

YE-UL16
METRIC



YG UNIVERSAL LINE

INDEXABLE CUTTING TOOLS

YG-1 CO., LTD.

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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.

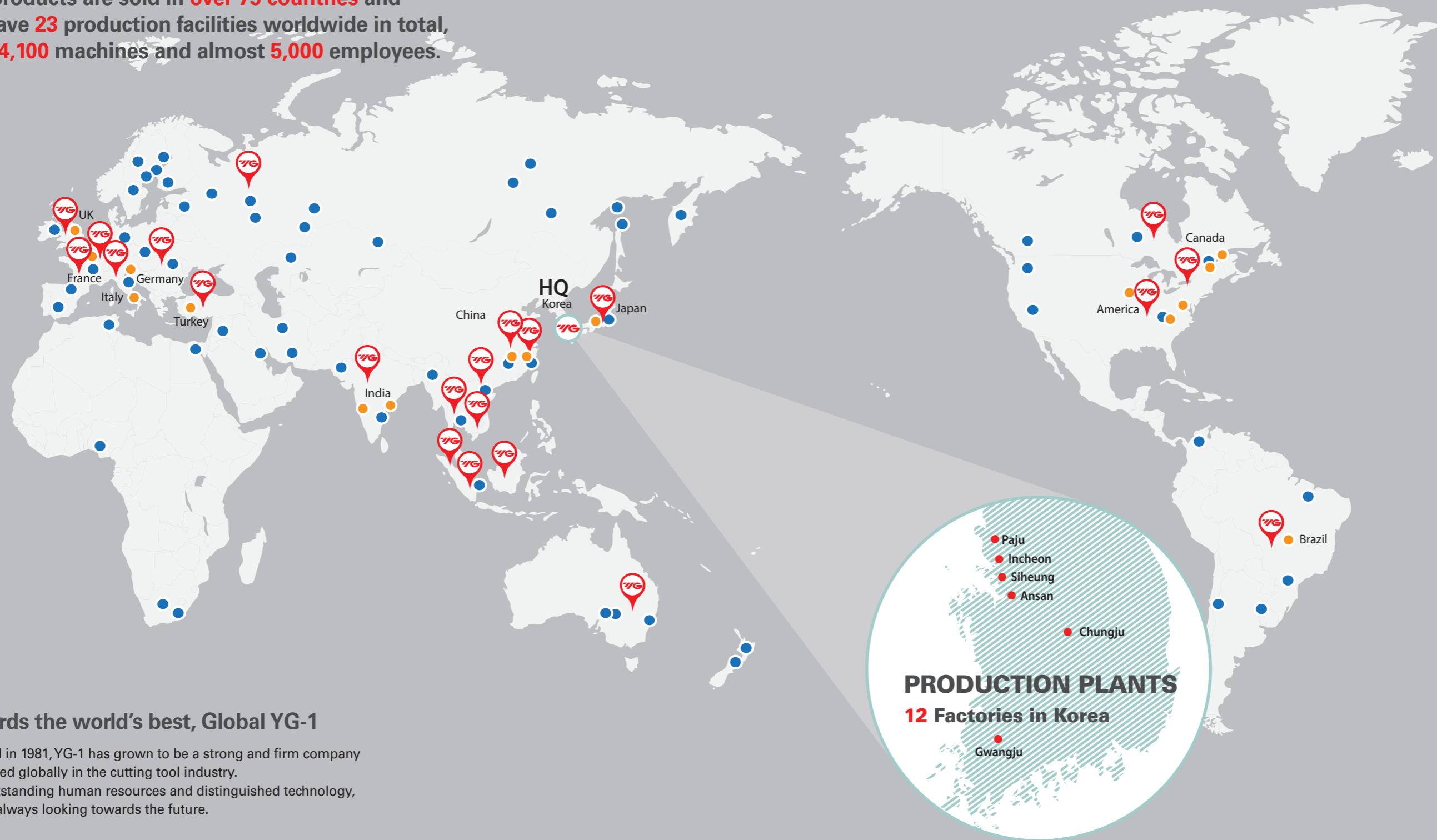


YG-1 CO., LTD.

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.

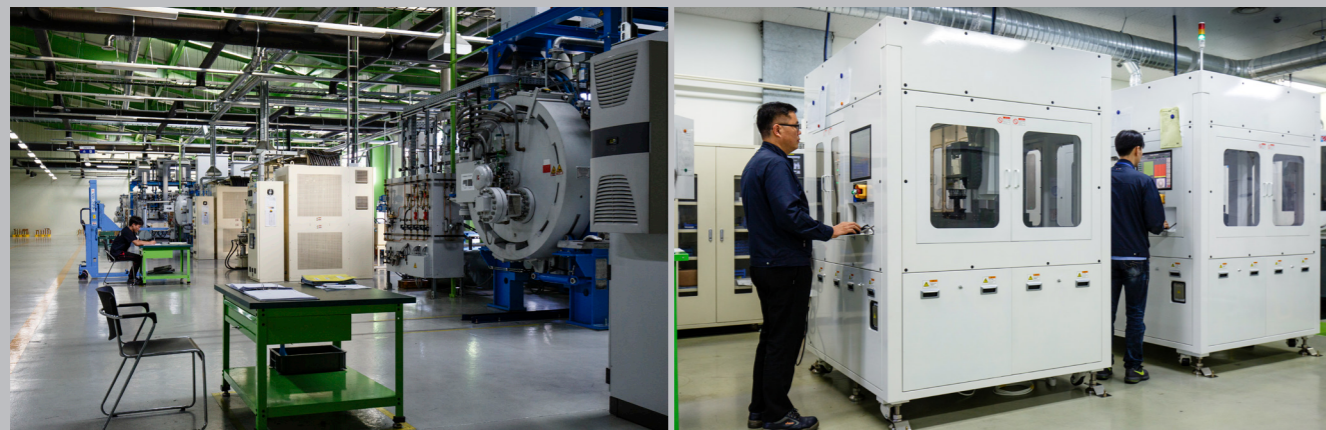
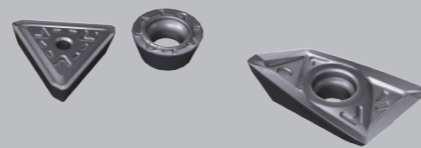


YG-1 R&D CENTER

- ▶ 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

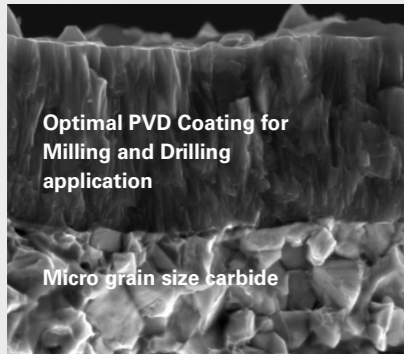
YG-1 is proud to introduce a new line of products - Universal Line - with a unique range of tools, geometries, sub-micron carbides and multi-purpose PVD and CVD coatings designed to support the entire range of Milling, Drilling and Turning applications to machine many types of raw materials in all areas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

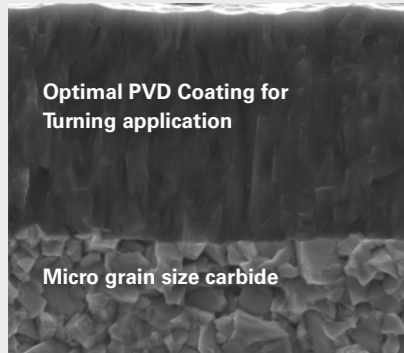
UNIVERSAL GRADES	6
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Features of Grades :

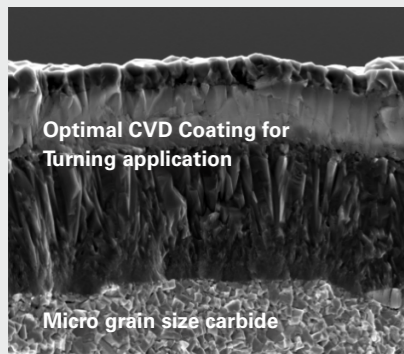
YG-1 Universal grades, designs for multi-purpose application and extremely efficient in covering materials including Steels, Stainless Steels and Cast Iron.

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

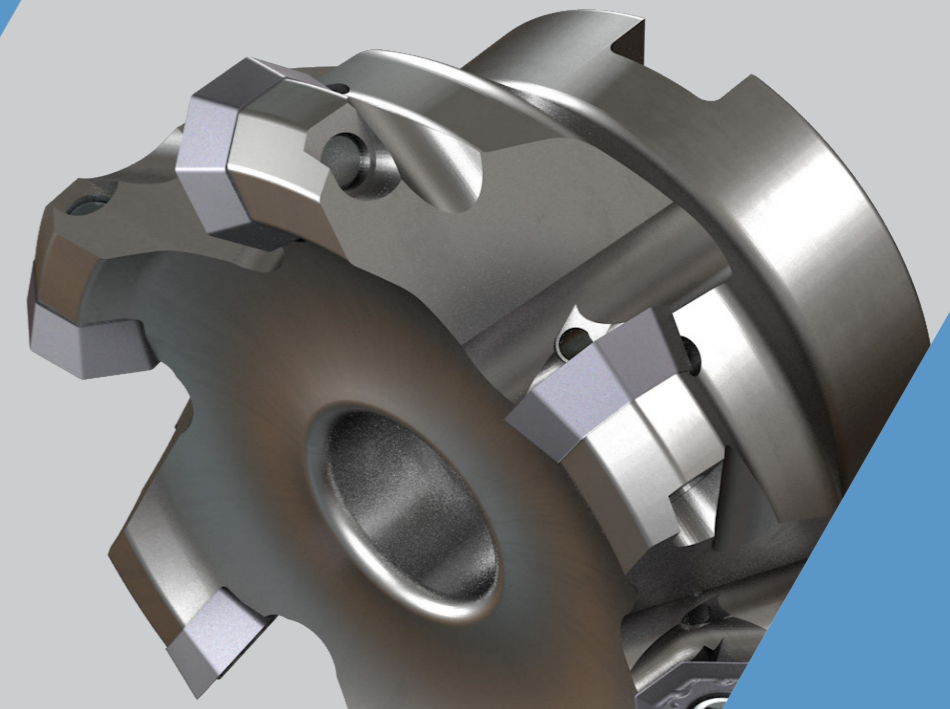
YG801

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.

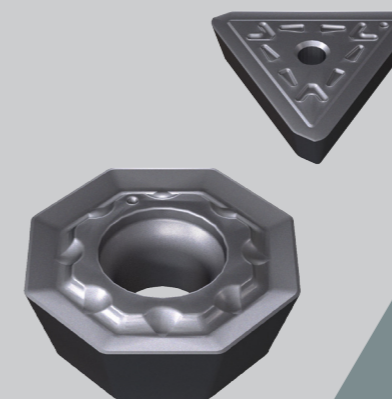
YG1001

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	-

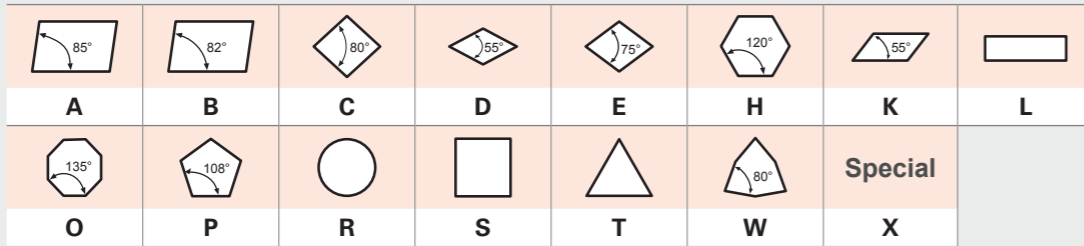


YG MILL
INDEXABLE CUTTING TOOLS
 YG UNIVERSAL LINE

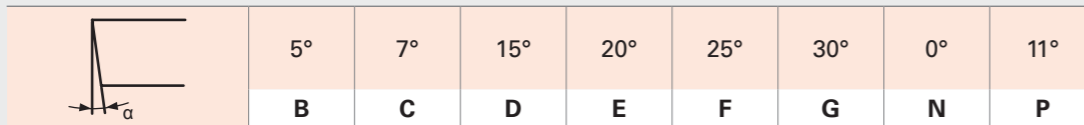




1 Insert Shape

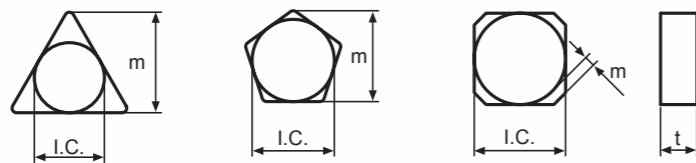


2 Clearance Angle

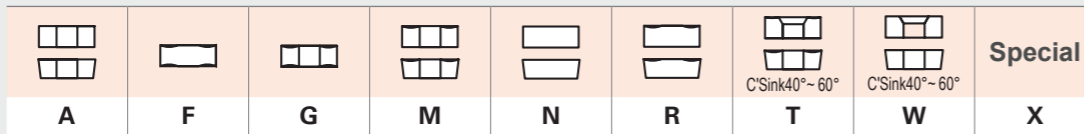


3 Tolerance

	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		

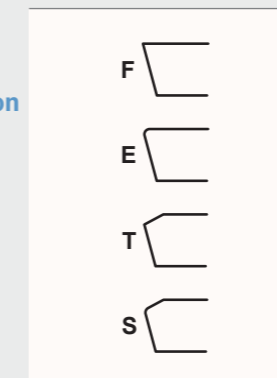
6 Thickness

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

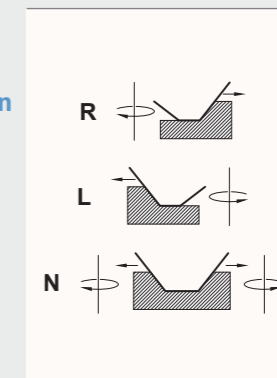
7 Lead Angle & Relief Angle of Minor Cutting Edge

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

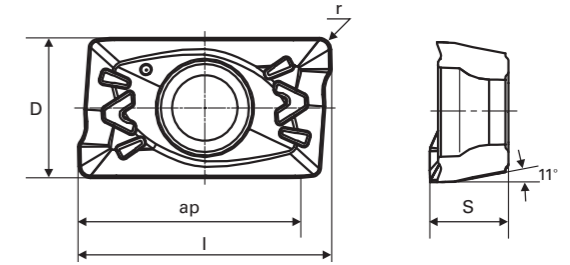
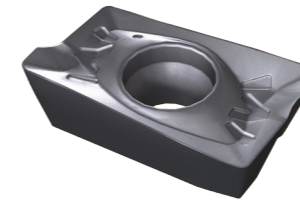
For Application

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.

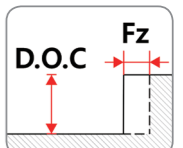
APKT 10


Designation	Grade	Dimensions			
		I	D	S	r
APKT 100305PDTR	YG602	13.34	6.70	3.64	0.5
APKT 100308PDTR	YG602	13.34	6.70	3.64	0.8

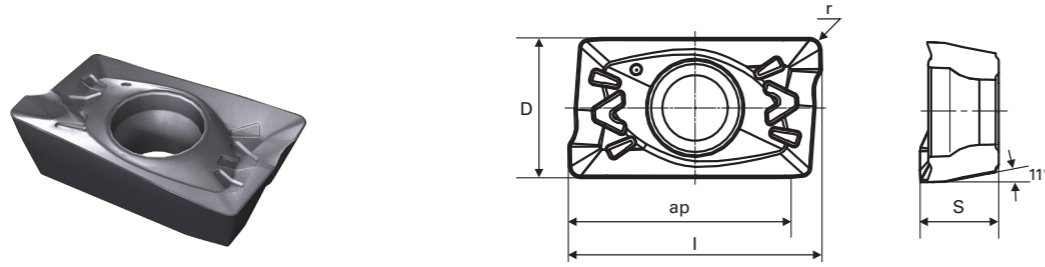

APKT 10 Recommended Cutting Condition

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



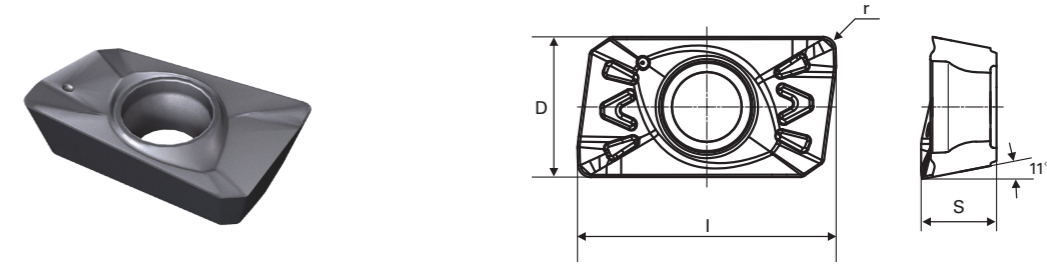
APKT 16



Designation	Grade	Dimensions			
		L	D	S	r
APKT 160404PDTR	YG602	17.07	9.40	5.27	0.4
APKT 160408PDTR	YG602	17.07	9.40	5.27	0.8
APKT 160412PDTR	YG602	17.07	9.40	5.27	1.2
APKT 160416PDTR	YG602	17.07	9.40	5.27	1.6



APMT 11



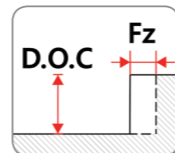
Designation	Grade	Dimensions			
		L	D	S	r
APMT 113504PDTR	YG602	11.18	6.20	3.50	0.4
APMT 113508PDTR	YG602	11.18	6.20	3.50	0.8



APKT 16 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

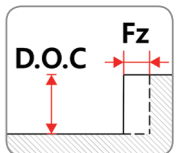
* D.O.C: Depth Of Cut



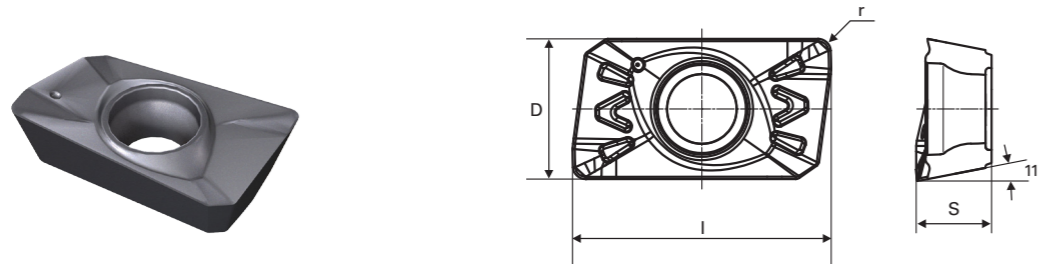
APMT 11 Recommended Cutting Condition

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 16



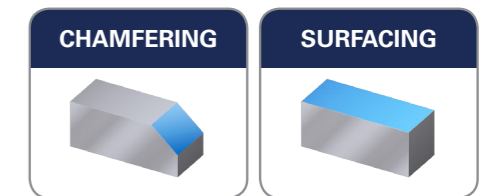
Designation	Grade	Dimensions			
		L	D	S	r
APMT 160408PDTR	YG602	17.01	9.22	4.76	0.8



ODMT 06



Designation	Grade	Dimensions			
		L	D	S	r
ODMT 060508	YG602	-	15.90	5.50	0.8

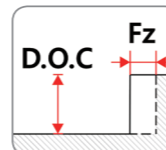


APMT 16

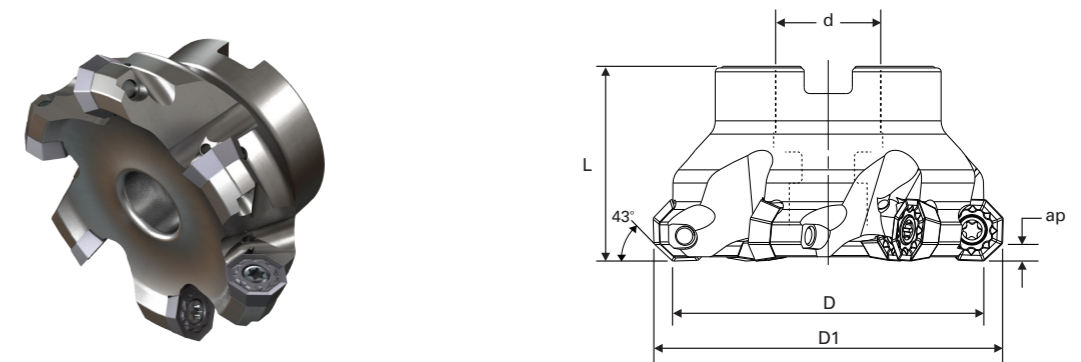
Recommended Cutting Condition

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 06 / Cutter



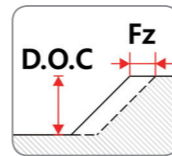
Designation	Dimensions							Coolant	Insert	Spare parts	
	D	d	L	z	ap	D1	Screw			Wrench	
YGO143-63Z5C22-06	63	22	40	5	3.5	72	Y	ODMT(W) 06	TP205013	TPWFTP20	
YGO143-80Z6C27-06	80	27	50	6	3.5	89	Y	ODMT(W) 06			
YGO143-100Z7C32-06	100	32	50	7	3.5	109	Y	ODMT(W) 06			
YGO143-125Z8C40-06	125	40	63	8	3.5	134	Y	ODMT(W) 06			

ODMT 06

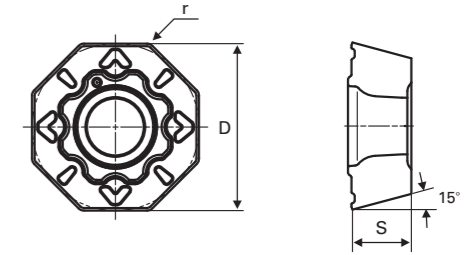
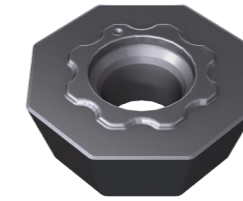
Recommended Cutting Condition

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

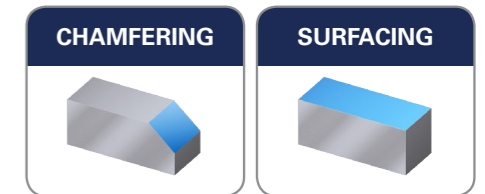
* D.O.C: Depth Of Cut



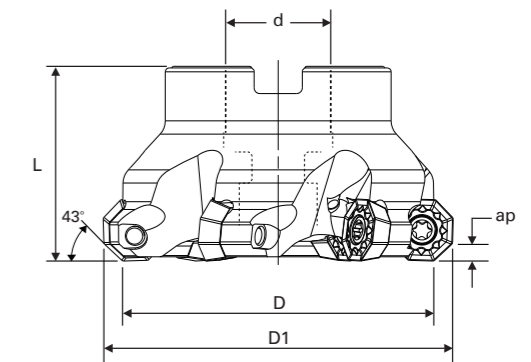
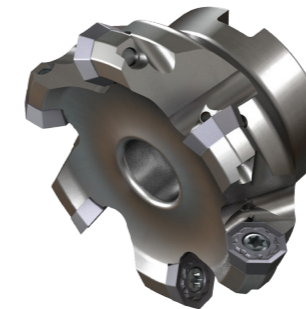
ODMW 06



Designation	Grade	Dimensions			
		I	D	S	r
ODMW 060508	YG602	-	15.90	5.50	0.8



ODMW 06 / Cutter

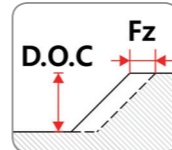


Designation	Dimensions								Insert	Spare parts	
	D	d	L	z	ap	D1	Coolant	Screw		Wrench	
YGO143-63Z5C22-06	63	22	40	5	3.5	72	Y	ODMT(W) 06	TP205013	TPWFTP20	
YGO143-80Z6C27-06	80	27	50	6	3.5	89	Y	ODMT(W) 06			
YGO143-100Z7C32-06	100	32	50	7	3.5	109	Y	ODMT(W) 06			
YGO143-125Z8C40-06	125	40	63	8	3.5	134	Y	ODMT(W) 06			

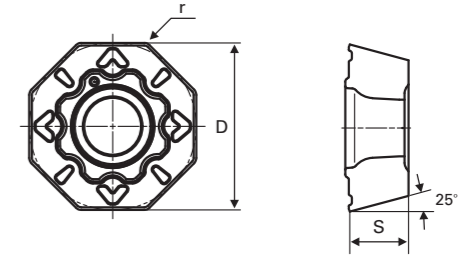
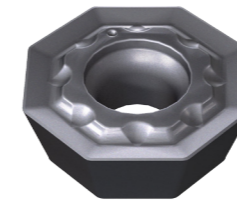
ODMW 06 Recommended Cutting Condition

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

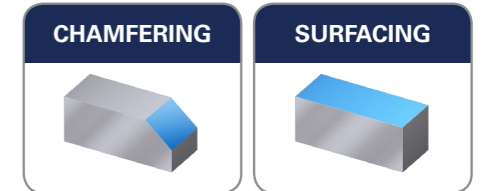
* D.O.C: Depth Of Cut



OFMT 05



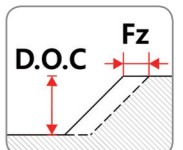
Designation	Grade	Dimensions			
		I	D	S	r
OFMT 05T305TN	YG602	-	12.70	4.00	0.8



OFMT 05 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



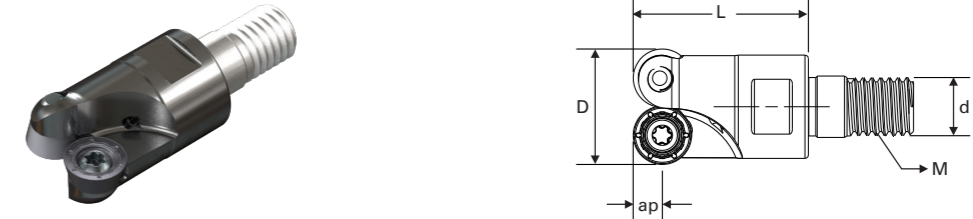
RDKT 08



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



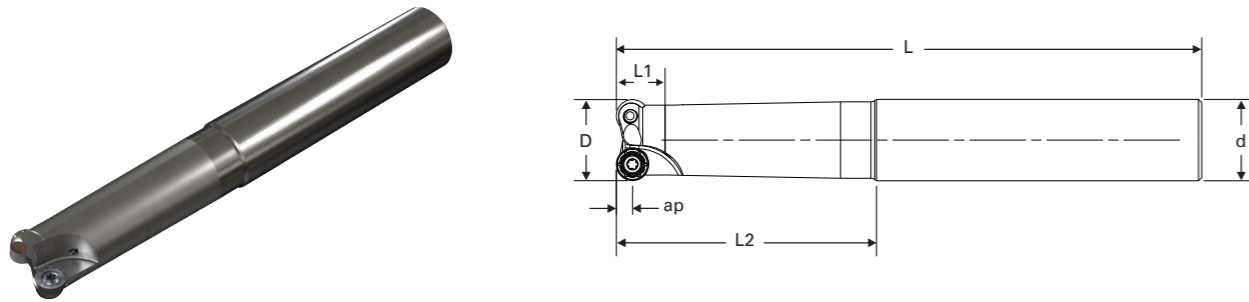
RDKT 08 / Modular



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

► Related holder page: p.54-56

RDKT 08 / Shank

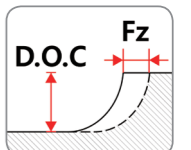


Designation	Dimensions								Insert	Spare parts		
	D	d	L1	L2	L	z	ap	Shank		Coolant	Screw	Wrench
YGR1-16Z2S16P160-08	16	16	12	60	160	2	4	Plain	Y	RDKT(W) 08		
YGR1-20Z2S20P180-08	20	20	12	80	180	2	4	Plain	Y	RDKT(W) 08	TP082505	TPWFTP08
YGR1-25Z3S20P180-08	25	20	12	40	180	3	4	Plain	Y	RDKT(W) 08		

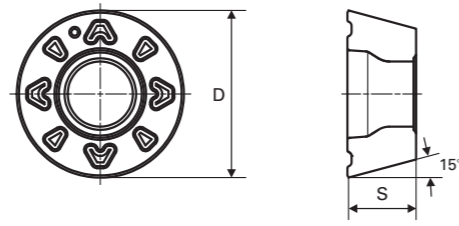
RDKT 08 Recommended Cutting Condition

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



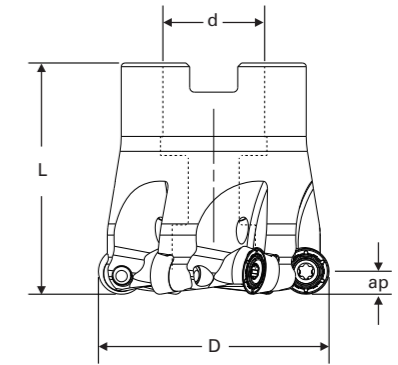
RDKT 10



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

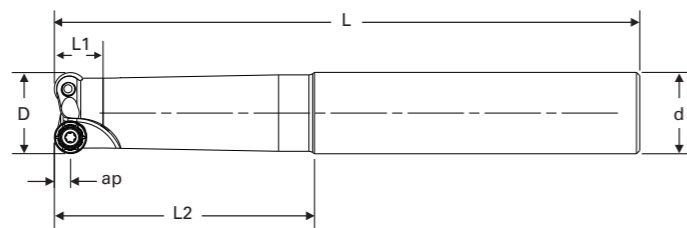


RDKT 10 / Cutter



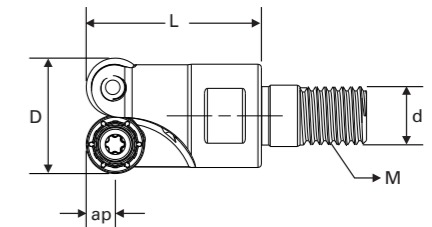
Designation	Dimensions							Insert	Spare parts	
	D	d	L	z	ap	D1	Coolant		Screw	Wrench
YGR1-40Z5C16-10	40	16	40	5	5	-	Y	RDKT(W) 10	TP154808	TPWFTP15
YGR1-50Z6C22-10	50	22	50	6	5	-	Y	RDKT(W) 10	TP154808	TPWFTP15

RDKT 10 / 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	TP154808	TPWFTP15

RDKT 10 / Modular



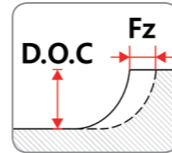
Designation	Dimensions						Insert	Spare parts	
	D	d	L	z	ap	Coolant		Screw	Wrench
YGR1-20Z2M10-10	20	M10	30	2	5	Y	RDKT(W) 10	TP154808	TPWFTP15
YGR1-25Z3M12-10	25	M12	35	3	5	Y	RDKT(W) 10	TP154808	TPWFTP15

► Related holder page: p.54-56

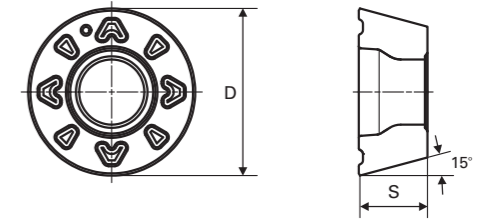
RDKT 10 Recommended Cutting Condition

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



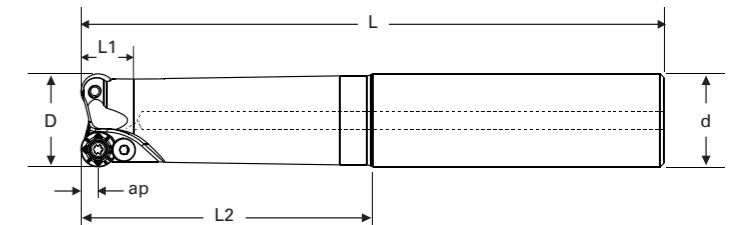
RDKT 12



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

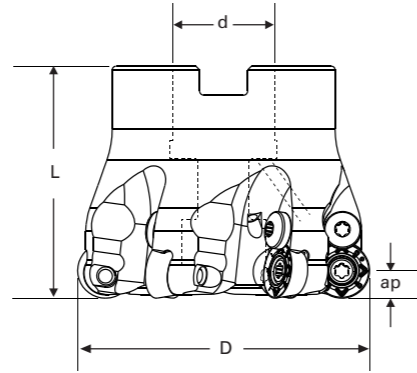
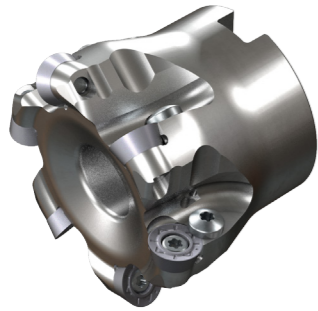


RDKT 12 / Shank



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 12 / Cutter

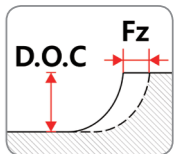


Designation	Dimensions							Insert	Spare parts	
	D	d	L	z	ap	D1	Coolant		Screw	Wrench
YGR1-40Z4C16-12	40	16	40	4	6	-	Y	RDKT(W) 12	TP154009 + TP153507	TPWFTP15
YGR1-50Z5C22-12	50	22	50	5	6	-	Y	RDKT(W) 12		
YGR1-63Z6C22-12	63	22	50	6	6	-	Y	RDKT(W) 12		

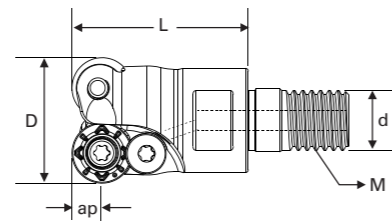
RDKT 12 Recommended Cutting Condition

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



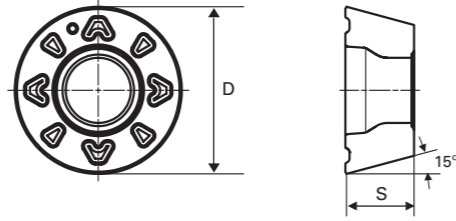
RDKT 12 / Modular



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

► Related holder page: p.54-56

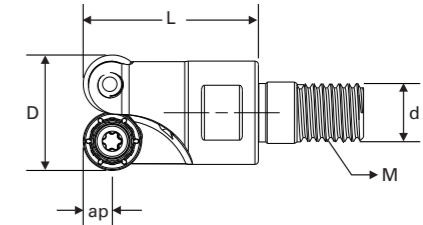
RDKW 08



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



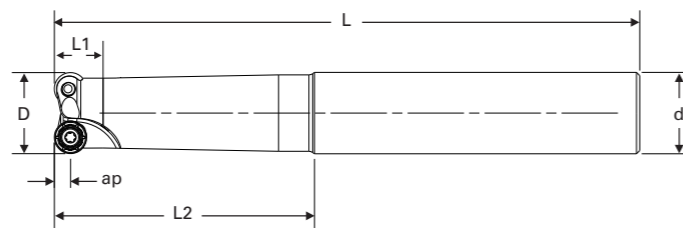
RDKW 08 / Modular



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

► Related holder page: p.54-56

RDKW 08 / Shank



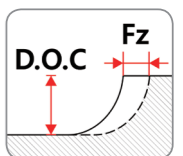
Designation	Dimensions									Insert	Spare parts	
	D	d	L1	L2	L	z	ap	Shank	Coolant		Screw	Wrench
YGR1-16Z2S16P160-08	16	16	12	60	160	2	4	Plain	Y	RDKT(W) 08		
YGR1-20Z2S20P180-08	20	20	12	80	180	2	4	Plain	Y	RDKT(W) 08	TP082505	TPWFTP08
YGR1-25Z3S20P180-08	25	20	12	40	180	3	4	Plain	Y	RDKT(W) 08		

RDKW 08

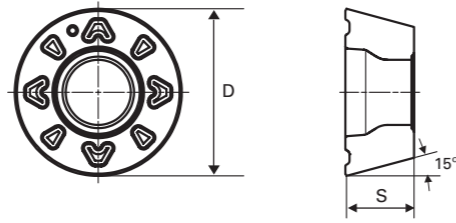
Recommended Cutting Condition

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



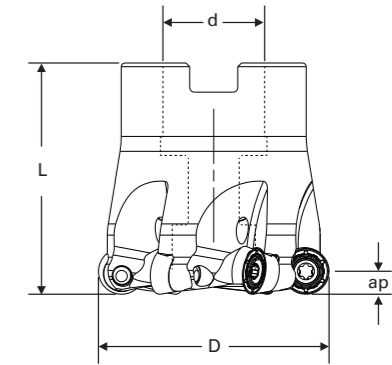
RDKW 10



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

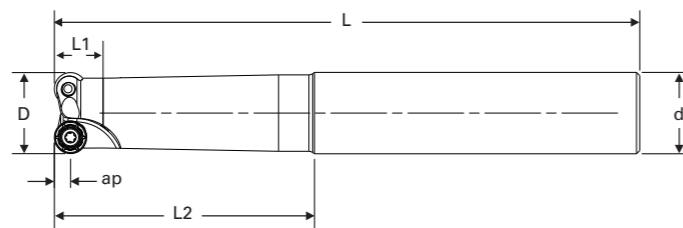


RDKW 10 / Cutter



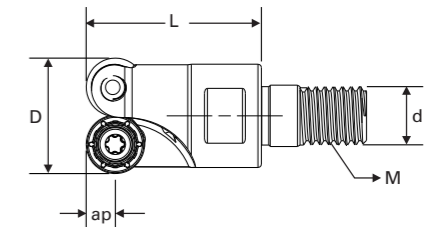
Designation	Dimensions							Insert	Spare parts	
	D	d	L	z	ap	D1	Coolant		Screw	Wrench
YGR1-40Z5C16-10	40	16	40	5	5	-	Y	RDKT(W) 10	TP154808	TPWFTP15
YGR1-50Z6C22-10	50	22	50	6	5	-	Y	RDKT(W) 10		

RDKW 10 / 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 10 / Modular



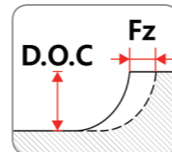
Designation	Dimensions							Insert	Spare parts	
	D	d	L	z	ap	Coolant	Screw		Wrench	
YGR1-20Z2M10-10	20	M10	30	2	5	Y	RDKT(W) 10	TP154808	TPWFTP15	
YGR1-25Z3M12-10	25	M12	35	3	5	Y	RDKT(W) 10			

► Related holder page: p.54-56

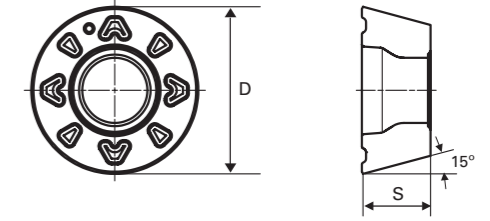
RDKW 10 Recommended Cutting Condition

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



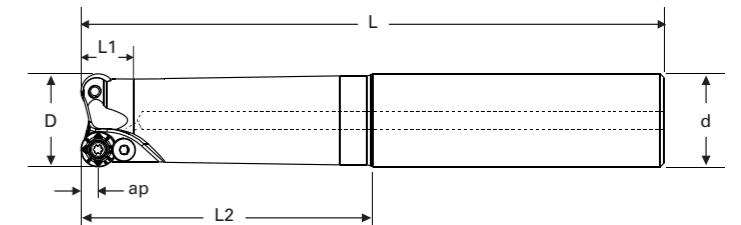
RDKW 12



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

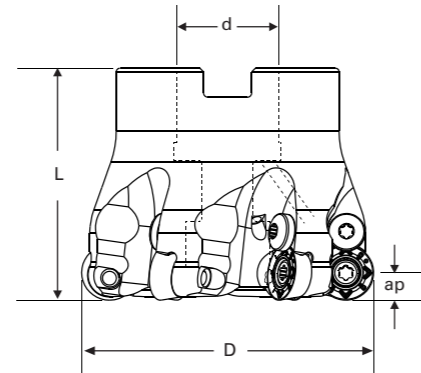
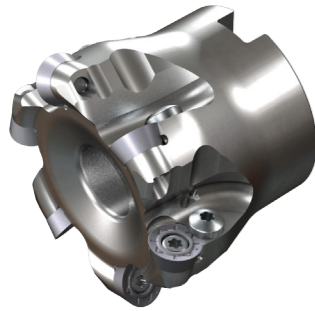


RDKW 12 / Shank



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 12 / Cutter

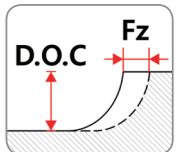


Designation	Dimensions							Insert	Spare parts	
	D	d	L	z	ap	D1	Coolant		Screw	Wrench
YGR1-40Z4C16-12	40	16	40	4	6	-	Y	RDKT(W) 12	TP154009 + TP153507	TPWFTP15
YGR1-50Z5C22-12	50	22	50	5	6	-	Y	RDKT(W) 12		
YGR1-63Z6C22-12	63	22	50	6	6	-	Y	RDKT(W) 12		

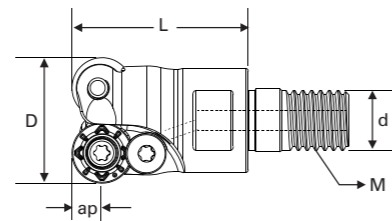
RDKW 12 Recommended Cutting Condition

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



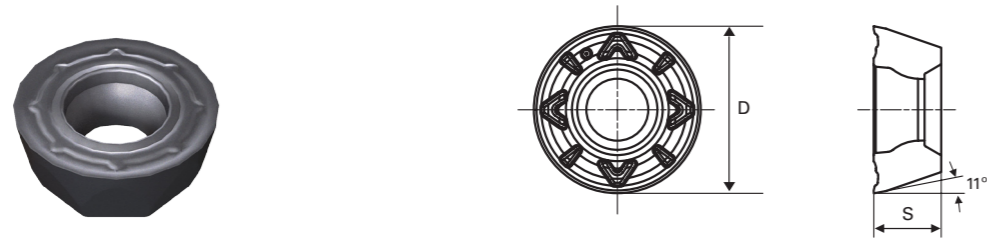
RDKW 12 / Modular



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

► Related holder page: p.54~56

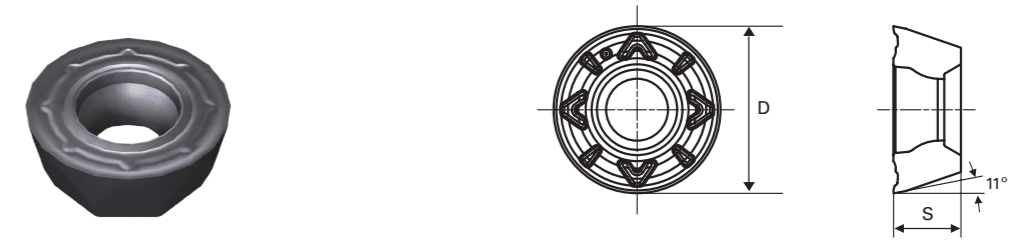
RPMT 08



Designation	Grade	Dimensions			
		l	D	S	r
RPMT 08T2M0	YG602	-	8.00	2.78	-



RPMT 10



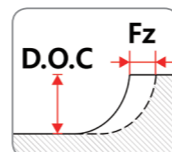
Designation	Grade	Dimensions			
		l	D	S	r
RPMT 10T3M0	YG602	-	10.00	3.97	-



RPMT 08 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

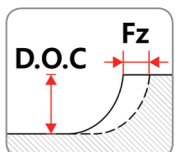
* D.O.C: Depth Of Cut



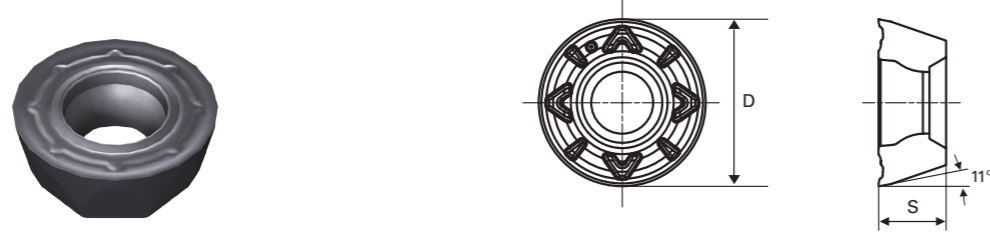
RPMT 10 Recommended Cutting Condition

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



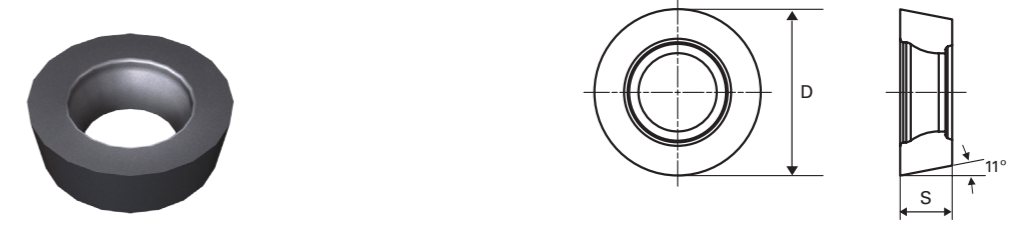
RPMT 12



Designation	Grade	Dimensions			
		l	D	S	r
RPMT 1204M0	YG602	-	12.00	4.76	-



RPMW 12



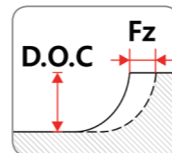
Designation	Grade	Dimensions			
		l	D	S	r
RPMW 1204M0	YG602	-	12.00	4.76	-



RPMT 12 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

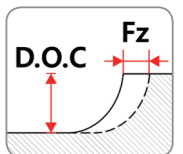
* D.O.C: Depth Of Cut



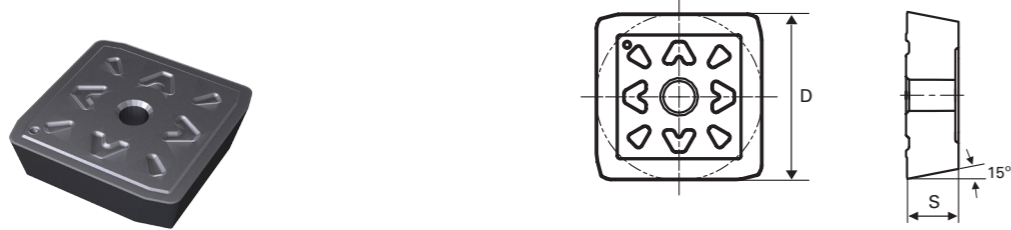
RPMW 12 Recommended Cutting Condition

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

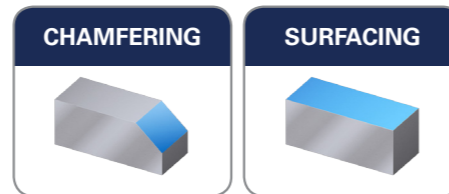
* D.O.C: Depth Of Cut



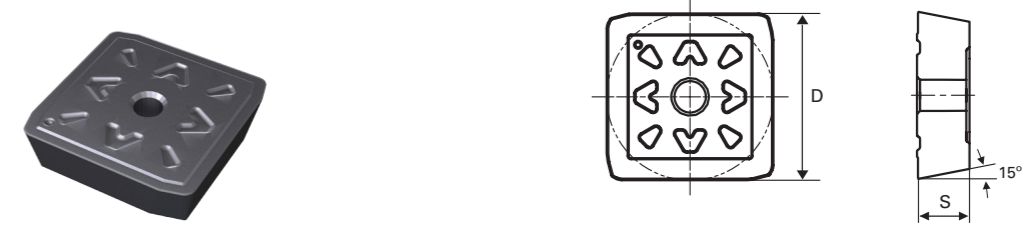
SDKN 12



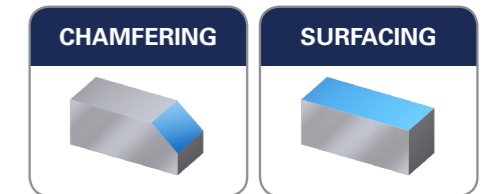
Designation	Grade	Dimensions			
		l	D	S	r
SDKN 1203AETN	YG602	-	12.70	3.18	-



SDKN 15



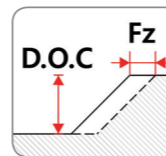
Designation	Grade	Dimensions			
		l	D	S	r
SDKN 1504AETN	YG602	-	15.88	4.76	-



SDKN 12 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

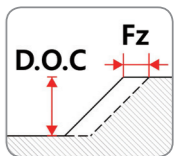
* D.O.C: Depth Of Cut



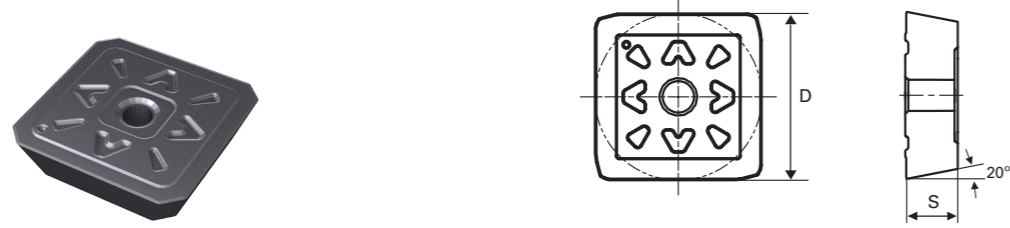
SDKN 15 Recommended Cutting Condition

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

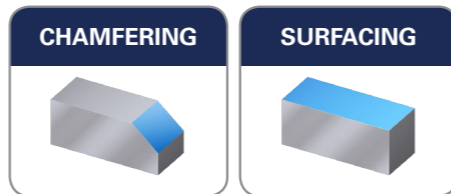
* D.O.C: Depth Of Cut



SEKN 12



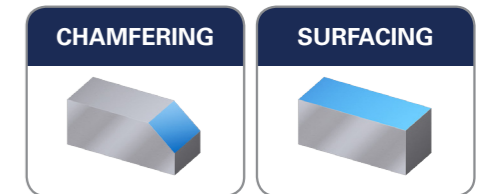
Designation	Grade	Dimensions			
		l	D	S	r
SEKN 1203AFTN	YG602	-	12.70	3.18	-



SEKR 12



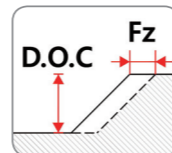
Designation	Grade	Dimensions			
		l	D	S	r
SEKR 1203AFTN	YG602	-	12.70	3.18	-



SEKN 12 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

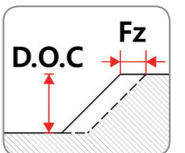
* D.O.C: Depth Of Cut



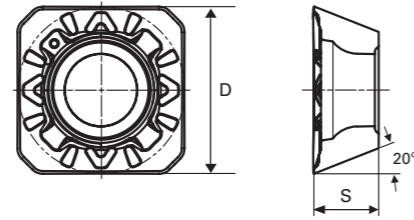
SEKR 12 Recommended Cutting Condition

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

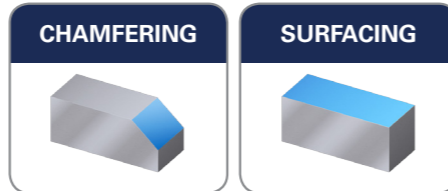
* D.O.C: Depth Of Cut



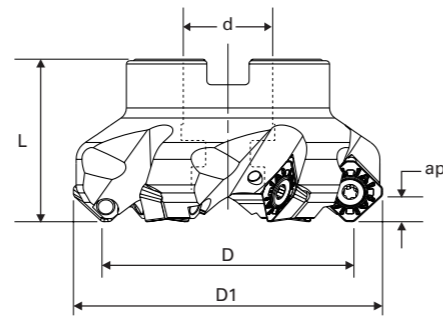
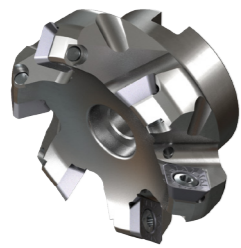
SEKT 1204



Designation	Grade	Dimensions			
		l	D	S	r
SEKT 1204AFTN	YG602	-	12.92	5.06	-



SEKT 1204 / Cutter



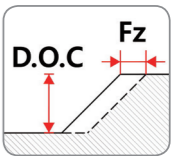
Designation	Dimensions							Insert	Spare parts	
	D	d	L	z	ap	D1	Coolant		Screw	Wrench
YGS145-40Z4C16-12	40	16	40	4	6	54	Y	SEKT1204	TP204510	TPWFTP20
YGS145-50Z5C22-12	50	22	40	5	6	64	Y	SEKT1204		
YGS145-63Z4C22-12	63	22	40	4	6	77	Y	SEKT1204		
YGS145-63Z6C22-12	63	22	40	6	6	77	Y	SEKT1204		
YGS145-80Z4C27-12	80	27	50	4	6	94	Y	SEKT1204		
YGS145-80Z7C27-12	80	27	50	7	6	94	Y	SEKT1204		
YGS145-100Z8C32-12	100	32	50	8	6	114	Y	SEKT1204		
YGS145-125Z10C40-12	125	40	63	10	6	139	Y	SEKT1204		
YGS145-160Z12C40-12	160	40	63	12	6	174	-	SEKT1204		

SEKT 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	0.46	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

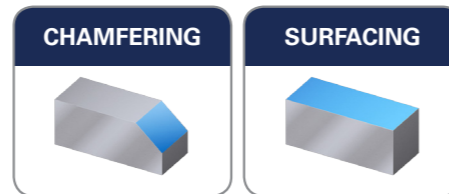
* D.O.C: Depth Of Cut



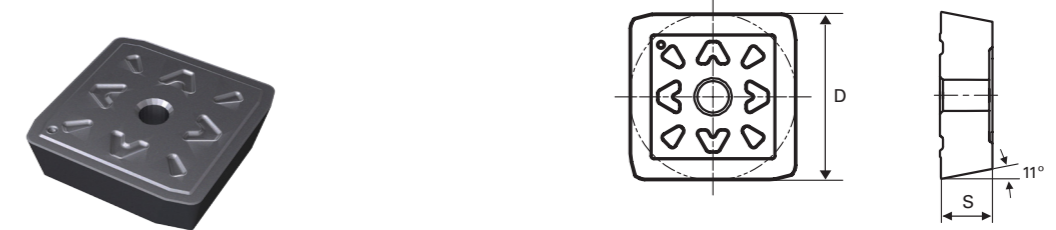
SEKT 12T3



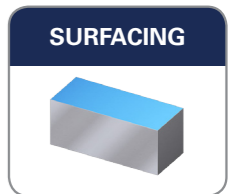
Designation	Grade	Dimensions			
		I	D	S	r
SEKT 12T3AGTN	YG602	-	13.40	3.97	-



SPKN 12



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

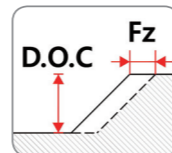


SEKT 12T3

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

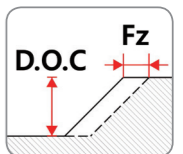


SPKN 12

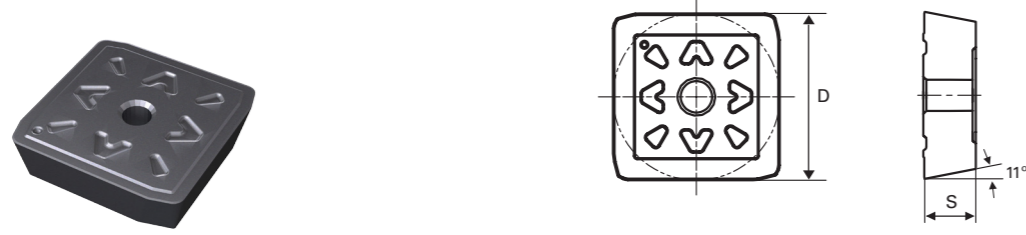
Recommended Cutting Condition

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

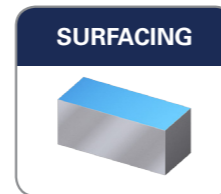
* D.O.C: Depth Of Cut



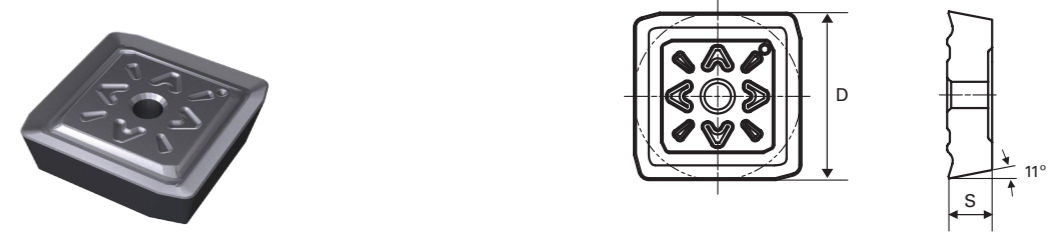
SPKN 15



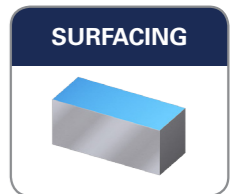
Designation	Grade	Dimensions			
		l	D	S	r
SPKN 1504EDTR	YG602	-	15.88	4.76	-



SPKR 12



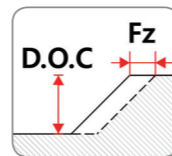
Designation	Grade	Dimensions			
		l	D	S	r
SPKR 1203EDTR	YG602	-	12.70	3.18	-



SPKN 15 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

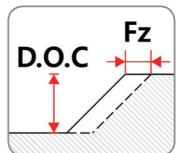
* D.O.C: Depth Of Cut



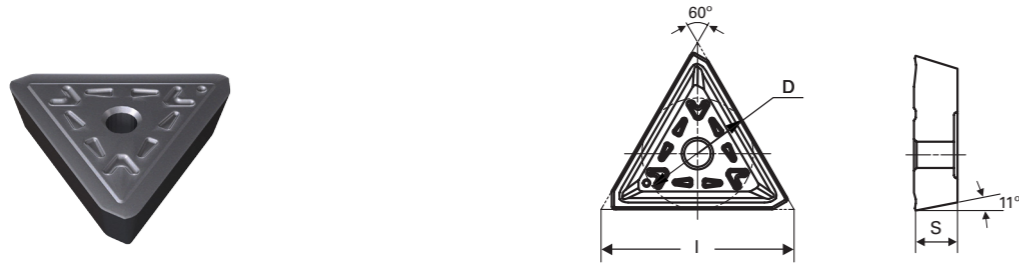
SPKR 12 Recommended Cutting Condition

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



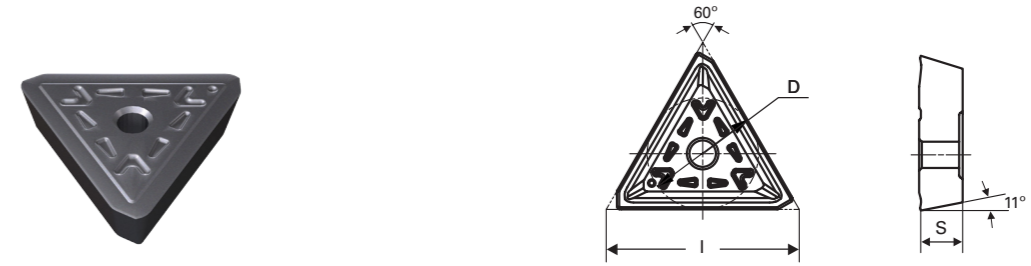
TPKN 16



Designation	Grade	Dimensions			
		I	D	S	r
TPKN 1603PDTR	YG602	16.50	9.53	3.18	-



TPKN 22



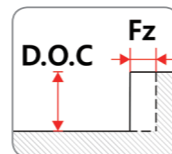
Designation	Grade	Dimensions			
		I	D	S	r
TPKN 2204PDTR	YG602	22.00	12.70	4.76	-



TPKN 16 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

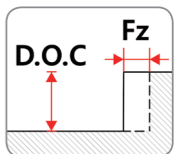
* D.O.C: Depth Of Cut



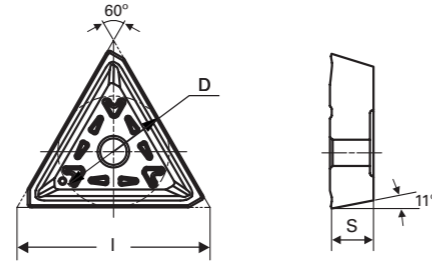
TPKN 22 Recommended Cutting Condition

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



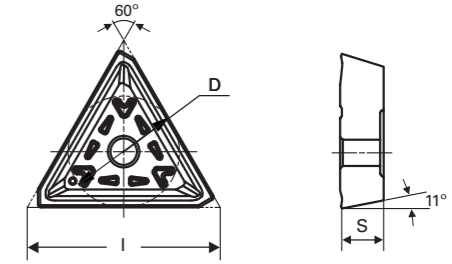
TPKR 16



Designation	Grade	Dimensions			
		L	D	S	r
TPKR 1603PDTR	YG602	16.50	9.53	3.18	-



TPKR 22



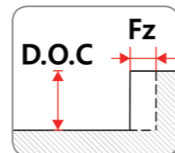
Designation	Grade	Dimensions			
		L	D	S	r
TPKR 2204PDTR	YG602	22.00	12.70	4.76	-



TPKR 16 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

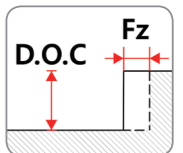
* D.O.C: Depth Of Cut



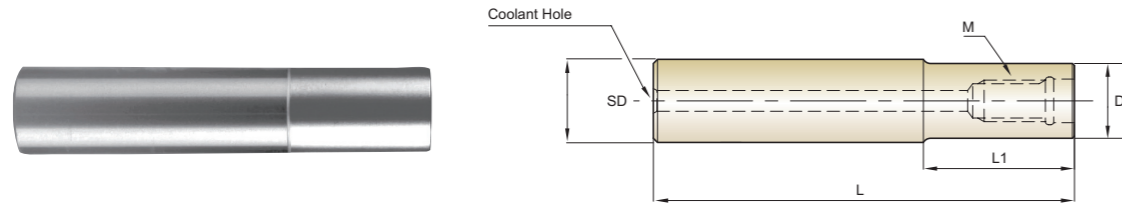
TPKR 22 Recommended Cutting Condition

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



ZMC (Carbide Holder)

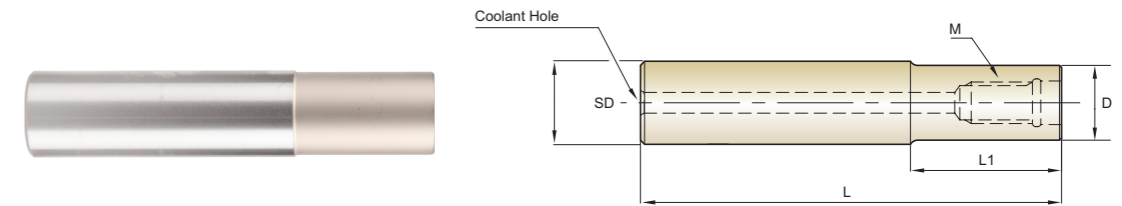


Straight Neck Type

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Wrench No.	Coolant Hole
		SD	L	L1	D	M		
ZMC1001100	10.0	10.0	70	20	9.5	M6	SPIS0810	2.0
ZMC1002100			100	40				
ZMC1003100			130	70				
ZMC1201120	12.0	12.0	80	20	11.5	M6	SPIS0810	2.0
ZMC1202120			100	40				
ZMC1203120			130	70				
ZMC1601160	16.0	16.0	100	40	15.5	M8	SPIS1300	3.0
ZMC1602160			150	80				
ZMC1603160			200	120				
ZMC2001200	20.0	20.0	100	40	19.5	M10	SPIS1700	4.0
ZMC2002200			150	80				
ZMC2003200			200	120				
ZMC2004200			250	160				
ZMC2501250	25.0	25.0	150	70	24.3	M12	SPIS2200	5.0
ZMC2502250			200	100				
ZMC2503250			250	150				
ZMC2504250			300	200				
ZMC3001320	30.0 / 32.0	32.0	150	70	29.0	M16	SPIS2700	6.0
ZMC3002320			200	120				
ZMC3003320			250	150				
ZMC3004320			300	200				
ZMC3005320			350	250				

► The wrench(1pc) for the relevant item is included.
If more is needed, available for sale.

ZMS (Steel Holder)



Straight Neck Type

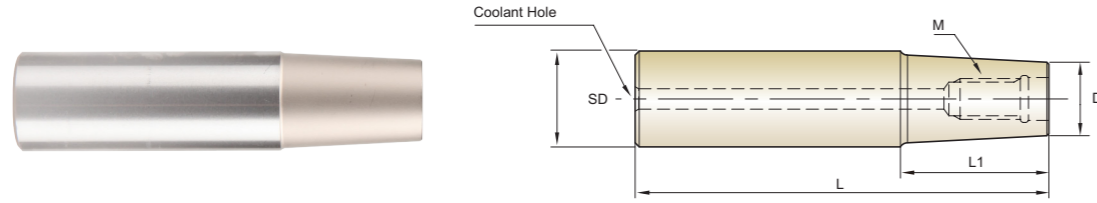
EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Wrench No.	Coolant Hole
		SD	L	L1	D	M		
ZMS1001100	10.0	10.0	70.0	20.0	9.0	M6	SPIS0810	3.0
ZMS1201120	12.0	12.0	90.0	30.0	11.0	M6		3.0
ZMS1601160	16.0	16.0	100.0	30.0	15.0	M8	SPIS1300	4.0
ZMS2001200	20.0	20.0	100.0	30.0	19.0	M10	SPIS1700	5.0
ZMS2501250	25.0	25.0	115.0	40.0	24.0	M12	SPIS2200	5.0
ZMS3001320	30.0 / 32.0	32.0	125.0	40.0	29.0	M16	SPIS2700	6.0

► The wrench(1pc) for the relevant item is included.
If more is needed, available for sale.

Wrench

Model	Wrench No.	Wrench Width	Mill Diameter	Clamping Torque [N·m]
	SPIS0810	8	10.0	6.5
		10	12.0	6.5
	SPIS1300	13	16.0	10
	SPIS1700	17	20.0	12
	SPIS2200	22	25.0	15
	SPIS2700	27	30.0 32.0	20

ZMT (Steel Holder)



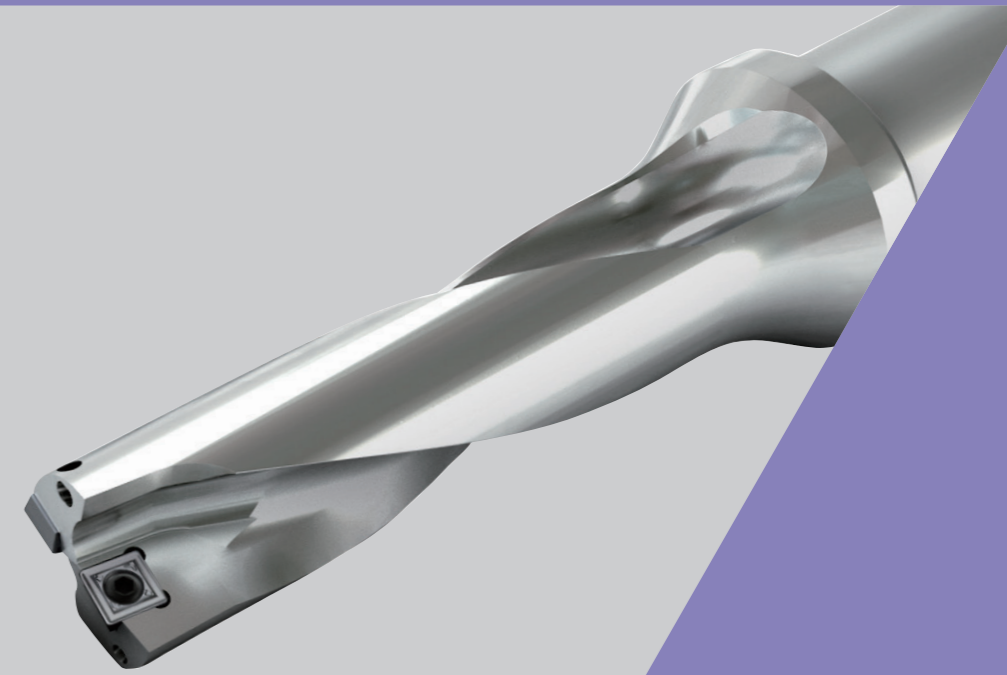
Taper Neck Type

EDP No.	Mill Diameter	Shank Diameter	Overall Length	Neck Length	Neck Diameter	Thread Size	Wrench No.	Coolant Hole
		SD	L	L1	D	M		
ZMT1001120	10.0	12.0	100.0	50.0	9.0	M6	SPIS0810	3.0
ZMT1201160	12.0	16.0	130.0	70.0	11.0	M6		3.0
ZMT1601200	16.0	20.0	150.0	90.0	15.0	M8	SPIS1300	4.0
ZMT2001250	20.0	25.0	170.0	100.0	19.0	M10	SPIS1700	5.0
ZMT2501320	25.0	32.0	200.0	110.0	24.0	M12	SPIS2200	5.0
ZMT3001320	30.0 / 32.0	32.0	200.0	110.0	29.0	M16	SPIS2700	6.0

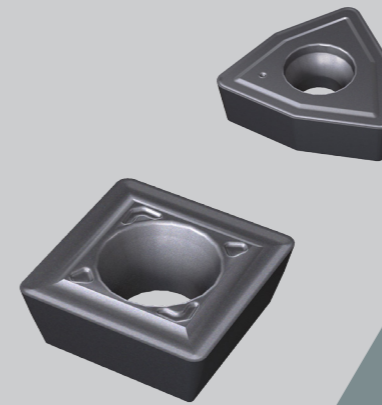
► The wrench(1pc) for the relevant item is included.
If more is needed, available for sale.

Wrench

Model	Wrench No.	Wrench Width	Mill Diameter	Clamping Torque [N·m]
	SPIS0810	8	10.0	6.5
		10	12.0	6.5
	SPIS1300	13	16.0	10
	SPIS1700	17	20.0	12
	SPIS2200	22	25.0	15
	SPIS2700	27	30.0 32.0	20



YG DRILL
INDEXABLE CUTTING TOOLS
YG UNIVERSAL LINE

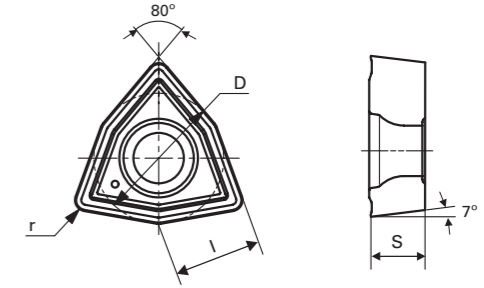


METRIC

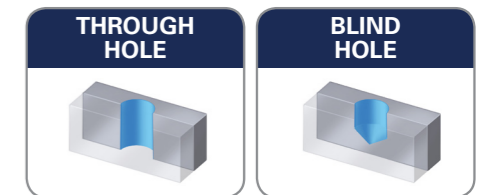
Designation	YG	S1	3	-	20	S	25	F	100	-	07
No.	①	②	③		④	⑤	⑥	⑦	⑧		⑨

No.	Meaning	Symbol	Explanation
①	Brand Name	YG	YG-1 Global
②	Insert Type	S1	S1 - SPMG...
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	4.28	6.35	2.38	0.8
WCMX 050308	YG602	5.35	7.94	3.18	0.8
WCMX 06T308	YG602	6.42	9.52	3.97	0.8
WCMX 080412	YG602	8.56	12.7	4.76	1.2



WCMX 04 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 06 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

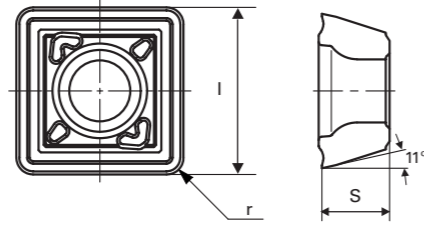
WCMX 05 Recommended Cutting Condition

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

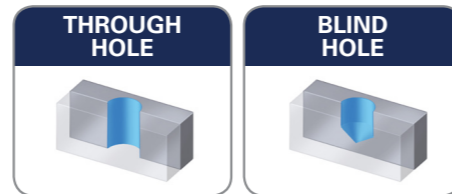
WCMX 08 Recommended Cutting Condition

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

SPMG 05



Designation	Grade	Dimensions			
		I	D	S	r
SPMG 050204	YG602	5.00	-	2.39	0.4

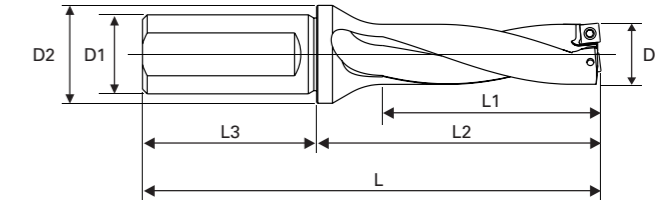
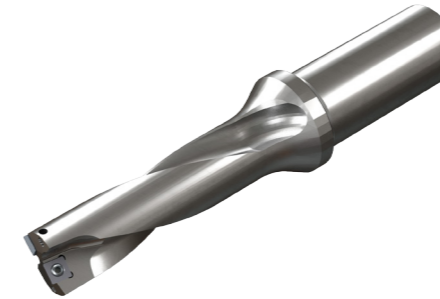


SPMG 05

Recommended Cutting Condition

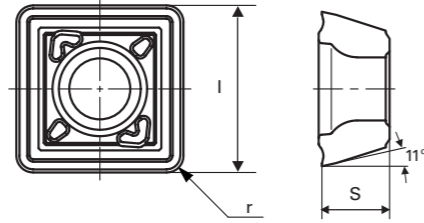
Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.04	0.09	0.07	180	270	225
	Low Alloys	200	0.04	0.09	0.07	120	230	175
	High Alloys	220	0.05	0.09	0.07	70	170	120
M	Austenitic	190	0.04	0.09	0.07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

SPMG 05 / Holder

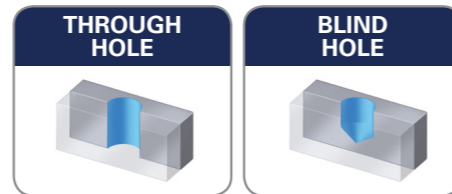


Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-13S20F094-05	2	13.0	20	25	26	44	50	94	TP072043	TPWFTP07	SPMG 050204
YGS12-14S20F096-05	2	14.0	20	25	28	46	50	96			
YGS12-15S20F098-05	2	15.0	20	25	30	48	50	98			
YGS13-13S20F107-05	2	13.0	20	25	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			

SPMG 06



Designation	Grade	Dimensions			
		I	D	S	r
SPMG 060204	YG602	6.00	-	2.41	0.4

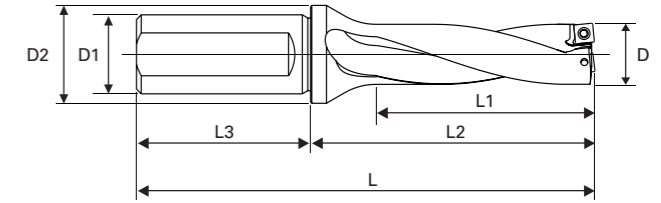


SPMG 06

Recommended Cutting Condition

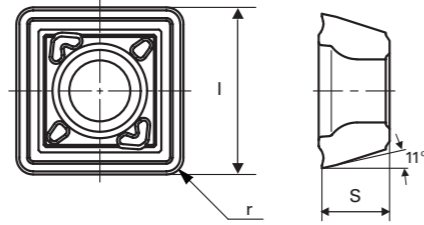
Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.04	0.09	0.07	180	270	225
	Low Alloys	200	0.04	0.09	0.07	120	230	175
	High Alloys	220	0.05	0.09	0.07	70	170	120
M	Austenitic	190	0.04	0.09	0.07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

SPMG 06 / Holder

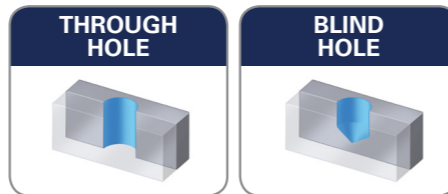


Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-16S25F109-06	2	16.0	25	32	32	53	56	109	TP072252	TPWFTP07	SPMG 060204
YGS12-17S25F111-06	2	17.0	25	32	34	55	56	111			
YGS12-18S25F113-06	2	18.0	25	32	36	57	56	113			
YGS12-19S25F115-06	2	19.0	25	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			
YGS13-21S25F114-06	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			

SPMG 07



Designation	Grade	Dimensions			
		I	D	S	r
SPMG 07T308	YG602	7.95	-	3.99	0.8

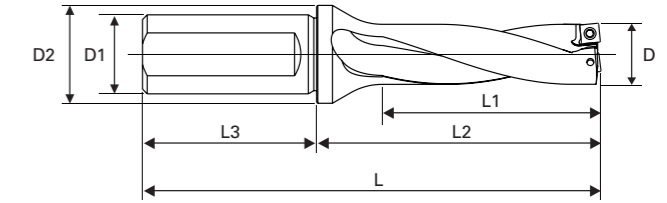
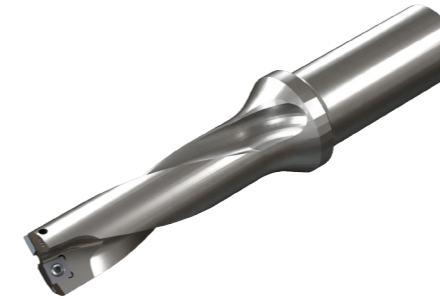


SPMG 07

Recommended Cutting Condition

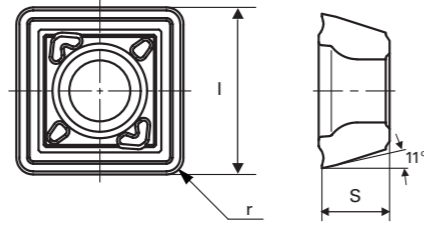
Material			Cutting Conditions					
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)		
			Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.05	0.10	0.08	180	270	220
	Low Alloys	200	0.05	0.10	0.08	120	230	180
	High Alloys	220	0.07	0.10	0.10	70	170	120
M	Austenitic	190	0.05	0.10	0.08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

SPMG 07 / Holder

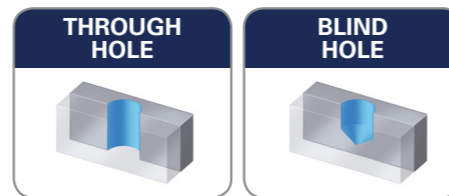


Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-22S32F134-07	2	22.0	32	45	44	74	60	134	TP082564	TPWFTP08	SPMG 07T308
YGS12-23S32F136-07	2	23.0	32	45	46	76	60	136			
YGS12-24S32F138-07	2	24.0	32	45	48	78	60	138			
YGS12-25S32F140-07	2	25.0	32	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			

SPMG 09



Designation	Grade	Dimensions			
		I	D	S	r
SPMG 090408	YG602	9.80	-	4.30	0.8

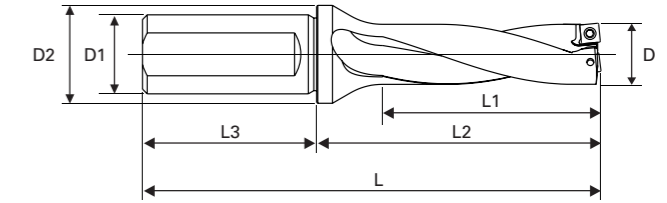
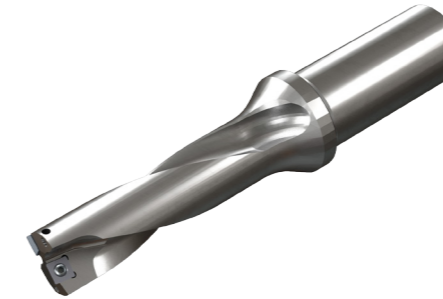


SPMG 09

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

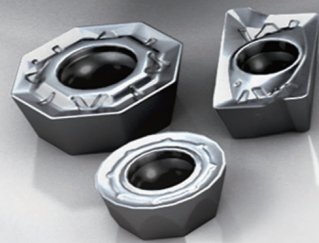
SPMG 09 / Holder



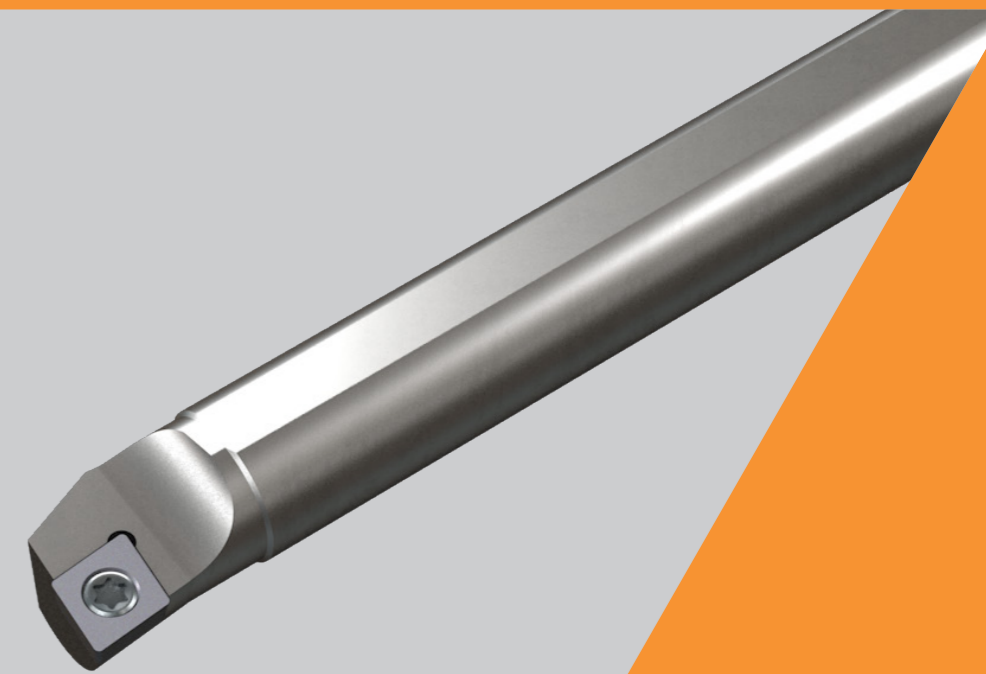
Designation	Dimensions								Spare parts		Geometry
	z	D	D1	D2	L1	L2	L3	L	Screw	Wrench	Relative Insert
YGS12-28S32F146-09	2	28.0	32	45	56	86	60	146	TP153588	TPWFTP15	SPMG 090408
YGS12-29S32F148-09	2	29.0	32	45	58	88	60	148			
YGS12-30S32F151-09	2	30.0	32	55	60	91	60	151			
YGS12-31S32F153-09	2	31.0	32	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 MILL

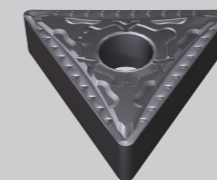


YG DRILL



YG TURN

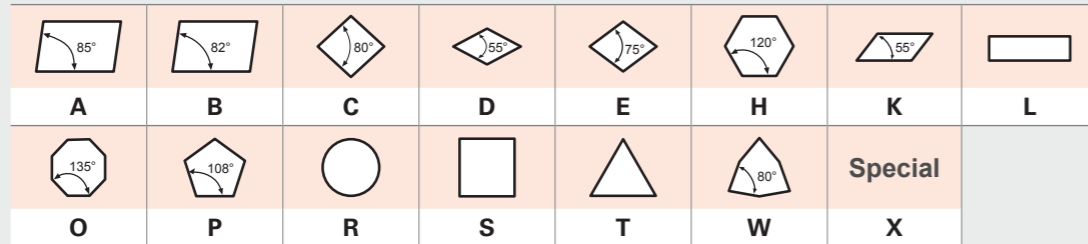
INDEXABLE CUTTING TOOLS
YG UNIVERSAL LINE



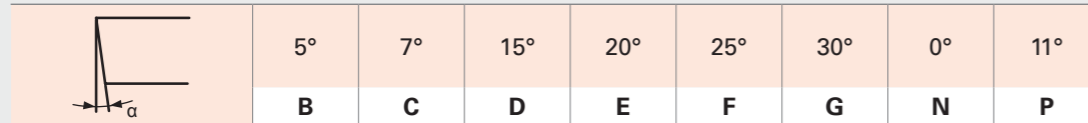
BROTECH



1 Insert Shape

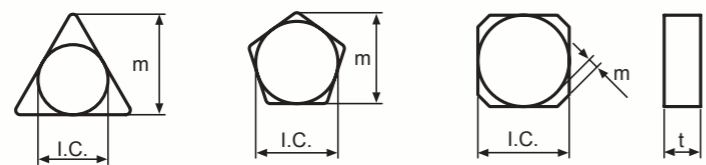


2 Clearance Angle

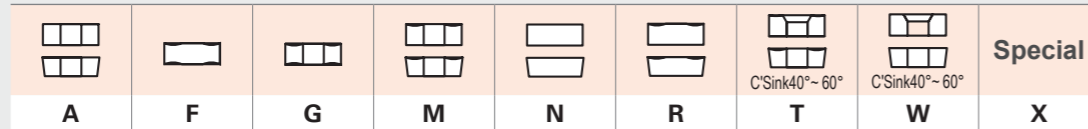


3 Tolerance

	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	± 0.18	± 0.13	± 0.05	●	●				
			± 0.08		●				
			± 0.10			●	●		
			± 0.13					●	



4 Cross Section Shape



5 Cutting Edge Length

I.C. Size	Symbol	C	D	S	R	T	V	W	H	O
Inch		Metric								
7/32	1.8(7)	05	06	05	05	09	09	03		
1/4	2	06	07	06	06	11	11	04		
5/16	2.5	08	09	07	07	13	13	05		
3/8	3	09	11	09	09	16	16	06		
1/2	4	12	15	12	12	22	22	08	05	05
5/8	5	16	19	15	15	27	27	10	09	06
3/4	6	19	23	19	19	33	33	13	10	
1	8	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

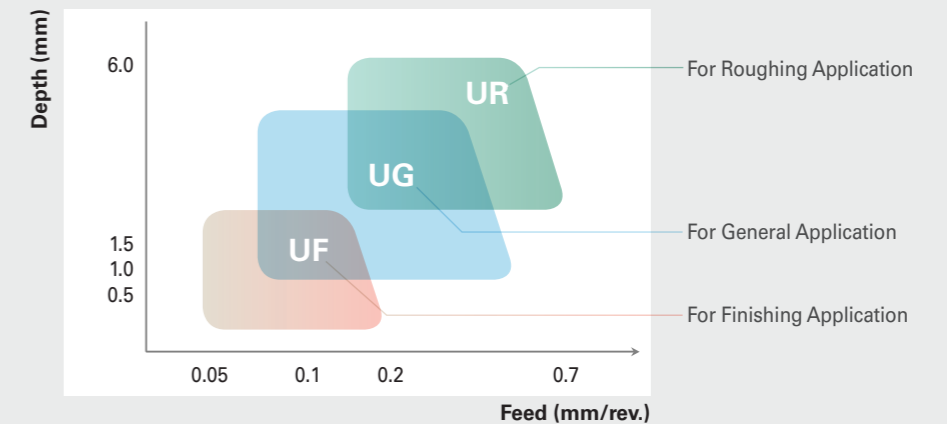
7 Nose Radius

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

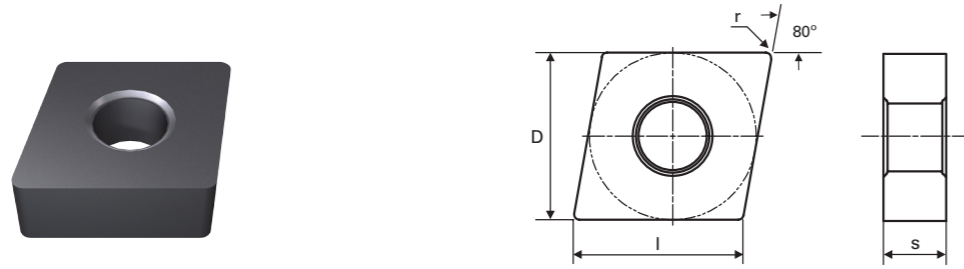
8 Chip Breaker

For Application

YG Turn Chip Breakers Application area

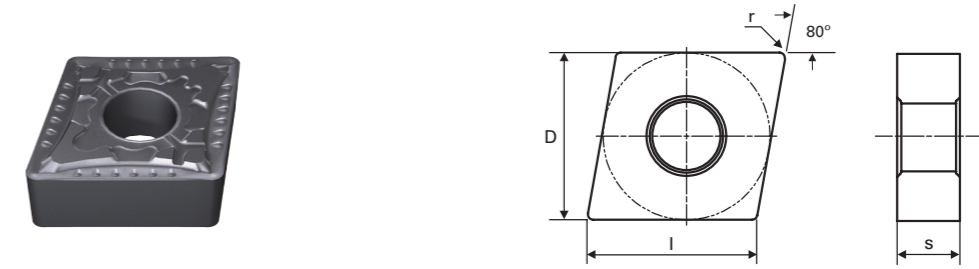


CNMA 12



Designation	Grade	Dimensions			
		L	D	s	r
CNMA 120408-UC	YG1001	12.90	12.70	4.76	0.8
CNMA 120412-UC	YG1001	12.90	12.70	4.76	1.2

CNMG 12



Designation	Grade	Dimensions			
		L	D	s	r
CNMG 120404-UF	YG801	12.90	12.70	4.76	0.4
CNMG 120408-UG	YG801	12.90	12.70	4.76	0.8
CNMG 120412-UR	YG801	12.90	12.70	4.76	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 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

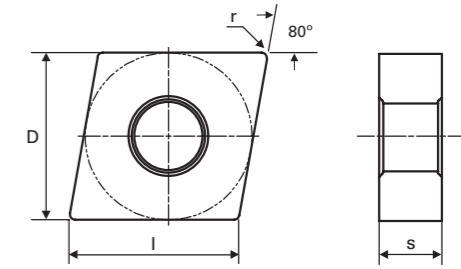
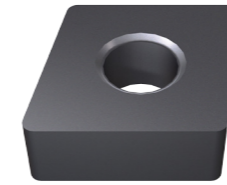
CNMG 120404

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 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

CNMA 16


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

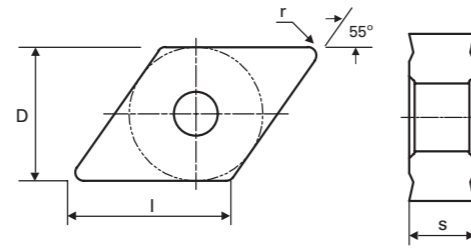
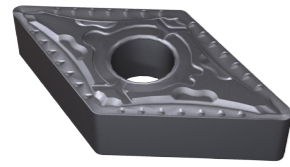
CNMG 120412
Recommended Cutting Condition

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

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

DNMG 15



Designation	Grade	Dimensions			
		L	D	s	r
DNMG 150404-UF	YG801	15.50	12.70	4.76	0.4
DNMG 150408-UG	YG801	15.50	12.70	4.76	0.8

DNMG 150404

Recommended Cutting Condition

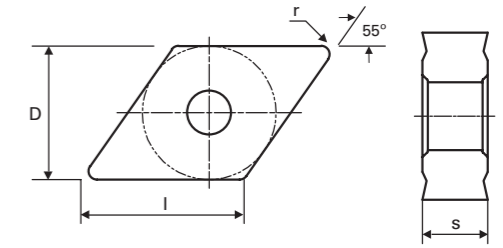
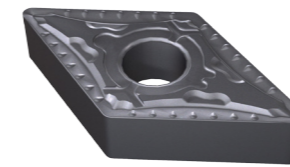
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	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 15



Designation	Grade	Dimensions			
		L	D	s	r
DNMG 150604-UF	YG801	15.50	12.70	6.35	0.4
DNMG 150608-UG	YG801	15.50	12.70	6.35	0.8
DNMG 150612-UR	YG801	15.50	12.70	6.35	1.2

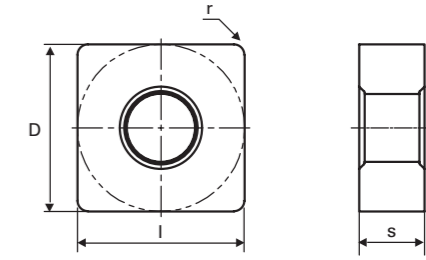
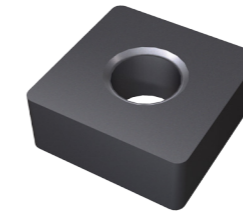
DNMG 150604

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

SNMA 12


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

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

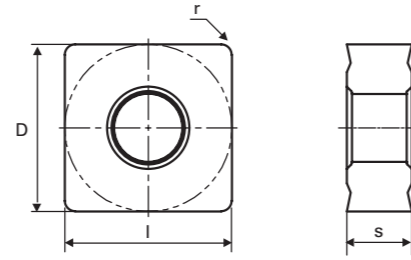
SNMA 120408
Recommended Cutting Condition

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 12



Designation	Grade	Dimensions			
		L	D	s	r
SNMG 120404-UF	YG801	12.70	12.70	4.76	0.4
SNMG 120408-UG	YG801	12.70	12.70	4.76	0.8
SNMG 120412-UR	YG801	12.70	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

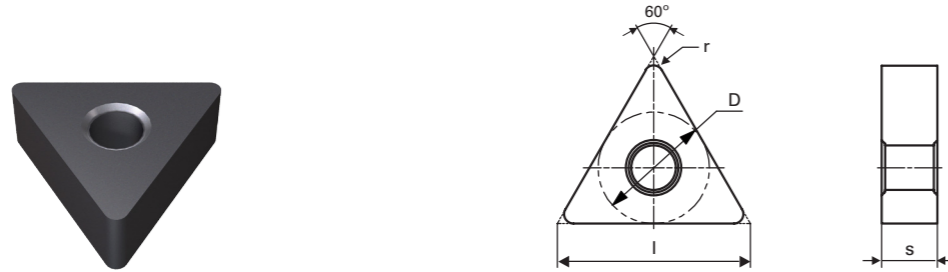
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.30	0.70	0.55	180	330	250	0.2	4.0	2.1
	Low Alloys	200	0.30	0.63	0.47	120	280	200	0.2	4.0	2.1
	High Alloys	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

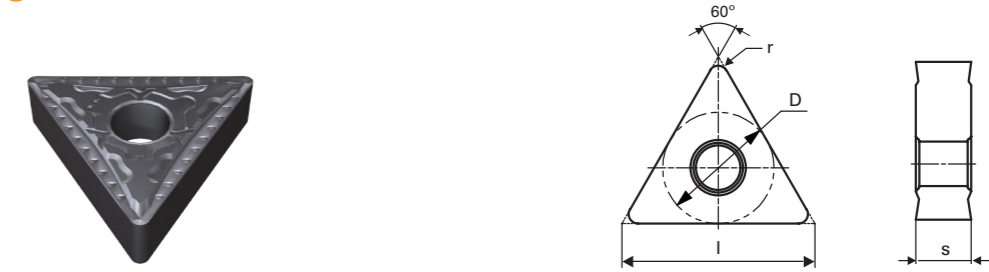
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.37	0.95	0.65	180	330	250	0.7	6.0	4.0
	Low Alloys	200	0.37	0.86	0.60	120	280	200	0.7	6.0	4.0
	High Alloys	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 16



Designation	Grade	Dimensions			
		l	D	s	r
TNMA 160408-UC	YG1001	16.50	9.52	4.76	0.8
TNMA 160412-UC	YG1001	16.50	9.52	4.76	1.2

TNMG 16



Designation	Grade	Dimensions			
		l	D	s	r
TNMG 160404-UF	YG801	16.50	9.52	4.76	0.4
TNMG 160408-UG	YG801	16.50	9.52	4.76	0.8
TNMG 160412-UR	YG801	16.50	9.52	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

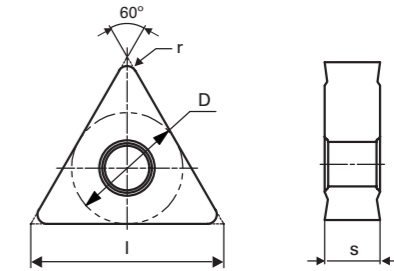
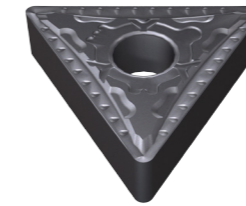
TNMG 160404

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 22


Designation	Grade	Dimensions			
		I	D	s	r
TNMG 220404-UF	YG801	22.00	12.70	4.76	0.4
TNMG 220408-UG	YG801	22.00	12.70	4.76	0.8
TNMG 220412-UR	YG801	22.00	12.70	4.76	1.2

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 220404
Recommended Cutting Condition

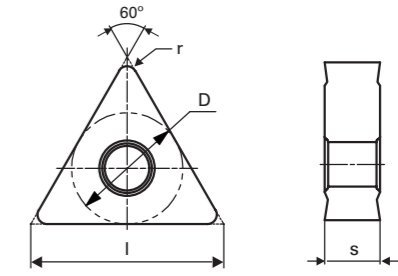
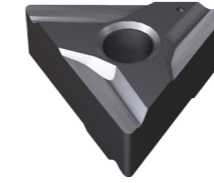
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	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 16


Designation	Grade	Dimensions			
		l	D	s	r
TNUX 160404 L	YG801	16.50	9.52	4.76	0.4
TNUX 160408 L	YG801	16.50	9.52	4.76	0.8
TNUX 160404 R	YG801	16.50	9.52	4.76	0.4
TNUX 160408 R	YG801	16.50	9.52	4.76	0.8

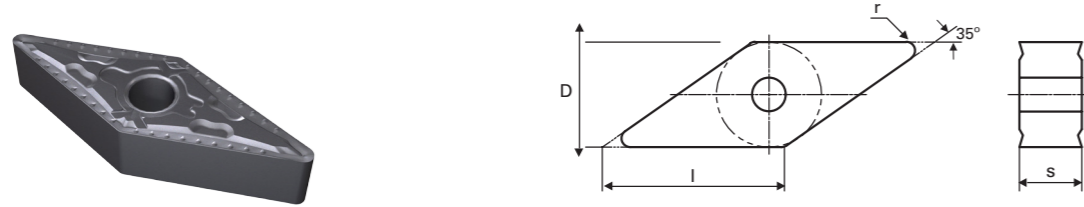
TNUX 160404
Recommended Cutting Condition

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 16



Designation	Grade	Dimensions			
		L	D	s	r
VNMG 160404-UF	YG801	16.50	9.52	4.76	0.4
VNMG 160408-UG	YG801	16.50	9.52	4.76	0.8
VNMG 160412-UR	YG801	16.50	9.52	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

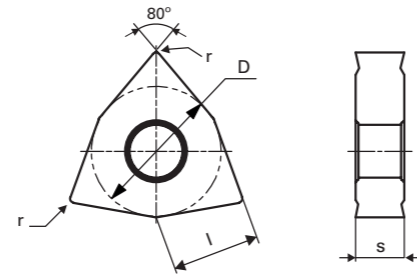
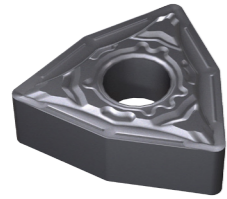
VNMG 160404 Recommended Cutting Condition

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

WNMG 06



Designation	Grade	Dimensions			
		l	D	s	r
WNMG 060404-UF	YG801	6.45	9.52	4.76	0.4
WNMG 060408-UG	YG801	6.45	9.52	4.76	0.8

WNMG 060404

Recommended Cutting Condition

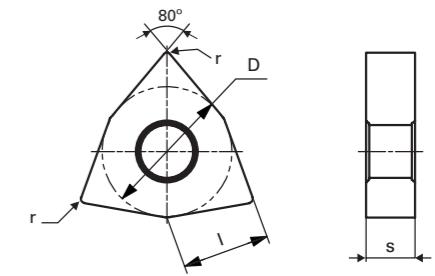
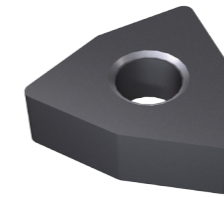
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	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

WNMA 08



Designation	Grade	Dimensions			
		l	D	s	r
WNMA 080404-UC	YG1001	8.14	12.70	4.76	0.4
WNMA 080408-UC	YG1001	8.14	12.70	4.76	0.8
WNMA 080412-UC	YG1001	8.14	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

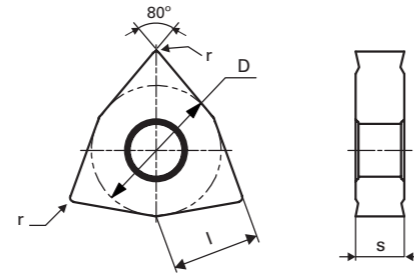
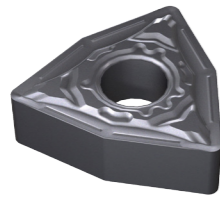
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.7	6.0	3.35

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 08



Designation	Grade	Dimensions			
		l	D	s	r
WNMG 080404-UF	YG801	8.69	12.70	4.76	0.4
WNMG 080408-UG	YG801	8.69	12.70	4.76	0.8
WNMG 080412-UR	YG801	8.69	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

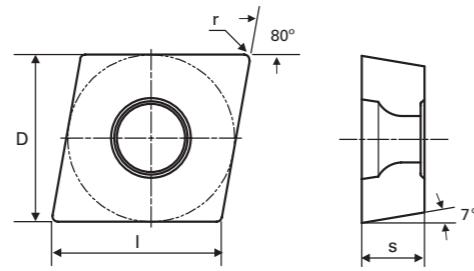
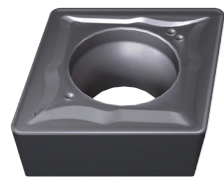
WNMG 080404 Recommended Cutting Condition

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 06



Designation	Grade	Dimensions			
		L	D	s	r
CCMT 060204-UF	YG801	6.45	6.35	2.38	0.4
CCMT 060208-UG	YG801	6.45	6.35	2.38	0.8

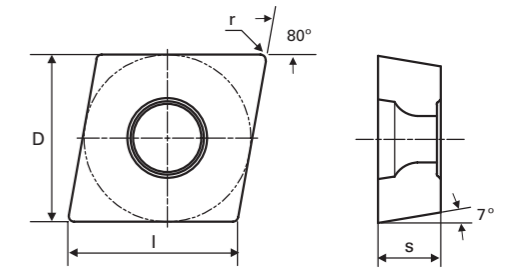
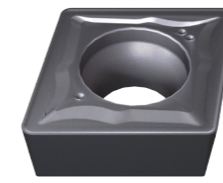
CCMT 060204 Recommended Cutting Condition

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 09



Designation	Grade	Dimensions			
		L	D	s	r
CCMT 09T304-UF	YG801	9.67	9.52	3.97	0.4
CCMT 09T308-UG	YG801	9.67	9.52	3.97	0.8

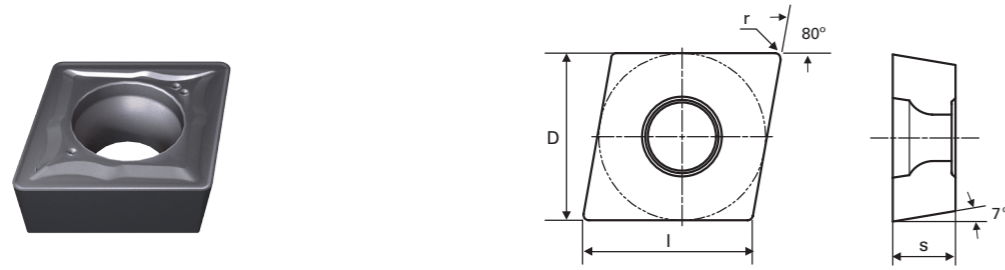
CCMT 09T304 Recommended Cutting Condition

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

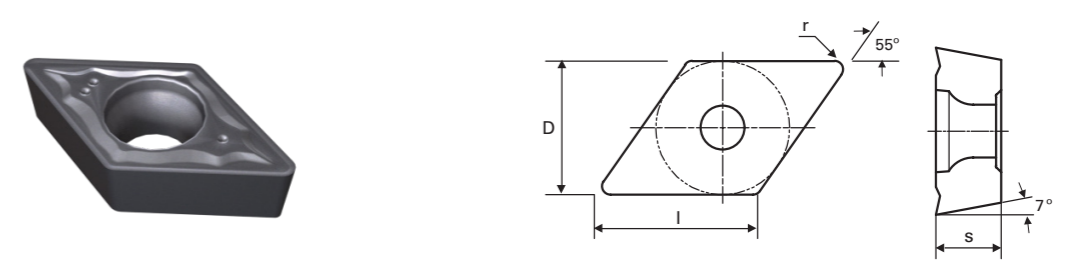
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys	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 12



Designation	Grade	Dimensions			
		I	D	s	r
CCMT 120408-UG	YG801	12.90	12.70	4.76	0.8

DCMT 07



Designation	Grade	Dimensions			
		I	D	s	r
DCMT 070204-UF	YG801	7.75	6.35	2.38	0.4

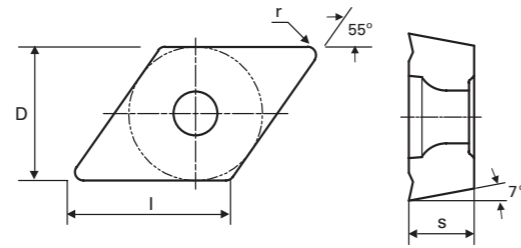
CCMT 12 Recommended Cutting Condition

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 07 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 11



Designation	Grade	Dimensions			
		l	D	s	r
DCMT 11T304-UF	YG801	11.63	9.52	3.97	0.4
DCMT 11T308-UG	YG801	11.63	9.52	3.97	0.8

DCMT 11T304

Recommended Cutting Condition

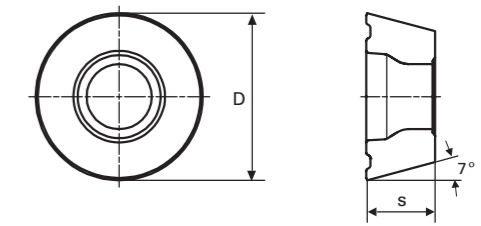
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys	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 06



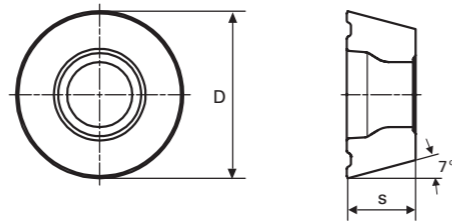
Designation	Grade	Dimensions			
		l	D	s	r
RCMT 0602M0	YG801	-	6.00	2.38	-

RCMT 0602M0

Recommended Cutting Condition

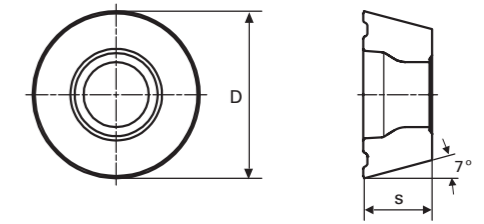
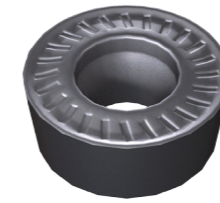
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.0	1.0
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.0	1.0
	High Alloys	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 08



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

RCMT 10



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

RCMT 0803M0

Recommended Cutting Condition

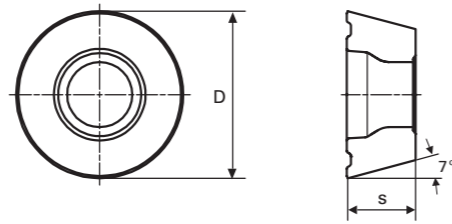
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.4	1.2
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.4	1.2
	High Alloys	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

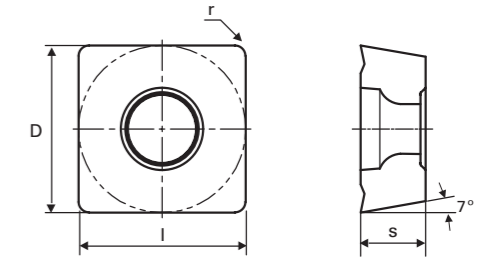
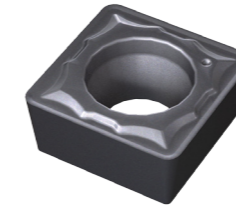
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.8	1.4
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.8	1.4
	High Alloys	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 12



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

SCMT 09



Designation	Grade	Dimensions			
		l	D	s	r
SCMT 09T304-UF	YG801	9.52	9.52	3.97	0.4
SCMT 09T308-UG	YG801	9.52	9.52	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

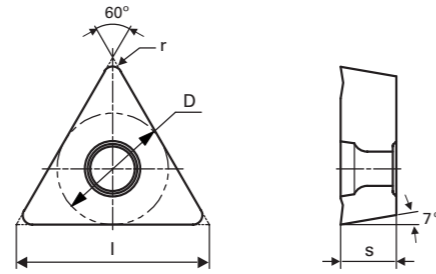
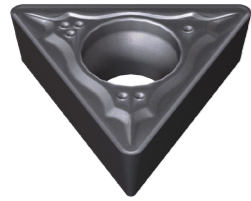
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.26	0.19	180	330	300	0.2	4.0	2.5
	Low Alloys	200	0.10	0.23	0.17	120	280	250	0.2	3.3	2.5
	High Alloys	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 11

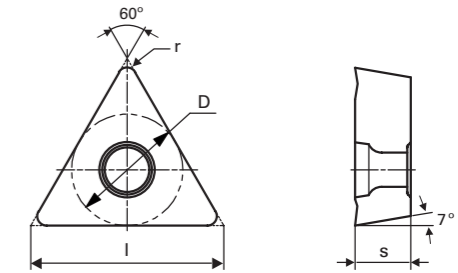
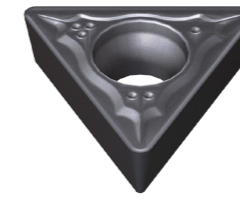


Designation	Grade	Dimensions			
		l	D	s	r
TCMT 110204-UF	YG801	11.00	6.35	2.38	0.4

TCMT 110204-UF 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 16



Designation	Grade	Dimensions			
		l	D	s	r
TCMT 16T304-UF	YG801	16.50	9.52	3.97	0.4
TCMT 16T308-UG	YG801	16.50	9.52	3.97	0.8

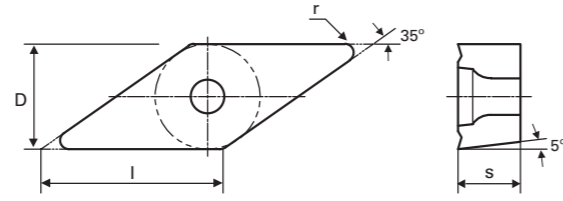
TCMT 16T304 Recommended Cutting Condition

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 16



Designation	Grade	Dimensions			
		L	D	s	r
VBMT 160404-UF	YG801	16.60	9.52	4.76	0.4
VBMT 160408-UG	YG801	16.60	9.52	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



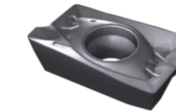
Damage of Insert & Counter Measure

	Description	Solution
Rapid Flank wear	<ol style="list-style-type: none"> Inappropriate feed(f) rate Cutting speed(s) too high 	<ol style="list-style-type: none"> Adjust feed(f) rate according to depth(ap), width(ae) Reduce cutting speed(s)
Chipping	<ol style="list-style-type: none"> Feed(f) rate too high Cutting speed(s) too low Vibration of holder & machine 	<ol style="list-style-type: none"> Reduce feed(f) rate Increase cutting speed(s) Reduce the tool overhang & improve the rigidity of machine and workpiece
Thermal crack	<ol style="list-style-type: none"> Insufficient coolant Cutting speed(s) too high 	<ol style="list-style-type: none"> Check cooling system, supply enough coolant or use dry milling Reduce cutting speed(s)
Built-up edge	<ol style="list-style-type: none"> Cutting speed(s) too low Insufficient coolant Not enough rake angle 	<ol style="list-style-type: none"> Increase cutting speed(s) Supply enough coolant Increase rake angle of change inserts
Notching	<ol style="list-style-type: none"> Scaling or work hardening in workpiece surface area Burrs in workpiece 	<ol style="list-style-type: none"> Change/Vary cutting condition (feed & depth) Change path or direction
Fracture	<ol style="list-style-type: none"> Wrong insert shape or corner radius Corner radius too small Cutting force fluctuation too high 	<ol style="list-style-type: none"> Choose the insert with bigger corner or radius
Cratering	<ol style="list-style-type: none"> Insufficient coolant supply Cutting speed(s) and feed(f) rate too high 	<ol style="list-style-type: none"> Increase coolant supply or concentration Reduce cutting speed(s) and feed(f) rate
Plastic deformation	<ol style="list-style-type: none"> Cutting speed(s) too high Too much stress applied on the cutting edge 	<ol style="list-style-type: none"> Reduce cutting speed(s) Supply enough coolant Choose insert with bigger corner radius

1. APKT 1003PDTR

Test Condition

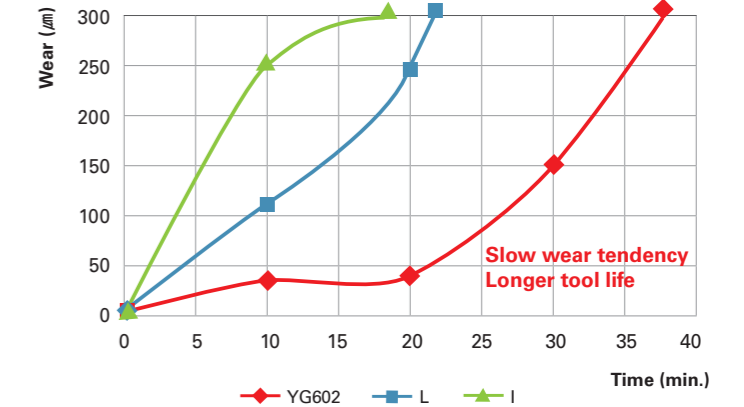
Workpiece (Alloy Tool Steel)	DIN: X100CrMoV5 1 AISI: D2 JIS: SKD11
Workpiece HB	210 ~ 220
Workpiece Size	150 × 200 × 120
Vc (m/min.)	140
fz (mm/tooth)	0.1
ap/ae (mm)	8 / 3
Coolant	Dry



Test samples

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

Test Result



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

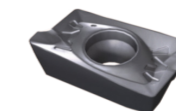
Tool life comparison results

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

2. APKT 1003PDTR

Test Condition

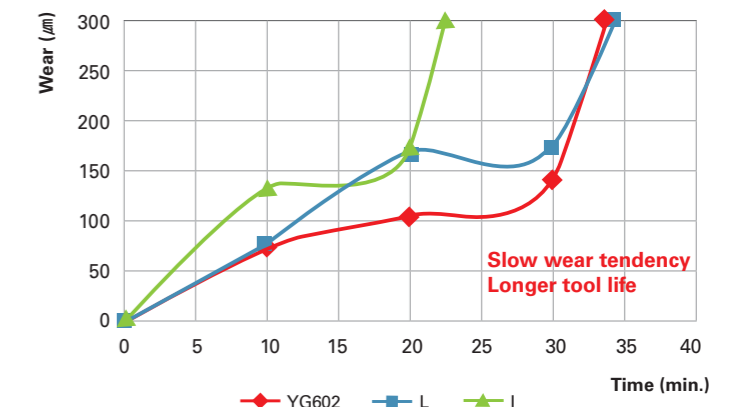
Workpiece (Stainless steel)	DIN: X2CrNi19-11 AISI: 304 JIS: SUS304
Workpiece HB	170 ~ 180
Workpiece Size	300 × 80 × 150
Vc (m/min.)	180
fz (mm/tooth)	0.08
ap/ae (mm)	8 / 3
Coolant	Dry



Test samples

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

Test Result



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

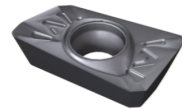
Tool life comparison results

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

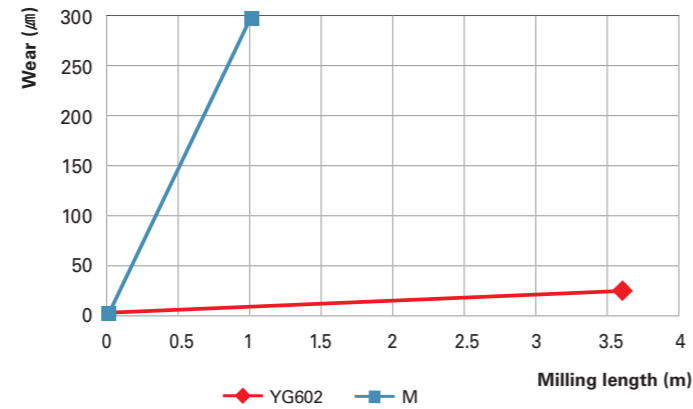
3. APMT 1604PDTR

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 1604PDTR	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.

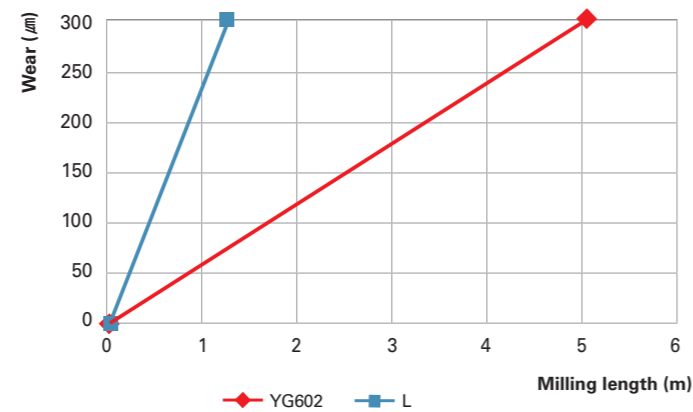
4. RDKT 1204M0

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.

MEMO




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