

YE-UL17
METRIC



YG UNIVERSAL LINE

INDEXABLE CUTTING TOOLS

YG-1 CO., LTD.

HEAD OFFICE

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<http://www.yg1.kr>
E-mail: yg1@yg1.kr

Note The new address above has currently been updated since Korean new postal standard was valid from 2014.
Be noticed that the physical Headquarter location is NOT changed.






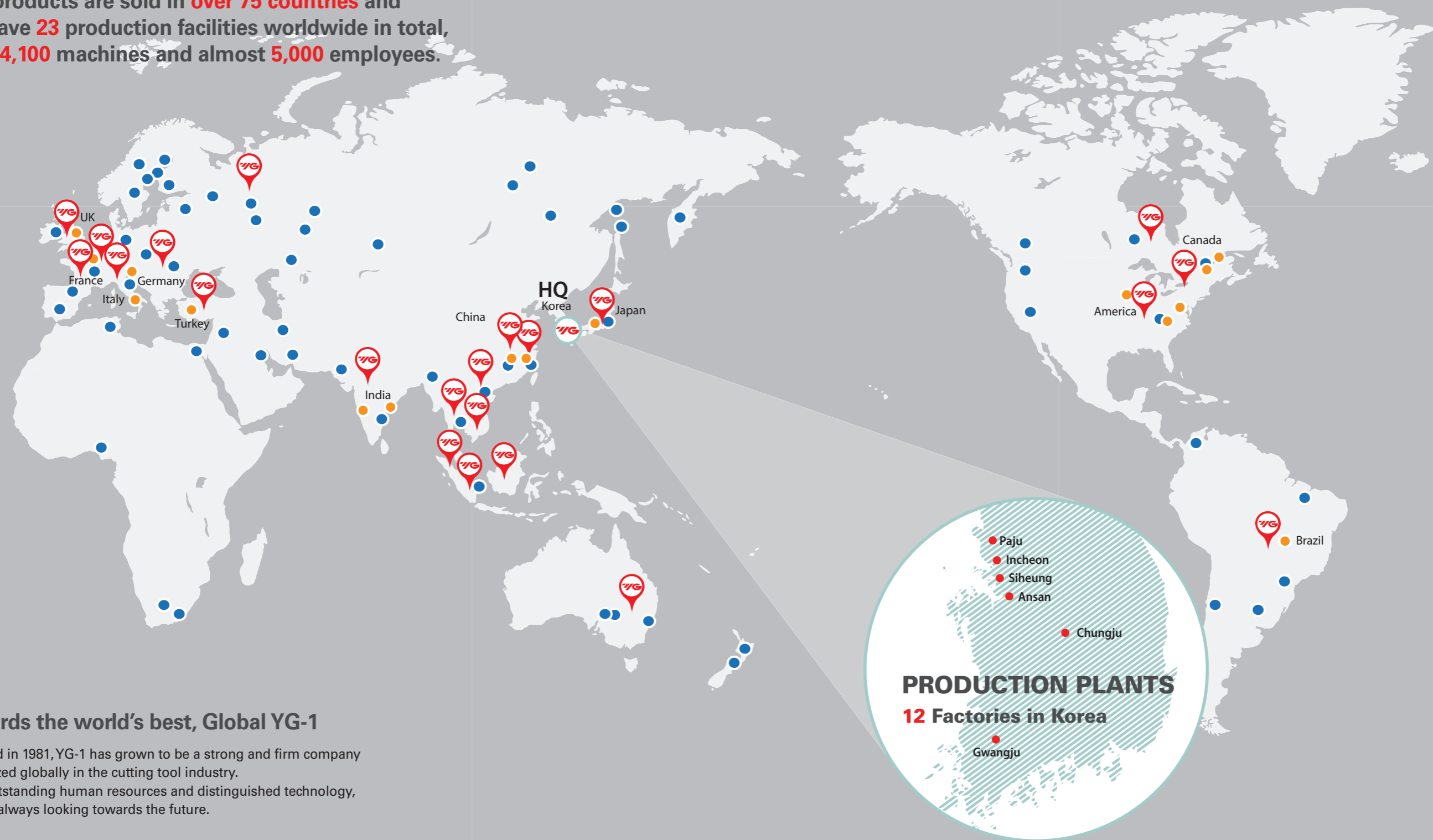
Tool specifications are subject to change without prior notice.



YG-1 SALES & PRODUCTION NETWORK

Our products are sold in **over 75 countries** and we have **23 production facilities** worldwide in total, with **4,100 machines** and almost **5,000 employees**.

 Branch (23 sales offices)  Sales  Production



Towards the world's best, Global YG-1

Founded in 1981, YG-1 has grown to be a strong and firm company recognized globally in the cutting tool industry. With outstanding human resources and distinguished technology, YG-1 is always looking towards the future.

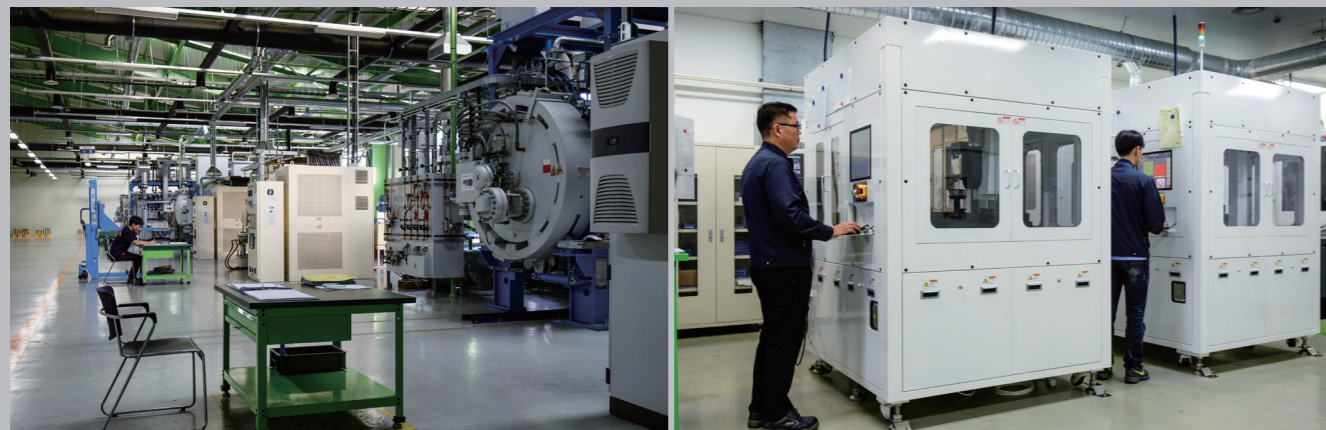
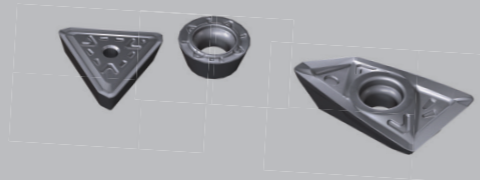
YG-1 is one of the world's 5 major companies in the End Mill manufacture and sales industry and also the largest one in the Republic of Korea. Based on its more than 30 years of know-how, YG-1 is expanding diversification of products.

YG-1 R&D CENTER

- ▶ The Chungju R&D Center is equipped with high tech facilities to produce new materials and products.
- ▶ It focuses on internalizing and upgrading YG-1's key technologies while working on R&D and production.



Developing innovative **cutting tool materials** in order to create **unique technologies of YG-1.**



INDEX



INDEXABLE CUTTING TOOLS YG UNIVERSAL LINE

YG-1 is proud to introduce a new line of products - Universal Line - with a unique range of tools, geometries, sub-micron carbides and multi-purpose PVD and CVD coatings designed to support the entire range of Milling, Drilling and Turning applications to machine many types of raw materials in all areas of industries.

Universal Line is especially designed for customers with a wide range of work-pieces and materials, with rapid turnover changes in the production line, as well as large volumes. YG-1 Universal Line combines a unique variety of geometries and carbides to offer unique solution parameters to the end-user that afford very attractive production costs.

UNIVERSAL GRADES 6

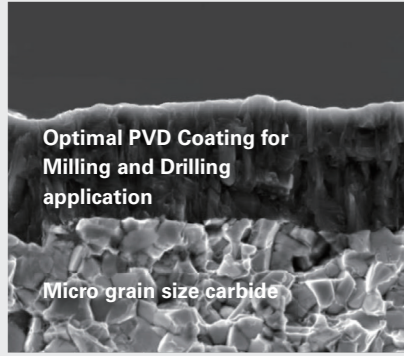
YG MILL 7
YG DRILL 55
YG TURN 69

TECHNICAL INFORMATION 109

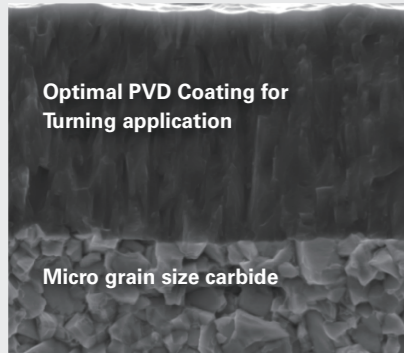
CASE STUDY 110

Features of Grades :

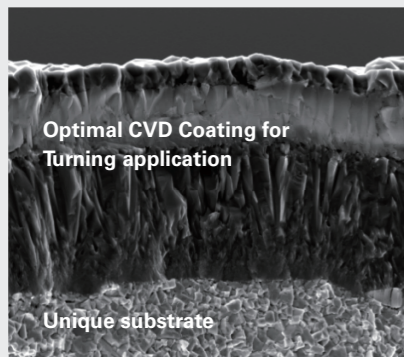
YG-1 Universal grades, designs for multi-purpose application and extremely efficient in covering materials including Steels, Stainless Steels and Cast Iron.

YG602

Exclusive PVD coating / Unique Substrate for MILLING and DRILLING Application

- Ultra dense PVD coating with optimal thermal resistance & added strength
- Sub-micron substrate designed for demanding application

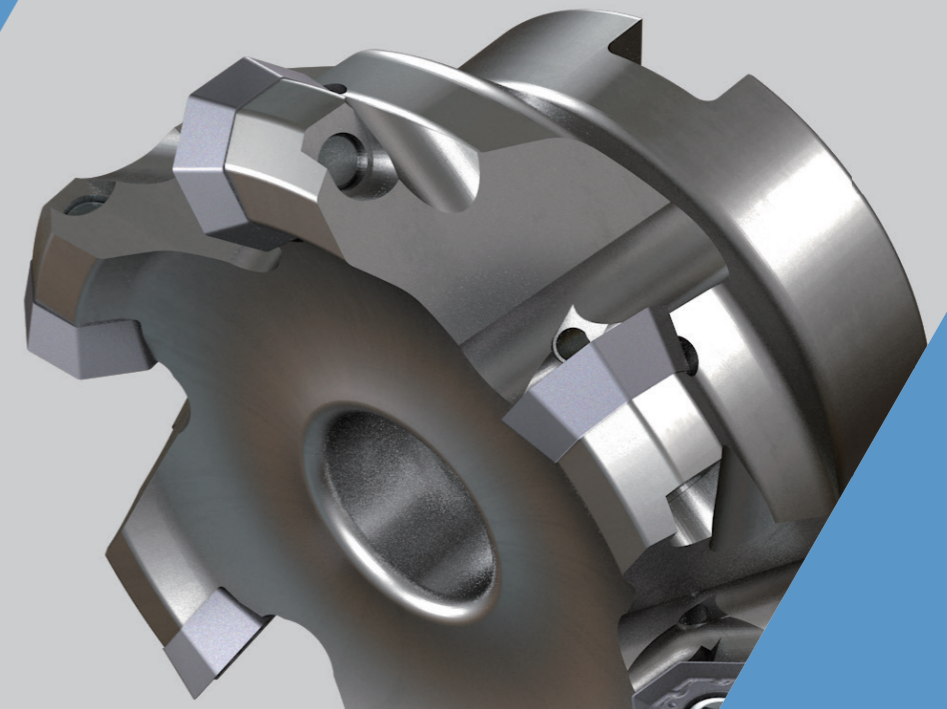
YG801

Exclusive PVD coating / Unique Substrate for TURNING Application

- Unique PVD coating and substrate designed to balance edge strength & wear resistance for continuous machining.
- Excellent cutting performance under harsh machining condition.

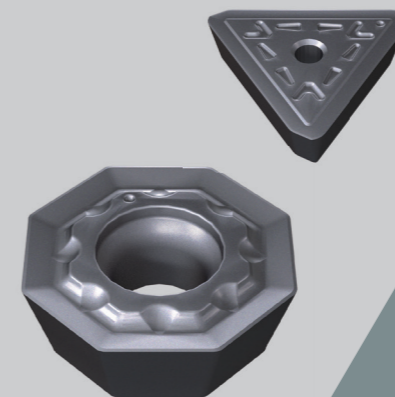
YG1001

Unique Substrate / CVD coating for TURNING Application

- Thick coating optimized for Cast iron applications and harsh machining condition.
- Advanced CVD coating with optimal thermal & wear resistance for turning applications.
- Exceptional cutting performance attributed to combination of carbide substrate and coating.

Grade	P	M	K	S
YG602	P30-40	M20-30	K20-30	S10-20
YG801	P20-40	M20-40	K10-25	S05-25
YG1001	-	-	K10-25	-

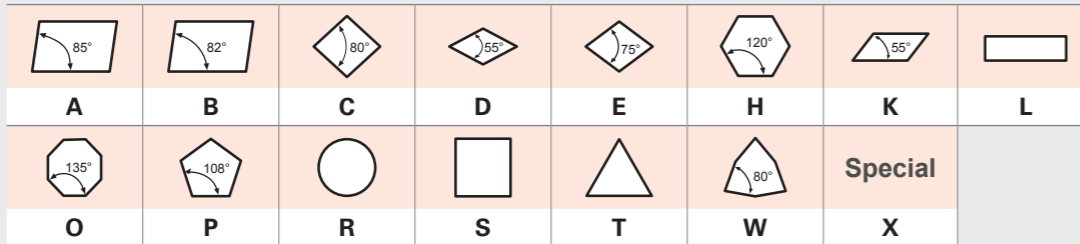


YG MILL
INDEXABLE CUTTING TOOLS
YG UNIVERSAL LINE

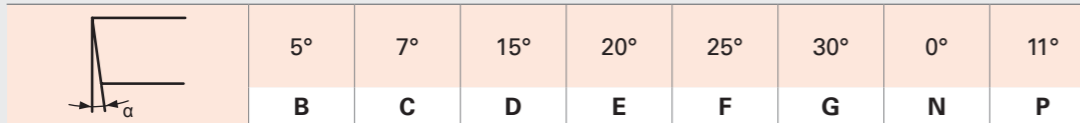




1 Insert Shape

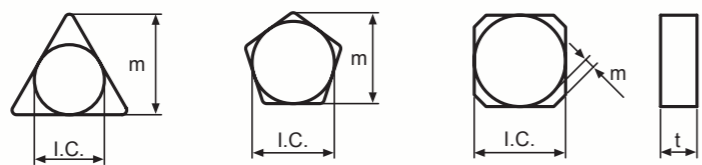


2 Clearance Angle

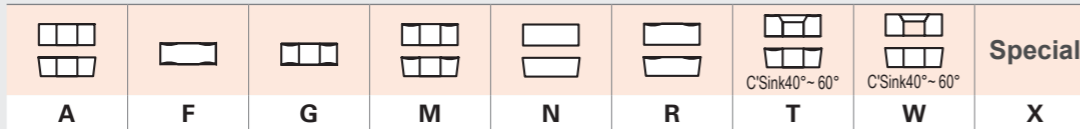


3 Tolerance

	Tolerance		I.C. Size						
	m	t	I.C.	6.35	9.525	12.7	15.875	19.05	25.4
A	± 0.005	± 0.025	± 0.025	●	●	●	●	●	●
C	± 0.013	± 0.025	± 0.025	●	●	●	●	●	●
E	± 0.025	± 0.025	± 0.025	●	●	●	●	●	●
F	± 0.005	± 0.025	± 0.013	●	●	●	●	●	●
G	± 0.025	± 0.13	± 0.025	●	●	●	●	●	●
H	± 0.013	± 0.025	± 0.013	●	●	●	●	●	●
K	± 0.013	± 0.025	± 0.05	●	●				
			± 0.08		●				
			± 0.10			●	●		
			± 0.13					●	
M	± 0.13	± 0.13	± 0.05	●	●				
			± 0.08		●				
			± 0.10			●	●		
			± 0.13					●	



4 Cross Section Shape



5 Cutting Edge Length

I.C. Size	C	S	R	T	H	O
	Metric					
5.56	05	05	05	09		
6.35	06	06	06	11		
7.94	08	07	07	13		
9.525	09	09	09	16		
12.7	12	12	12	22	05	05
15.875	16	15	15	27	09	06
19.05	19	19	19	33	10	
25.4	25	25	25	44		

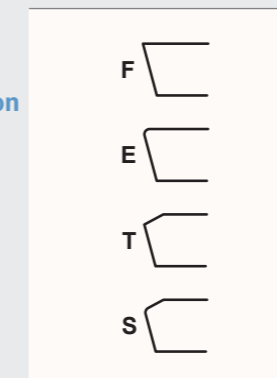
6 Thickness

Symbol(t)	mm
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
09	9.52

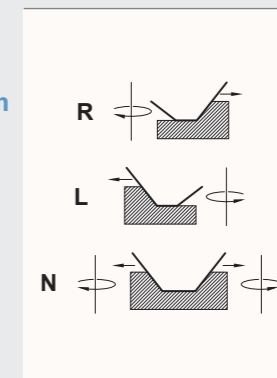
7 Lead Angle & Relief Angle of Minor Cutting Edge

Lead Angle		Relief Angle of minor cutting edge	
A	45°	B	5°
D	60°	C	7°
E	75°	D	15°
F	85°	E	20°
P	90°	F	25°
Z	Special	G	30°
		N	0°
		P	11°
		Z	Special

8 Edge Preparation



9 Cutting Direction



10 Chip Breaker

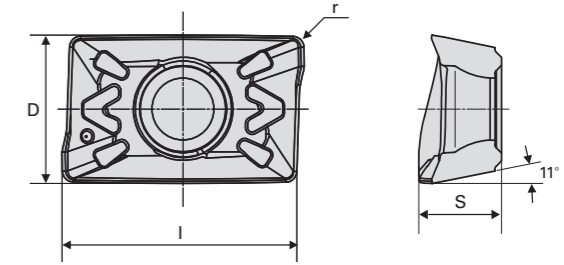
For Application

METRIC

Designation	YG	S1	45	-	25	Z2	S	25	P	200	-	12
No.	①	②	③		④	⑤	⑥	⑦	⑧	⑨		⑩

No.	Meaning	Symbol	Explanation
①	Brand Name	YG	YG-1 Global
②	Insert Type	S1	S1-SEKN, S2-SEKT, S3-SEMT...
③	Cutting Degree	45	45, 90 - Cutting degree
④	Tool Diameter	25	Ø20, Ø30... Ø125...
⑤	No. of Teeth	Z2	2, 3, 4... 12...
⑥	Tool Type (Interface)	S	Shank type
		C	Cutter type
		M	Modular type (M08, M10, M12...)
⑦	Shank Diameter	25	Ø25 - Shank diameter
	Coupling Size	32	Ø32 - Cutter coupling size
⑧	Shank Type	P	Plain (Cylindrical shank)
		F	Flat (Weldon shank)
⑨	Tool Length	200	100mm, 150mm, 200mm...
⑩	Insert Size	12	08, 10, 17...

* Additional information(data) will be described in specific dimensions.

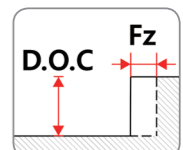
APKT 1003


Designation	Grade	Dimensions			
		L	D	S	r
APKT 100305PDTR	YG602	10.58	6.70	3.60	0.5
APKT 100308PDTR	YG602	10.58	6.70	3.60	0.8

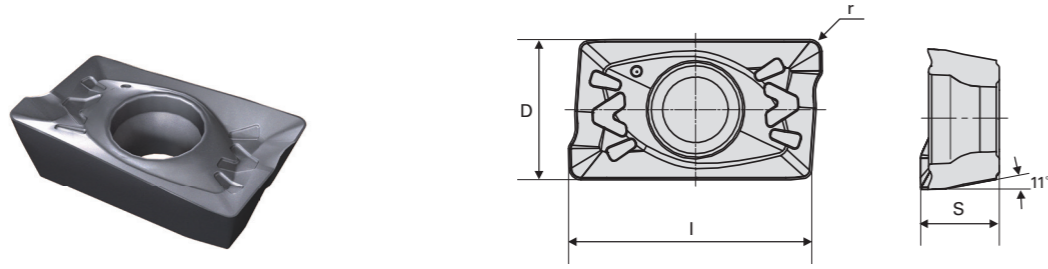

APKT 1003
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.13	0.26	0.20	190	330	250	0.5	9.0	2.0
	Low Alloys	200	0.11	0.21	0.16	150	240	200	0.5	9.0	2.0
	High Alloys	220	0.08	0.18	0.13	90	150	120	0.5	6.4	1.5
M	Austenitic	190	0.11	0.21	0.16	190	250	220	0.5	9.0	2.0
K	Grey Cast Iron	140	0.13	0.26	0.20	150	240	200	0.5	9.0	2.0
S	Heat Resistant and Super Alloys	240	0.08	0.15	0.12	25	45	35	0.5	6.4	1.5
H	Hardened Materials	45HRc	0.07	0.15	0.11	40	80	60	0.5	3.2	1.0

* D.O.C: Depth Of Cut



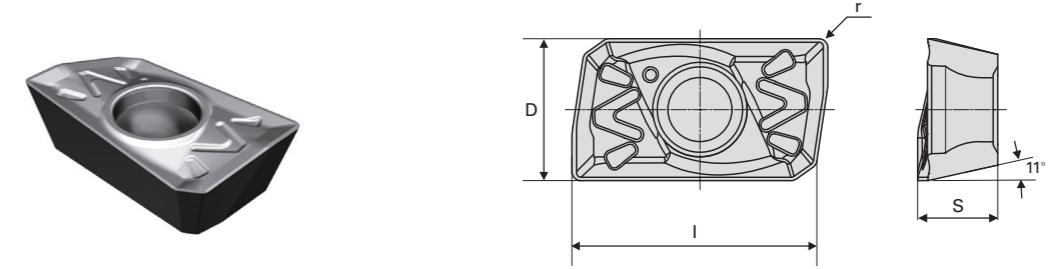
APKT 1604



Designation	Grade	Dimensions			
		L	D	S	r
APKT 160404PDTR	YG602	16.32	9.40	5.27	0.4
APKT 160408PDTR	YG602	16.32	9.40	5.27	0.8
APKT 160412PDTR	YG602	16.32	9.40	5.27	1.2
APKT 160416PDTR	YG602	16.32	9.40	5.27	1.6



APMT 1135



Designation	Grade	Dimensions			
		L	D	S	r
APMT 113504PDTR	YG602	10.69	6.20	3.50	0.4
APMT 113508PDTR	YG602	10.69	6.20	3.50	0.8

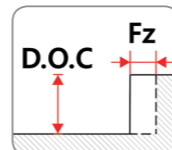


APKT 1604

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.32	0.25	190	330	250	0.5	15.0	4.0
	Low Alloys	200	0.15	0.25	0.20	150	240	195	0.5	15.0	4.0
	High Alloys	220	0.12	0.22	0.17	90	150	120	0.5	10.7	4.0
M	Austenitic	190	0.15	0.25	0.20	190	250	220	0.5	15.0	3.0
K	Grey Cast Iron	140	0.18	0.32	0.25	150	240	195	0.5	15.0	4.0
S	Heat Resistant and Super Alloys	240	0.12	0.18	0.15	25	45	35	0.5	10.7	3.0
H	Hardened Materials	45HRc	0.10	0.18	0.14	40	80	60	0.5	5.4	2.0

* D.O.C: Depth Of Cut

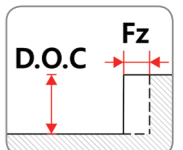


APMT 1135

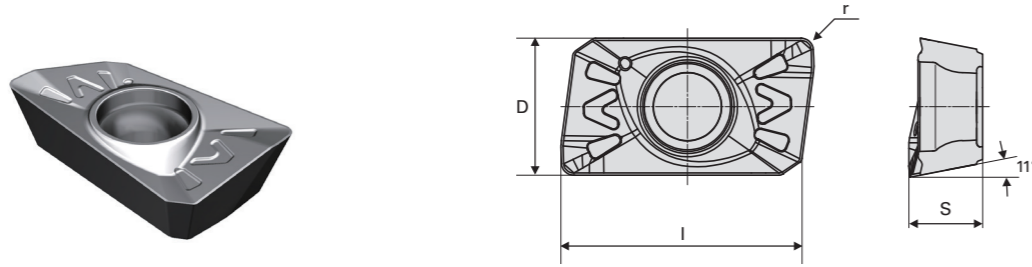
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.13	0.22	0.18	190	330	250	0.5	10.0	2.0
	Low Alloys	200	0.11	0.18	0.15	150	240	200	0.5	10.0	2.0
	High Alloys	220	0.08	0.15	0.12	90	150	120	0.5	7.2	1.5
M	Austenitic	190	0.11	0.18	0.15	190	250	220	0.5	10.0	2.0
K	Grey Cast Iron	140	0.13	0.22	0.18	150	240	200	0.5	10.0	2.0
S	Heat Resistant and Super Alloys	240	0.08	0.13	0.11	25	45	35	0.5	7.2	1.5
H	Hardened Materials	45HRc	0.07	0.13	0.07	40	80	60	0.5	3.6	1.0

* D.O.C: Depth Of Cut



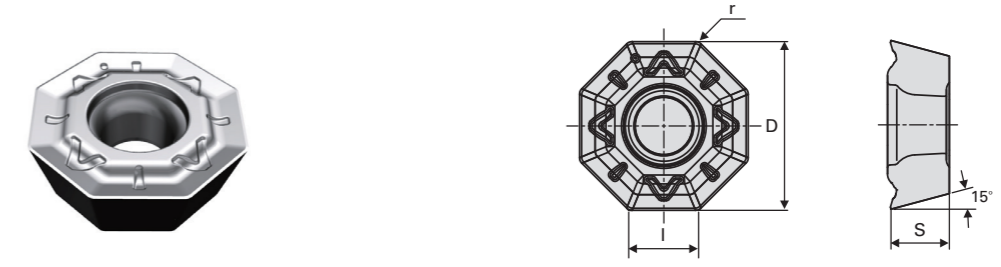
APMT 1604



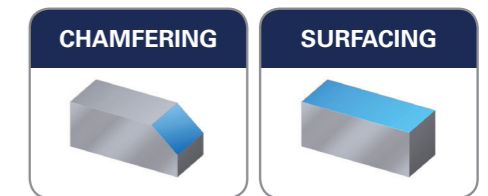
Designation	Grade	Dimensions			
		L	D	S	r
APMT 160408PDTR	YG602	16.25	9.22	4.76	0.8



ODMT 0605



Designation	Grade	Dimensions			
		I	D	S	r
ODMT 060508	YG602	6.60	15.88	5.50	0.8

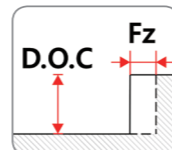


APMT 1604

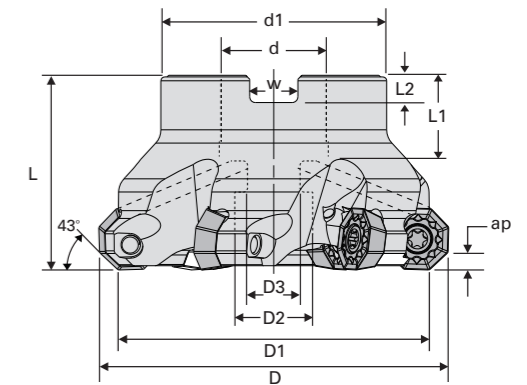
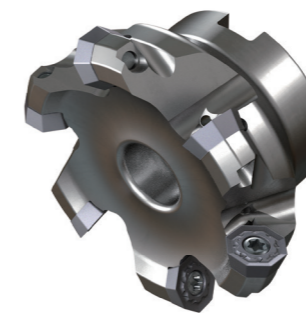
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.16	0.30	0.23	190	330	250	0.5	15.0	4.0
	Low Alloys	200	0.14	0.23	0.19	150	240	200	0.5	15.0	4.0
	High Alloys	220	0.11	0.2	0.16	90	150	120	0.5	10.7	4.0
M	Austenitic	190	0.14	0.23	0.19	190	250	220	0.5	15.0	4.0
K	Grey Cast Iron	140	0.16	0.30	0.23	150	240	200	0.5	15.0	4.0
S	Heat Resistant and Super Alloys	240	0.11	0.17	0.14	25	45	35	0.5	10.7	3.0
H	Hardened Materials	45HRc	0.09	0.17	0.13	40	80	60	0.5	5.4	2.0

* D.O.C: Depth Of Cut



ODMT 0605 / Cutter



Designation	Dimensions												
	D	D1	D2	D3	d	d1	w	L	L1	L2	ap	z	Coolant
YGO143-63Z5C22-06	73	63	18	11	22	50	10.4	40	20	6.3	3.5	5	Y
YGO143-80Z6C27-06	90	80	20	13.5	27	58	12.4	50	22	7	3.5	6	Y
YGO143-100Z7C32-06	110	100	26.5	17.5	32	78	14.4	50	25	8	3.5	7	Y
YGO143-125Z8C40-06	135	125	32.5	22.5	40	90	16.4	63	29	9	3.5	8	Y

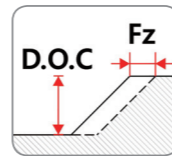
Insert	Spare parts	
	Screw	Wrench
ODMT(W) 06	TP205013	TPWFTP20

ODMT 0605

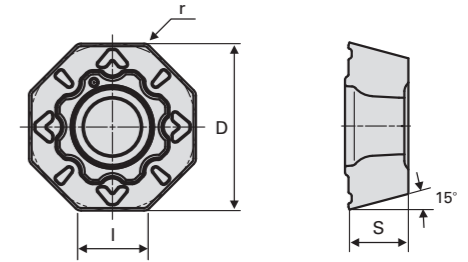
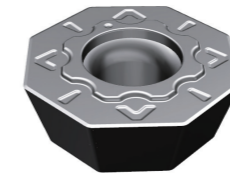
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.22	0.54	0.38	190	330	250	0.5	4.0	2.5
	Low Alloys	200	0.18	0.43	0.31	150	240	195	0.5	4.0	2.5
	High Alloys	220	0.14	0.37	0.26	90	150	120	0.5	2.9	1.9
M	Austenitic	190	0.18	0.37	0.28	190	250	220	0.5	4.0	2.5
K	Grey Cast Iron	140	0.22	0.54	0.38	150	240	195	0.5	4.0	2.5
S	Heat Resistant and Super Alloys	240	0.14	0.31	0.23	25	45	35	0.5	2.9	1.9
H	Hardened Materials	45HRc	0.12	0.31	0.22	40	80	60	0.4	1.4	1.3

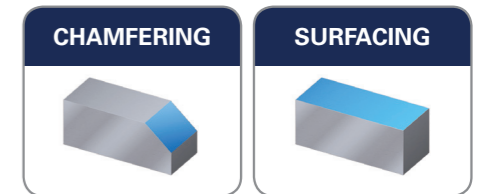
* D.O.C: Depth Of Cut



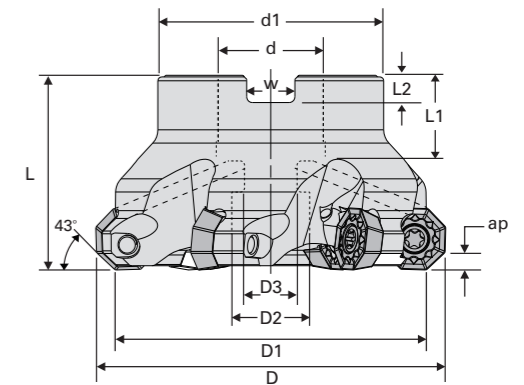
ODMW 0605



Designation	Grade	Dimensions			
		I	D	S	r
ODMW 060508	YG602	6.60	15.88	5.50	0.8



ODMW 0605 / Cutter



Designation	Dimensions												
	D	D1	D2	D3	d	d1	w	L	L1	L2	ap	z	Coolant
YGO143-63Z5C22-06	73	63	18	11	22	50	10.4	40	20	6.3	3.5	5	Y
YGO143-80Z6C27-06	90	80	20	13.5	27	58	12.4	50	22	7	3.5	6	Y
YGO143-100Z7C32-06	110	100	26.5	17.5	32	78	14.4	50	25	8	3.5	7	Y
YGO143-125Z8C40-06	135	125	32.5	22.5	40	90	16.4	63	29	9	3.5	8	Y

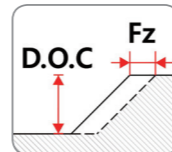
Insert	Spare parts	
	Screw	Wrench
ODMT(W) 06	TP205013	TPWFTP20

ODMW 0605

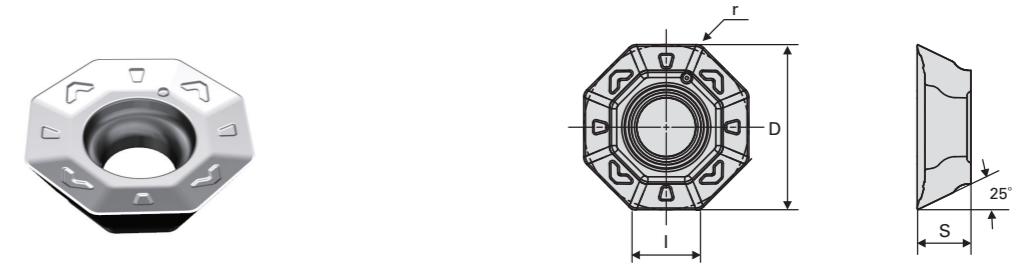
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.22	0.58	0.40	190	330	250	0.5	4.0	3.0
	Low Alloys	200	0.18	0.45	0.32	150	240	195	0.5	4.0	3.0
	High Alloys	220	0.14	0.40	0.27	90	150	120	0.5	2.9	2.3
K	Grey Cast Iron	140	0.22	0.58	0.40	150	240	195	0.5	4.0	3.0
H	Hardened Materials	45HRc	0.12	0.32	0.22	40	80	60	0.4	1.4	1.3

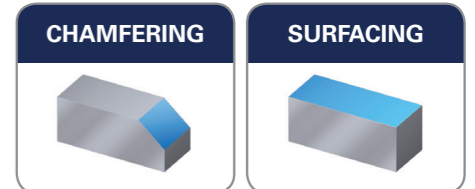
* D.O.C: Depth Of Cut



OFMT 05T3



Designation	Grade	Dimensions			
		I	D	S	r
OFMT 05T308	YG602	5.27	12.70	4.02	0.8

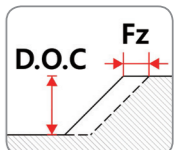


OFMT 05T3

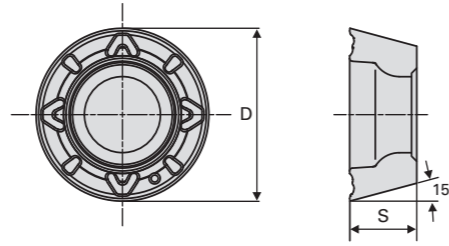
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.22	0.51	0.37	190	330	250	0.5	3.5	2.5
	Low Alloys	200	0.18	0.40	0.29	150	240	195	0.5	3.5	2.5
	High Alloys	220	0.14	0.35	0.25	90	150	120	0.5	2.5	1.9
M	Austenitic	190	0.18	0.35	0.27	190	250	220	0.5	3.5	2.5
K	Grey Cast Iron	140	0.22	0.51	0.37	150	240	195	0.5	3.5	2.5
S	Heat Resistant and Super Alloys	240	0.14	0.29	0.22	25	45	35	0.5	2.5	1.9
H	Hardened Materials	45HRc	0.12	0.29	0.21	40	80	60	0.4	1.3	1.3

* D.O.C: Depth Of Cut



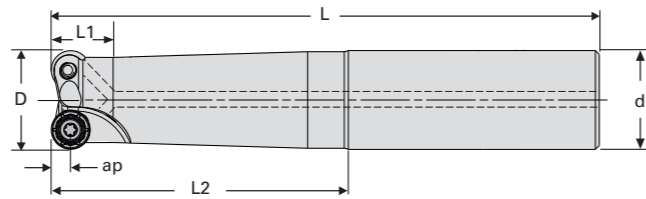
RDKT 0802



Designation	Grade	Dimensions			
		l	D	S	r
RDKT 0802M0	YG602	-	8.00	2.38	-

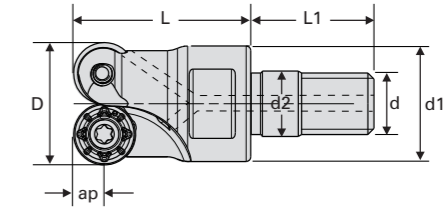


RDKT 0802 / Shank



Designation	Dimensions								Insert	Spare parts		
	D	d	L1	L2	L	z	ap	Shank		Coolant	Screw	Wrench
YGR1-16Z2S16P160-08	16	16	12	60	160	2	4	Plain	Y	RDKT(W) 08	TP082505	TPWFTP08
YGR1-20Z2S20P180-08	20	20	12	80	180	2	4	Plain	Y	RDKT(W) 08		
YGR1-25Z3S20P180-08	25	20	-	40	180	3	4	Plain	Y	RDKT(W) 08		

RDKT 0802 / Modular



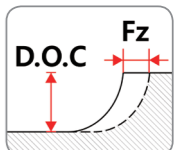
Designation	Dimensions									Insert	Spare parts	
	D	d	d1	d2	L	L1	z	ap	Coolant		Screw	Wrench
YGR1-16Z2M08-08	16	M8	13	8.5	23	16	2	4	Y	RDKT(W) 08	TP082505	TPWFTP08
YGR1-20Z2M10-08	20	M10	18	10.5	30	18	2	4	Y	RDKT(W) 08		
YGR1-25Z3M12-08	25	M12	21	12.5	35	20	3	4	Y	RDKT(W) 08		

RDKT 0802

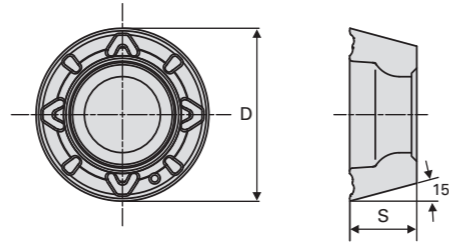
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	0.8
	Low Alloys	200	0.15	0.50	0.30	150	240	195	0.5	2.5	0.8
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	0.6
M	Austenitic	190	0.15	0.50	0.30	190	250	220	0.5	2.5	0.8
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	195	0.5	2.5	0.8
S	Heat Resistant and Super Alloys	240	0.12	0.32	0.24	25	45	35	0.5	1.5	0.6
H	Hardened Materials	45HRc	0.10	0.32	0.23	40	80	60	0.3	0.7	0.4

* D.O.C: Depth Of Cut



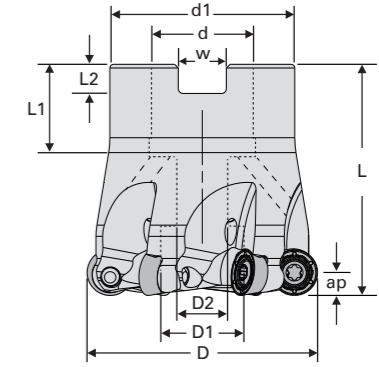
RDKT 10T3



Designation	Grade	Dimensions			
		l	D	S	r
RDKT 10T3M0	YG602	-	10.00	3.97	-



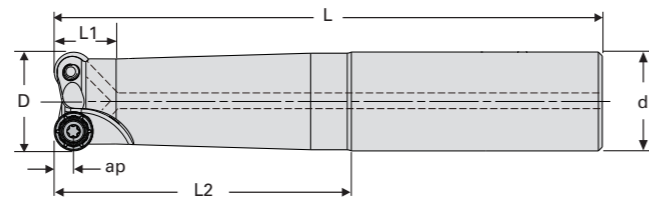
RDKT 10T3 / Cutter



Designation	Dimensions											
	D	D1	D2	d	d1	w	L	L1	L2	ap	z	Coolant
YGR1-40Z5C16-10	40	14	9	16	32	8.4	40	18	5.6	2.5	5	Y
YGR1-50Z6C22-10	50	18	11	22	40	10.4	50	20	6.3	2.5	6	Y

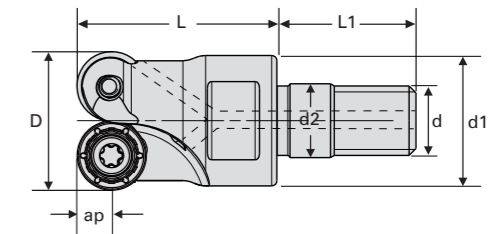
Insert	Spare parts	
	Screw	Wrench
RDKT(W) 10	TP154808	TPWFTP15

RDKT 10T3 / Shank



Designation	Dimensions										Insert	Spare parts	
	D	d	L1	L2	L	z	ap	Shank	Coolant	Screw		Wrench	
YGR1-20Z2S20P180-10	20	20	15	80	180	2	5	Plain	Y	RDKT(W) 10	TP154808	TPWFTP15	
YGR1-25Z2S25P180-10	25	25	15	80	180	2	5	Plain	Y	RDKT(W) 10			

RDKT 10T3 / Modular



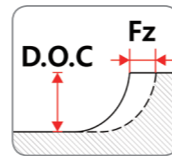
Designation	Dimensions										Insert	Spare parts	
	D	d	d1	d2	L	L1	z	ap	Coolant	Screw		Wrench	
YGR1-20Z2M10-10	20	M10	18	10.5	30	18	2	5	Y	RDKT(W) 10	TP154808	TPWFTP15	
YGR1-25Z3M12-10	25	M12	21	12.5	35	20	3	5	Y	RDKT(W) 10			

RDKT 10T3

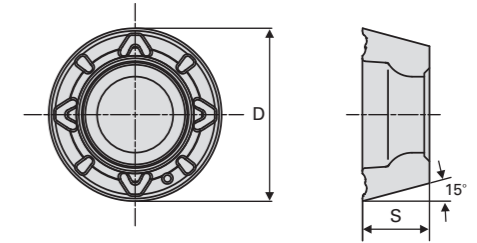
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.0
	Low Alloys	200	0.15	0.50	0.30	150	240	200	0.5	2.5	1.0
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	0.8
M	Austenitic	190	0.15	0.50	0.30	190	250	220	0.5	2.5	1.0
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	200	0.5	2.5	1.0
S	Heat Resistant and Super Alloys	240	0.12	0.36	0.24	25	45	35	0.5	2.0	0.5
H	Hardened Materials	45HRc	0.10	0.36	0.23	40	80	60	0.3	0.9	0.5

* D.O.C: Depth Of Cut



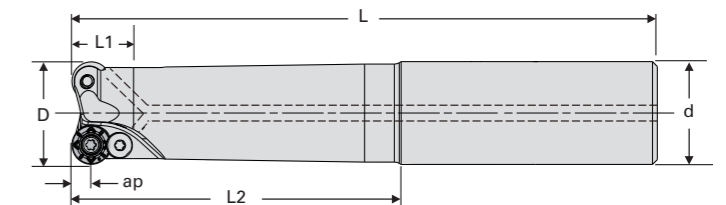
RDKT 1204



Designation	Grade	Dimensions			
		I	D	S	r
RDKT 1204M0	YG602	-	12.00	4.76	-

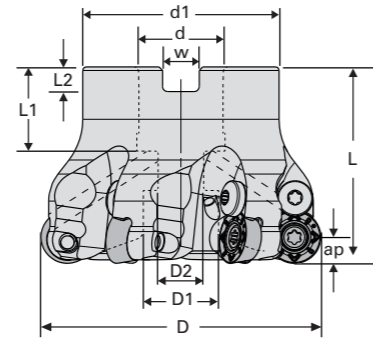


RDKT 1204 / Shank



Designation	Dimensions										Insert	Spare parts	
	D	d	L1	L2	L	z	ap	Shank	Coolant	Screw		Wrench	
YGR1-25Z2S25P180-12	25	25	18	80	180	2	6	Plain	Y	RDKT(W) 12	TP154009 + TP153507	TPWFTP15	
YGR1-32Z2S32P200-12	32	32	18	100	200	2	6	Plain	Y	RDKT(W) 12			
YGR1-32Z3S32P160-12	32	32	18	60	160	3	6	Plain	Y	RDKT(W) 12			

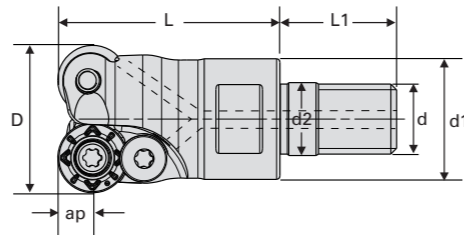
RDKT 1204 / Cutter



Designation	Dimensions											
	D	D1	D2	d	d1	w	L	L1	L2	ap	z	Coolant
YGR1-40Z4C16-12	40	13.8	9	16	32	8.4	40	18	5.6	4	4	Y
YGR1-50Z5C22-12	50	18	11	22	40	10.4	50	20	6.3	4	5	Y
YGR1-63Z6C22-12	63	18	11	22	48	10.4	50	20	6.3	4	6	Y

Insert	Spare parts	
	Screw	Wrench
RDKT(W) 12	TP154009 + TP153507	TPWFTP15

RDKT 1204 / Modular



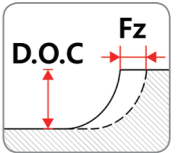
Designation	Dimensions									Insert	Spare parts	
	D	d	d1	d2	L	L1	z	ap	Coolant		Screw	Wrench
YGR1-25Z2M12-12	25	M12	21	12.5	35	20	2	6	Y	RDKT(W) 12	TP154009 +	TPWFTP15
YGR1-32Z3M16-12	32	M16	29	17	42	22	3	6	Y	RDKT(W) 12	TP153507	

RDKT 1204

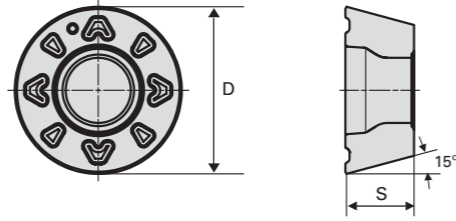
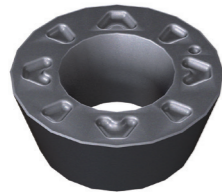
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.3
	Low Alloys	200	0.15	0.50	0.30	150	240	200	0.5	2.5	1.3
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	1.0
M	Austenitic	190	0.15	0.50	0.30	190	250	220	0.5	2.5	1.3
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	200	0.5	2.5	1.3
S	Heat Resistant and Super Alloys	240	0.17	0.41	0.29	25	45	35	0.5	2.4	1.0
H	Hardened Materials	45HRc	0.14	0.41	0.28	40	80	60	0.3	1.1	0.7

* D.O.C: Depth Of Cut



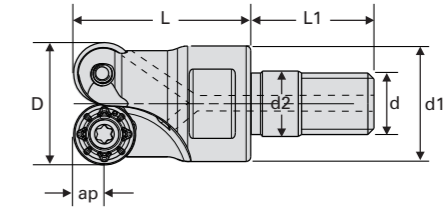
RDKW 0802



Designation	Grade	Dimensions			
		l	D	S	r
RDKW 0802M0	YG602	-	8.00	2.38	-

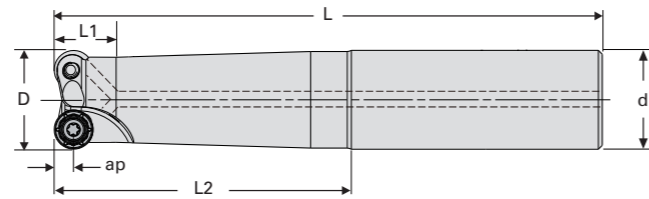


RDKW 0802 / Modular



Designation	Dimensions										Insert	Spare parts	
	D	d	d1	d2	L	L1	z	ap	Coolant	Screw		Wrench	
YGR1-16Z2M08-08	16	M8	13	8.5	23	16	2	4	Y	RDKT(W) 08			
YGR1-20Z2M10-08	20	M10	18	10.5	30	18	2	4	Y	RDKT(W) 08	TP082505	TPWFTP08	
YGR1-25Z3M12-08	25	M12	21	12.5	35	20	3	4	Y	RDKT(W) 08			

RDKW 0802 / Shank



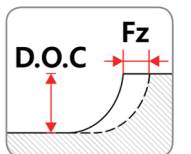
Designation	Dimensions										Insert	Spare parts	
	D	d	L1	L2	L	z	ap	Shank	Coolant	Screw		Wrench	
YGR1-16Z2S16P160-08	16	16	12	60	160	2	4	Plain	Y	RDKT(W) 08			
YGR1-20Z2S20P180-08	20	20	12	80	180	2	4	Plain	Y	RDKT(W) 08	TP082505	TPWFTP08	
YGR1-25Z3S20P180-08	25	20	-	40	180	3	4	Plain	Y	RDKT(W) 08			

RDKW 0802

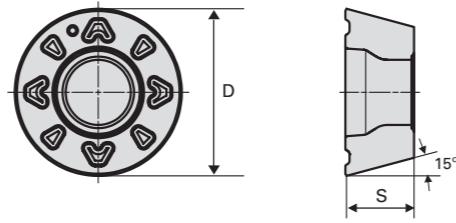
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.41	190	330	260	0.5	2.5	0.8
	Low Alloys	200	0.15	0.50	0.33	150	240	195	0.5	2.5	0.8
	High Alloys	220	0.12	0.44	0.28	90	150	120	0.5	1.8	0.6
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	195	0.5	2.5	0.8
H	Hardened Materials	45HRc	0.10	0.32	0.23	40	80	60	0.3	0.7	0.4

* D.O.C: Depth Of Cut



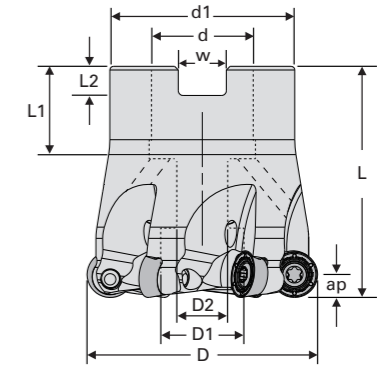
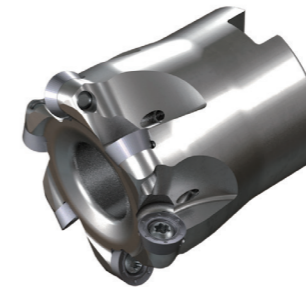
RDKW 10T3



Designation	Grade	Dimensions			
		l	D	S	r
RDKW 10T3M0	YG602	-	10.00	3.97	-



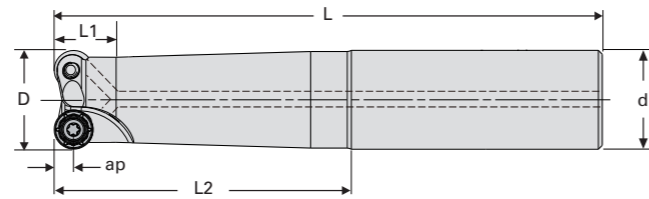
RDKW 10T3 / Cutter



Designation	Dimensions											
	D	D1	D2	d	d1	w	L	L1	L2	ap	z	Coolant
YGR1-40Z5C16-10	40	14	9	16	32	8.4	40	18	5.6	2.5	5	Y
YGR1-50Z6C22-10	50	18	11	22	40	10.4	50	20	6.3	2.5	6	Y

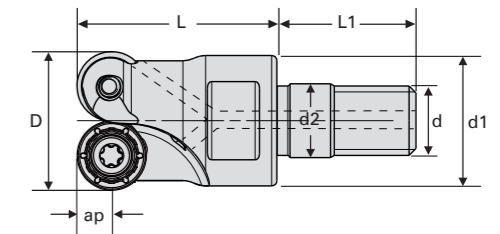
Insert	Spare parts	
	Screw	Wrench
RDKT(W) 10	TP154808	TPWFTP15

RDKW 10T3 / Shank



Designation	Dimensions										Insert	Spare parts	
	D	d	L1	L2	L	z	ap	Shank	Coolant	Screw		Wrench	
YGR1-20Z2S20P180-10	20	20	15	80	180	2	5	Plain	Y	RDKT(W) 10	TP154808	TPWFTP15	
YGR1-25Z2S25P180-10	25	25	15	80	180	2	5	Plain	Y	RDKT(W) 10			

RDKW 10T3 / Modular



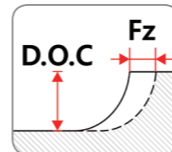
Designation	Dimensions										Insert	Spare parts	
	D	d	d1	d2	L	L1	z	ap	Coolant	Screw		Wrench	
YGR1-20Z2M10-10	20	M10	18	10.5	30	18	2	5	Y	RDKT(W) 10	TP154808	TPWFTP15	
YGR1-25Z3M12-10	25	M12	21	12.5	35	20	3	5	Y	RDKT(W) 10			

RDKW 10T3

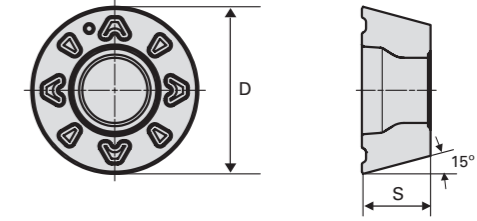
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.0
	Low Alloys	200	0.15	0.50	0.30	150	240	200	0.5	2.5	1.0
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	0.8
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	200	0.5	2.5	1.0
H	Hardened Materials	45HRc	0.10	0.36	0.23	40	80	60	0.3	0.9	0.5

* D.O.C: Depth Of Cut



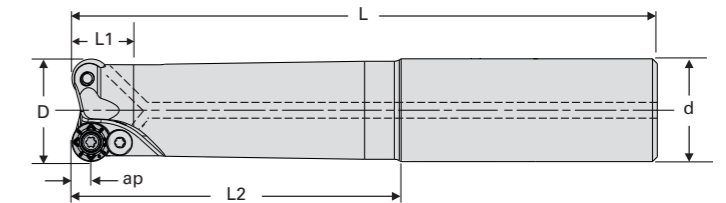
RDKW 1204



Designation	Grade	Dimensions			
		I	D	S	r
RDKW 1204M0	YG602	-	12.00	4.76	-

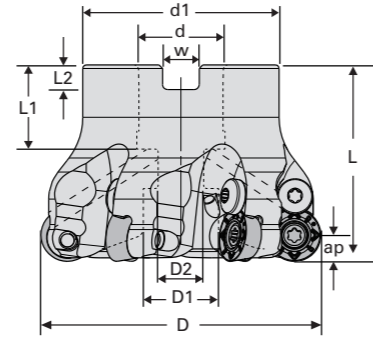


RDKW 1204 / Shank



Designation	Dimensions										Insert	Spare parts	
	D	d	L1	L2	L	z	ap	Shank	Coolant	Screw		Wrench	
YGR1-25Z2S25P180-12	25	25	18	80	180	2	6	Plain	Y	RDKT(W) 12	TP154009 + TP153507	TPWFTP15	
YGR1-32Z2S32P200-12	32	32	18	100	200	2	6	Plain	Y	RDKT(W) 12			
YGR1-32Z3S32P160-12	32	32	18	60	160	3	6	Plain	Y	RDKT(W) 12			

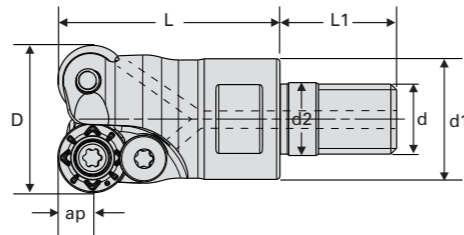
RDKW 1204 / Cutter



Designation	Dimensions											Coolant
	D	D1	D2	d	d1	w	L	L1	L2	ap	z	
YGR1-40Z4C16-12	40	13.8	9	16	32	8.4	40	18	5.6	4	4	Y
YGR1-50Z5C22-12	50	18	11	22	40	10.4	50	20	6.3	4	5	Y
YGR1-63Z6C22-12	63	18	11	22	48	10.4	50	20	6.3	4	6	Y

Insert	Spare parts	
	Screw	Wrench
RDKT(W) 12	TP154009 + TP153507	TPWFTP15

RDKW 1204 / Modular



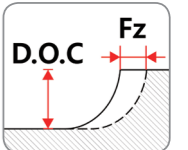
Designation	Dimensions									Insert	Spare parts	
	D	d	d1	d2	L	L1	z	ap	Coolant		Screw	Wrench
YGR1-25Z2M12-12	25	M12	21	12.5	35	20	2	6	Y	RDKT(W) 12	TP154009 +	TPWFTP15
YGR1-32Z3M16-12	32	M16	29	17	42	22	3	6	Y	RDKT(W) 12	TP153507	

RDKW 1204

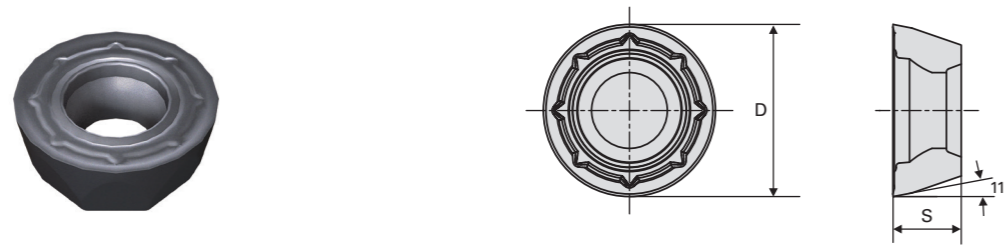
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.3
	Low Alloys	200	0.15	0.50	0.30	150	240	200	0.5	2.5	1.3
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	1.0
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	200	0.5	2.5	1.3
H	Hardened Materials	45HRc	0.14	0.41	0.28	40	80	60	0.3	1.1	0.7

* D.O.C: Depth Of Cut



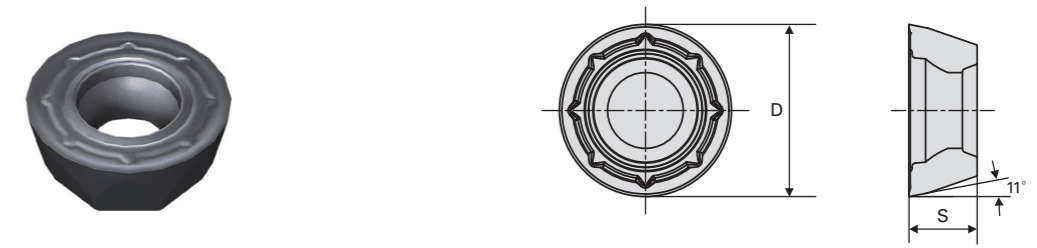
RPMT 08T2



Designation	Grade	Dimensions			
		l	D	S	r
RPMT 08T2M0	YG602	-	8.00	2.76	-



RPMT 10T3



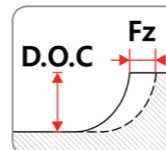
Designation	Grade	Dimensions			
		l	D	S	r
RPMT 10T3M0	YG602	-	10.00	3.96	-



RPMT 08T2 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.41	190	330	250	0.5	2.5	0.8
	Low Alloys	200	0.15	0.50	0.33	150	240	195	0.5	2.5	0.8
	High Alloys	220	0.12	0.44	0.28	90	150	120	0.5	1.8	0.6
M	Austenitic	190	0.15	0.50	0.33	190	250	220	0.5	2.5	0.8
K	Grey Cast Iron	140	0.18	0.64	0.41	150	240	195	0.5	2.5	0.8
S	Heat Resistant and Super Alloys	240	0.12	0.32	0.22	25	45	35	0.5	1.5	0.6
H	Hardened Materials	45HRc	0.10	0.32	0.21	40	80	60	0.3	0.7	0.4

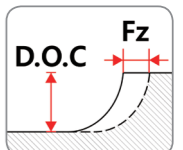
* D.O.C: Depth Of Cut



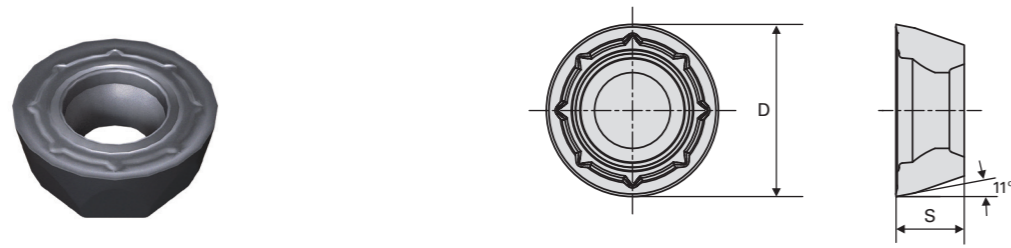
RPMT 10T3 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.0
	Low Alloys	200	0.15	0.50	0.30	150	240	200	0.5	2.5	1.0
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	0.8
M	Austenitic	190	0.15	0.50	0.30	190	250	220	0.5	2.5	1.0
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	200	0.5	2.5	1.0
S	Heat Resistant and Super Alloys	240	0.12	0.36	0.24	25	45	35	0.5	2.0	0.8
H	Hardened Materials	45HRc	0.10	0.36	0.23	40	80	60	0.3	0.9	0.5

* D.O.C: Depth Of Cut



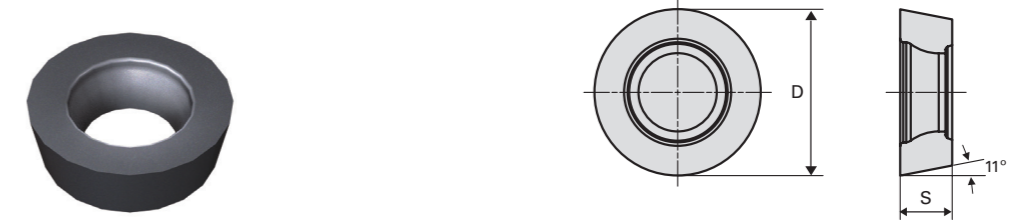
RPMT 1204



Designation	Grade	Dimensions			
		l	D	S	r
RPMT 1204M0	YG602	-	12.00	4.74	-



RPMW 1204



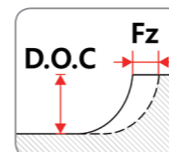
Designation	Grade	Dimensions			
		l	D	S	r
RPMW 1204M0	YG602	-	12.00	4.71	-



RPMT 1204 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.3
	Low Alloys	200	0.15	0.50	0.30	150	240	195	0.5	2.5	1.3
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	1.0
M	Austenitic	190	0.15	0.50	0.30	190	250	220	0.5	2.5	1.3
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	195	0.5	2.5	1.3
S	Heat Resistant and Super Alloys	240	0.13	0.30	0.29	25	50	38	0.5	2.4	1.5
H	Hardened Materials	45HRc	0.50	0.22	0.28	50	100	75	0.5	1.9	1.8

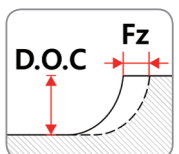
* D.O.C: Depth Of Cut



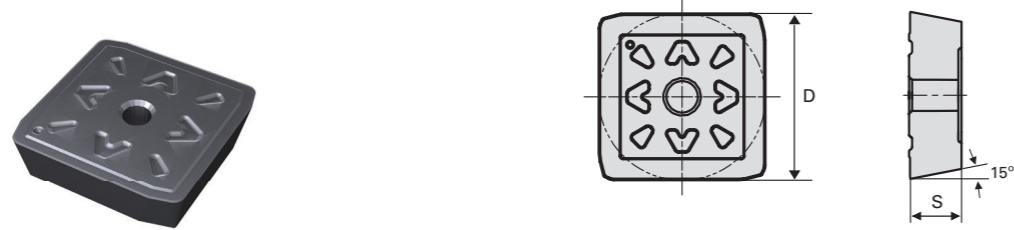
RPMW 1204 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.64	0.35	190	330	250	0.5	2.5	1.3
	Low Alloys	200	0.15	0.50	0.30	150	240	200	0.5	2.5	1.3
	High Alloys	220	0.12	0.44	0.25	90	150	120	0.5	1.8	1.0
K	Grey Cast Iron	140	0.18	0.64	0.35	150	240	200	0.5	2.5	1.3
H	Hardened Materials	45HRc	0.14	0.41	0.28	40	80	60	0.3	1.1	0.7

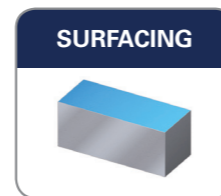
* D.O.C: Depth Of Cut



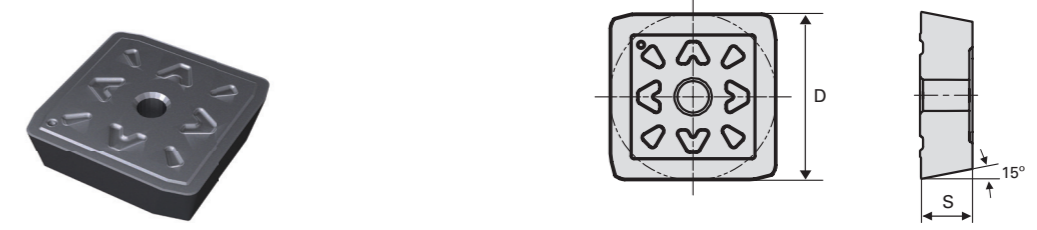
SDKN 1203



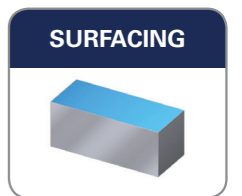
Designation	Grade	Dimensions			
		l	D	S	r
SDKN 1203AETN	YG602	-	12.70	3.18	-



SDKN 1504



Designation	Grade	Dimensions			
		l	D	S	r
SDKN 1504AETN	YG602	-	15.88	4.76	-

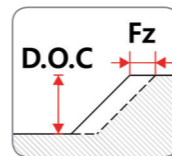


SDKN 1203

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.46	0.32	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.36	0.26	150	240	195	0.5	7.0	3.0
	High Alloys	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.3
K	Grey Cast Iron	140	0.18	0.46	0.32	150	240	195	0.5	7.0	3.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	40	80	60	0.5	2.5	1.5

* D.O.C: Depth Of Cut

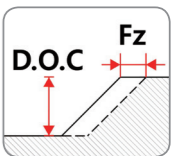


SDKN 1504

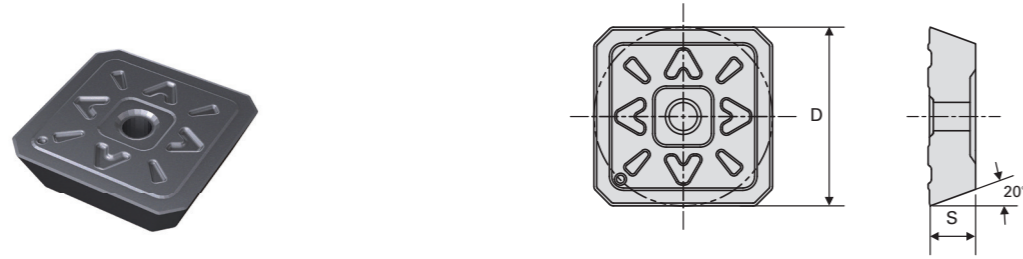
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.43	0.31	190	330	250	0.5	9.0	4.0
	Low Alloys	200	0.15	0.34	0.25	150	240	195	0.5	9.0	4.0
	High Alloys	220	0.12	0.30	0.21	90	150	120	0.5	6.5	3.0
K	Grey Cast Iron	140	0.18	0.43	0.31	150	240	195	0.5	9.0	4.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	40	80	60	0.5	3.2	2.0

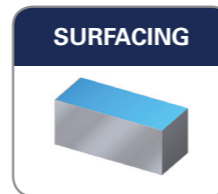
* D.O.C: Depth Of Cut



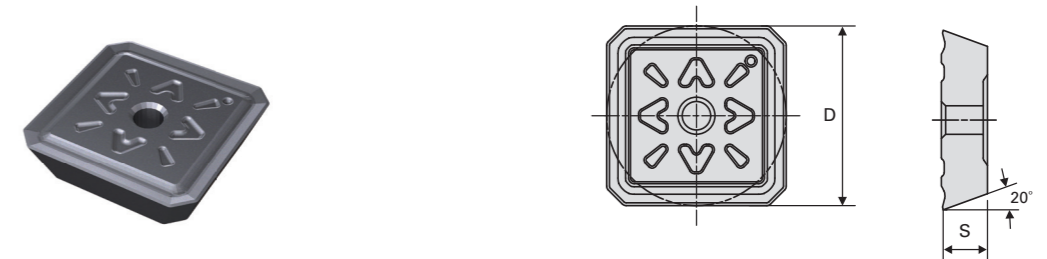
SEKN 1203



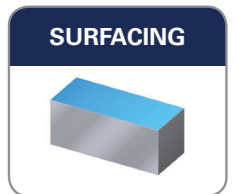
Designation	Grade	Dimensions			
		l	D	S	r
SEKN 1203AFTN	YG602	-	12.70	3.18	-



SEKR 1203



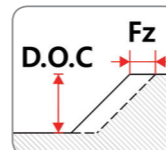
Designation	Grade	Dimensions			
		l	D	S	r
SEKR 1203AFTN	YG602	-	12.70	3.18	-



SEKN 1203 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.46	0.32	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.36	0.26	150	240	195	0.5	7.0	3.0
	High Alloys	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.3
M	Austenitic	190	0.15	0.32	0.24	190	250	220	0.5	7.0	3.0
K	Grey Cast Iron	140	0.18	0.46	0.32	150	240	195	0.5	7.0	3.0
S	Heat Resistant and Super Alloys	240	0.10	0.26	0.18	25	45	35	0.5	5.0	2.3
H	Hardened Materials	45HRc	0.10	0.26	0.18	40	80	60	0.5	2.5	1.0

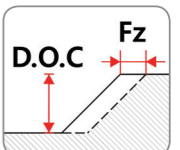
* D.O.C: Depth Of Cut



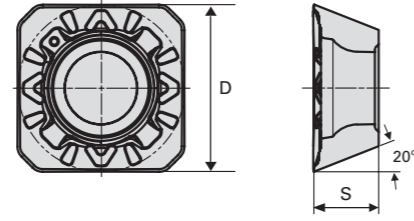
SEKR 1203 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.46	0.32	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.36	0.26	150	240	195	0.5	7.0	3.0
	High Alloys	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.3
M	Austenitic	190	0.15	0.32	0.24	190	250	220	0.5	7.0	3.0
K	Grey Cast Iron	140	0.18	0.46	0.32	150	240	195	0.5	7.0	3.0
S	Heat Resistant and Super Alloys	240	0.12	0.26	0.19	25	45	35	0.5	5.0	2.3
H	Hardened Materials	45HRc	0.10	0.26	0.18	40	80	60	0.5	2.5	1.5

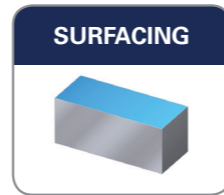
* D.O.C: Depth Of Cut



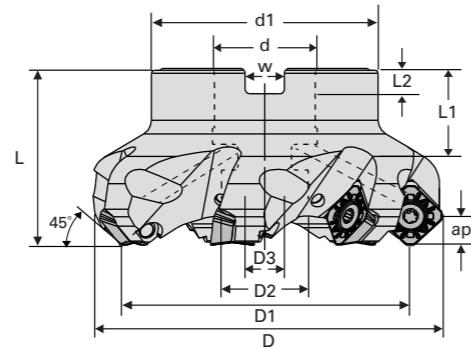
SEKT 1204



Designation	Grade	Dimensions			
		I	D	S	r
SEKT 1204AFTN	YG602	-	12.73	4.94	-



SEKT 1204 / Cutter



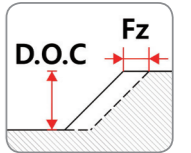
Designation	Dimensions												
	D	D1	D2	D3	d	d1	w	L	L1	L2	ap	z	Coolant
YGS145-40Z4C16-12	53.6	40	14	9	16	32	8.4	40	18	5.6	6	4	Y
YGS145-50Z5C22-12	63.4	50	18	11	22	48	10.4	40	20	6.3	6	5	Y
YGS145-63Z4C22-12	76.2	63	18	11	22	50	10.4	40	20	6.3	6	4	Y
YGS145-63Z6C22-12	76.2	63	18	11	22	50	10.4	40	20	6.3	6	6	Y
YGS145-80Z4C27-12	93.4	80	20	13.5	27	56	12.4	50	22	7	6	4	Y
YGS145-80Z7C27-12	93.4	80	20	13.5	27	56	12.4	50	22	7	6	7	Y
YGS145-100Z8C32-12	113.5	100	26.5	17.5	32	78	14.4	50	25	8	6	8	Y
YGS145-125Z10C40-12	138.5	125	32.5	22.5	40	90	16.4	63	29	9	6	10	Y
YGS145-160Z12C40-12	173.6	160	-	-	40	114	16.4	63	30	9	6	12	N

Insert	Spare parts	
	Screw	Wrench
SEKT1204	TP204510	TPWFTP20

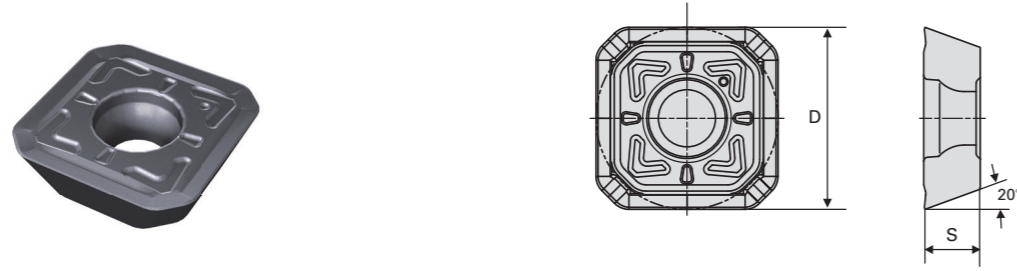
SEKT 1204 Recommended Cutting Condition

Group	Sub Group	Hardness (HB)	Cutting Conditions								
			Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.46	0.30	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.36	0.25	150	240	200	0.5	7.0	3.0
	High Alloys	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.0
M	Austenitic	190	0.15	0.32	0.25	190	250	220	0.5	7.0	3.0
K	Grey Cast Iron	140	0.18	0.46	0.30	150	240	200	0.5	7.0	3.0
S	Heat Resistant and Super Alloys	240	0.12	0.26	0.19	25	45	35	0.5	5.0	2.3
H	Hardened Materials	45HRc	0.10	0.26	0.18	40	80	60	0.5	2.5	1.5

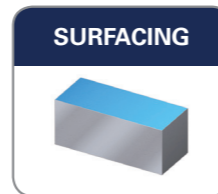
* D.O.C: Depth Of Cut



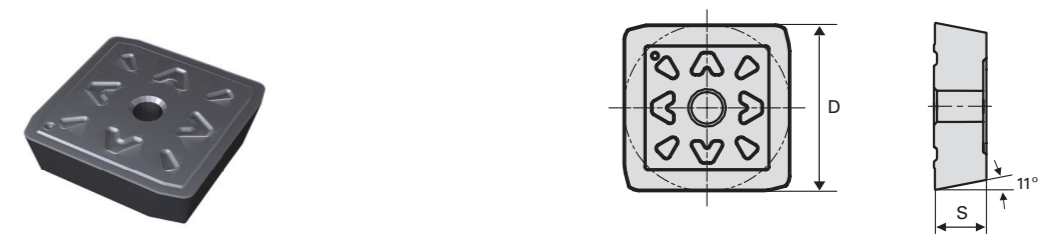
SEKT 12T3



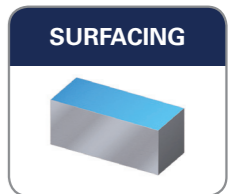
Designation	Grade	Dimensions			
		I	D	S	r
SEKT 12T3AGTN	YG602	-	13.40	3.97	-



SPKN 1203



Designation	Grade	Dimensions			
		I	D	S	r
SPKN 1203EDTR	YG602	-	12.70	3.18	-

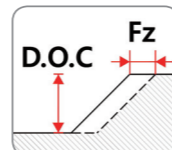


SEKT 12T3

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.46	0.30	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.36	0.25	150	240	200	0.5	7.0	3.0
	High Alloys	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.0
M	Austenitic	190	0.15	0.32	0.25	190	250	220	0.5	7.0	3.0
K	Grey Cast Iron	140	0.18	0.46	0.30	150	240	200	0.5	7.0	3.0
S	Heat Resistant and Super Alloys	240	0.12	0.26	0.19	25	45	35	0.5	5.0	2.3
H	Hardened Materials	45HRc	0.10	0.26	0.18	40	80	60	0.5	2.5	1.5

* D.O.C: Depth Of Cut

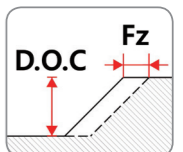


SPKN 1203

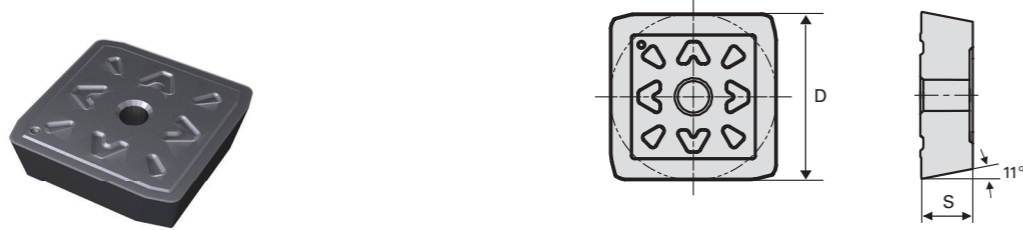
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.43	0.30	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.34	0.25	150	240	200	0.5	7.0	3.0
	High Alloys	220	0.12	0.30	0.20	90	150	120	0.5	5.0	2.5
K	Grey Cast Iron	140	0.18	0.43	0.30	150	240	200	0.5	7.0	3.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	40	80	60	0.5	2.5	1.5

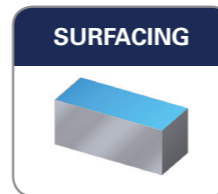
* D.O.C: Depth Of Cut



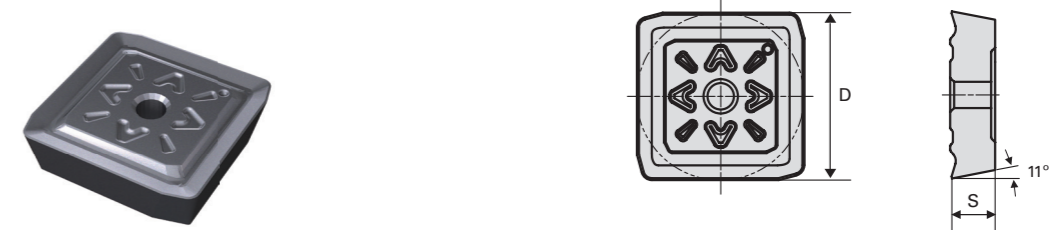
SPKN 1504



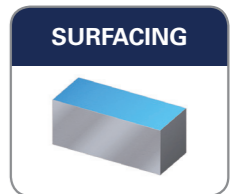
Designation	Grade	Dimensions			
		l	D	S	r
SPKN 1504EDTR	YG602	-	15.88	4.76	-



SPKR 1203



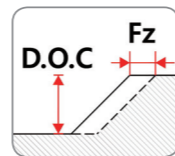
Designation	Grade	Dimensions			
		l	D	S	r
SPKR 1203EDTR	YG602	-	12.70	3.18	-



SPKN 1504 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.43	0.31	190	330	260	0.5	9.0	4.0
	Low Alloys	200	0.15	0.34	0.25	150	240	195	0.5	9.0	4.0
	High Alloys	220	0.12	0.30	0.21	90	150	120	0.5	6.5	3.0
K	Grey Cast Iron	140	0.18	0.43	0.31	150	240	195	0.5	9.0	4.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	40	80	60	0.5	3.2	2.0

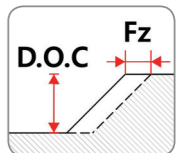
* D.O.C: Depth Of Cut



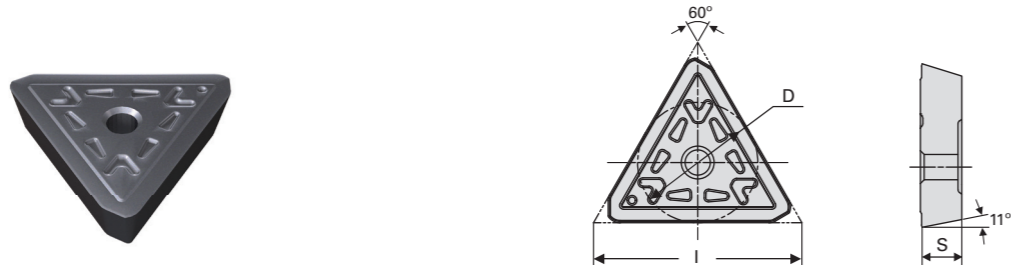
SPKR 1203 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.18	0.38	0.25	190	330	250	0.5	7.0	3.0
	Low Alloys	200	0.15	0.30	0.20	150	240	200	0.5	7.0	3.0
	High Alloys	220	0.12	0.26	0.17	90	150	120	0.5	5.0	2.5
M	Austenitic	190	0.15	0.26	0.20	190	250	220	0.5	7.0	3.0
K	Grey Cast Iron	140	0.18	0.38	0.30	150	240	200	0.5	7.0	3.0
S	Heat Resistant and Super Alloys	240	0.12	0.22	0.17	25	45	35	0.5	5.0	2.3
H	Hardened Materials	45HRc	0.10	0.22	0.16	40	80	60	0.5	2.5	1.5

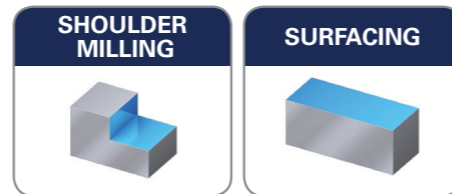
* D.O.C: Depth Of Cut



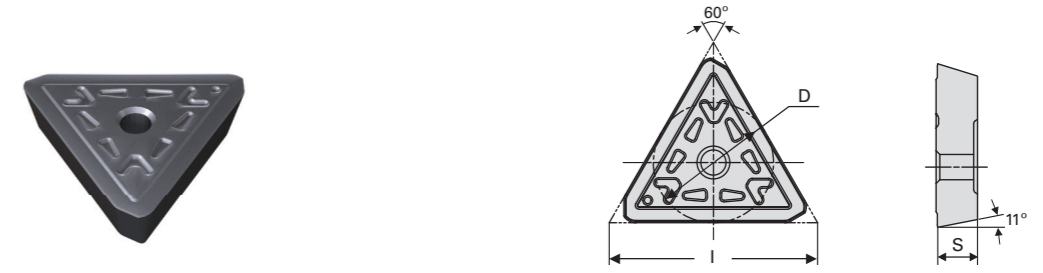
TPKN 1603



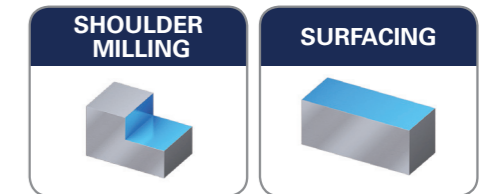
Designation	Grade	Dimensions			
		I	D	S	r
TPKN 1603PDTR	YG602	16.5	9.53	3.14	-



TPKN 2204



Designation	Grade	Dimensions			
		I	D	S	r
TPKN 2204PDTR	YG602	22.0	12.70	4.76	-

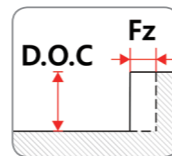


TPKN 1603

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.14	0.27	0.21	190	330	260	0.5	12.0	3.0
	Low Alloys	200	0.12	0.21	0.17	150	240	195	0.5	12.0	3.0
	High Alloys	220	0.10	0.19	0.15	90	150	120	0.5	8.6	2.5
K	Grey Cast Iron	140	0.14	0.27	0.21	150	240	195	0.5	12.0	3.0
H	Hardened Materials	45HRc	0.08	0.15	0.12	40	80	60	0.5	4.3	1.5

* D.O.C: Depth Of Cut

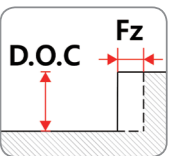


TPKN 2204

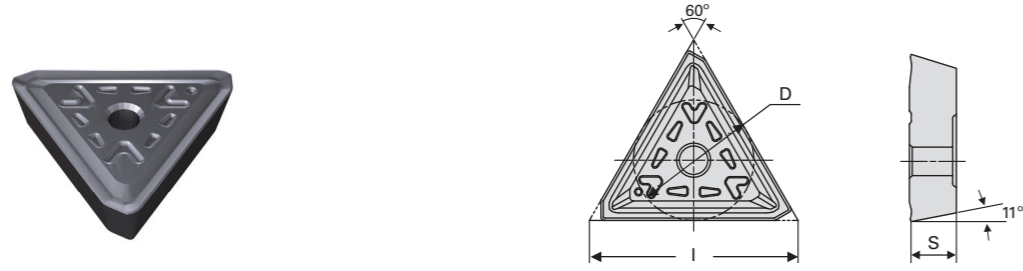
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.16	0.27	0.22	190	330	260	0.5	18.0	4.0
	Low Alloys	200	0.14	0.21	0.18	150	240	195	0.5	18.0	4.0
	High Alloys	220	0.11	0.19	0.15	90	150	120	0.5	12.9	3.0
K	Grey Cast Iron	140	0.16	0.27	0.22	150	240	195	0.5	18.0	4.0
H	Hardened Materials	45HRc	0.09	0.15	0.12	40	80	60	0.5	6.4	2.0

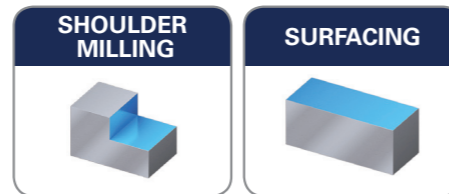
* D.O.C: Depth Of Cut



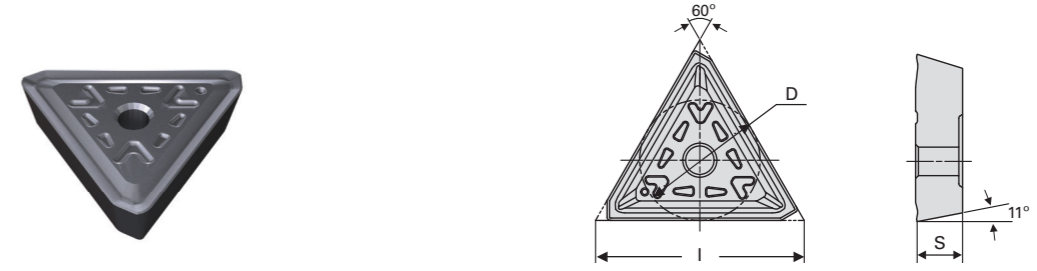
TPKR 1603



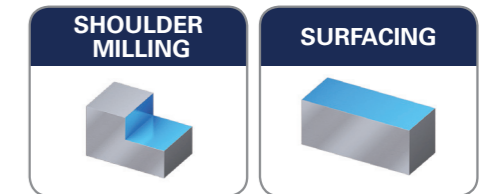
Designation	Grade	Dimensions			
		I	D	S	r
TPKR 1603PDTR	YG602	16.5	9.53	3.14	-



TPKR 2204



Designation	Grade	Dimensions			
		I	D	S	r
TPKR 2204PDTR	YG602	22.0	12.70	4.76	-

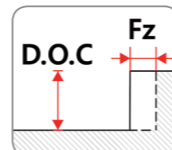


TPKR 1603

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.16	0.22	0.19	190	330	260	0.5	12.0	3.0
	Low Alloys	200	0.14	0.18	0.16	150	240	195	0.5	12.0	3.0
	High Alloys	220	0.11	0.15	0.13	90	150	120	0.5	8.6	2.5
M	Austenitic	190	0.14	0.15	0.15	190	250	220	0.5	12.0	3.0
K	Grey Cast Iron	140	0.16	0.22	0.19	150	240	195	0.5	12.0	3.0
S	Heat Resistant and Super Alloys	240	0.11	0.13	0.12	25	45	35	0.5	8.6	2.3
H	Hardened Materials	45HRc	0.09	0.13	0.11	40	80	60	0.5	3.4	1.5

* D.O.C: Depth Of Cut

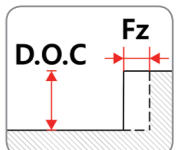


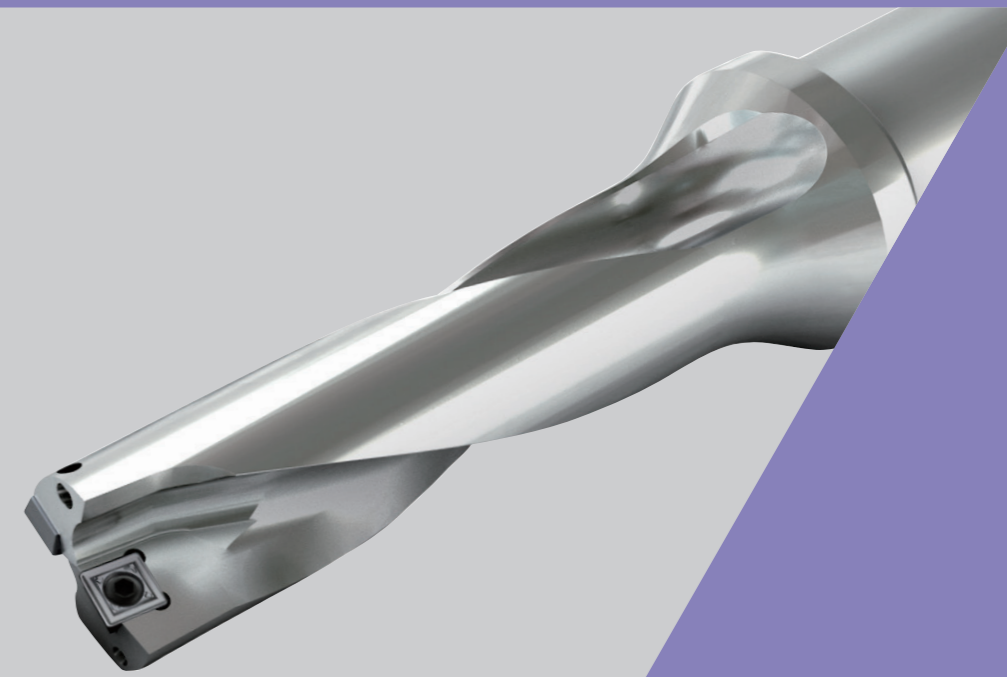
TPKR 2204

Recommended Cutting Condition

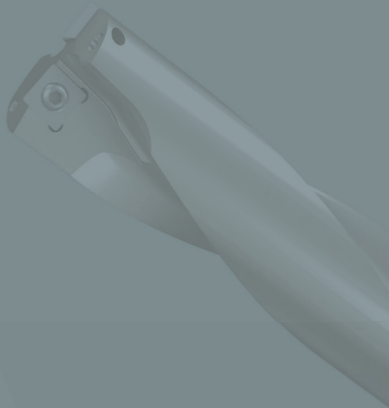
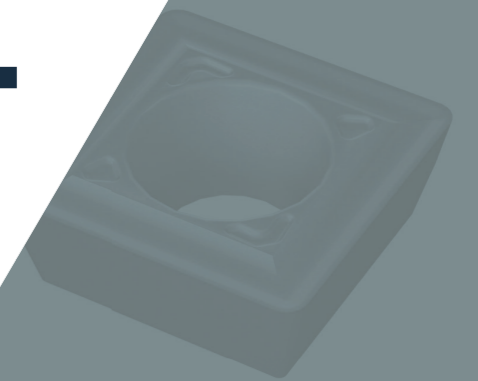
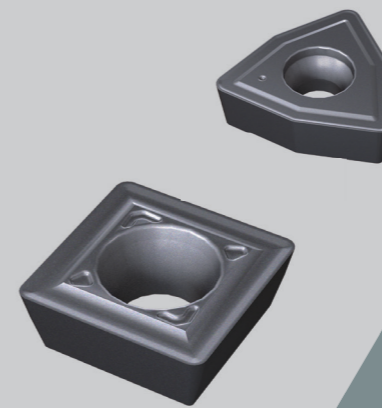
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/tooth)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.16	0.22	0.19	190	330	260	0.5	18.0	4.0
	Low Alloys	200	0.14	0.18	0.16	150	240	195	0.5	18.0	4.0
	High Alloys	220	0.11	0.15	0.13	90	150	120	0.5	12.9	3.0
M	Austenitic	190	0.14	0.15	0.15	190	250	220	0.5	18.0	4.0
K	Grey Cast Iron	140	0.16	0.22	0.19	150	240	195	0.5	18.0	4.0
S	Heat Resistant and Super Alloys	240	0.11	0.13	0.12	25	45	35	0.5	12.9	3.0
H	Hardened Materials	45HRc	0.09	0.13	0.11	40	80	60	0.5	6.4	2.0

* D.O.C: Depth Of Cut





YG DRILL
INDEXABLE CUTTING TOOLS
YG UNIVERSAL LINE

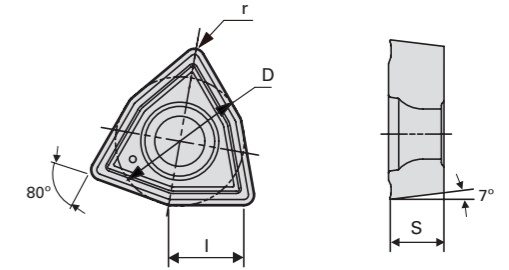


METRIC

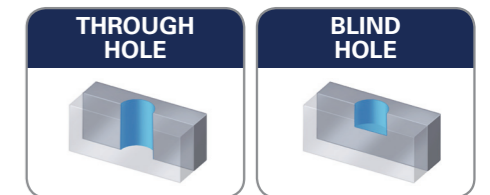
Designation	YG	S1	3	-	20	S	25	F	100	-	07
No.	①	②	③		④	⑤	⑥	⑦	⑧		⑨

No.	Meaning	Symbol	Explanation
①	Brand Name	YG	YG-1 Global
②	Insert Type	S1	S1 - SPMX...
③	Drilling Depth	3	3 - 3D, 5 - 5D...
④	Tool Diameter	20	Ø20, Ø30 ...
⑤	Tool Type (Interface)	S	Shank type
⑥	Shank Diameter	25	Ø25 - Shank diameter
⑦	Shank Type	F	Flange
		S	Straight
⑧	Tool Length	100	100mm, 150mm, 200mm...
⑨	Insert Size	07	05, 07, 09...

* Additional information(data) will be described in specific dimensions.

WCMX


Designation	Grade	Dimensions			
		I	D	S	r
WCMX 040208	YG602	3.33	6.35	2.38	0.8
WCMX 050308	YG602	3.39	7.94	3.18	0.8
WCMX 06T308	YG602	4.48	9.53	3.97	0.8
WCMX 080412	YG602	7.26	12.7	4.76	1.2



WCMX 0402
Recommended Cutting Condition

Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.05	0.10	0.08	180	270	225
	Low Alloys	200	0.05	0.10	0.08	120	230	175
	High Alloys	220	0.07	0.10	0.09	70	170	120
M	Austenitic	190	0.05	0.10	0.08	170	230	200
K	Grey Cast Iron	140	0.10	0.11	0.11	150	230	190

WCMX 06T3
Recommended Cutting Condition

Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.06	0.12	0.07	180	270	230
	Low Alloys	200	0.06	0.12	0.06	120	230	180
	High Alloys	220	0.08	0.12	0.10	70	170	120
M	Austenitic	190	0.06	0.12	0.09	170	230	200
K	Grey Cast Iron	140	0.12	0.13	0.13	150	230	190

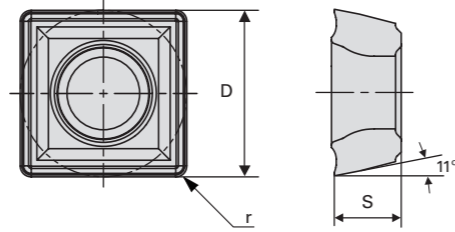
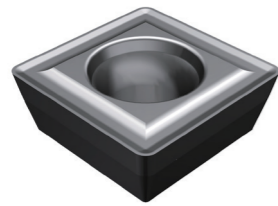
WCMX 0503
Recommended Cutting Condition

Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.06	0.11	0.09	180	270	225
	Low Alloys	200	0.06	0.11	0.09	120	230	175
	High Alloys	220	0.09	0.11	0.10	70	170	120
M	Austenitic	190	0.06	0.11	0.09	170	230	200
K	Grey Cast Iron	140	0.13	0.12	0.13	150	230	190

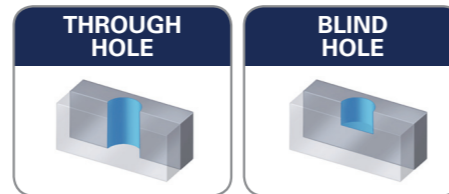
WCMX 0804
Recommended Cutting Condition

Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.06	0.16	0.11	180	270	225
	Low Alloys	200	0.06	0.16	0.11	120	230	175
	High Alloys	220	0.09	0.16	0.13	70	170	120
M	Austenitic	190	0.06	0.15	0.11	170	230	200
K	Grey Cast Iron	140	0.10	0.18	0.14	150	230	190

SPMX 0502



Designation	Grade	Dimensions			
		l	D	S	r
SPMX 050204	YG602	-	5.00	2.38	0.4

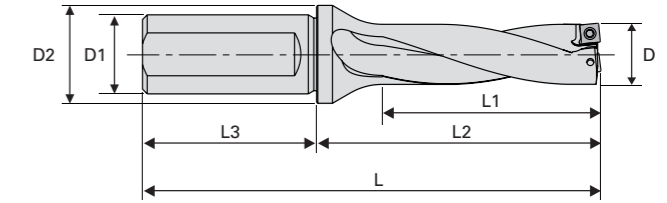
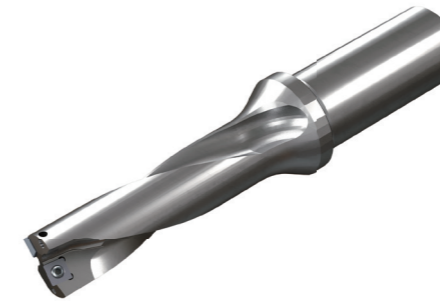


SPMX 0502

Recommended Cutting Condition

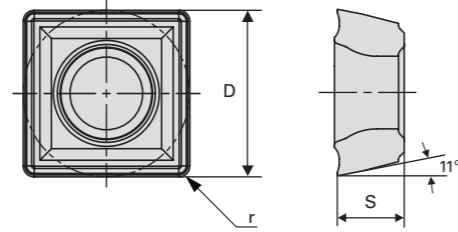
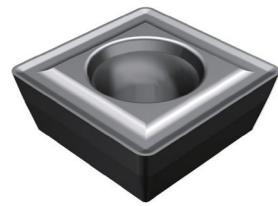
Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.04	0.09	0.07	180	270	225
	Low Alloys	200	0.04	0.09	0.07	120	230	175
	High Alloys	220	0.05	0.09	0.07	70	170	120
M	Austenitic	190	0.04	0.09	0.07	170	230	200
K	Grey Cast Iron	140	0.07	0.10	0.09	150	230	190

SPMX 0502 / Holder

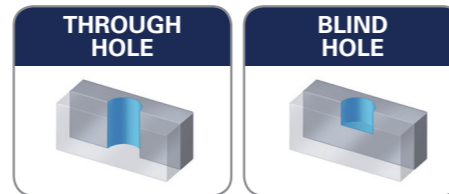


Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-13S20F094-05	2	13.0	20	25	26	44	50	94	TP072043	TPWFTP07	SPMX 050204
YGS12-14S20F096-05	2	14.0	20	25	28	46	50	96			
YGS12-15S20F098-05	2	15.0	20	25	30	48	50	98			
YGS13-13S20F107-05	2	13.0	20	25	39	57	50	107			
YGS13-14S20F110-05	2	14.0	20	25	42	60	50	110			
YGS13-15S20F113-05	2	15.0	20	25	45	63	50	113			
YGS15-13S20F133-05	2	13.0	20	25	65	83	50	133			
YGS15-14S20F138-05	2	14.0	20	25	70	88	50	138			
YGS15-15S20F143-05	2	15.0	20	25	75	93	50	143			

SPMX 0602



Designation	Grade	Dimensions			
		l	D	S	r
SPMX 060204	YG602	-	6.00	2.41	0.4

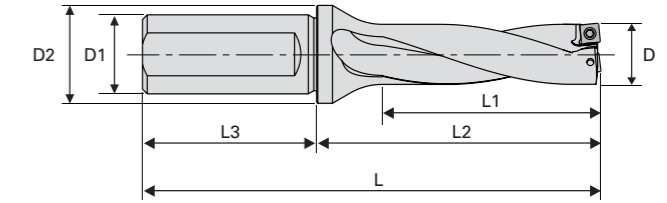
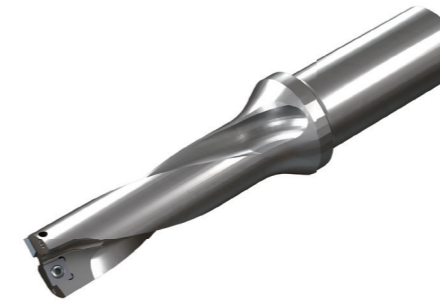


SPMX 0602

Recommended Cutting Condition

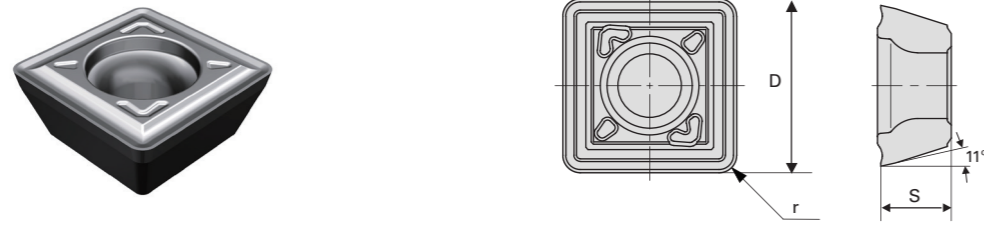
Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.04	0.09	0.07	180	270	225
	Low Alloys	200	0.04	0.09	0.07	120	230	175
	High Alloys	220	0.05	0.09	0.07	70	170	120
M	Austenitic	190	0.04	0.09	0.07	170	230	200
K	Grey Cast Iron	140	0.07	0.10	0.09	150	230	190

SPMX 0602 / Holder

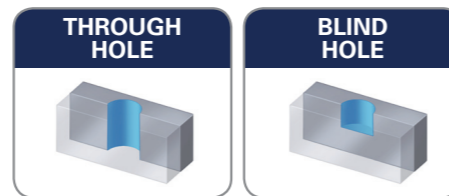


Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-16S25F109-06	2	16.0	25	32	32	53	56	109	TP072252	TPWFTP07	SPMX 060204
YGS12-17S25F111-06	2	17.0	25	32	34	55	56	111			
YGS12-18S25F113-06	2	18.0	25	32	36	57	56	113			
YGS12-19S25F115-06	2	19.0	25	32	38	59	56	115			
YGS12-20S25F118-06	2	20.0	25	32	40	62	56	118			
YGS12-21S25F120-06	2	21.0	25	32	42	64	56	120			
YGS13-16S25F125-06	2	16.0	25	32	48	69	56	125			
YGS13-17S25F128-06	2	17.0	25	32	51	72	56	128			
YGS13-18S25F131-06	2	18.0	25	32	54	75	56	131			
YGS13-19S25F134-06	2	19.0	25	32	57	78	56	134			
YGS13-20S25F138-06	2	20.0	25	32	60	82	56	138			
YGS13-21S25F144-06	2	21.0	25	32	63	85	56	141			
YGS15-16S25F157-06	2	16.0	25	32	80	101	56	157			
YGS15-17S25F162-06	2	17.0	25	32	85	106	56	162			
YGS15-18S25F167-06	2	18.0	25	32	90	111	56	167			
YGS15-19S25F172-06	2	19.0	25	32	95	116	56	172			
YGS15-20S25F178-06	2	20.0	25	32	100	122	56	178			
YGS15-21S25F183-06	2	21.0	25	32	105	127	56	183			

SPMX 07T3



Designation	Grade	Dimensions			
		l	D	S	r
SPMX 07T308	YG602	-	7.95	3.99	0.8

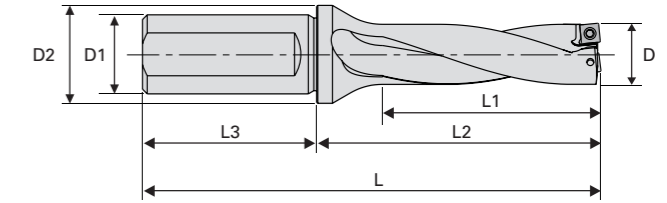
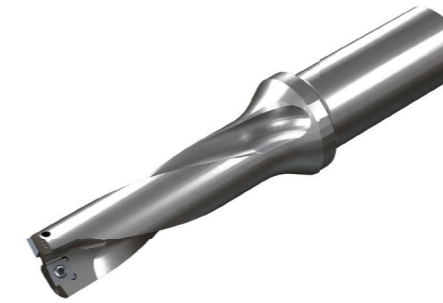


SPMX 07T3

Recommended Cutting Condition

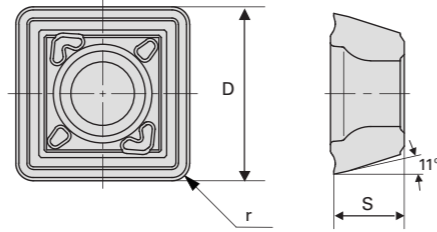
Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.05	0.10	0.08	180	270	220
	Low Alloys	200	0.05	0.10	0.08	120	230	180
	High Alloys	220	0.07	0.10	0.10	70	170	120
M	Austenitic	190	0.05	0.10	0.08	170	230	200
K	Grey Cast Iron	140	0.10	0.11	0.11	150	230	190

SPMX 07T3 / Holder

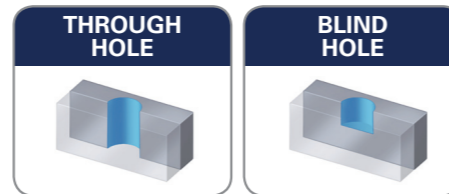


Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-22S32F134-07	2	22.0	32	45	44	74	60	134	TP082564	TPWFTP08	SPMX 07T308
YGS12-23S32F136-07	2	23.0	32	45	46	76	60	136			
YGS12-24S32F138-07	2	24.0	32	45	48	78	60	138			
YGS12-25S32F140-07	2	25.0	32	45	50	80	60	140			
YGS12-26S32F142-07	2	26.0	32	45	52	82	60	142			
YGS12-27S32F144-07	2	27.0	32	45	54	84	60	144			
YGS13-22S32F156-07	2	22.0	32	45	66	96	60	156			
YGS13-23S32F159-07	2	23.0	32	45	69	99	60	159			
YGS13-24S32F162-07	2	24.0	32	45	72	102	60	162			
YGS13-25S32F165-07	2	25.0	32	45	75	105	60	165			
YGS13-26S32F168-07	2	26.0	32	45	78	108	60	168			
YGS13-27S32F171-07	2	27.0	32	45	81	111	60	171			
YGS15-22S32F200-07	2	22.0	32	45	110	140	60	200			
YGS15-23S32F205-07	2	23.0	32	45	115	145	60	205			
YGS15-24S32F210-07	2	24.0	32	45	120	150	60	210			
YGS15-25S32F215-07	2	25.0	32	45	125	155	60	215			
YGS15-26S32F168-07	2	26.0	32	45	130	160	60	220			
YGS15-27S32F171-07	2	27.0	32	45	135	165	60	225			

SPMX 0904



Designation	Grade	Dimensions			
		l	D	S	r
SPMX 090408	YG602	-	9.80	4.30	0.8

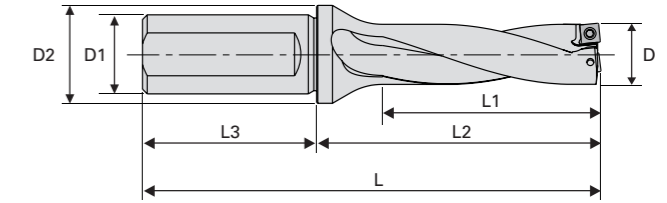
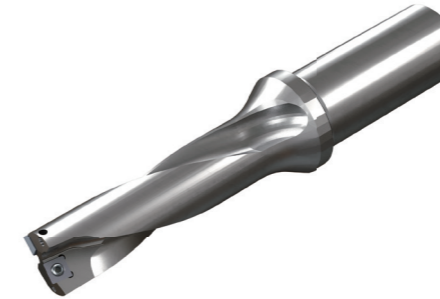


SPMX 0904

Recommended Cutting Condition

Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.06	0.11	0.09	180	270	225
	Low Alloys	200	0.06	0.11	0.09	120	230	175
	High Alloys	220	0.09	0.11	0.10	70	170	120
M	Austenitic	190	0.06	0.11	0.09	170	230	200
K	Grey Cast Iron	140	0.13	0.12	0.13	150	230	190

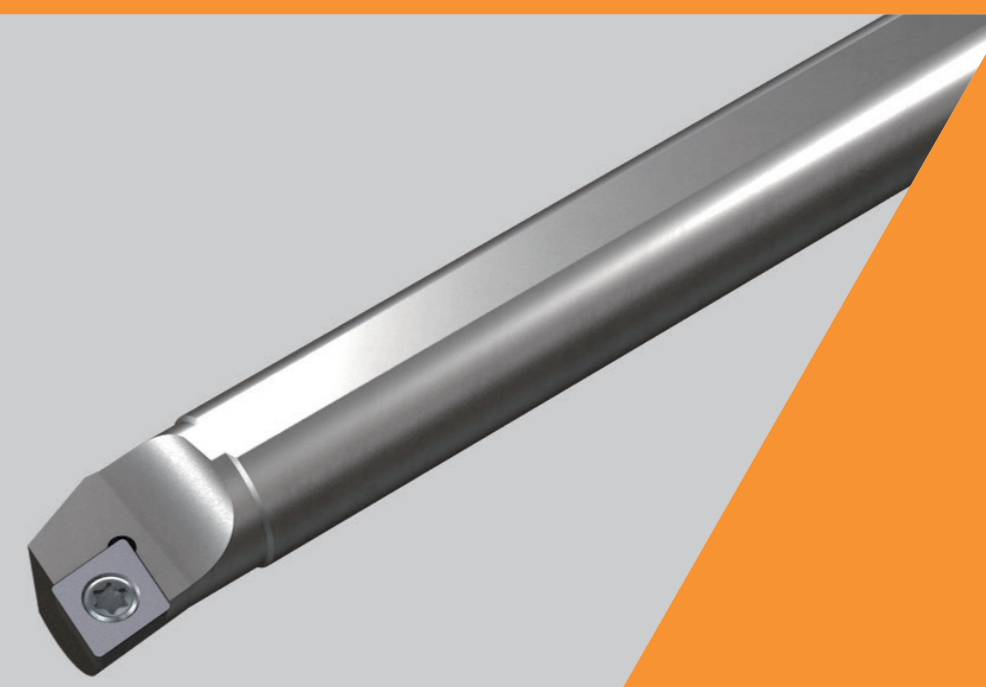
SPMX 0904 / Holder



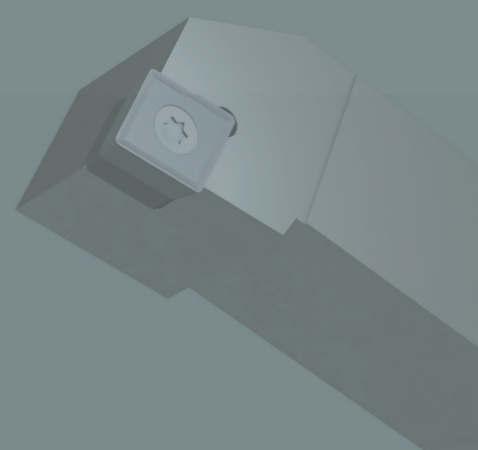
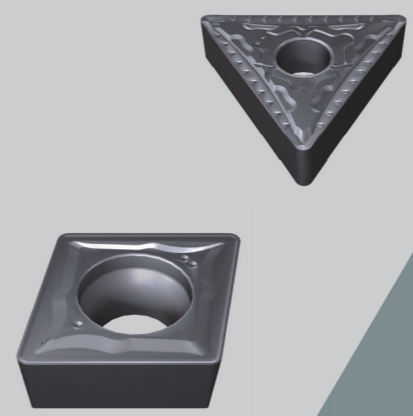
Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-28S32F146-09	2	28.0	32	45	56	86	60	146	TP153588	TPWFTP15	SPMX 090408
YGS12-29S32F148-09	2	29.0	32	45	58	88	60	148			
YGS12-30S32F151-09	2	30.0	32	55	60	91	60	151			
YGS12-31S32F153-09	2	31.0	32	55	62	93	60	153			
YGS12-32S32F155-09	2	32.0	32	55	64	95	60	155			
YGS12-33S32F157-09	2	33.0	32	55	66	97	60	157			
YGS13-28S32F174-09	2	28.0	32	45	84	114	60	174			
YGS13-29S32F177-09	2	29.0	32	45	87	117	60	177			
YGS13-30S32F181-09	2	30.0	32	55	90	121	60	181			
YGS13-31S32F184-09	2	31.0	32	55	93	124	60	184			
YGS13-32S32F187-09	2	32.0	32	55	96	127	60	187			
YGS13-33S32F190-09	2	33.0	32	55	99	130	60	190			
YGS15-28S32F230-09	2	28.0	32	45	140	170	60	230			
YGS15-29S32F235-09	2	29.0	32	45	145	175	60	235			
YGS15-30S32F241-09	2	30.0	32	55	150	181	60	241			
YGS15-31S32F246-09	2	31.0	32	55	155	186	60	246			
YGS15-32S32F251-09	2	32.0	32	55	160	191	60	251			
YGS15-33S32F256-09	2	33.0	32	55	165	196	60	256			



YG DRILL

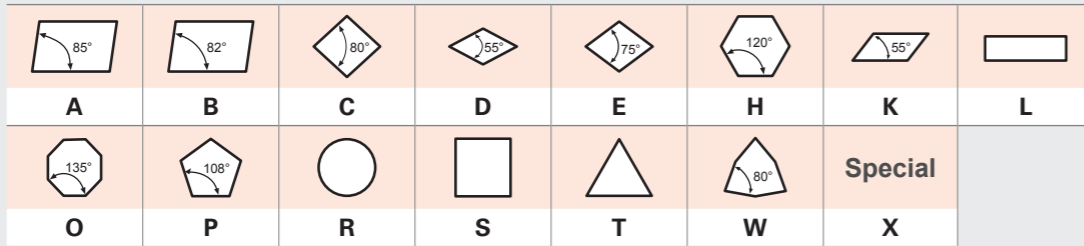


YG TURN
INDEXABLE CUTTING TOOLS
YG UNIVERSAL LINE

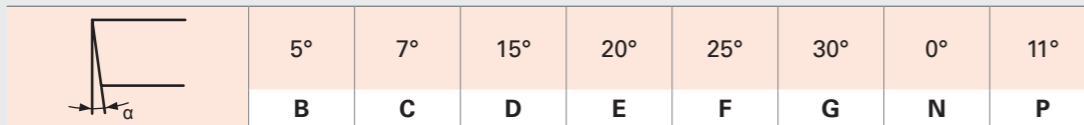




1 Insert Shape

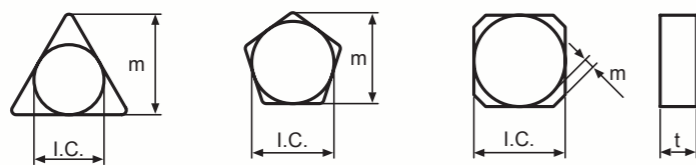


2 Clearance Angle

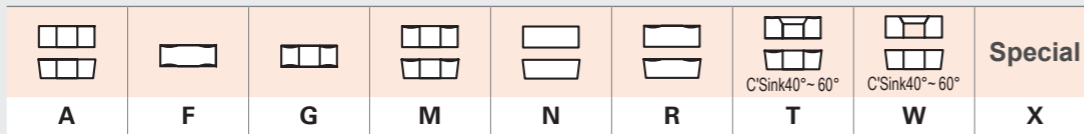


3 Tolerance

	Tolerance		I.C.	I.C. Size					
	m	t		6.35	9.525	12.7	15.875	19.05	25.4
A	± 0.005	± 0.025	± 0.025	●	●	●	●	●	●
C	± 0.013	± 0.025	± 0.025	●	●	●	●	●	●
E	± 0.025	± 0.025	± 0.025	●	●	●	●	●	●
F	± 0.005	± 0.025	± 0.013	●	●	●	●	●	●
G	± 0.025	± 0.13	± 0.025	●	●	●	●	●	●
H	± 0.013	± 0.025	± 0.013	●	●	●	●	●	●
K	± 0.013	± 0.025	± 0.05	●	●				
			± 0.08		●				
			± 0.10			●	●		
			± 0.13					●	●
M	± 0.13	± 0.13	± 0.05	●	●				
			± 0.08		●				
			± 0.10			●	●		
			± 0.13					●	●



4 Cross Section Shape



5 Cutting Edge Length

I.C. Size	C	D	S	R	T	V	W	H
Metric								
3.97	03	04	03	03	06		02	
4.76	04	05	04	04	08	08		
5.56	05	06	05	05	09	09	03	
6.35	06	07	06	06	11	11	04	
7.94	08	09	07	07	13	13	05	
9.525	09	11	09	09	16	16	06	
12.7	12	15	12	12	22	22	08	05
15.875	16	19	15	15	27	27	10	09
19.05	19	23	19	19	33	33	13	10
25.4	25	31	25	25	44	44	17	

*() symbol for small size insert

6 Thickness

Symbol(t)	mm
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
09	9.52

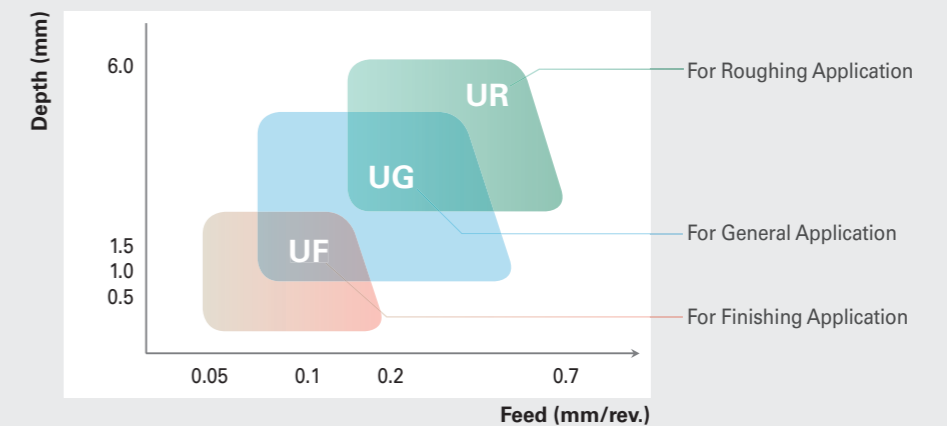
7 Nose Radius

Symbol(r)	mm
02	0.2
04	0.4
08	0.8
10	1.0
12	1.2
16	1.6
20	2.0

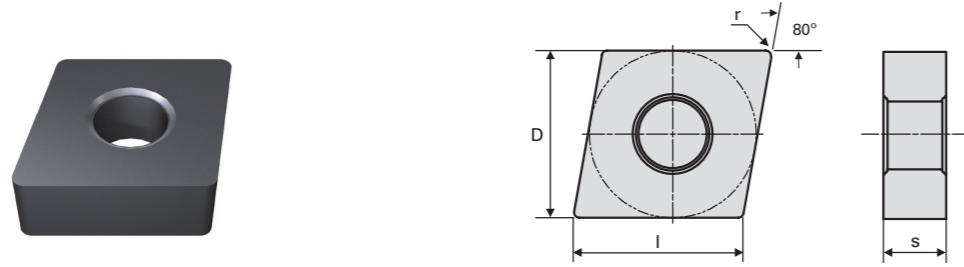
8 Chip Breaker

For Application

YG Turn Chip Breakers Application area

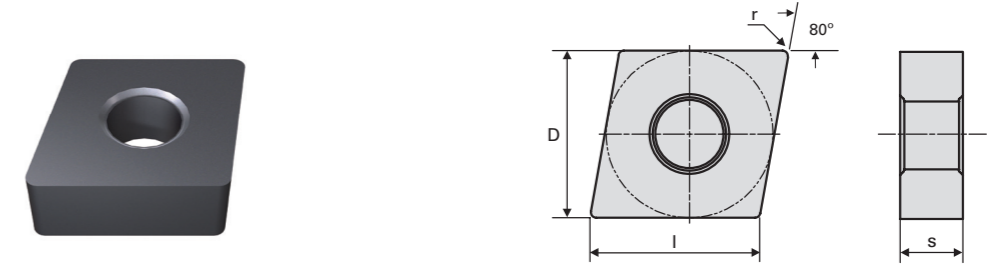


CNMA 1204



Designation	Grade	Dimensions			
		L	D	s	r
CNMA 120408-UC	YG1001	12.08	12.70	4.76	0.8
CNMA 120412-UC	YG1001	11.66	12.70	4.76	1.2

CNMA 1606



Designation	Grade	Dimensions			
		L	D	s	r
CNMA 160612-UC	YG1001	16.12	15.88	6.35	1.2

CNMA 120408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.5	5.0	3.00

CNMA 160612

Recommended Cutting Condition

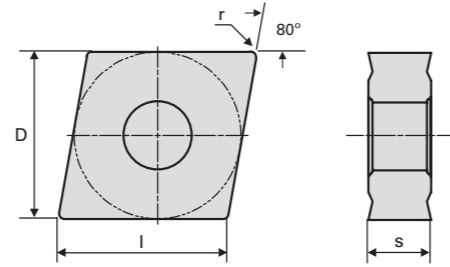
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.15	0.70	0.40	130	390	260	2.0	8.0	3.0

CNMA 120412

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.81	0.51	130	390	260	0.7	6.0	4.00

CNMG 1204



Designation	Grade	Dimensions			
		L	D	s	r
CNMG 120404-UF	YG801	12.48	12.70	4.76	0.4
CNMG 120408-UG	YG801	12.08	12.70	4.76	0.8
CNMG 120412-UR	YG801	11.66	12.70	4.76	1.2

CNMG 120408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.30	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.25	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.35	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	50	38	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

CNMG 120404

Recommended Cutting Condition

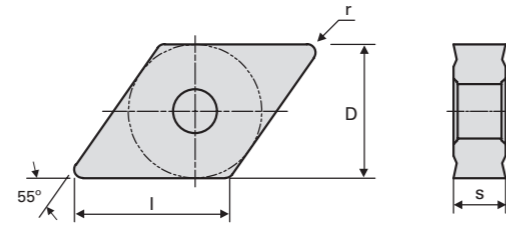
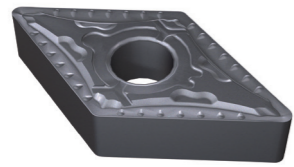
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

CNMG 120412

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.26	0.68	0.47	180	330	250	0.7	6.0	4.0
	Low Alloys	200	0.26	0.61	0.44	120	280	200	0.7	6.0	4.0
	High Alloys	220	0.23	0.54	0.39	70	190	130	0.7	4.8	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	220	0.7	6.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.51	170	250	210	0.7	6.0	4.0
S	Heat Resistant and Super Alloys	240	0.25	0.47	0.36	25	45	35	0.7	3.6	2.7
H	Hardened Materials	45HRc	0.14	0.41	0.28	50	100	75	0.7	3.0	2.7

DNMG 1504



Designation	Grade	Dimensions			
		L	D	s	r
DNMG 150404-UF	YG801	15.14	12.70	4.76	0.4
DNMG 150408-UG	YG801	14.77	12.70	4.76	0.8

DNMG 150404

Recommended Cutting Condition

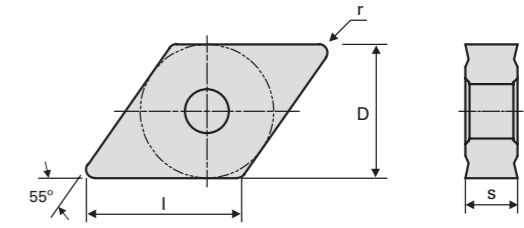
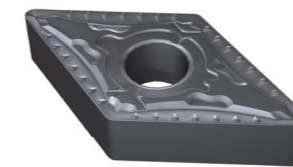
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

DNMG 150408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

DNMG 1506



Designation	Grade	Dimensions			
		L	D	s	r
DNMG 150604-UF	YG801	15.14	12.70	6.35	0.4
DNMG 150608-UG	YG801	14.77	12.70	6.35	0.8
DNMG 150612-UR	YG801	14.40	12.70	6.35	1.2

DNMG 150604

Recommended Cutting Condition

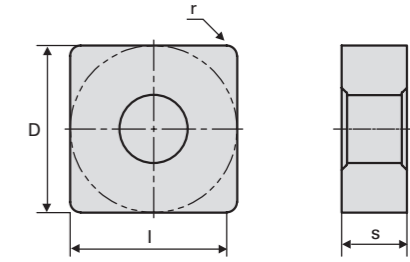
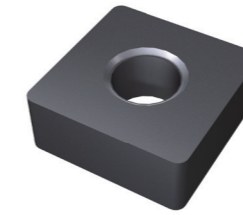
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.19	180	330	290	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.14	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.13	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	240	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.18	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	40	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.10	50	100	75	0.2	2.0	1.5

DNMG 150608
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

DNMG 150612
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.26	0.68	0.47	180	330	250	0.7	6.0	4.0
	Low Alloys	200	0.26	0.61	0.44	120	280	200	0.7	6.0	4.0
	High Alloys	220	0.23	0.54	0.39	70	190	130	0.7	4.8	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	220	0.7	6.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.51	170	250	210	0.7	6.0	4.0
S	Heat Resistant and Super Alloys	240	0.25	0.47	0.36	25	45	35	0.7	3.6	2.7
H	Hardened Materials	45HRc	0.14	0.41	0.28	50	100	75	0.7	3.0	2.7

SNMA 1204


Designation	Grade	Dimensions			
		I	D	s	r
SNMA 120408-UC	YG1001	11.90	12.70	4.76	0.8
SNMA 120412-UC	YG1001	11.50	12.70	4.76	1.2

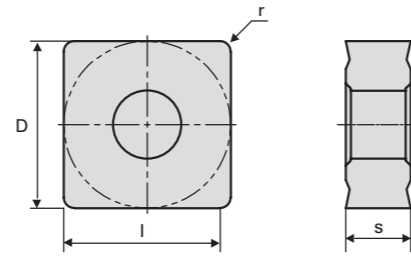
SNMA 120408
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.15	0.70	0.35	130	390	260	1.0	6.0	2.50

SNMA 120412
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.80	0.40	130	390	260	1.5	6.0	3.00

SNMG 1204



Designation	Grade	Dimensions			
		I	D	s	r
SNMG 120404-UF	YG801	12.30	12.70	4.76	0.4
SNMG 120408-UG	YG801	11.90	12.70	4.76	0.8
SNMG 120412-UR	YG801	11.50	12.70	4.76	1.2

SNMG 120408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.30	0.70	0.50	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.30	0.63	0.47	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.25	0.56	0.40	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.28	0.56	0.42	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.21	0.84	0.53	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.28	0.49	0.39	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.16	0.42	0.29	50	100	75	0.5	2.5	2.0

SNMG 120404

Recommended Cutting Condition

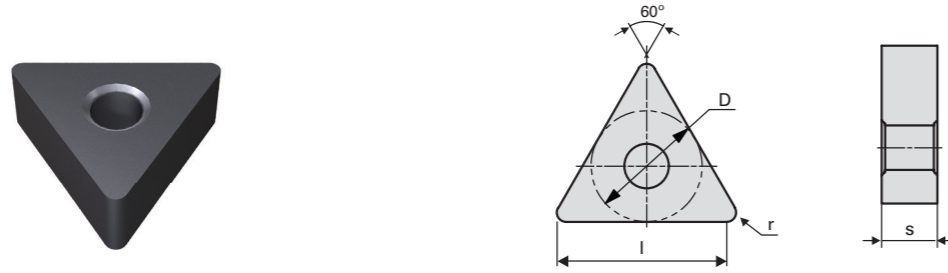
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.30	0.70	0.55	180	330	250	0.2	4.0	2.1
	Low Alloys	200	0.30	0.63	0.47	120	280	200	0.2	4.0	2.1
	High Alloys	220	0.25	0.56	0.40	70	190	130	0.2	3.0	1.6
M	Austenitic	190	0.28	0.56	0.42	170	270	220	0.2	4.0	2.1
K	Grey Cast Iron	140	0.21	0.84	0.53	170	250	210	0.2	4.0	2.1
S	Heat Resistant and Super Alloys	240	0.28	0.49	0.39	25	45	35	0.2	2.0	1.1
H	Hardened Materials	45HRc	0.16	0.42	0.29	50	100	75	0.2	2.0	1.1

SNMG 120412

Recommended Cutting Condition

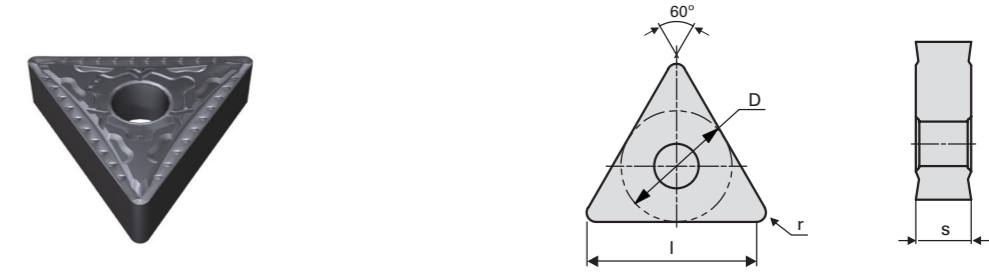
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.37	0.95	0.65	180	330	250	0.7	6.0	4.0
	Low Alloys	200	0.37	0.86	0.60	120	280	200	0.7	6.0	4.0
	High Alloys	220	0.32	0.76	0.54	70	190	130	0.7	4.8	3.4
M	Austenitic	190	0.35	0.76	0.55	170	270	220	0.7	6.0	4.0
K	Grey Cast Iron	140	0.30	1.14	0.70	170	250	210	0.7	6.0	4.0
S	Heat Resistant and Super Alloys	240	0.35	0.67	0.51	25	45	35	0.7	3.6	2.7
H	Hardened Materials	45HRc	0.19	0.57	0.38	50	100	75	0.7	3.0	2.7

TNMA 1604



Designation	Grade	Dimensions			
		L	D	s	r
TNMA 160408-UC	YG1001	14.53	9.53	4.76	0.8
TNMA 160412-UC	YG1001	13.54	9.53	4.76	1.2

TNMG 1604



Designation	Grade	Dimensions			
		L	D	s	r
TNMG 160404-UF	YG801	15.51	9.53	4.76	0.4
TNMG 160408-UG	YG801	14.53	9.53	4.76	0.8
TNMG 160412-UR	YG801	13.54	9.53	4.76	1.2

TNMA 160408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.15	0.40	0.35	130	390	260	1.0	4.0	2.50

TNMA 160412

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.50	0.40	130	390	260	1.5	4.5	3.00

TNMG 160404

Recommended Cutting Condition

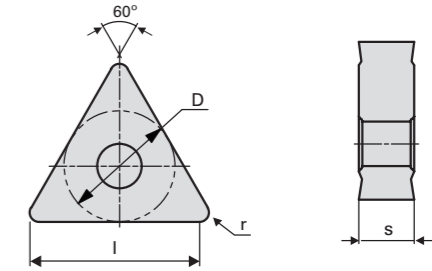
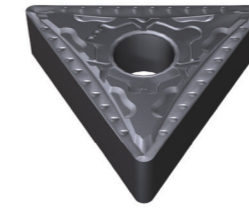
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

TNMG 160408
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

TNMG 160412
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.26	0.68	0.47	180	330	250	0.7	5.0	4.0
	Low Alloys	200	0.26	0.61	0.44	120	280	200	0.7	5.0	4.0
	High Alloys	220	0.23	0.54	0.39	70	190	130	0.7	4.0	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	220	0.7	5.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.51	170	250	210	0.7	5.0	4.0
S	Heat Resistant and Super Alloys	240	0.25	0.47	0.36	25	45	35	0.7	3.0	2.7
H	Hardened Materials	45HRc	0.14	0.41	0.28	50	100	75	0.7	2.5	2.2

TNMG 2204


Designation	Grade	Dimensions			
		I	D	s	r
TNMG 220404-UF	YG801	21.01	12.70	4.76	0.4
TNMG 220408-UG	YG801	20.03	12.70	4.76	0.8
TNMG 220412-UR	YG801	19.04	12.70	4.76	1.2

TNMG 220404
Recommended Cutting Condition

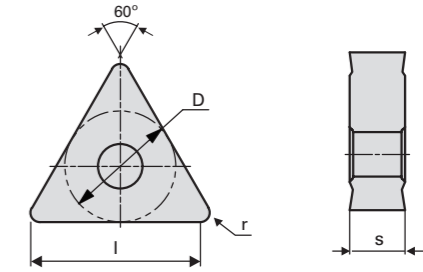
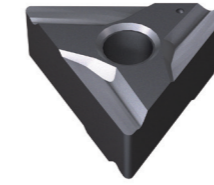
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

TNMG 220408
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	7.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	7.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	5.6	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	7.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	190	0.5	7.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	4.2	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	3.5	2.0

TNMG 220412
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.26	0.68	0.45	180	330	250	0.7	7.0	4.0
	Low Alloys	200	0.26	0.61	0.40	120	280	200	0.7	7.0	4.0
	High Alloys	220	0.23	0.54	0.39	70	190	130	0.7	5.6	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	180	0.7	7.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.50	170	250	190	0.7	7.0	4.0
S	Heat Resistant and Super Alloys	240	0.25	0.47	0.36	25	45	35	0.7	4.2	2.7
H	Hardened Materials	45HRc	0.14	0.41	0.28	50	100	75	0.7	3.5	2.2

TNUX 1604


Designation	Grade	Dimensions			
		I	D	s	r
TNUX 160404 L	YG801	15.51	9.53	4.76	0.4
TNUX 160408 L	YG801	14.53	9.53	4.76	0.8
TNUX 160404 R	YG801	15.51	9.53	4.76	0.4
TNUX 160408 R	YG801	14.53	9.53	4.76	0.8

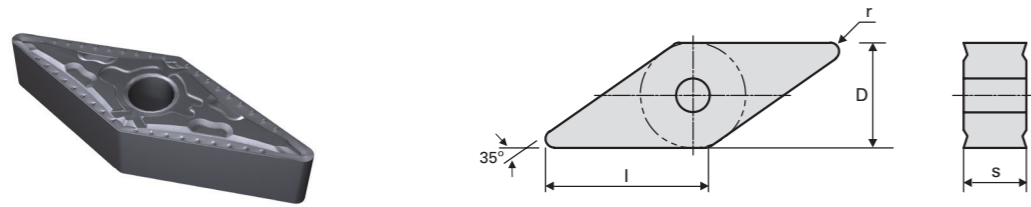
TNUX 160404
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

TNUX 160408
Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

VNMG 1604



Designation	Grade	Dimensions			
		L	D	s	r
VNMG 160404-UF	YG801	15.62	9.53	4.76	0.4
VNMG 160408-UG	YG801	14.62	9.53	4.76	0.8
VNMG 160412-UR	YG801	13.62	9.53	4.76	1.2

VNMG 160408 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.19	0.40	0.30	180	330	250	0.5	4.0	2.7
	Low Alloys	200	0.19	0.36	0.28	120	280	200	0.5	4.0	2.7
	High Alloys	220	0.16	0.32	0.24	70	190	130	0.5	3.2	2.3
M	Austenitic	190	0.18	0.32	0.25	170	270	200	0.5	4.0	2.7
K	Grey Cast Iron	140	0.14	0.48	0.31	170	250	210	0.5	4.0	2.7
S	Heat Resistant and Super Alloys	240	0.18	0.28	0.23	25	45	35	0.5	2.4	2.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	50	100	75	0.5	2.0	1.8

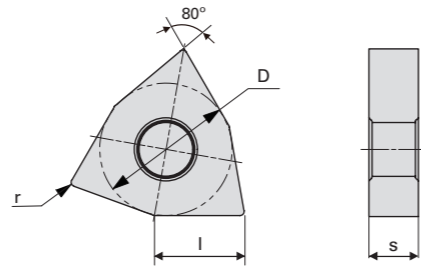
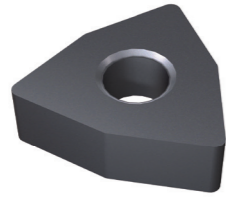
VNMG 160404 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

VNMG 160412 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.19	0.40	0.30	180	330	250	1.5	4.0	2.7
	Low Alloys	200	0.19	0.36	0.28	120	280	200	1.5	4.0	2.7
	High Alloys	220	0.16	0.32	0.24	70	190	130	1.5	3.2	2.3
M	Austenitic	190	0.18	0.32	0.25	170	270	200	1.5	4.0	2.7
K	Grey Cast Iron	140	0.14	0.48	0.31	170	250	210	1.5	4.0	2.7
S	Heat Resistant and Super Alloys	240	0.18	0.28	0.23	25	45	35	1.5	2.4	2.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	50	100	75	1.5	2.0	1.8

WNMA 0804



Designation	Grade	Dimensions			
		L	D	s	r
WNMA 080404-UC	YG1001	8.21	12.70	4.76	0.4
WNMA 080408-UC	YG1001	7.73	12.70	4.76	0.8
WNMA 080412-UC	YG1001	7.26	12.70	4.76	1.2

WNMA 080404 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.30	130	390	260	0.7	6.0	2.00

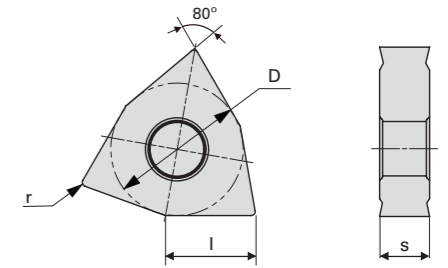
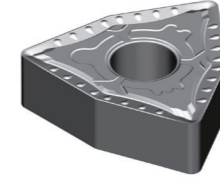
WNMA 080408 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.7	6.0	3.35

WNMA 080412 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	1.5	6.0	3.75

WNMG 0604



Designation	Grade	Dimensions			
		L	D	s	r
WNMG 060404-UF	YG801	6.04	9.53	4.76	0.4
WNMG 060408-UG	YG801	5.56	9.53	4.76	0.8

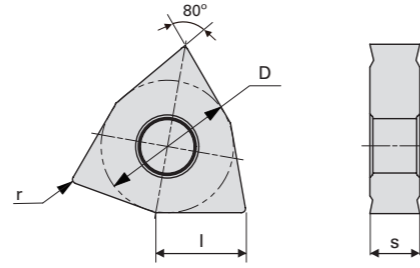
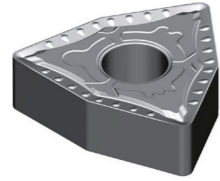
WNMG 060404 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

WNMG 060408 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	2.5	2.2
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	2.5	2.2
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	2.0	1.8
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	2.5	2.2
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	2.5	2.2
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	30	0.5	1.5	1.5
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	70	0.5	1.6	1.5

WNMG 0804



Designation	Grade	Dimensions			
		I	D	s	r
WNMG 080404-UF	YG801	8.21	12.70	4.76	0.4
WNMG 080408-UG	YG801	7.73	12.70	4.76	0.8
WNMG 080412-UR	YG801	7.26	12.70	4.76	1.2

WNMG 080408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	3.5	2.4
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	3.5	2.4
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	2.8	2.0
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	3.5	2.4
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	3.5	2.4
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	30	0.5	2.1	1.6
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	70	0.5	1.8	1.6

WNMG 080404

Recommended Cutting Condition

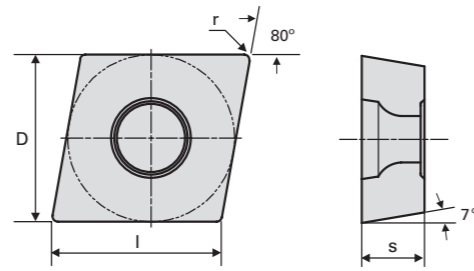
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

WNMG 080412

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.25	0.65	0.45	180	330	250	0.7	3.5	3.0
	Low Alloys	200	0.25	0.59	0.40	120	280	200	0.7	3.5	3.0
	High Alloys	220	0.22	0.52	0.35	70	190	130	0.7	2.8	2.5
M	Austenitic	190	0.24	0.52	0.35	170	270	200	0.7	3.5	3.0
K	Grey Cast Iron	140	0.18	0.78	0.45	170	250	210	0.7	3.5	3.0
S	Heat Resistant and Super Alloys	240	0.24	0.46	0.35	25	45	30	0.7	2.1	2.0
H	Hardened Materials	45HRc	0.13	0.39	0.25	50	100	70	0.7	1.8	2.0

CCMT 0602



Designation	Grade	Dimensions			
		L	D	s	r
CCMT 060204-UF	YG801	5.94	6.35	2.38	0.4
CCMT 060208-UG	YG801	5.44	6.35	2.38	0.8

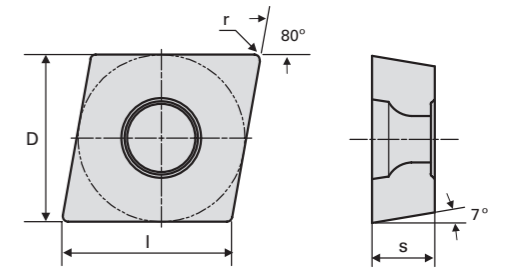
CCMT 060204 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.08	0.20	0.14	180	330	300	0.2	2.1	1.0
	Low Alloys	200	0.08	0.17	0.13	120	280	250	0.2	1.8	1.0
	High Alloys	220	0.07	0.15	0.11	70	190	170	0.2	1.8	1.0
M	Austenitic	190	0.08	0.15	0.12	170	270	250	0.2	1.8	1.0
K	Grey Cast Iron	140	0.06	0.17	0.12	170	250	240	0.2	2.1	1.0
S	Heat Resistant and Super Alloys	240	0.08	0.13	0.07	25	50	35	0.2	1.4	1.0
H	Hardened Materials	45HRc	0.04	0.10	0.07	50	100	75	0.2	1.3	0.8

CCMT 060208 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.08	0.20	0.14	180	330	250	0.4	2.1	1.2
	Low Alloys	200	0.08	0.17	0.13	120	280	200	0.4	1.8	1.2
	High Alloys	220	0.07	0.15	0.11	70	190	130	0.4	1.8	1.2
M	Austenitic	190	0.08	0.15	0.12	170	270	200	0.4	1.8	1.2
K	Grey Cast Iron	140	0.06	0.17	0.12	170	250	210	0.4	2.1	1.2
S	Heat Resistant and Super Alloys	240	0.08	0.13	0.07	25	50	30	0.4	1.4	1.2
H	Hardened Materials	45HRc	0.04	0.10	0.07	50	100	75	0.4	1.3	0.8

CCMT 09T3



Designation	Grade	Dimensions			
		L	D	s	r
CCMT 09T304-UF	YG801	9.25	9.53	3.97	0.4
CCMT 09T308-UG	YG801	8.85	9.53	3.97	0.8

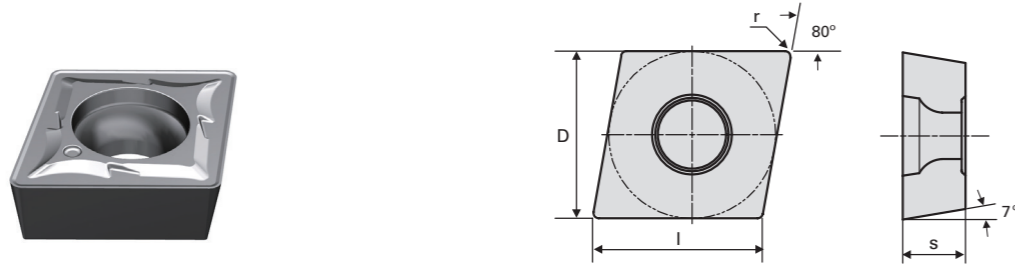
CCMT 09T304 Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

CCMT 09T308 Recommended Cutting Condition

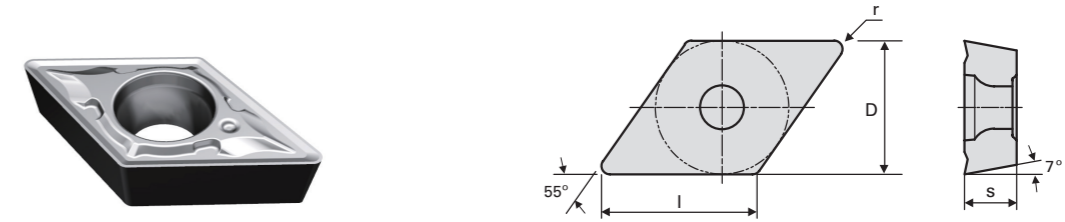
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

CCMT 1204



Designation	Grade	Dimensions			
		L	D	s	r
CCMT 120408-UG	YG801	11.88	12.70	4.76	0.8

DCMT 0702



Designation	Grade	Dimensions			
		L	D	s	r
DCMT 070204-UF	YG801	7.38	6.35	2.38	0.4

CCMT 120408

Recommended Cutting Condition

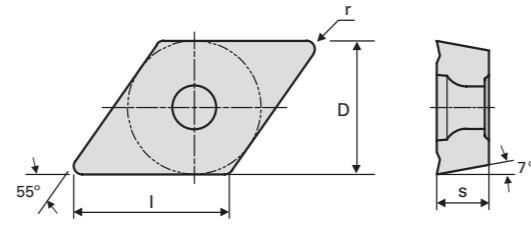
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

DCMT 070204

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.08	0.20	0.14	180	330	300	0.2	2.1	1.0
	Low Alloys	200	0.08	0.17	0.13	120	280	250	0.2	1.8	1.0
	High Alloys	220	0.07	0.15	0.11	70	190	170	0.2	1.8	1.0
M	Austenitic	190	0.08	0.15	0.12	170	270	250	0.2	1.8	1.0
K	Grey Cast Iron	140	0.06	0.17	0.12	170	250	240	0.2	2.1	1.0
S	Heat Resistant and Super Alloys	240	0.08	0.13	0.11	25	50	35	0.2	1.4	1.0
H	Hardened Materials	45HRc	0.04	0.10	0.07	50	100	75	0.2	1.3	0.8

DCMT 11T3



Designation	Grade	Dimensions			
		l	D	s	r
DCMT 11T304-UF	YG801	11.26	9.53	3.97	0.4
DCMT 11T308-UG	YG801	10.89	9.53	3.97	0.8

DCMT 11T304

Recommended Cutting Condition

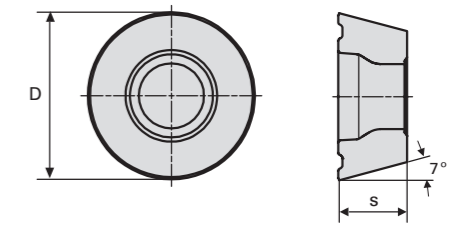
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.12	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.15	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.15	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

DCMT 11T308

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	4.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	4.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	3.2	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	4.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	4.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	2.4	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.0	2.0

RCMT 0602



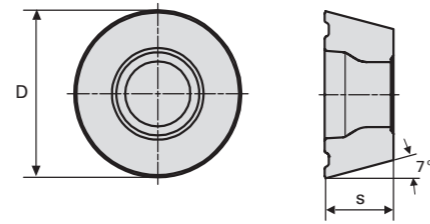
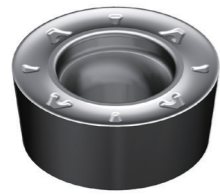
Designation	Grade	Dimensions			
		l	D	s	r
RCMT 0602M0	YG801	-	6.00	2.38	-

RCMT 0602M0

Recommended Cutting Condition

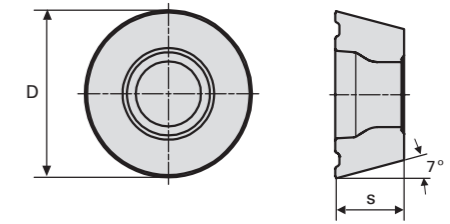
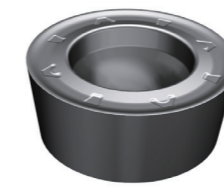
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.0	1.0
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.0	1.0
	High Alloys	220	0.13	0.35	0.28	70	190	130	0.5	2.0	1.0
M	Austenitic	190	0.14	0.35	0.30	170	270	220	0.5	2.0	1.0
K	Grey Cast Iron	140	0.11	0.45	0.33	170	250	210	0.5	2.0	1.0
S	Heat Resistant and Super Alloys	240	0.13	0.30	0.25	25	50	38	0.5	1.5	1.0
H	Hardened Materials	45HRc	0.05	0.22	0.14	50	100	75	0.5	1.2	0.9

RCMT 0803



Designation	Grade	Dimensions			
		l	D	s	r
RCMT 0803M0	YG801	-	8.00	3.18	-

RCMT 10T3



Designation	Grade	Dimensions			
		l	D	s	r
RCMT 10T3M0	YG801	-	10.00	3.97	-

RCMT 0803M0

Recommended Cutting Condition

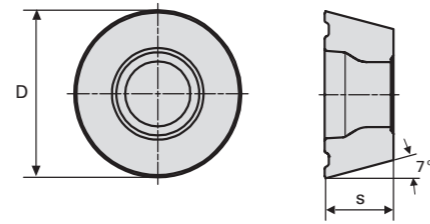
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.4	1.2
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.4	1.2
	High Alloys	220	0.13	0.35	0.28	70	190	130	0.5	2.4	1.2
M	Austenitic	190	0.14	0.35	0.30	170	270	220	0.5	2.4	1.2
K	Grey Cast Iron	140	0.11	0.45	0.33	170	250	210	0.5	2.4	1.2
S	Heat Resistant and Super Alloys	240	0.13	0.30	0.25	25	50	38	0.5	1.8	1.2
H	Hardened Materials	45HRc	0.05	0.22	0.14	50	100	75	0.5	1.4	1.1

RCMT 10T3M0

Recommended Cutting Condition

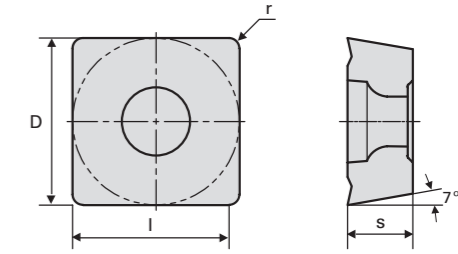
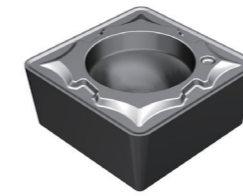
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.8	1.4
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.8	1.4
	High Alloys	220	0.13	0.35	0.28	70	190	130	0.5	2.8	1.4
M	Austenitic	190	0.14	0.35	0.30	170	270	220	0.5	2.8	1.4
K	Grey Cast Iron	140	0.11	0.45	0.33	170	250	210	0.5	2.8	1.4
S	Heat Resistant and Super Alloys	240	0.13	0.30	0.25	25	50	38	0.5	2.1	1.4
H	Hardened Materials	45HRc	0.05	0.22	0.14	50	100	75	0.5	1.7	1.3

RCMT 1204



Designation	Grade	Dimensions			
		I	D	s	r
RCMT 1204M0	YG801	-	12.00	4.76	-

SCMT 09T3



Designation	Grade	Dimensions			
		I	D	s	r
SCMT 09T304-UF	YG801	9.13	9.53	3.97	0.4
SCMT 09T308-UG	YG801	8.73	9.53	3.97	0.8

RCMT 1204M0

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.40	180	330	255	0.5	3.2	2.0
	Low Alloys	200	0.15	0.35	0.35	120	280	200	0.5	3.2	2.0
	High Alloys	220	0.13	0.35	0.35	70	190	130	0.5	3.2	2.0
M	Austenitic	190	0.14	0.35	0.35	170	270	220	0.5	3.2	2.0
K	Grey Cast Iron	140	0.11	0.45	0.40	170	250	210	0.5	3.2	2.0
S	Heat Resistant and Super Alloys	240	0.13	0.30	0.30	25	50	38	0.5	2.4	1.5
H	Hardened Materials	45HRc	0.05	0.22	0.20	50	100	75	0.5	1.9	1.8

SCMT 09T304

Recommended Cutting Condition

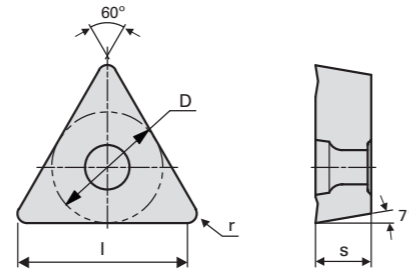
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.26	0.19	180	330	300	0.2	4.0	2.5
	Low Alloys	200	0.10	0.23	0.17	120	280	250	0.2	3.3	2.5
	High Alloys	220	0.09	0.21	0.15	70	190	170	0.2	3.3	2.5
M	Austenitic	190	0.10	0.21	0.16	170	270	250	0.2	3.3	2.5
K	Grey Cast Iron	140	0.08	0.23	0.16	170	250	240	0.2	4.0	2.5
S	Heat Resistant and Super Alloys	240	0.09	0.17	0.13	25	50	35	0.2	2.7	2.0
H	Hardened Materials	45HRc	0.05	0.14	0.10	50	100	75	0.2	2.4	1.9

SCMT 09T308

Recommended Cutting Condition

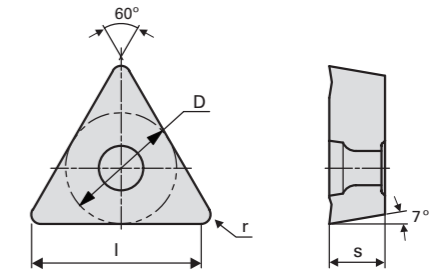
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	4.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	4.0	3.0
	High Alloys	220	0.18	0.40	0.29	70	190	130	0.5	3.2	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	4.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	4.0	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.35	0.28	25	45	35	0.5	2.4	2.0
H	Hardened Materials	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.0	2.0

TCMT 1102



Designation	Grade	Dimensions			
		I	D	s	r
TCMT 110204-UF	YG801	11.00	6.35	2.38	0.4

TCMT 16T3



Designation	Grade	Dimensions			
		I	D	s	r
TCMT 16T304-UF	YG801	15.46	9.53	3.97	0.4
TCMT 16T308-UG	YG801	13.73	9.53	3.97	0.8

TCMT 110204

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.08	0.20	0.14	180	330	300	0.2	2.1	1.0
	Low Alloys	200	0.08	0.17	0.13	120	280	250	0.2	1.8	1.0
	High Alloys	220	0.07	0.15	0.11	70	190	170	0.2	1.8	1.0
M	Austenitic	190	0.08	0.15	0.12	170	270	250	0.2	1.8	1.0
K	Grey Cast Iron	140	0.06	0.17	0.12	170	250	240	0.2	2.1	1.0
S	Heat Resistant and Super Alloys	240	0.08	0.13	0.11	25	50	35	0.2	1.4	1.0
H	Hardened Materials	45HRc	0.04	0.10	0.07	50	100	75	0.2	1.3	0.8

TCMT 16T304

Recommended Cutting Condition

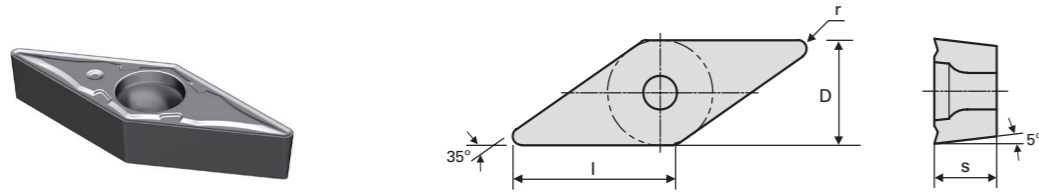
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.20	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.12	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.15	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.15	170	250	240	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.11	25	45	35	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

TCMT 16T308

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.20	180	330	250	0.2	3.0	3.0
	Low Alloys	200	0.10	0.20	0.15	120	280	200	0.2	2.5	3.0
	High Alloys	220	0.09	0.18	0.12	70	190	130	0.2	2.5	2.5
M	Austenitic	190	0.10	0.18	0.15	170	270	220	0.2	2.5	3.0
K	Grey Cast Iron	140	0.08	0.20	0.15	170	250	210	0.2	2.5	3.0
S	Heat Resistant and Super Alloys	240	0.20	0.30	0.25	25	45	35	0.5	3.0	2.0
H	Hardened Materials	45HRc	0.11	0.26	0.19	50	100	75	0.5	2.5	2.0

VBMT 1604



Designation	Grade	Dimensions			
		L	D	s	r
VBMT 160404-UF	YG801	15.62	9.53	4.76	0.4
VBMT 160408-UG	YG801	14.62	9.53	4.76	0.8

VBMT 160404

Recommended Cutting Condition

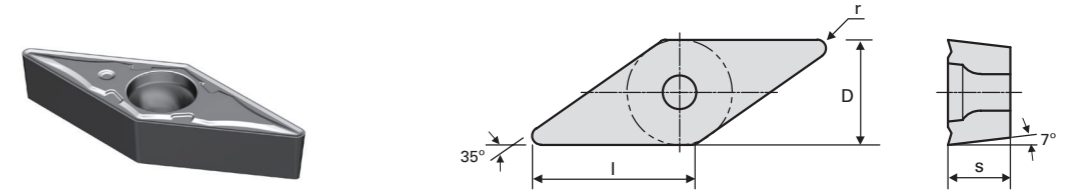
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	255	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	200	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	130	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	220	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	210	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	38	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

VBMT 160408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.19	0.40	0.30	180	330	255	0.5	3.5	2.5
	Low Alloys	200	0.19	0.36	0.28	120	280	200	0.5	3.5	2.5
	High Alloys	220	0.16	0.32	0.24	70	190	130	0.5	2.8	2.1
M	Austenitic	190	0.18	0.32	0.25	170	270	220	0.5	3.5	2.5
K	Grey Cast Iron	140	0.14	0.48	0.31	170	250	210	0.5	3.5	2.5
S	Heat Resistant and Super Alloys	240	0.18	0.28	0.23	25	45	35	0.5	2.1	2.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	50	100	75	0.5	1.8	1.6

VCMT 1604



Designation	Grade	Dimensions			
		L	D	s	r
VCMT 160404-UF	YG801	15.62	9.53	4.76	0.4
VCMT 160408-UG	YG801	14.62	9.53	4.76	0.8

VCMT 160404

Recommended Cutting Condition

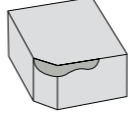
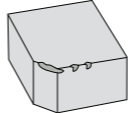
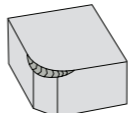
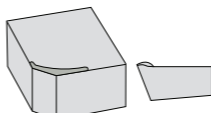
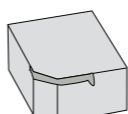
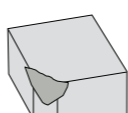
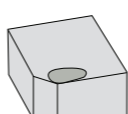
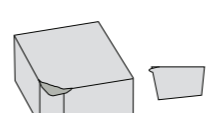
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	255	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	200	0.2	2.5	2.0
	High Alloys	220	0.09	0.18	0.14	70	190	130	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	220	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	210	0.2	3.0	2.0
S	Heat Resistant and Super Alloys	240	0.09	0.15	0.12	25	50	38	0.2	2.0	2.0
H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

VCMT 160408

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.19	0.40	0.30	180	330	255	0.5	3.5	2.5
	Low Alloys	200	0.19	0.36	0.28	120	280	200	0.5	3.5	2.5
	High Alloys	220	0.16	0.32	0.24	70	190	130	0.5	2.8	2.1
M	Austenitic	190	0.18	0.32	0.25	170	270	220	0.5	3.5	2.5
K	Grey Cast Iron	140	0.14	0.48	0.31	170	250	210	0.5	3.5	2.5
S	Heat Resistant and Super Alloys	240	0.18	0.28	0.23	25	45	35	0.5	2.1	2.0
H	Hardened Materials	45HRc	0.10	0.24	0.17	50	100	75	0.5	1.8	1.6

Damage of Insert & Counter Measure

Trouble Type	Cause	Solution
 Rapid Flank wear	<ol style="list-style-type: none"> 1. Inappropriate feed(f) rate 2. Cutting speed(s) too high 	<ol style="list-style-type: none"> 1. Adjust feed(f) rate according to depth(ap), width(ae) 2. Reduce cutting speed(s)
 Chipping	<ol style="list-style-type: none"> 1. Feed(f) rate too high 2. Cutting speed(s) too low 3. Vibration of holder & machine 4. Lack of toughness of cutting edge 5. Lack of rigid of shank type holder 	<ol style="list-style-type: none"> 1. Reduce feed(f) rate 2. Increase cutting speed(s) 3. Reduce the tool overhang & improve the rigidity of machine and workpiece 4. Apply big size shank type holder 5. Increase honing size
 Thermal crack	<ol style="list-style-type: none"> 1. Insufficient coolant 2. Cutting speed(s) too high 3. Workpiece too hardened 	<ol style="list-style-type: none"> 1. Check cooling system, supply enough coolant or use dry milling 2. Reduce cutting speed(s) 3. Apply workpiece with high toughness
 Built-up edge	<ol style="list-style-type: none"> 1. Cutting speed(s) too low 2. Insufficient coolant 3. Not enough rake angle 	<ol style="list-style-type: none"> 1. Increase cutting speed(s) 2. Supply enough coolant 3. Increase rake angle of change inserts
 Notch wear	<ol style="list-style-type: none"> 1. Scaling or work hardening in workpiece surface area 2. Burrs in workpiece 	<ol style="list-style-type: none"> 1. Change/Vary cutting condition (feed & depth) 2. Change path or direction
 Fracture	<ol style="list-style-type: none"> 1. Wrong insert shape or corner radius 2. Corner radius too small 3. Cutting force fluctuation too high 	<ol style="list-style-type: none"> 1. Choose the insert with bigger corner or radius 2. Reduce feed rate and depth 3. Choose thicker insert
 Cratering	<ol style="list-style-type: none"> 1. Insufficient coolant supply 2. Cutting speed(s) and feed(f) rate too high 3. Workpiece too softened 	<ol style="list-style-type: none"> 1. Increase coolant supply or concentration 2. Reduce cutting speed(s) and feed(f) rate 3. Apply workpiece with high wear resistance
 Plastic deformation	<ol style="list-style-type: none"> 1. Feed(f) and depth of cut too high 2. Cutting speed(s) too high 3. Too much stress applied on the cutting edge 	<ol style="list-style-type: none"> 1. Reduce cutting speed(s) 2. Supply enough coolant 3. Choose insert with bigger corner radius 4. Reduce feed rate and depth of cut 5. Apply workpiece with high wear resistance or high thermal conductivity



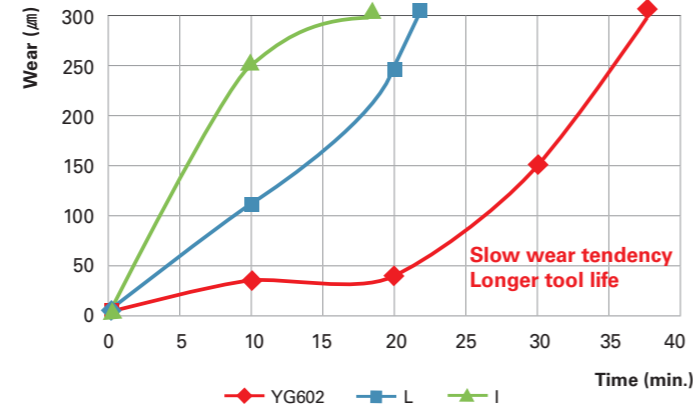
YGTURN

1. APKT 100305PDTR
Test Condition

Workpiece (Alloy Tool Steel)	DIN: X100CrMoV5 1 AISI: D2 JIS: SKD11
Workpiece HB	210 ~ 220
Workpiece Size	150 × 200 × 120
Vc (m/min.)	140
fz (mm/tooth)	0.10
ap/ae (mm)	8 / 3
Coolant	Dry


Test samples

Designation	Grade	Cutter
APKT 100305PDTR	YG602	Ø20
APKT 1003PDTR	L	
APKT 1003PDER	I	

Test Result


※ Test finishing wear value : 300µm (flank wear)

Tool life comparison results

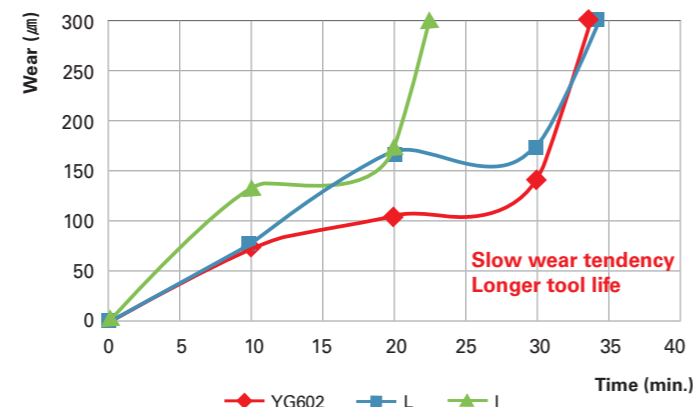
- YG602 had best tool life result compare than others.
- YG602 showed slow wear tendency compare than others.

2. APKT 100305PDTR
Test Condition

Workpiece (Stainless steel)	DIN: X2CrNi19-11 AISI: 304 JIS: SUS304
Workpiece HB	170 ~ 180
Workpiece Size	300 × 80 × 150
Vc (m/min.)	180
fz (mm/tooth)	0.08
ap/ae (mm)	8 / 3
Coolant	Dry


Test samples

Designation	Grade	Cutter
APKT 100305PDTR	YG602	Ø20
APKT 1003PDTR	L	
APKT 1003PDER	I	

Test Result


※ Test finishing wear value : 300µm (flank wear)

Tool life comparison results

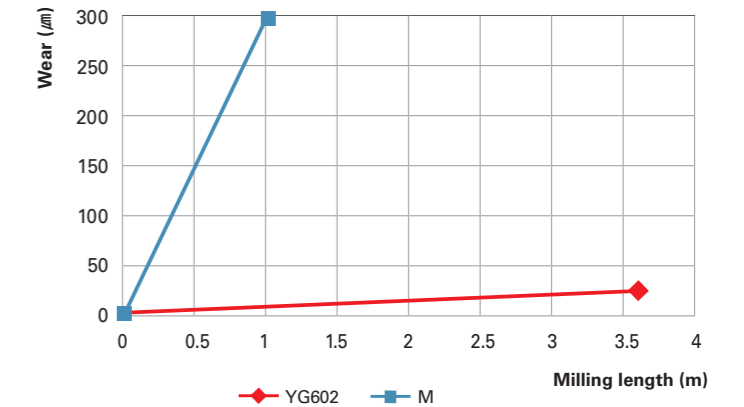
- YG602 had best tool life result compare than others.
- YG602 showed slow wear tendency compare than others.

3. APMT 160408PDTR
Test Condition

Workpiece (Alloy steel)	DIN: 42CrMo4 AISI: 4140 JIS: SCM440
Workpiece HB	270 ~ 290
Workpiece Size	200 × 300 × 150
Vc (m/min.)	200
fz (mm/tooth)	0.18
ap/ae (mm)	2 / 20
Coolant	Dry


Test samples

Designation	Grade	Cutter
APMT 160408PDTR	YG602	Ø50
APMT 1604PDER	M	

Test Result


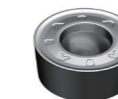
※ Test finishing wear value : 300µm (flank wear)

Tool life comparison results

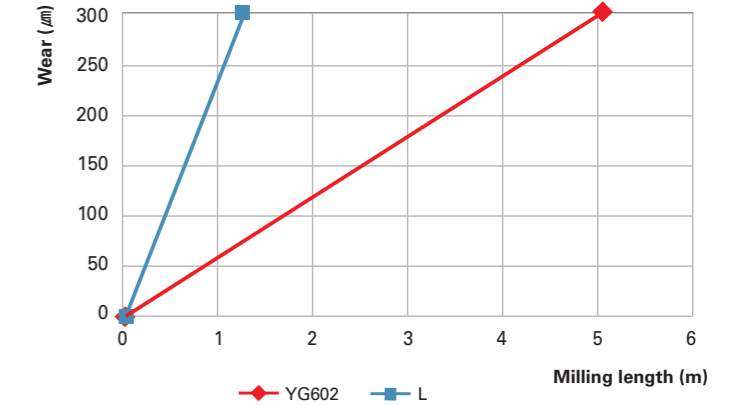
- YG602 had best tool life result compare than the other.
- YG602 showed slow wear tendency compare than the other.

4. RDKT 1204M0
Test Condition

Workpiece (Alloy Tool Steel)	DIN: X100CrMoV5 1 AISI: D2 JIS: SKD11
Workpiece HB	200 ~ 210
Workpiece Size	120 × 100 × 150
Vc (m/min.)	120
fz (mm/tooth)	0.20
ap/ae (mm)	1.5 / 20
Coolant	Dry


Test samples

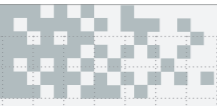
Designation	Grade	Cutter
RDKT 1204M0	YG602	Ø50
RDMT 1204M0	L	

Test Result


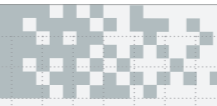
※ Test finishing wear value : 300µm (flank wear)

Tool life comparison results

- YG602 had best tool life result compare than the other.
- YG602 showed slow wear tendency compare than the other.



Grid area for writing notes.



Grid area for writing notes.



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