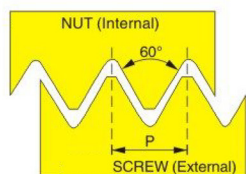
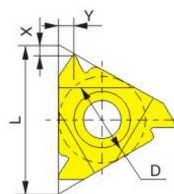
16 E R 1.5 ISO

Pitch		
Full profile		
	mm	TPI
	0.5~6	48~4
Partial profile		
	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
Q	5.5~6.0	4.5~4

Thread standard
60-- 60°General Pitch Thread
55-- 55°General Pitch Thread
ISO-- Metric thread
UN-- Unified Thread
UNJ-- America Aviation threads
W-- Whitworth thread
NPT-- National(American)Pipe Thread
NPTF-- National Pipe Thread Fine
BSPT--British Standard Pipe Taper
ACME-- British 29°trapezoidal thread(ACME)
TR-- 30°ISO MetricThread
ABUT-- American buttress
RD-- Round threads for food,fire,machinery(RD)

AG Partial Profile

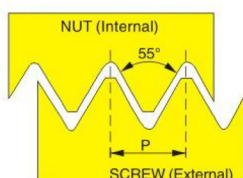
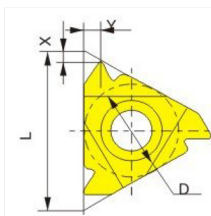
60° Universal Threading Insert



External processing type	D	Range of processed pitch		Designation		Dimension		
		mm	TPI	Right hand	Left hand	L	X	Y
External	1/4"	0.5~1.5	48~16	11ER A60	11EL A60	11	0.8	0.9
	3/8"	0.5~1.5 0.5~3.0 1.75~3.0	48~16 48~8 14~8	16ER A60 16ER AG60 16ER G60	16EL A60 16EL AG60 16EL G60	16	0.8	0.9
							1.2	1.7
							1.2	1.7
	1/2"	3.5~5.0	7~5	22ER N60	22EL N60	22	1.7	2.5
Interna	5/8"	5.5~6.0	4.5~4	27ER Q60	27EL Q60	27	2.1	3.1
	1/4"	0.5~1.5	48~16	11IR A60	11IL A60	11	0.8	0.9
	3/8"	0.5~1.5 0.5~3.0 1.75~3.0	48~16 48~8 14~8	16IR A60 16IR AG60 16IR G60	16IL A60 16IL AG60 16IL G60	16	0.8	0.9
							1.2	1.7
							1.2	1.7
	1/2"	3.5~5.0	7~5	22IR N60	22IL N60	22	1.7	2.5
	5/8"	5.5~6.0	4.5~4	27IR Q60	27IL Q60	27	1.8	2.7

Order example: 16IR AG 60 100PCS

55° Universal Threading Insert

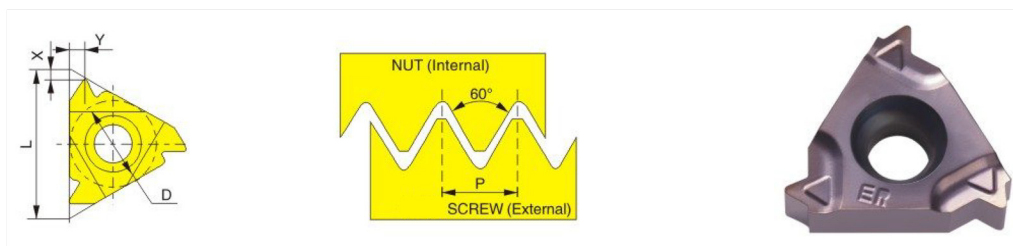


External processing type	D	Range of processed pitch		Designation		Dimension		
		mm	TPI	Right hand	Left hand	L	X	Y
External	1/4"	0.5~1.5	48~16	16ER A55	16EL A55	11	0.8	0.9
	3/8"	0.5~1.5 0.5~3.0 1.75~3.0	48~16 48~8 14~8	16ER AG55 16ER G55 22ER N55	16EL AG55 16EL G55 22EL N55	16	0.8	0.9
							1.2	1.7
							1.2	1.7
	1/2"	3.5~5.0	7~5	27ER Q55	27EL Q55	22	1.7	2.5
Interna	5/8"	5.5~6.0	4.5~4	11IR A55	11IL A55	27	2	2.9
	1/4"	0.5~1.5	48~16	16IR A55	16IL A55	11	0.8	0.9
	3/8"	0.5~1.5 0.5~3.0 1.75~3.0	48~16 48~8 14~8	16IR AG55 16IR G55 22IR N55	16IL AG55 16IL G55 22IL N55	16	0.8	0.9
							1.2	1.7
							1.2	1.7
	1/2"	3.5~5.0	7~5	27IR Q55	27IL Q55	22	1.7	2.5
	5/8"	5.5~6.0	4.5~4	27IR Q60	27IL Q60	27	2	2.9

Order example: 16 ER AG 55 100PCS

AG Partial Profile

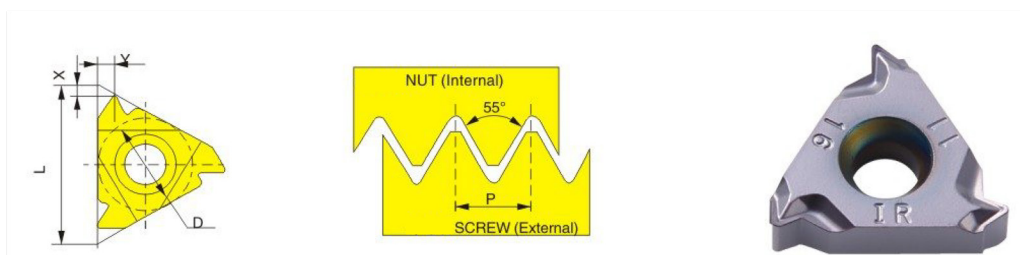
60° Universal Pressed Threading Insert



External processing type	D	Range of processed pitch		Designation		Dimension		
		mm	TPI	Right hand	Left hand	L	X	Y
External	3/8"	0.5~1.5	48~16	16ER A60	16EL A60	16	0.8	0.9
		0.5~3.0	48~8	16ER AG60	16EL AG60		1.2	1.7
		1.75~3.0	14~8	16ER G60	16EL G60		1.2	1.7
Internal	3/8"	0.5~1.5	48~16	16IR A60	16IL A60	16	0.8	0.9
		0.5~3.0	48~8	16IR AG60	16IL AG60		1.2	1.7
		1.75~3.0	14~8	16IR G60	16IL G60		1.2	1.7

Order example: 16IR AG 60 100PCS

55° Universal Pressed Threading Insert

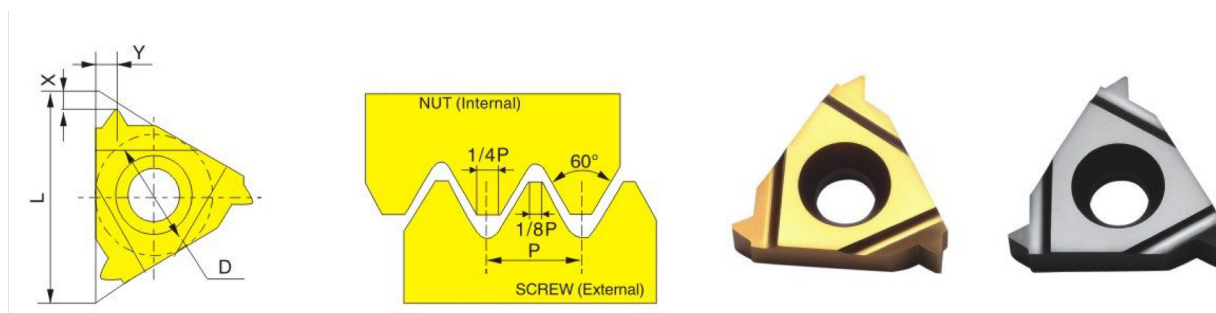


External processing type	D	Range of processed pitch		Designation		Dimension		
		mm	TPI	Right hand	Left hand	L	X	Y
External	3/8"	0.5~1.5	48~16	16ER A55	16EL A55	16	0.8	0.9
		0.5~3.0	48~8	16ER AG55	16EL AG55		1.2	1.7
		1.75~3.0	14~8	16ER G55	16EL G55		1.2	1.7
Internal	3/8"	0.5~1.5	48~16	16IR A55	16IL A55	16	0.8	0.9
		0.5~3.0	48~8	16IR AG55	16IL AG55		1.2	1.7
		1.75~3.0	14~8	16IR G55	16IL G55		1.2	1.7

Order example: 16 ER AG 55 100PCS

AG Partial Profile

ISO Standard Threading Insert

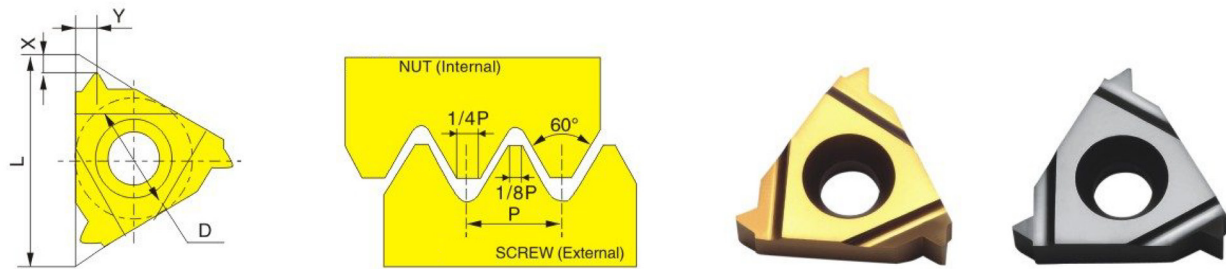


External processing type	D	Pitch	Designation		Dimension		
		mm	Right hand	Left hand	L	X	Y
External	1/4"	0.50	11ER0.50 ISO	11EL0.50 ISO	11	0.6	0.6
		0.75	11ER0.75 ISO	11EL0.75 ISO		0.6	0.6
		1.00	11ER1.00 ISO	11EL1.00 ISO		0.7	0.7
		1.25	11ER1.25 ISO	11EL1.25 ISO		0.8	0.9
		1.50	11ER1.50 ISO	11EL1.50 ISO		0.8	1.0
		1.75	11ER1.75 ISO	11EL1.75 ISO		0.8	1.1
	3/8"	0.50	16ER0.50 ISO	16EL0.50 ISO	16	0.6	0.6
		0.75	16ER0.75 ISO	16EL0.75 ISO		0.6	0.7
		1.00	16ER1.00 ISO	16EL1.00 ISO		0.7	0.8
		1.25	16ER1.25 ISO	16EL1.25 ISO		0.8	0.9
		1.50	16ER1.50 ISO	16EL1.50 ISO		0.8	1.0
		1.75	16ER1.75 ISO	16EL1.75 ISO		0.9	1.2
		2.00	16ER2.00 ISO	16EL2.00 ISO		1.0	1.3
		2.50	16ER2.50 ISO	16EL2.50 ISO		1.1	1.5
		3.00	16ER3.00 ISO	16EL3.00 ISO		1.2	1.6
	1/2"	3.50	22ER3.50 ISO	22EL3.50 ISO	22	1.6	2.3
		4.00	22ER4.00 ISO	22EL4.00 ISO		1.6	2.3
		4.50	22ER4.50 ISO	22EL4.50 ISO		1.7	2.4
		5.00	22ER5.00 ISO	22EL5.00 ISO		1.7	2.5
	5/8"	5.50	27ER5.50 ISO	27EL5.50 ISO	27	1.9	2.7
		6.00	27ER6.00 ISO	27EL6.00 ISO		2.0	2.9

Order example: 16 ER 1.25ISO 100PCS

AG Partial Profile

ISO Standard Threading Insert

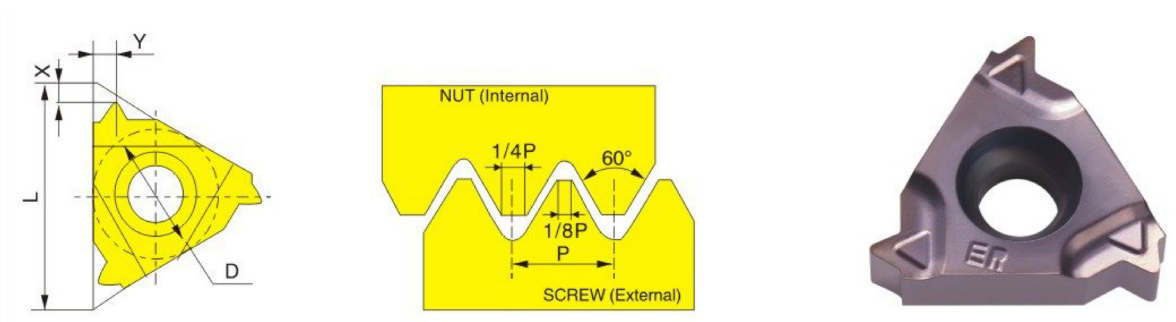


External processing type	D	Pitch	Designation		Dimension		
		mm	Right hand	Left hand	L	X	Y
Internal	1/4"	0.50	11IR0.50 ISO	11IL0.50 ISO	11	0.6	0.6
		0.75	11IR0.75 ISO	11IL0.75 ISO		0.6	0.6
		1.00	11IR1.00 ISO	11IL1.00 ISO		0.6	0.7
		1.25	11IR1.25 ISO	11IL1.25 ISO		0.8	0.9
		1.50	11IR1.50 ISO	11IL1.50 ISO		0.8	1.0
		1.75	11IR1.75 ISO	11IL1.75 ISO		0.9	1.1
		2.00	11IR2.00 ISO	11IL2.00 ISO		1.0	1.3
	3/8"	0.50	16IR0.50 ISO	16IL0.50 ISO	16	0.6	0.6
		0.75	16IR0.75ISO	16IL0.75 ISO		0.6	0.6
		1.00	16IR1.00 ISO	16IL1.00 ISO		0.6	0.7
		1.25	16IR1.25 ISO	16IL1.25 ISO		0.8	0.9
		1.50	16IR1.50 ISO	16IL1.50 ISO		0.8	1.0
		1.75	16IR1.75 ISO	16IL1.75 ISO		0.9	1.2
		2.00	16IR2.00 ISO	16IL2.00 ISO		1.0	1.3
		2.50	16IR2.50 ISO	16IL2.50 ISO		1.1	1.5
		3.00	16IR3.00 ISO	16IL3.00 ISO		1.1	1.5
	1/2"	3.50	22IR3.50 ISO	22IL3.50 ISO	22	1.6	2.3
		4.00	22IR4.00 ISO	22IL4.00 ISO		1.6	2.3
		4.50	22IR4.50 ISO	22IL4.50 ISO		1.6	2.4
		5.00	22IR5.00 ISO	22IL5.00 ISO		1.6	2.5
	5/8"	5.50	27IR5.50 ISO	27IL5.50 ISO	27	1.9	2.7
		6.00	27IR6.00 ISO	27IL6.00 ISO		2.0	2.9

Order example: 16 IR 1.25ISO 100PCS

AG Partial Profile

ISO Standard Pressed Threading Insert

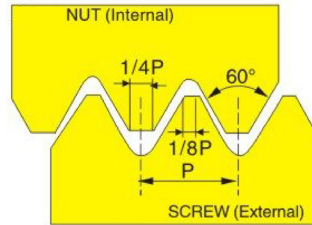
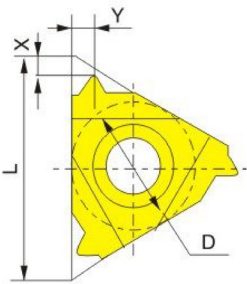


External processing type	D	Pitch	Designation		Dimension		
		mm	Right hand	Left hand	L	X	Y
External	3/8"	0.50	16ER0.50 ISO	16EL0.50 ISO	16	0.6	0.6
		0.75	16ER0.75ISO	16EL0.75ISO		0.6	0.7
		1.00	16ER1.00 ISO	16EL1.00 ISO		0.7	0.8
		1.25	16ER1.25ISO	16EL1.25ISO		0.8	0.9
		1.50	16ER1.50 ISO	16EL1.50 ISO		0.8	1.0
		1.75	16ER1.75 ISO	16EL1.75ISO		0.9	1.2
		2.00	16ER2.00 ISO	16EL2.00 ISO		1.0	1.3
		2.50	16ER2.50 ISO	16EL2.50 ISO		1.1	1.5
		3.00	16ER3.00 ISO	16EL3.00 ISO		1.2	1.6
Internal	3/8"	0.50	16IR0.50 ISO	16IL0.50 ISO	16	0.6	0.6
		0.75	16IR0.75ISO	16IL0.75 ISO		0.6	0.6
		1.00	16IR1.00 ISO	16IL1.00 ISO		0.6	0.7
		1.25	16IR1.25 ISO	16IL1.25 ISO		0.8	0.9
		1.50	16IR1.50 ISO	16IL1.50 ISO		0.8	1.0
		1.75	16IR1.75 ISO	16IL1.75 ISO		0.9	1.2
		2.00	16IR2.00 ISO	16IL2.00 ISO		1.0	1.3
		2.50	16IR2.50 ISO	16IL2.50 ISO		1.1	1.5
		3.00	16IR3.00 ISO	16IL3.00 ISO		1.1	1.5

Order example: 16 ER 1.25ISO 100PCS

AG Partial Profile

60° American UN Threading Insert

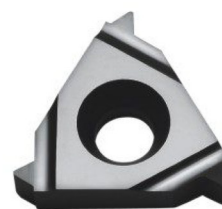
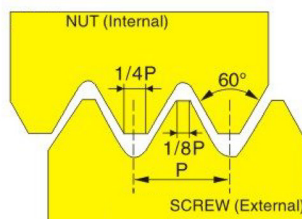
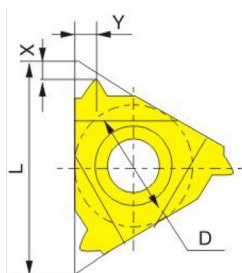


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	32	11ER32 UN	11EL32 UN	11	0.6	0.6
		28	11ER28 UN	11EL28 UN		0.6	0.7
		24	11ER24 UN	11EL24 UN		0.7	0.8
		20	11ER20 UN	11EL20 UN		0.8	0.9
		18	11ER18 UN	11EL18 UN		0.8	1.0
		16	11ER16 UN	11EL16 UN		0.9	1.1
	3/8"	32	16ER32 UN	16EL32 UN	16	0.6	0.6
		28	16ER28 UN	16EL28 UN		0.6	0.7
		24	16ER24 UN	16EL24 UN		0.7	0.8
		20	16ER20 UN	16EL20 UN		0.8	0.9
		18	16ER18 UN	16EL18 UN		0.8	1.0
		16	16ER16 UN	16EL16 UN		0.9	1.1
		14	16ER14 UN	16EL14 UN		1.0	1.2
		13	16ER13 UN	16EL13 UN		1.1	1.3
		12	16ER12 UN	16EL12 UN		1.1	1.4
		11.5	16ER11.5UN	16EL11.5 UN		1.1	1.4
		11	16ER11UN	16EL11 UN		1.1	1.5
		10	16ER10 UN	16EL10 UN		1.1	1.5
		9	16ER9 UN	16EL9 UN		1.2	1.7
		8	16ER8 UN	16EL8 UN		1.2	2.0
	1/2"	7	22ER7 UN	22EL7 UN	22	1.6	2.3
		6	22ER6 UN	22EL6 UN		1.6	2.3
		5	22ER5 UN	22EL5 UN		1.7	2.5
	5/8"	4.5	27ER4.5 UN	27EL4.5 UN	27	1.9	2.7
		4	27ER4 UN	27EL4 UN		2.1	3.0

Order example: 16 IR 1.25ISO 100PCS

AG Partial Profile

60° American UN Threading Insert

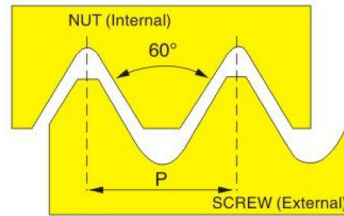
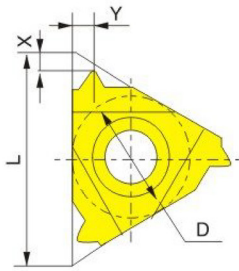


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
Internal	1/4"	32	111R32 UN	111L32 UN	11	0.6	0.6
		28	111R28 UN	111L28 UN		0.6	0.7
		24	111R24 UN	111L24 UN		0.7	0.8
		20	111R20 UN	111L20 UN		0.8	0.9
		18	111R18 UN	111L18 UN		0.8	1.0
		16	111R16 UN	111L16 UN		0.9	1.1
	3/8"	32	161R32 UN	161L32 UN	16	0.6	0.6
		28	161R28 UN	161L28 UN		0.6	0.7
		24	161R24 UN	161L24 UN		0.7	0.8
		20	161R20 UN	161L20 UN		0.8	0.9
		18	161R18 UN	161L18 UN		0.8	1.0
		16	161R16 UN	161L16 UN		0.9	1.1
		14	161R14 UN	161L14 UN		1.0	1.2
		13	161R13 UN	161L13 UN		1.0	1.3
		12	161R12 UN	161L12 UN		1.1	1.4
		11	161R11 UN	161L11 UN		1.1	1.5
		10	161R10 UN	161L10 UN		1.1	1.5
		9	161R9 UN	161L9 UN		1.2	1.7
		8	161R8 UN	161L8 UN		1.2	2.0
	1/2"	7	221R7 UN	221L7 UN	22	1.6	2.3
		6	221R6 UN	221L6 UN		1.6	2.3
		5	221R5 UN	221L5 UN		1.7	2.5
	5/8"	4.5	271R4.5 UN	271L4.5 UN	27	1.9	2.7
		4	271R4 UN	271L4 UN		2.1	3.0

Order example: 161R 20 UN 100PCS

UNJ Aviation Threads

UNJ - America Aviation Threading Insert

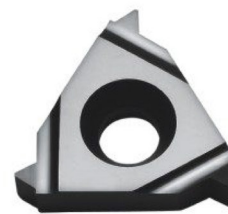
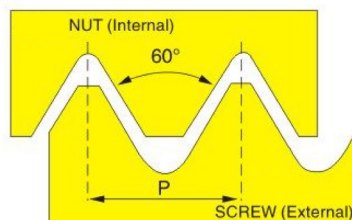
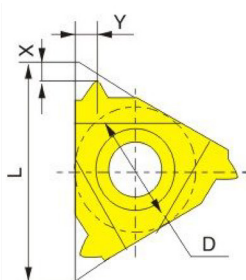


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	28	11ER28 UNJ	11EL28 UNJ	11	0.7	0.7
		24	11ER24 UNJ	11EL24 UNJ		0.7	0.8
		20	11ER20 UNJ	11EL20 UNJ		0.8	0.9
		18	11ER18 UNJ	11EL18 UNJ		0.8	1.0
		16	11ER16 UNJ	11EL16 UNJ		0.9	1.1
		14	11ER14 UNJ	11EL14 UNJ		1.0	1.2
	3/8"	28	16ER28 UNJ	16EL28 UNJ	16	0.7	0.7
		24	16ER24 UNJ	16EL24 UNJ		0.7	0.8
		20	16ER20 UNJ	16EL20 UNJ		0.8	0.9
		18	16ER18 UNJ	16EL18 UNJ		0.8	1.0
		16	16ER16 UNJ	16EL16 UNJ		0.9	1.1
		14	16ER14 UNJ	16EL14 UNJ		1.0	1.2
		13	16ER13 UNJ	16EL13 UNJ		1.0	1.3
		12	16ER12 UNJ	16EL12 UNJ		1.1	1.3
		11	16ER11 UNJ	16EL11 UNJ		1.2	1.5
		10	16ER10 UNJ	16EL10 UNJ		1.2	1.5
		9	16ER9 UNJ	16EL9 UNJ		1.3	1.7
		8	16ER8 UNJ	16EL8 UNJ		1.2	1.6
	1/2"	7	22ER7 UNJ	22EL7 UNJ	22	1.7	2.3
		6	22ER6 UNJ	22EL6 UNJ		1.6	2.3
		5	22ER5 UNJ	22EL5 UNJ		1.8	2.5
	5/8"	4.5	27ER4.5 UNJ	27EL4.5 UNJ	27	2.0	2.7
		4	27ER4 UNJ	27EL4 UNJ		2.2	3.0

Order example: 16ER 20 UNJ 100PCS

UNJ Aviation Threads

UNJ - America Aviation Threading Insert

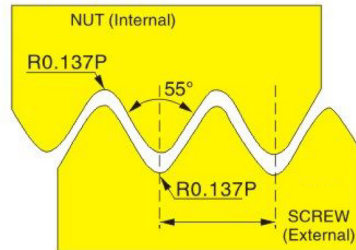
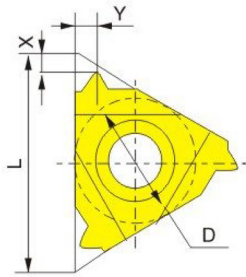


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
Internal	1/4"	28	11IR28 UNJ	11IL28 UNJ	11	0.7	0.7
		24	11IR24 UNJ	11IL24 UNJ		0.7	0.8
		20	11IR20 UNJ	11IL20 UNJ		0.8	0.9
		18	11IR18 UNJ	11IL18 UNJ		0.8	1.0
		16	11IR16 UNJ	11IL16 UNJ		0.9	1.1
		14	11IR14 UNJ	11IL14 UNJ		1.0	1.2
	3/8"	28	16IR28 UNJ	16IL28 UNJ	16	0.7	0.7
		24	16IR24 UNJ	16IL24 UNJ		0.7	0.8
		20	16IR20 UNJ	16IL20 UNJ		0.8	0.9
		18	16IR18 UNJ	16IL18 UNJ		0.8	1.0
		16	16IR16 UNJ	16IL16 UNJ		0.9	1.1
		14	16IR14 UNJ	16IL14 UNJ		1.0	1.2
		13	16IR13 UNJ	16IL13 UNJ		1.0	1.3
		12	16IR12 UNJ	16IL12 UNJ		1.1	1.3
		11	16IR11 UNJ	16IL11 UNJ		1.2	1.5
		10	16IR10 UNJ	16IL10 UNJ		1.2	1.5
		9	16IR9 UNJ	16IL9 UNJ		1.3	1.7
		8	16IR8 UNJ	16IL8 UNJ		1.2	1.6
	1/2"	7	22IR7 UNJ	22IL7 UNJ	22	1.7	2.3
		6	22IR6 UNJ	22IL6 UNJ		1.6	2.3
		5	22IR5 UNJ	22IL5 UNJ		1.8	2.5
	5/8"	4.5	27IR4.5 UNJ	27IL4.5 UNJ	27	2.0	2.7
		4	27IR4 UNJ	27IL4 UNJ		2.2	3.0

Order example: 16IR 20UNJ 100PCS

For Connecting Gas and Water Taps to Pipelines

55° Whitworth Threading Insert

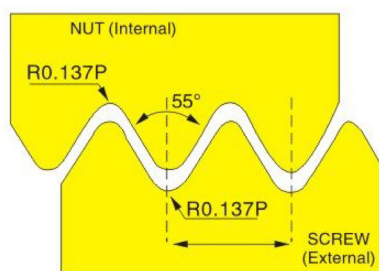
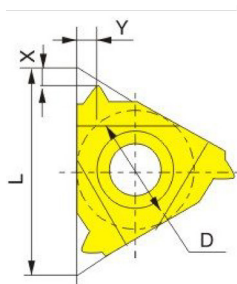


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	28	11ER28 W	11EL28 W	11	0.6	0.7
		26	11ER26 W	11EL26 W		0.7	0.8
		20	11ER20 W	11EL20 W		0.8	0.9
		19	11ER19 W	11EL19 W		0.8	1
		18	11ER18 W	11EL18 W		0.8	1
		16	11ER16 W	11EL16 W		0.9	1.1
		14	11ER14 W	11EL14 W		1.0	1.2
	3/8"	28	16ER28 W	16EL28 W	16	0.6	0.7
		26	16ER26 W	16EL26 W		0.7	0.8
		20	16ER20 W	16EL20 W		0.8	0.9
		19	16ER19 W	16EL19 W		0.8	1
		18	16ER18 W	16EL18 W		0.8	0.9
		16	16ER16 W	16EL16 W		0.9	1.1
		14	16ER14 W	16EL14 W		1.0	1.2
		12	16ER12 W	16EL12 W		1.1	1.4
		11	16ER11 W	16EL11 W		1.1	1.5
		10	16ER10 W	16EL10 W		1.1	1.5
		9	16ER9 W	16EL9 W		1.2	1.5
		8	16ER8 W	16EL8 W		1.2	1.7
	1/2"	7	22ER7 W	22EL7 W	22	1.6	2.3
		6	22ER6 W	22EL6 W		1.6	2.3
		5	22ER5 W	22EL5 W		1.7	2.4
	5/8"	4.5	27ER4.5 W	27EL4.5 W	27	1.8	2.6
		4	27ER4 W	27EL4 W		2.0	2.9

Order example: 16ER 16W 100PCS

For Connecting Gas and Water Taps to Pipelines

55° Whitworth Threading Insert

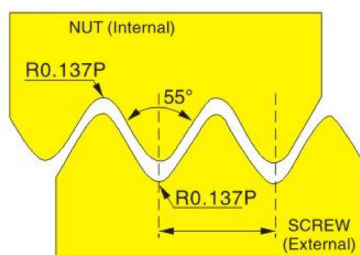
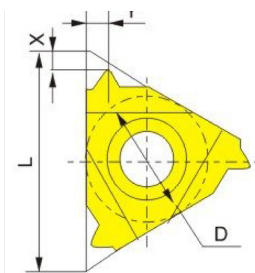


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
Internal	1/4"	28	11IR28W	11IL28 W	11	0.6	0.6
		26	11IR26W	11IL26W		0.6	0.7
		20	11IR20W	11IL20W		0.7	0.9
		19	11IR19W	11IL19W		0.8	1.0
		18	11IR18W	11IL18W		0.8	1.0
		16	11IR16W	11IL16W		0.9	1.1
		14	11IR14W	11IL14W		1.0	1.2
	3/8"	28	16IR28 W	16IL28W	16	0.6	0.7
		26	16IR26W	16IL26W		0.7	0.8
		20	16IR20W	16IL20W		0.8	0.9
		19	16IR19W	16IL19W		0.8	1.0
		18	16IR18W	16IL18W		0.8	1.0
		16	16IR16W	16IL16W		0.9	1.1
		14	16IR14W	16IL14W		1.0	1.2
		12	16IR12W	16IL12W		1.1	1.4
		11	16IR11W	16IL11W		1.1	1.5
		10	16IR10W	16IL10W		1.1	1.5
		9	16IR9W	16IL9W		1.2	1.5
		8	16IR8W	16IL8W		1.2	1.7
	1/2"	7	22IR7W	22IL7W	22	1.6	2.3
		6	22IR6W	22IL6W		1.6	2.3
		5	22IR5W	22IL5W		1.7	2.4
	5/8"	4.5	27IR4.5W	27IL4.5W	27	1.8	2.6
		4	27IR4W	27IL4W		2.0	2.9

Order example: 16IR 16W 100PCS

For Connecting Gas and Water Taps to Pipelines

55° Whitworth Pressed Threading Insert

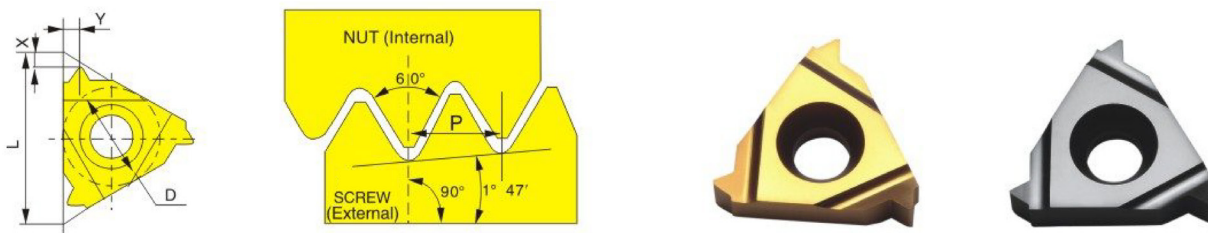


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	3/8"	28	16ER28W	16EL28W	16	0.6	0.7
		26	16ER26W	16EL26W		0.7	0.8
		20	16ER20W	16EL20W		0.8	0.9
		19	16ER19W	16EL19W		0.8	1
		18	16ER18W	16EL18W		0.8	0.9
		16	16ER16W	16EL16W		0.9	1.1
		14	16ER14W	16EL14W		1.0	1.2
		12	16ER12W	16EL12W		1.1	1.4
		11	16ER11W	16EL11W		1.1	1.5
		10	16ER10W	16EL10W		1.1	1.5
		9	16ER9W	16EL9W		1.2	1.5
		8	16ER8W	16EL8W		1.2	1.7
Internal	3/8"	28	16IR28W	16IL28W	16	0.6	0.7
		26	16IR26W	16IL26W		0.7	0.8
		20	16IR20W	16IL20W		0.8	0.9
		19	16IR19W	16IL19W		0.8	1.0
		18	16IR18W	16IL18W		0.8	1.0
		16	16IR16W	16IL16W		0.9	1.1
		14	16IR14W	16IL14W		1.0	1.2
		12	16IR12W	16IL12W		1.1	1.4
		11	16IR11W	16IL11W		1.1	1.5
		10	16IR10W	16IL10W		1.1	1.5
		9	16IR9 W	16IL9W		1.2	1.5
		8	16IR8W	16IL8 W		1.2	1.7

Order example: 16ER 16W 100PCS

For Connecting Gas and Water Taps to Pipelines

60° American Standard Pipe Taper Threading Insert



External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	27	11ER27 NPT	11EL27 NPT	11	0.7	0.8
		18	11ER18NPT	11EL18NPT		0.8	1.0
		14	11ER14 NPT	11EL14 NPT		0.8	1.0
	3/8"	27	16ER27 NPT	16EL27 NPT	16	0.7	0.8
		18	16ER18NPT	16EL18 NPT		0.8	1.0
		14	16ER14NPT	16EL14 NPT		0.9	1.2
		11.5	16ER11.5 NPT	16EL11.5NPT		1.1	1.5
Internal	1/4"	8	16ER8 NPT	16EL8 NPT	11	1.2	1.8
		27	11IR27 NPT	11IL27 NPT		0.7	0.8
		18	11IR18NPT	11IL18 NPT		0.8	1.0
	3/8"	14	11IR14 NPT	11IL14 NPT	16	0.8	1.0
		27	16IR27NPT	16IL27 NPT		0.7	0.8
		18	16IR18NPT	16IL18 NPT		0.8	1.0
		14	16IR14 NPT	16IL14 NPT		0.9	1.2
		11.5	16IR11.5NPT	16IL11.5NPT		1.1	1.5
		8	16IR8 NPT	16IL8 NPT		1.2	1.8

Order example: 16ER 8NPT 100PCS

Threads For Steam, Gas, Water Supply Tubes(NPTF)

60° National Pipe Threading Fine(NPTF)

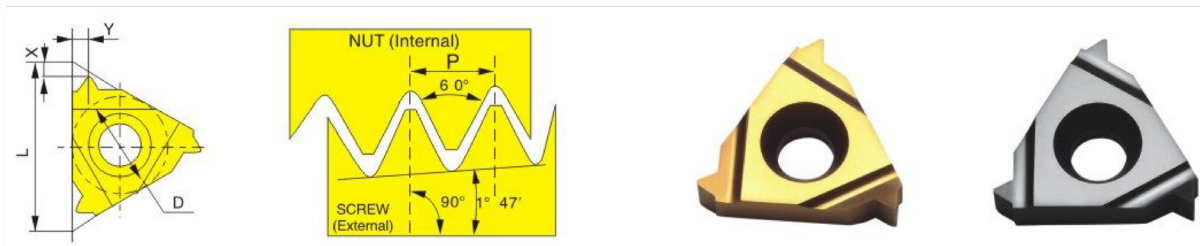


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	27	11ER27 NPTF	11EL27 NPTF	11	0.7	0.8
		18	11ER18 NPTF	11EL18 NPTF		0.8	1.0
		14	11ER14 NPTF	11EL14 NPTF		0.8	1.0
	3/8"	27	16ER27 NPTF	16EL27 NPTF	16	0.7	0.8
		18	16ER18NPTF	16EL18 NPTF		0.8	1.0
		14	16ER14 NPTF	16EL14 NPTF		0.9	1.2
		11.5	16ER11.5 NPTF	16EL11.5 NPTF		1.1	1.5
Internal	1/4"	8	16ER8 NPTF	16EL8 NPTF	11	1.2	1.8
		27	11IR27 NPTF	11IL27 NPTF		0.7	0.8
		18	11IR18 NPTF	11IL18 NPTF		0.8	1.0
	3/8"	14	11IR14 NPTF	11IL14 NPTF	16	0.8	1.0
		27	16IR27 NPTF	16IL27 NPTF		0.7	0.8
		18	16IR18 NPTF	16IL18 NPTF		0.8	1.0
		14	16IR14 NPTF	16IL14 NPTF		0.9	1.2
		11.5	16IR11.5 NPTF	16IL11.5 NPTF		1.1	1.5
		8	16IR8 NPTF	16IL8 NPTF		1.2	1.8

Order example: 16ER 8NPT 100PCS

Threads For Steam, Gas, Water Supply Tubes(NPTF)

55° English Standard Pipe Taper Threading Insert

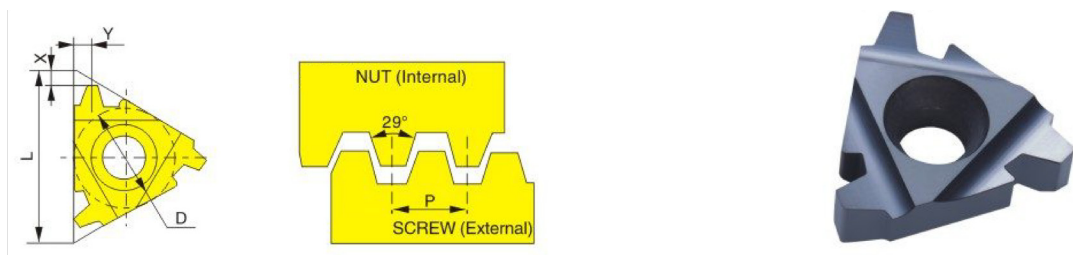


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	28	11ER 28 BSPT	11EL28 BSPT	11	0.6	0.6
		19	11ER 19 BSPT	11EL19BSPT		0.8	0.9
		14	11ER14 BSPT	11EL14 BSPT		0.9	1.0
	3/8"	28	16ER 28 BSPT	16EL28 BSPT	16	0.6	0.6
		19	16ER 19BSPT	16EL19 BSPT		0.8	0.9
		14	16ER 14BSPT	16EL14 BSPT		1.0	1.2
Internal	1/4"	11	16ER 11 BSPT	16EL11 BSPT	11	1.1	1.5
		28	11IR 28 BSPT	11IL28 BSPT		0.6	0.8
		19	11IR19 BSPT	11IL19BSPT		0.8	0.9
	3/8"	14	11IR14 BSPT	11IL14 BSPT	16	0.9	1.0
		28	16IR 28 BSPT	16IL28 BSPT		0.6	0.6
		19	16IR 19 BSPT	16IL19 BSPT		0.8	0.9
		14	16IR 14 BSPT	16IL 14 BSPT		1.0	1.2
		11	16IR 11 BSPT	16IL11 BSPT		1.1	1.5

Order example: 16ER 16 BSPT 100PC

Threads For Mechanical Drive

British 29° Trapezoidal Threading(Acme)

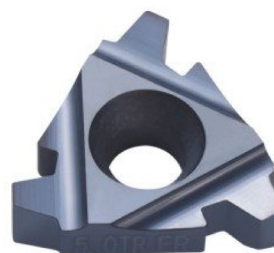
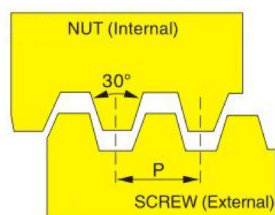
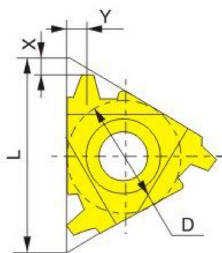


External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	3/8"	16	16ER 16 ACME	16EL16ACME	16	1.0	1.1
		14	16ER 14 ACME	16EL14 ACME		1.0	1.2
		12	16ER 12 ACME	16EL 12 ACME		1.1	1.2
		10	16ER 10 ACME	16EL10 ACME		1.3	1.3
	1/2"	8	16ER8ACME	16EL8ACME	22	1.4	1.5
		6	22ER6ACME	22EL6ACME		1.8	2.1
	5/8"	5	22ER 5ACME	22EL5ACME	27	2.0	2.3
		4	27ER5ACME	27EL5ACME		2.4	2.7
Internal	3/8"	16	16IR 16 ACME	16IL 16ACME	16	1.0	1.1
		14	16IR 14 ACME	16IL14 ACME		1.0	1.2
		12	16IR 12 ACME	16IL12 ACME		1.1	1.2
		10	16IR 10 ACME	16IL 10 ACME		1.3	1.3
	1/2"	8	16IR8ACME	16IL8ACME	22	1.4	1.5
		6	22IR6ACME	22IL6ACME		1.8	2.1
	5/8"	5	22IR5ACME	22IL5ACME	27	2.0	2.3
		4	27IR5ACME	27IL5ACME		2.4	2.7

Order example: 16ER 16ACME 100PCS

For Connecting Gas and Water Taps to Pipelines

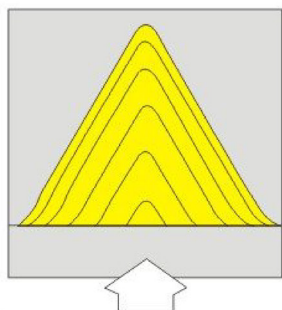
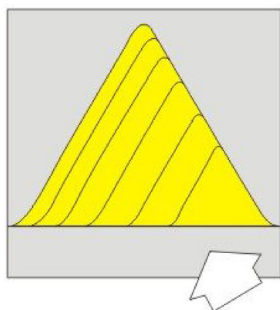
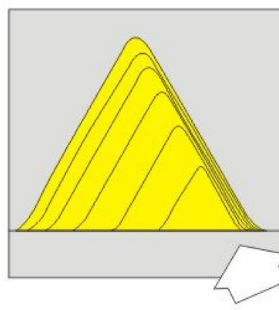
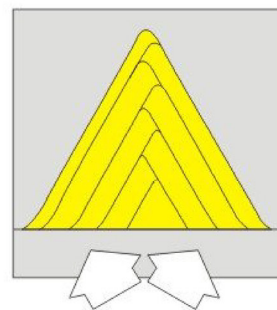
55° Whitworth Threading Insert



External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	3/8"	1.5	16ER1.5 TR	16EL1.5 TR	16	1.0	1.1
		2.0	16ER2 TR	16EL2 TR		1.1	1.3
		3.0	16ER3 TR	16EL3 TR		1.3	1.5
	1/2"	4.0	22ER4 TR	22EL4 TR	22	1.7	1.9
		5.0	22ER5 TR	22EL5 TR		2.1	2.5
	5/8"	6.0	27ER6 TR	27EL6 TR	27	2.2	2.6
		7.0	27ER7 TR	27EL7 TR		2.3	2.7
Internal	3/8"	1.5	161R1.5 TR	161L1.5 TR	16	1.0	1.1
		2.0	161R2 TR	161L2 TR		1.1	1.3
		3.0	161R3 TR	161L3 TR		1.3	1.5
	1/2"	4.0	221R4 TR	221L4 TR	22	1.7	1.9
		5.0	221R5 TR	221L5 TR		2.1	2.5
	5/8"	6.0	271R6 TR	271L6 TR	27	2.2	2.6
		7.0	271R7 TR	271L7 TR		2.3	2.7

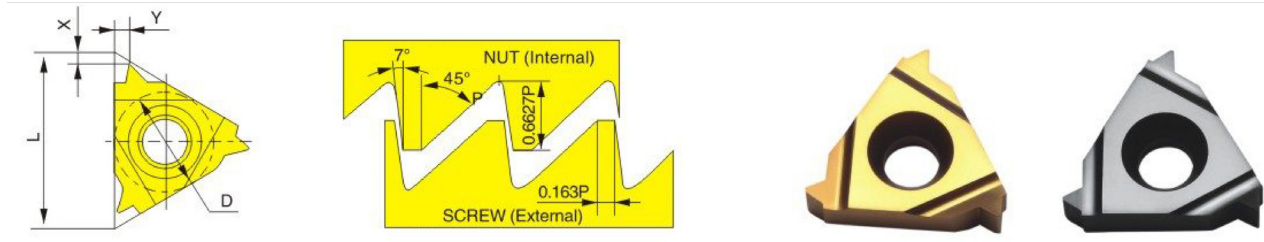
Order example: 16ER 1.5TR 100PCS

Thread cutting feed way

Vertical thread
turning way
(radial feed)Unilateral blade
thread turning
(lateral feed)Unilateral blade thread
turning correction
(lateral feed)Staggered
thread turning
(alternate lateral feed)

ABUT American Buttress Threading Insert

ABUT American Buttress Threading Insert



External processing type	D	Pitch	Designation		Dimension		
		TPI	Right hand	Left hand	L	X	Y
External	1/4"	20	11ER 20 ABUT	11EL20 ABUT	11	1.0	1.4
		16	11ER 16 ABUT	11EL16 ABUT		1.3	1.9
	3/8"	20	16ER 20 ABUT	16EL20 ABUT	16	1.0	1.4
		16	16ER 16 ABUT	16EL16 ABUT		1.3	1.9
		12	16ER 12 ABUT	16EL12 ABUT		1.4	2.0
		10	16ER 10 ABUT	16EL10 ABUT		1.5	2.3
	1/2"	8	22ER8 ABUT	22EL8 ABUT	22	2.0	3.2
		6	22IR6 ABUT	22IL6ABUT		2.2	3.5
Internal	1/4"	20	11IR 20 ABUT	11IL 20 ABUT	11	1.0	1.4
		16	111R 16 ABUT	111L16 ABUT		1.3	1.9
	3/8"	20	16IR 20 ABUT	16IL 20 ABUT	16	1.0	1.4
		16	161R 16 ABUT	16IL16 ABUT		1.3	1.9
		12	16IR 12 ABUT	16IL 12 ABUT		1.4	2.0
		10	16IR 10 ABUT	16IL 10 ABUT		1.5	2.3
	1/2"	8	22IR8 ABUT	22IL8 ABUT	22	2.0	3.2
		6	22IR6 ABUT	22IL6 ABUT		2.2	3.5

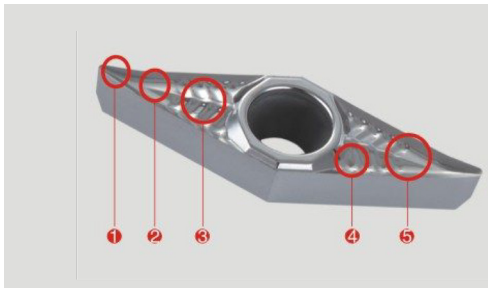
Order example: 16ER 12ABUT 100PCS

Aluminum Insert

Aluminum Machining Technical Information

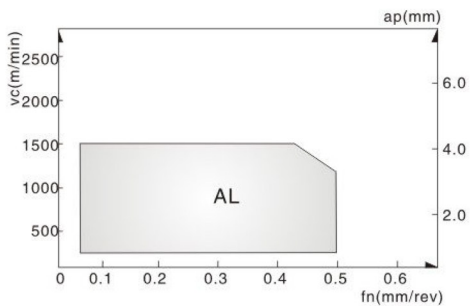
• AL special chip breaker groove for aluminum machining

- ▶▶ Unique 3D rake angle design. Smooth chip control and flow. Cutting resistance is effectively reduced. And the service life of the tool is longer.
- ▶▶ The large rake angle of the cutting edge reduces the cutting resistance, so that the service life of the tool is prolonged.
- ▶▶ The top surface of the insert is subject to polishing, so that the chip flow can be in better control and the build-up edge is reduced.

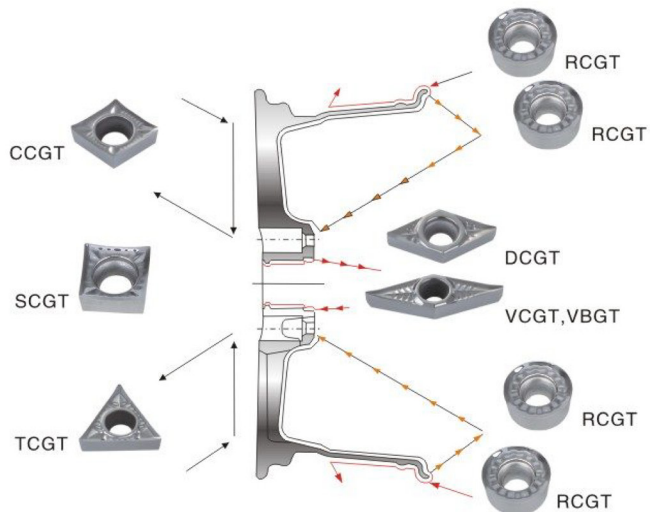


- ❶ Large rake angle corrugated chip-hold groove-low cutting resistance
- ❷ Unique rake angle design-efficient chip breaking and smooth chip flow
- ❸ Unique upper surface and 3D design-longer tool service life and better surface roughness
- ❹ Corrugated & sharp cutting edge-dispersed cutting resistance and long tool service life
- ❺ Polished upper surface-outstanding cutting performance with reduced build-up edge and smooth cutting

• AL Specially developed AL for aluminum alloy machining



Recommended range		Material
AL	ap=0.1~5.0mm fn=0.03~0.5mm/rev	K10(Carbide K10~K20) ND1000(PVD coating) PD1000(DLC coating)



• Characteristics of K01

- ▶▶ Suitable for aluminum alloy and alloy steel machining.
- ▶▶ Polished upper, reduce build-up edge
- ▶▶ In high feed and high speed machining, the 3D design can reduce cutting resistance and show good cutting performance

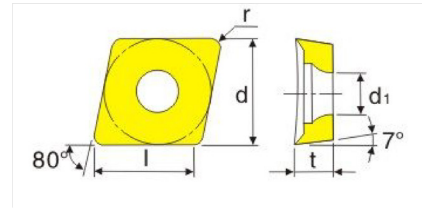
Machined workpiece		Hardness(HB)	Kc(MPa)	vc(m/min)	fn(mm/rev)
Aluminum(forge)	Pre-heat treatment	50~70	500~600	1000~2500	0.1~0.6
	Pre-heat treatment	90~110	700~900	300~1000	0.1~0.5
Aluminum(casting)	Pre-heat treatment	70~80	700~800	300~1000	0.1~0.6
	Pre-heat treatment	80~100	800~950	200~600	0.1~0.4
Copper alloy	-	90~110	700	250~600	0.1~0.5
Other nonferrous metals	-	100	1700	150~300	0.1~0.6

Aluminum Insert(Positive)

CC□□

Rhombus
Clearance angle: 7°

80° Positive



Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
CCGT-AL 	060202-AL	●	6.2	6.35	2.38	0.2	2.8	0.01~0.12	0.05~3.00
	060204-AL	●	6.0	6.35	2.38	0.4	2.8	0.02~0.15	0.10~3.00
	060208-AL	●	5.6	6.35	2.38	0.8	2.8	0.02~0.20	0.10~4.00
	09T302-AL	●	9.4	9.525	3.97	0.2	4.4	0.02~0.20	0.05~3.00
	09T304-AL	●	9.2	9.525	3.97	0.4	4.4	0.02~0.30	0.10~5.00
	09T308-AL	●	8.8	9.525	3.97	0.8	4.4	0.03~0.50	0.10~5.00
	120402-AL	●	12.6	12.7	4.76	0.2	5.5	0.02~0.30	0.05~4.00
	120404-AL	●	12.4	12.7	4.76	0.4	5.5	0.03~0.50	0.10~5.00
	120408-AL	●	12.0	12.7	4.76	0.8	5.5	0.04~0.80	0.10~5.50

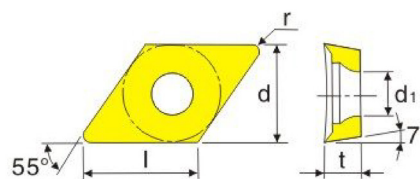
● Stock items

Aluminum Insert(Positive)

DC□□

Rhombus
Clearance angle: 7°

55° Positive



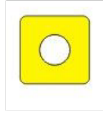
Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
	070202-AL	●	7.5	6.35	2.38	0.2	2.8	0.01~0.20	0.05~3.00
	070204-AL	●	7.3	6.35	2.38	0.4	2.8	0.02~0.30	0.10~4.00
	070208-AL	●	6.8	6.35	2.38	0.8	2.8	0.03~0.40	0.10~4.00
	11T302-AL	●	11.4	9.525	3.97	0.2	4.4	0.02~0.30	0.05~4.00
	11T304-AL	●	11.2	9.525	3.97	0.4	4.4	0.03~0.50	0.10~5.00
	11T308-AL	●	10.8	9.525	3.97	0.8	4.4	0.03~0.50	0.10~5.00
	11T312-AL	●	10.4	9.525	3.97	1.2	4.4	0.04~0.60	0.15~5.00

● Stock items

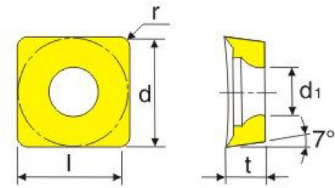
Aluminum Insert(Positive)

SC □ □



Square
Clearance angle: 7°

90° Positive



Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
SCGT-AL 	09T302-AL		9.3	9.525	3.97	0.2	4.4	0.02~0.30	0.10~4.00
	09T304-AL	●	9.1	9.525	3.97	0.4	4.4	0.04~0.40	0.10~5.00
	09T308-AL	●	8.7	9.525	3.97	0.8	4.4	0.03~0.40	0.10~5.00
	120404-AL	●	12.3	12.7	4.76	0.4	5.5	0.03~0.50	0.10~5.00
	120408-AL	●	11.9	12.7	4.76	0.8	5.5	0.04~0.60	0.15~5.50
	120416-AL		11.1	12.7	4.76	1.6	5.5		

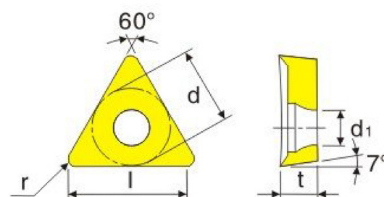
● Stock items

Aluminum Insert(Positive)

TC □ □

Triangle
Clearance angle: 7°

60° Positive



Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
TCGT-AL 	090202-AL	●	9.1	5.56	2.38	0.2	2.5	0.01~0.12	0.05~3.00
	090204-AL	●	8.6	5.56	2.38	0.4	2.5	0.02~0.15	0.10~4.00
	110202-AL	●	10.5	6.35	2.38	0.2	2.8	0.02~0.20	0.05~4.00
	110204-AL	●	10.0	6.35	2.38	0.4	2.8	0.03~0.30	0.10~4.00
	110208-AL	●	9.0	6.35	2.38	0.8	2.8	0.03~0.40	0.10~5.00
	16T302-AL	●	15.0	9.525	3.97	0.2	4.4	0.02~0.30	0.05~5.00
	16T304-AL	●	15.5	9.525	3.97	0.4	4.4	0.03~0.40	0.10~5.50
	16T308-AL	●	14.5	9.525	3.97	0.8	4.4	0.03~0.50	0.10~5.50
	16T312-AL	●	13.5	9.525	3.97	1.2	4.4	0.04~0.60	0.15~5.50
	16T316-AL	●	12.5	9.525	3.97	1.6	4.4	0.05~0.80	0.15~5.50
	16T325-AL		10.0	9.525	3.97	2.5	4.4	0.06~0.90	0.20~7.00

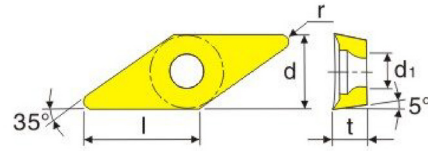
● Stock items

Aluminum Insert(Positive)

VB □□

Rhombus
Clearance angle: 5°

35° Positive



Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
VBGT-AL 	110302-AL	●	10.5	6.35	3.18	0.2	2.8	0.02~0.15	0.05~3.00
	110304-AL	●	10.0	6.35	3.18	0.4	2.8	0.02~0.15	0.10~4.00
	110308-AL		9.0	6.35	3.18	0.8	2.8	0.03~0.18	0.10~5.00
	160402-AL		16.1	9.525	4.75	0.2	4.4	0.03~0.30	0.05~4.00
	160404-AL	●	15.6	9.525	4.76	0.4	4.4	0.03~0.40	0.10~5.00
	160408-AL	●	14.6	9.525	4.76	0.8	4.4	0.03~0.50	0.10~5.00
	160412-AL		13.6	9.525	4.76	1.2	4.4	0.05~0.60	0.10~5.50

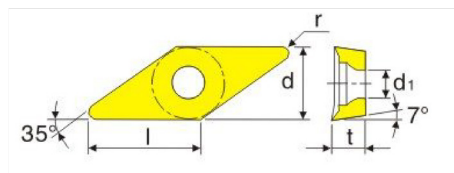
● Stock items

Aluminum Insert(Positive)

VC □ □

Rhombus
Clearance angle: 7°

35° Positive



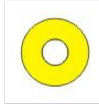
Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
	110301-AL		10.2	6.35	3.18	0.1	2.8	0.02~0.15	0.05~3.00
	110302-AL	●	10.5	6.35	3.18	0.2	2.8	0.02~0.20	0.05~3.00
	110304-AL	●	10.0	6.35	3.18	0.4	2.8	0.02~0.25	0.10~4.00
	110308-AL	●	9.0	6.35	3.18	0.8	2.8	0.03~0.30	0.10~5.00
	130302-AL	●	10.5	7.94	3.18	0.2	3.4	0.02~0.35	0.10~5.00
	130304-AL	●	10.0	7.94	3.18	0.4	3.4	0.03~0.35	0.10~5.00
	130308-AL		9.0	7.94	3.18	0.8	3.4	0.04~0.40	0.10~5.00
	160402-AL	●	16.1	9.525	4.76	0.2	4.4	0.02~0.30	0.05~5.00
	160404-AL	●	15.6	9.525	4.76	0.4	4.4	0.03~0.40	0.10~5.00
	160408-AL	●	14.0	9.525	4.76	0.8	4.4	0.03~0.50	0.10~5.00
	160412-AL	●	13.6	9.525	4.76	1.2	4.4	0.03~0.50	0.10~5.00
	220516-AL		18.0	12.7	5.56	1.6	5.6	0.03~0.60	0.10~7.00
	220525-AL		15.6	12.7	5.56	2.5	5.6	0.05~0.70	0.10~7.00
	220530-AL	●	14.3	12.7	5.56	3.0	5.6	0.08~1.00	0.10~7.00

● Stock items

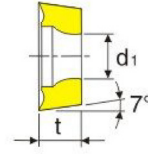
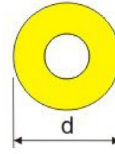
Aluminum Insert(Positive)

RC□□



Circle
Clearance angle: 7°

Positive



Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	
				⬮ ⬮ ⬮ ⬮ ⬮			● Continuous machining ⬮ General machining ⬮ Intermittent machining

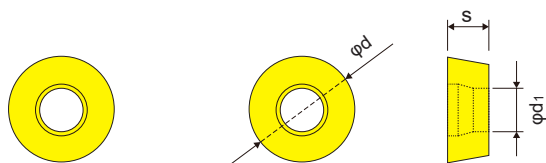
Insert	Model	Uncoated	Specification and dimension (mm)					Cutting conditions	
		K01	l	d	t	r	d1	fn (mm/rev)	ap (mm)
RCGT-AL 	0602MO-AL	●	-	6.0	2.38	-	2.8	0.05~0.20	0.50~2.00
	0803M0-AL	●	-	8.0	3.18	-	3.35	0.05~0.25	0.50~2.50
	1003M0-AL	●	-	10.0	3.18	-	4.0	0.10~0.30	1.00~3.00
	10T3MO-AL		-	10.0	3.97	-	4.4	0.10~0.30	1.00~3.00
	1204M0-AL	●	-	12.0	4.76	-	4.4	0.10~0.35	1.00~3.50

● Stock items

Milling Insert(Positive)

R□□□

Round Positive



R□MT 12 04 □□

Insert diameter

Thickness

Chip breaker
groove code

R□T□□	08T2□□	1003□□	10T3□□	1204□□	1605□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	- Continuous machining - General machining - Intermittent machining

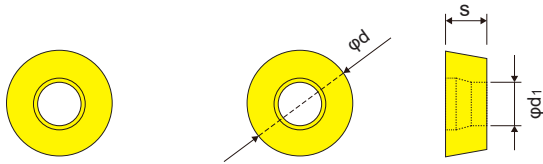
Insert appearance	Model	Dimension			Specification and dimension (mm)						Shape
		D1	S1	d	MH518	MH5008	MH5018	MH5028	MHA	Uncoated	
	RCMT06T2MO	6	2.45	2.8			▲				
	RPMT08T2MOE-JS	8	2.78	2.94			▲				
	RPMT10T3MOE-JS	10	3.97	4.4			▲				
	RPMT1204MOE-JS	12	4.76	4.4			▲				
	RPMT1606MOE-JS	16	6.35	5.5			▲				
	RPMT08T2MO-TT	8	2.78	2.94			▲				
	RPMW1003MO-TT	10	3.18	4.4			▲				
	RPMW1204MO-TT	12	4.76	4.4			▲				
	RPMT1003MO-TT	10	3.18	4.4	▲						
	RPMT10T3MO-TT	10	3.97	4.4			▲				
	RPMT1204MO-TT	12	4.76	4.4			▲				
	RPMT1606MO-TT	16	6.35	5.5			▲				
	RPMT1204MO-TT	12	4.76	4.4	▲						
	RDMT1204MO-MQ	12	4.76	4.4			▲				

Product stock ▲ Main grade reserve stock ○ Make-to-order

Milling Insert(Positive)

R□□□

Round Positive



R□MT 12 04 □□

Insert diameter

Thickness

Chip breaker
groove code

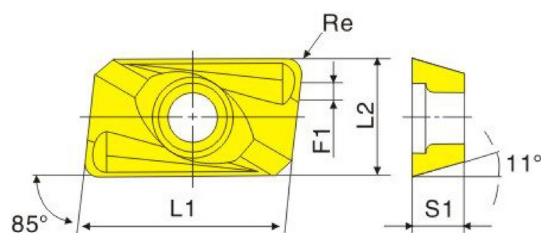
R□T□□	08T2□□	1003□□	10T3□□	1204□□	1605□□
φd1(mm)	3.81	5.16	6.35	7.93	9.12

Machined Workpiece	P	M	K	N	S	H	Machining type
	Steel	Stainless Steel	Cast Iron	Nonferrous metal	Heat-resistant alloy, titanium alloy	Quenched steel	- Continuous machining - General machining - Intermittent machining
				⬢ ⬢ ⬢ ⬢ ⬢			

Insert appearance	Model	Dimension			Specification and dimension (mm)						Shape
		D1	S1	d	MH518	MH5008	MH5018	MH5028	MHA	Uncoated	
	RDMT1204MO-MQ	12	4.76	4.4				▲			
	RDMT1204MO-MQ	12	4.76	4.4	▲						
	RDMT08T2MOE-BM	8	2.78	2.94			▲				
	RDMT10T3MOE-BM	10	3.97	4.4			▲				
	RDMT1204MOE-BM	12	4.76	4.4			▲				
	RDHX1003MOT	10	3.18	3.8			▲				
	RDHX12T3MOT	12	3.97	3.8			▲				

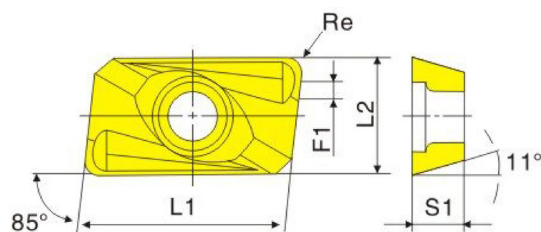
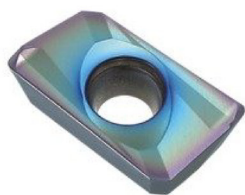
Product stock ▲ Main grade reserve stock ○ Make-to-order

Milling Insert

APMT ☐☐☐ - H ☐

Product stock ▲ Main grade reserve stock ○ Make-to-order

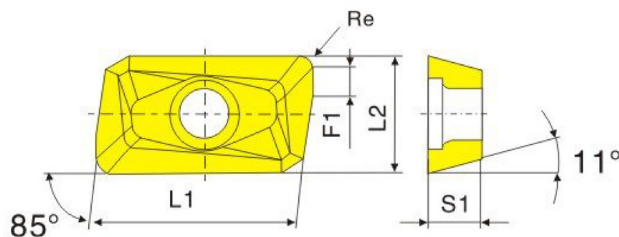
Corresponding milling cutter	Model	Dimension					Grade					
		L1	L2	S1	F1	Re	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP300	APMT1135PDER-H1	11	6.35	3.5	1.5	0.4			○		○	
	APMT1135PDER-H2	11	6.35	3.5	1.5	0.8			▲		▲	
	APMT1135PDER-H3	11	6.35	3.5	1.5	1.2			○		○	
BAP400	APMT1604PDER-H1	17.5	9.525	4.76	1.7	0.4			○		○	
	APMT1604PDER-H2	17.5	9.525	4.76	1.7	0.8			▲		▲	
	APMT1604PDER-H4	17.5	9.525	4.76	1.7	1.6			○		○	

APMT ☐☐☐☐ PDER - H2

Product stock ▲ Main grade reserve stock ○ Make-to-order

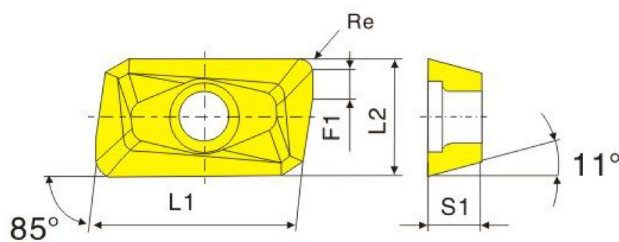
Corresponding milling cutter	Model	Dimension						Grade					
		d	I.C	L	W	S	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP300	APMT1135PDER-H2	2.8	6.2	11	6.35	3.5	0.8	▲					
BAP400	APMT1604PDER-H2	4.4	9.25	17.5	9.525	4.76	0.8	▲					

Milling Insert

APMT ☐☐☐ - M ☐

Product stock ▲ Main grade reserve stock ○ Make-to-order

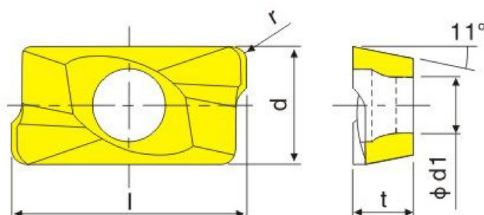
Corresponding milling cutter	Model	Dimension					Grade					
		L1	L2	S1	F1	Re	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP300	APMT1135PDER-MO	11	6.35	3.5	1.5	0.2			○		○	
	APMT1135PDER-M1	11	6.35	3.5	1.5	0.4			○		○	
	APMT1135PDER-M2	11	6.35	3.5	1.5	0.8			▲		▲	
BAP400	APMT1604PDER-M2	16.5	9.525	4.76	1.7	0.8			▲			
BAP300	APGT1135PDER-G2	11	6.35	3.5	1.5	0.8						▲
BAP400	APGT1604PDER-G2	17.5	9.525	4.76	1.7	0.8						▲

APMT ☐☐☐☐ PDER - M2

Product stock ▲ Main grade reserve stock ○ Make-to-order

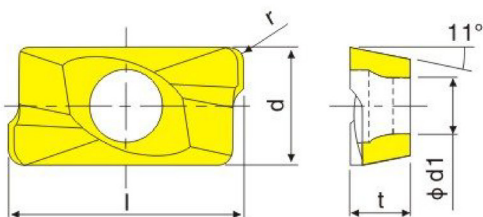
Corresponding milling cutter	Model	Dimension						Grade					
		d	I.C	L	W	S	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP400	APMT1604PDER-M2	4.4	9.25	16.5	9.525	4.76	0.8	▲					

Milling Insert

APMT - XM

Product stock ▲ Main grade reserve stock ○ Make-to-order

Corresponding milling cutter	Model	Dimension					Grade					
		L1	L2	S1	F1	Re	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP300	APMT1135PDER-XM	11.3	6.35	3.5	1.5	0.4			▲		▲	
BAP400	APMT1604PDER-XM	16.15	9.525	4.76	1.7	0.8			▲		▲	

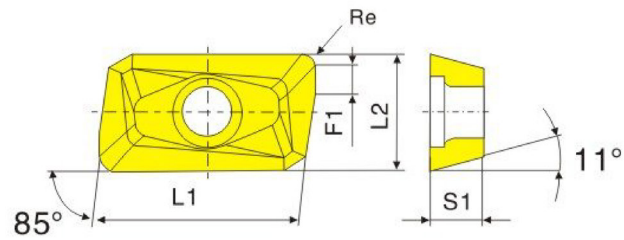
APMT1 PEER - XM

Product stock ▲ Main grade reserve stock ○ Make-to-order

Corresponding milling cutter	Model	Dimension						Grade					
		d	I.C	L	W	S	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP400	APMT1604PEER-XM	4.4	9.27	16.5	9.525	5.25	0.8	▲					
	APMT1605PEER-XM	4.4	9.33	16.5	9.525	5.25	0.8	▲					

Milling Insert

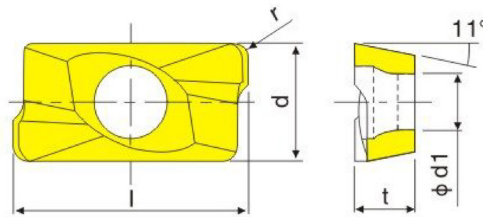
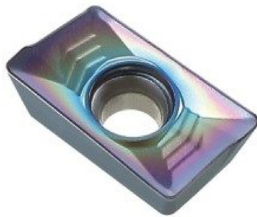
APMT1□□□□OPDER - GW



Product stock ▲ Main grade reserve stock ○ Make-to-order

Corresponding milling cutter	Model	Dimension					Grade					
		L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BAP400	APKT160420PDER-GW	9	9.25	4.76	4.3	2			▲			

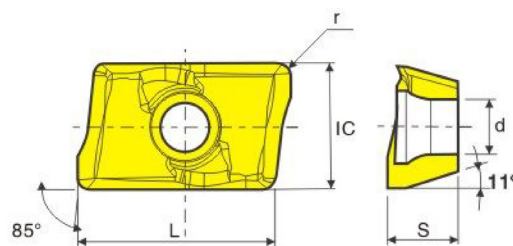
APKT □□□□ - HM



Product stock ▲ Main grade reserve stock ○ Make-to-order

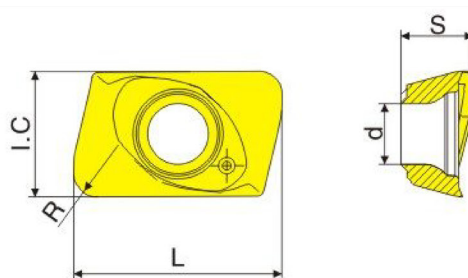
Model	Dimension						Grade					
	d	I.C	L	W	S	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
APKT160408-HM	4.4	9.55	17.5	9.525	5.77	0.8	▲					

Milling Insert

AP ☐ ☐ 1003PD ☐ ☐

Product stock ▲ Main grade reserve stock ○ Make-to-order

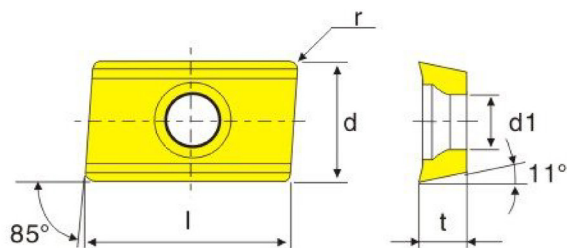
Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
APKT1003PDTR	11	6.67	3.55	2.8	0.5			▲			

JDMT ☐ ☐ ☐

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
JDMT070204R	6.84	4.25	2.45	2.05	0.4			▲			

Milling Insert

APKT ☐☐☐ - AL

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L1	L2	S1	F1	Re	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
APKT160402PDER-AL	16.88	9.8	4.76	4.4	0.2						▲
APKT160404PDER-AL	16.88	9.8	4.76	4.4	0.4						▲
APKT160408PDER-AL	6.88	9.8	4.76	4.4	0.8						▲

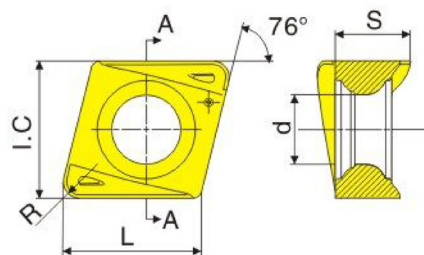
LNMU ☐☐☐☐ ZER - MJ

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
LNMU0303ZER-MJ	3.5	6	3.9	2.9	1.2	▲		▲			

Milling Insert

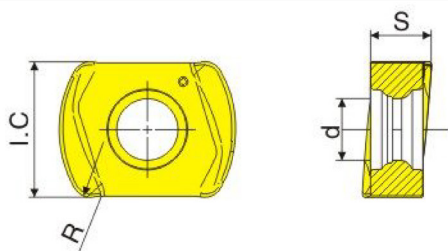
4NKT □□□□ - ML



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
4NKT060308R-ML	6.5	6.6	4.6	3.3	0.8				▲		

BLMP □□□□ - M

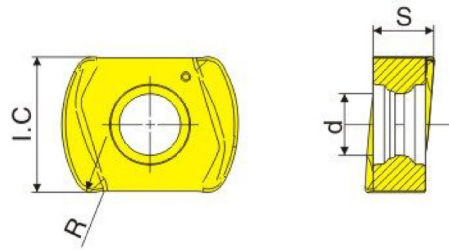


Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BLMP0603R-M	6.5	6.4	3.42	3.2	1.0				▲		
BLMP0904R-M	9.5	9.2	4.11	4.15	1.2				▲		

Milling Insert

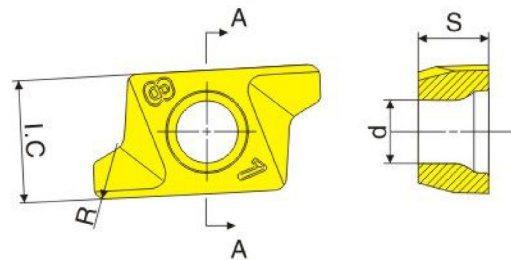
BLMP □□□ - M



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
BLMP0603R-M	6.5	6.4	3.42	3.2	1.0			▲			

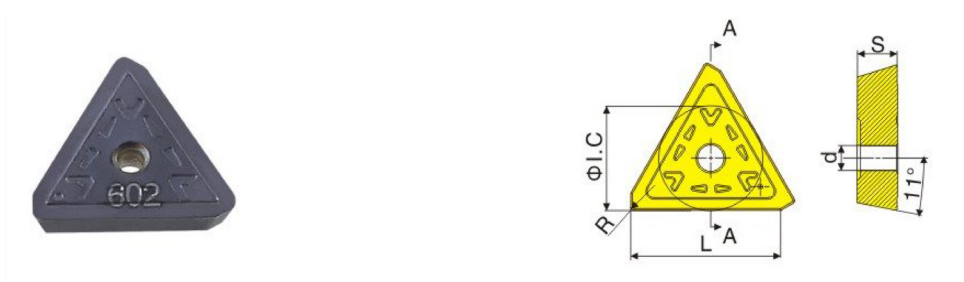
RT □□□□ - 81



Product stock ▲ Main grade reserve stock ○ Make-to-order

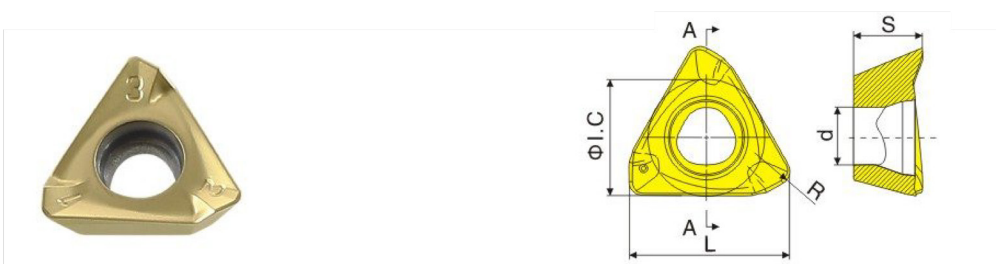
Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
RT070204R-81	7.5	4.3	2.38	2.2	0.4			▲			

Milling Insert

TPKN ☐☐☐☐ PDTR

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
TPKN2204PDTR	12.5	4.76	4.76	2.0	1			▲			

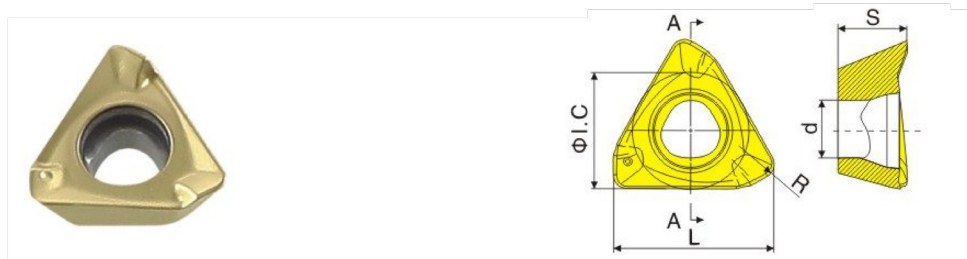
3PKT ☐☐☐ - M

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade													
						P					M				K		Uncoated		
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018	MH2028
3PKT150508R-M	15.5	10.7	4.96	5	0.8									▲					

Milling Insert

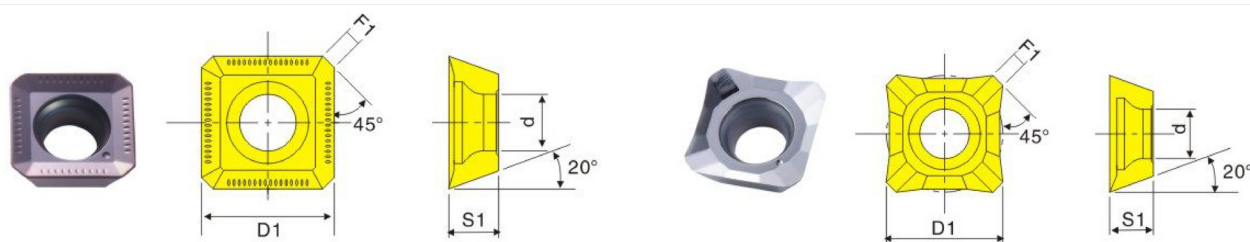
3PKT □□□ - M



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade													
						P					M				K	Uncoated			
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
3PKT100408R-M	10.5	6.9	4.0	3.5	0.8									▲					

SE □□ 1204 □□ - □□

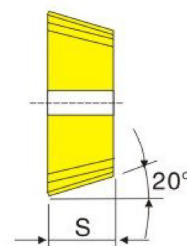
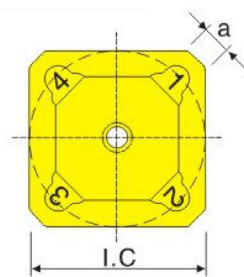


Product stock ▲ Main grade reserve stock ○ Make-to-order

Corresponding milling cutter	Model	Dimension				Grade					Uncoated
		D1	d	S1	F1	MH518	MH5008	MH5018	MH5028	MHA	
KM12	SEKT1204AFTN-XM	12.7	5.4	4.76	1.6			▲		▲	
	SEHT1204AFFN-AL	12.7	5.4	4.76	1.6						▲

Milling Insert

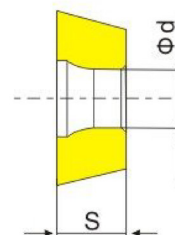
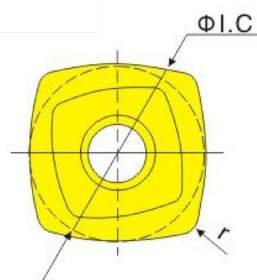
SE □□ 1203 □□ - □□



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
SEET1203AFEN	12.55	12.55	3.18	/	0.8			▲			

SDMT □□□□ - 12 - PH

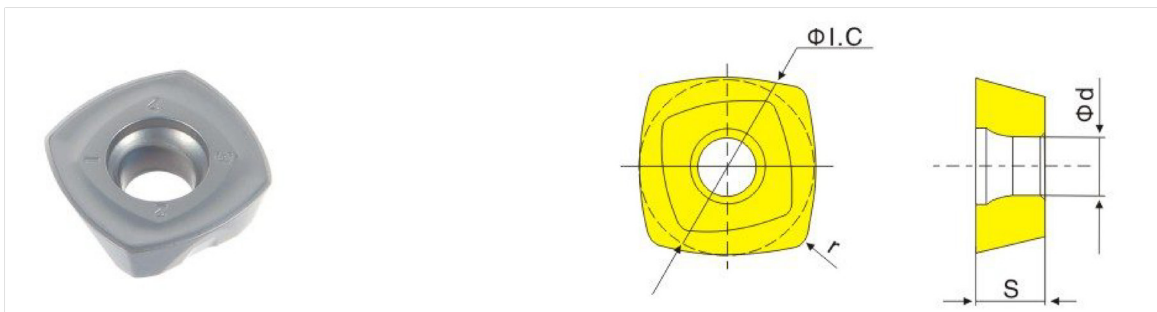


Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
SDMT150512-PH	15.95	15.93	5.65	5.56	1.2	▲					

Milling Insert

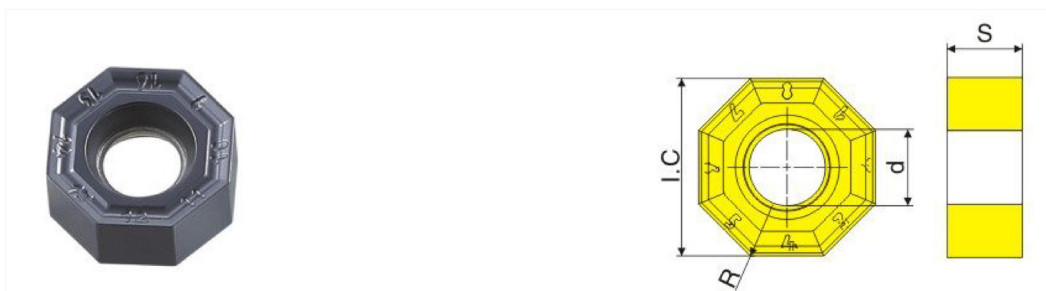
SDMT □□□□ - 12 - PH



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade					
	L	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
SDMT120512-PH	12.7	12.7	5.65	4.3	1.2			▲			
SDMT150512-PH	15.95	15.95	5.65	5.5	1.2			▲			

ONMU □□□□

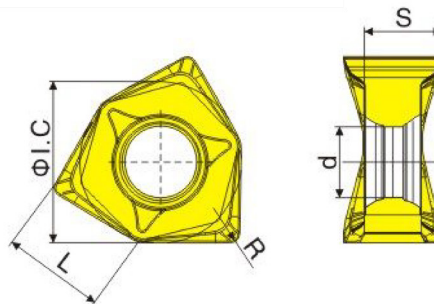


Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension				Grade					
	I.C	S	d	r	MH518	MH5008	MH5018	MH5028	MHA	Uncoated
ONMU050504	13	5.15	5.55	0.4			▲			

Milling Insert

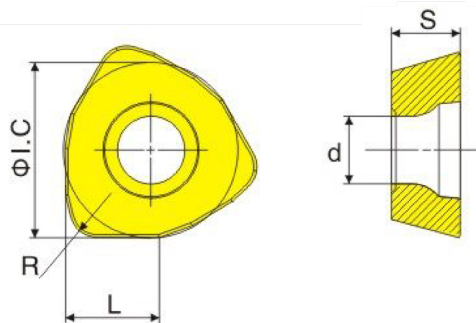
WNMU □□□ EN - GM



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade											Uncoated		
						P					M				K				
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018	MH2028
WNMU080608EN-GM	8.55	14	8.3	6.16	0.8								▲						

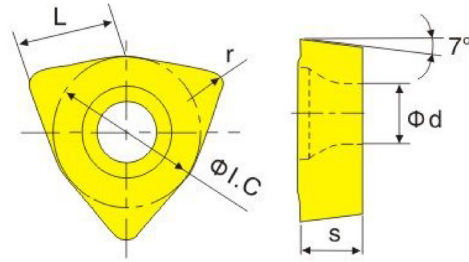
JDMW □□□



Product stock ▲ Main grade reserve stock ○ Make-to-order

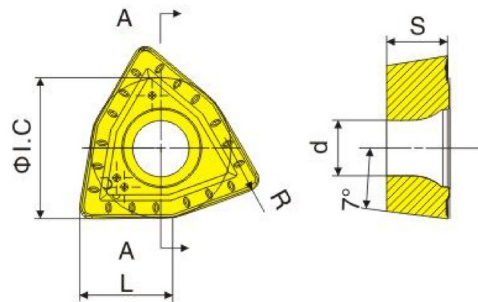
Model	Dimension					Grade													
						P						M				K		Uncoated	
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018		MH2028
JDMW120420	6.5	12.3	4.76	4.73	2.0								▲						

U-drill Insert

WCMX ☐☐☐ - SF

Product stock ▲ Main grade reserve stock ○ Make-to-order

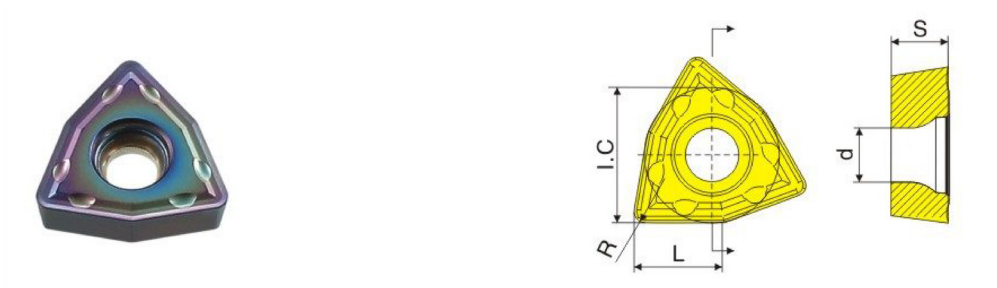
Model	Dimension					Grade											Uncoated	
						P					M				K			
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018
WCMX030208-SF	3.8	5.56	2.38	2.8	0.8									▲				
WCMX040208-SF	4.3	6.35	2.38	3.1	0.8									▲				
WCMX050308-SF	5.4	7.94	3.18	3.2	0.8									▲				
WCMX06T308-SF	6.5	9.525	3.97	3.7	0.8									▲				
WCMX080412-SF	8.7	12.7	4.76	4.3	1.2									▲				

WCMX ☐☐☐ - MF

Product stock ▲ Main grade reserve stock ○ Make-to-order

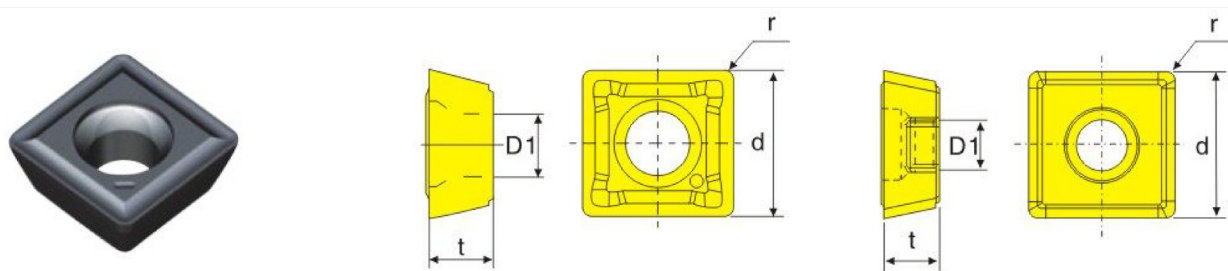
Model	Dimension					Grade												Uncoated
						P					M				K			
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	
WCMX030208-MF	3.8	5.56	2.38	2.8	0.8									▲	▲			
WCMX040208-MF	4.3	6.35	2.38	3.1	0.8									▲	▲			
WCMX050308-MF	5.4	7.94	3.18	3.2	0.8									▲	▲			
WCMX06T308-MF	6.5	9.525	3.97	3.7	0.8									▲	▲			
WCMX080412-MF	8.7	12.7	4.76	4.3	1.2									▲	▲			

U-drill Insert

WCMX - SF

Product stock ▲ Main grade reserve stock ○ Make-to-order

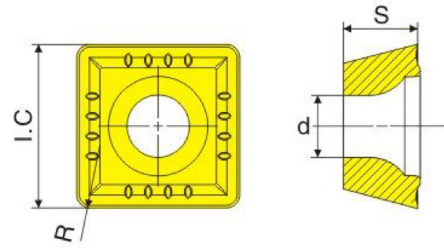
Model	Dimension					Grade											Uncoated	
						P				M				K				
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018
WCMT030208-SF	3.8	5.56	2.38	2.8	0.8											▲		
WCMT040208-SF	4.3	6.35	2.38	3.1	0.8											▲		
WCMT050308-SF	5.4	7.94	3.18	3.2	0.8											▲		
WCMT06T308-SF	6.5	9.525	3.97	3.7	0.8											▲		
WCMT080412-SF	8.7	12.7	4.76	4.3	1.2											▲		

SPMG - TG

Product stock ▲ Main grade reserve stock ○ Make-to-order

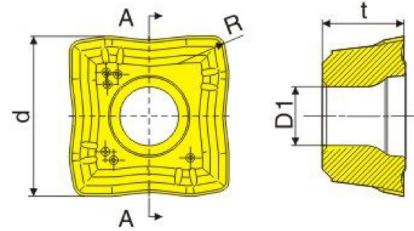
Model	Dimension				Grade												Uncoated
					P						M				K		
	d	t	r	D1	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	
SPMG050204-TG	5	2.38	0.4	2.25								▲					
SPMG060204-TG	6	2.38	0.4	2.61								▲					
SPMG07T308-TG	7.94	3.97	0.8	2.85								▲					
SPMG090408-TG	9.8	4.76	0.8	4.05								▲					
SPMG110408-TG	11.5	4.76	0.8	4.45								▲					
SPMG120408-TG	12.7	4.76	0.8	4.45								▲					

U-drill Insert

SPMG - DK

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension				Grade												Uncoated
					P						M				K		
	d	t	r	D1	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	
SPMG050204-DK	5	2.38	0.4	2.25								▲		▲			
SPMG060204-DK	6	2.38	0.4	2.61								▲		▲			
SPMG07T308-DK	7.94	3.97	0.8	2.85								▲		▲			
SPMG090408-DK	9.8	4.76	0.8	4.05								▲		▲			
SPMG110408-DK	11.5	4.76	0.8	4.45								▲		▲			

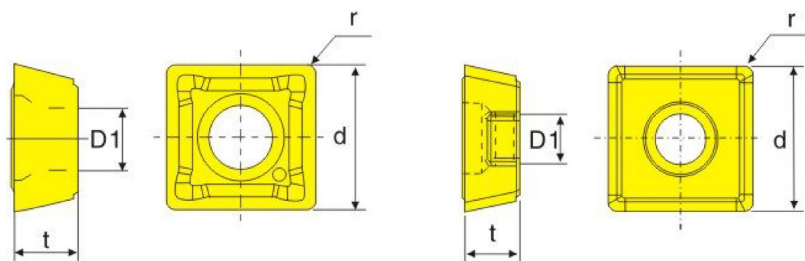
SOMT - DQ

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension				Grade												Uncoated
					P						M				K		
	d	t	r	D1	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	
SOMT050204-DQ	4.9	2.38	0.4	2.25								▲					
SOMT060204-DQ	5.7	2.38	0.4	2.60								▲					
SOMT070306-DQ	6.8	2.80	0.6	2.60								▲					
SOMT08T306-DQ	7.9	3.97	0.6	2.85								▲					
SOMT09T308-DQ	9.2	3.97	0.8	3.80								▲					
SOMT11T308-DQ	11.0	3.97	0.8	3.80								▲					
SOMT130408-DQ	12.8	4.40	0.8	4.40								▲					
SOMT150510-DQ	15.0	4.80	1.0	5.40								▲					

Milling Insert

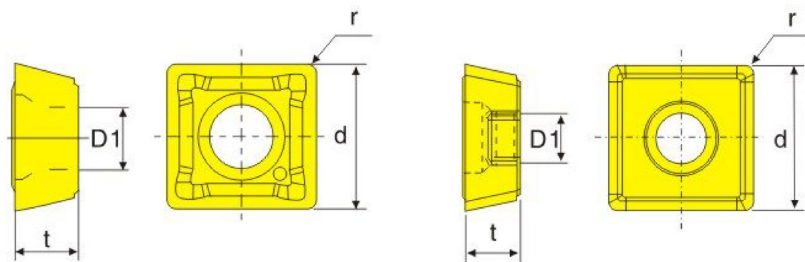
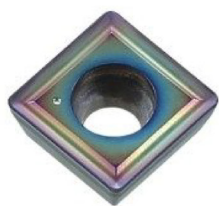
SOMT □□□ - TG



Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade										Uncoated			
						P					M				K				
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018	MH2028
SOMG040202-TG	1.9	4.0	1.82	2.0	0.2								▲						

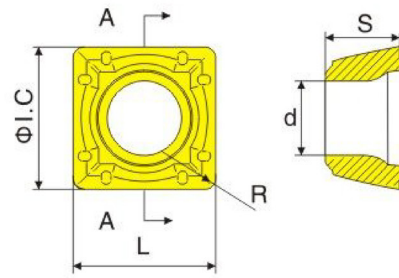
SPMG □□□ - TG



Product stock ▲ Main grade reserve stock ○ Make-to-order

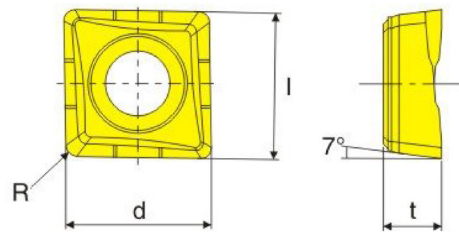
Model	Dimension				Grade											Uncoated	
					P					M			K				
	d	t	r	D1	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518		MH2018
SPMG050204-TG	5	2.38	0.4	2.25											▲		
SPMG060204-TG	6	2.38	0.4	2.61													
SPMG07T308-TG	7.94	3.97	0.8	2.85													
SPMG090408-TG	9.8	4.76	0.8	4.05													
SPMG110408-TG	11.5	4.76	0.8	4.45													

U-drill Insert

SPMG - PD

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension					Grade												
						P						M				K		Uncoated
	L	I.C	S	d	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118	MH518	MH2018	
SPMG040204-PD	2.48	4.7	2.38	2.45	0.4								▲					

QCMT - CM

Product stock ▲ Main grade reserve stock ○ Make-to-order

Model	Dimension				Grade												
					P				M				K		Uncoated		
	d	l	t	r	MH8008	MH8018	MH8028	MH8218	MH8118	MH818	MH5008	MH5018	MH5028	MH5118		MH518	MH2018
QCMT040104-CM	4.4	6.4	1.7	0.4								▲					
QCMT050204-CM	5.6	5.6	2.1	0.4								▲					
QCMT060204-CM	6.4	6.4	2.38	0.4								▲					
QCMT070304-CM	7.5	7.5	3.18	0.4								▲					
QCMT080304-CM	8.4	8.4	3.18	0.4								▲					
QCMT10T304-CM	10.5	10.5	3.97	0.4								▲					



CARBIDE INSERTS CATELOGE

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