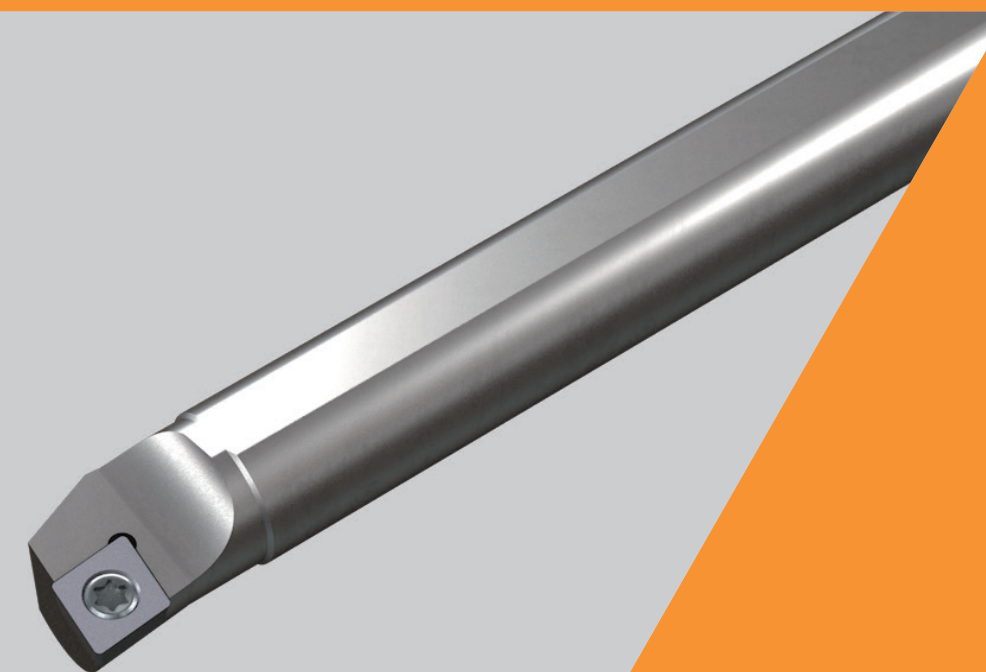


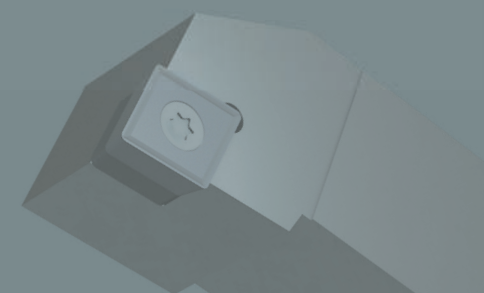
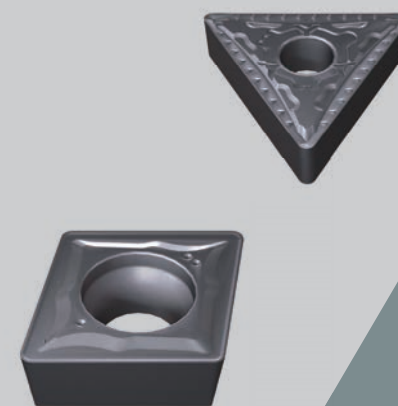


///GDRILL



///GTURN

INDEXABLE CUTTING TOOLS
YG UNIVERSAL LINE





1 Insert Shape

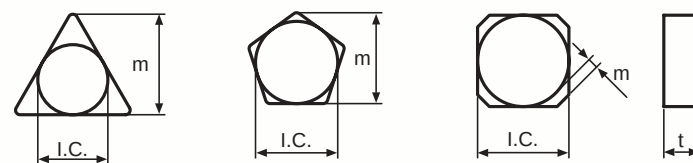
A	B	C	D	E	H	K	L
						Special	
O	P	R	S	T	W	X	

2 Clearance Angle

	5°	7°	15°	20°	25°	30°	0°	11°
	B	C	D	E	F	G	N	P

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	●	●				
	± .0050		± 0.08			●			
	± .0060		± 0.10				●	●	
	± .0070		± 0.13						●



4 Cross Section Shape

								Special
A	F	G	M	N	R	T	W	X



5 Cutting Edge Length

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

*() symbol for small size insert

6 Thickness

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

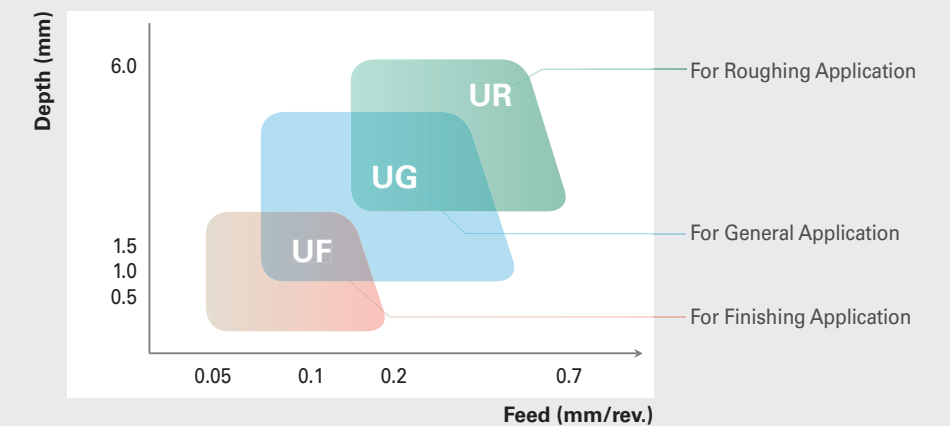
7 Nose Radius

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

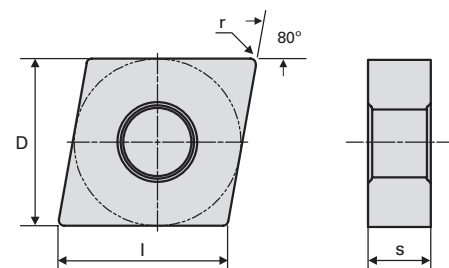
8 Chip Breaker

For Application

YG Turn Chip Breakers Application area



CNMA 1204



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

CNMA 120408

Recommended Cutting Condition

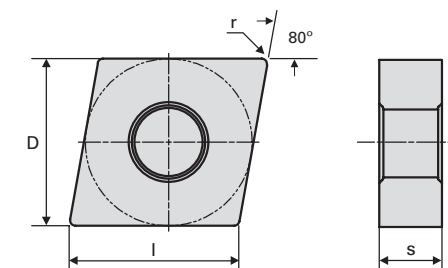
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.5	5.0	3.00

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

CNMA 1606



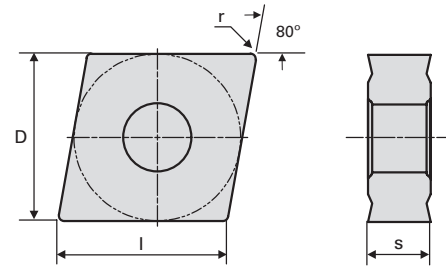
Designation	Grade	Dimensions			
		L	D	s	r
CNMA 160612-UC	YG1001	16.12	15.88	6.35	1.2

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

CNMG 1204



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

CNMG 120408

Recommended Cutting Condition

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

CNMG 120404

Recommended Cutting Condition

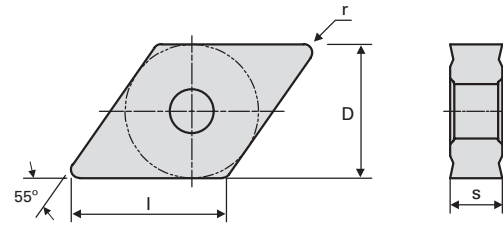
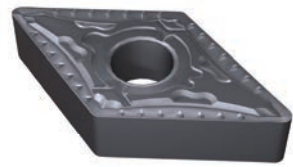
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

CNMG 120412

Recommended Cutting Condition

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

DNMG 1504



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

DNMG 150404

Recommended Cutting Condition

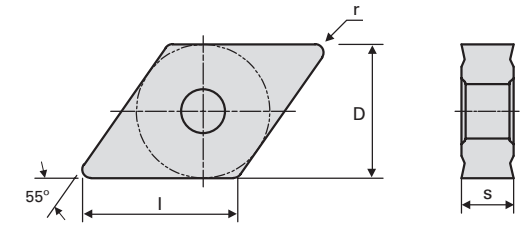
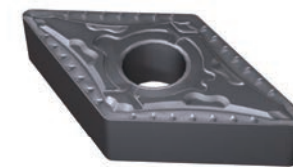
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

DNMG 150408

Recommended Cutting Condition

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

DNMG 1506



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

DNMG 150604

Recommended Cutting Condition

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

DNMG 150608

Recommended Cutting Condition

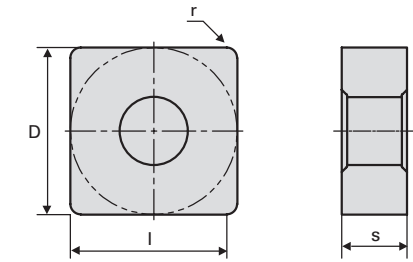
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys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

DNMG 150612

Recommended Cutting Condition

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

SNMA 1204



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

SNMA 120408

Recommended Cutting Condition

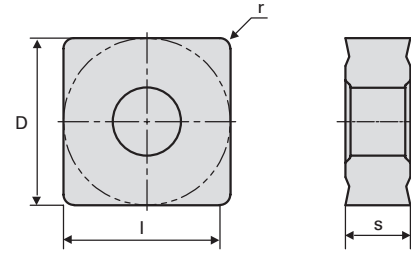
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.15	0.70	0.35	130	390	260	1.0	6.0	2.50

SNMA 120412

Recommended Cutting Condition

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

SNMG 1204



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

SNMG 120408

Recommended Cutting Condition

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

SNMG 120404

Recommended Cutting Condition

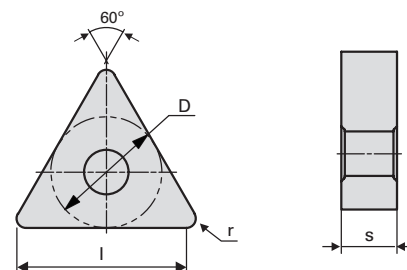
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.30	0.70	0.55	180	330	250	0.2	4.0	2.1
	Low Alloys	200	0.30	0.63	0.47	120	280	200	0.2	4.0	2.1
	High Alloys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

SNMG 120412

Recommended Cutting Condition

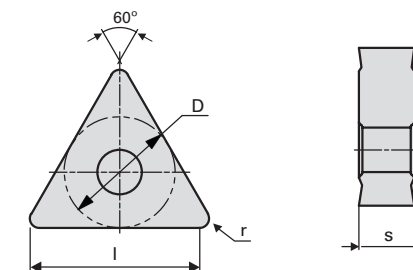
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.37	0.95	0.65	180	330	250	0.7	6.0	4.0
	Low Alloys	200	0.37	0.86	0.60	120	280	200	0.7	6.0	4.0
	High Alloys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

TNMA 1604



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

TNMG 1604



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

TNMA 160408

Recommended Cutting Condition

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

TNMA 160412

Recommended Cutting Condition

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

TNMG 160404

Recommended Cutting Condition

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

TNMG 160408

Recommended Cutting Condition

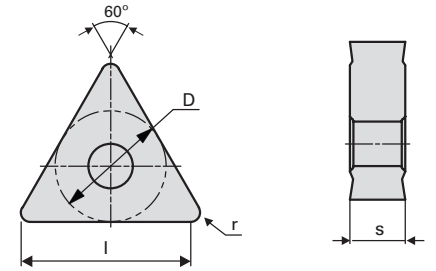
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys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

TNMG 160412

Recommended Cutting Condition

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

TNMG 2204



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

TNMG 220404

Recommended Cutting Condition

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

TNMG 220408

Recommended Cutting Condition

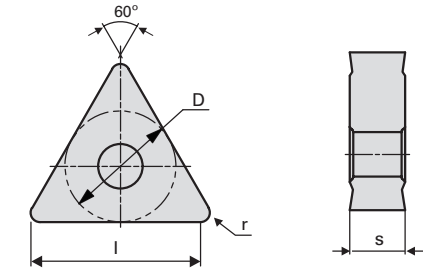
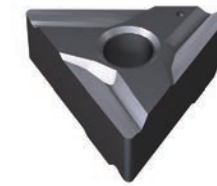
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	250	0.5	7.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	7.0	3.0
	High Alloys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

TNMG 220412

Recommended Cutting Condition

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

TNUX 1604



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

TNUX 160404

Recommended Cutting Condition

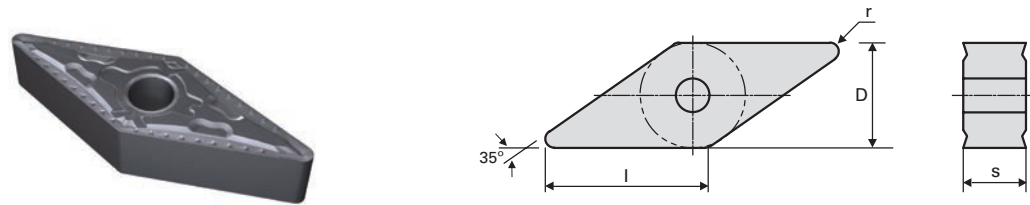
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

TNUX 160408

Recommended Cutting Condition

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

VNMG 1604



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

VNMG 160408

Recommended Cutting Condition

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

VNMG 160404

Recommended Cutting Condition

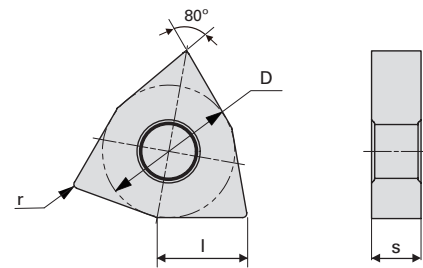
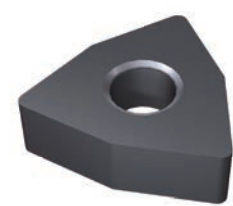
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

VNMG 160412

Recommended Cutting Condition

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

WNMA 0804



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

WNMA 080404

Recommended Cutting Condition

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

WNMA 080408

Recommended Cutting Condition

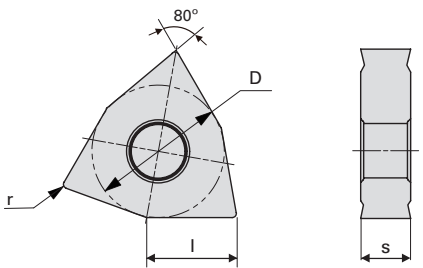
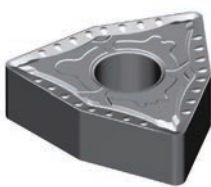
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.7	6.0	3.35

WNMA 080412

Recommended Cutting Condition

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

WNMG 0604



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

WNMG 060404

Recommended Cutting Condition

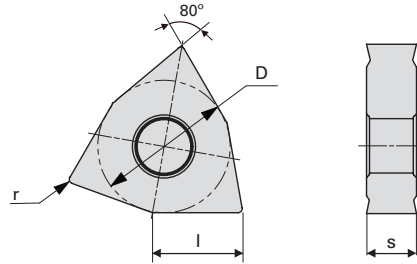
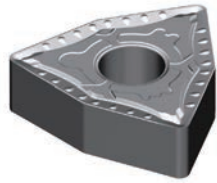
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

WNMG 060408

Recommended Cutting Condition

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

WNMG 0804



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

WNMG 080408

Recommended Cutting Condition

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

WNMG 080404

Recommended Cutting Condition

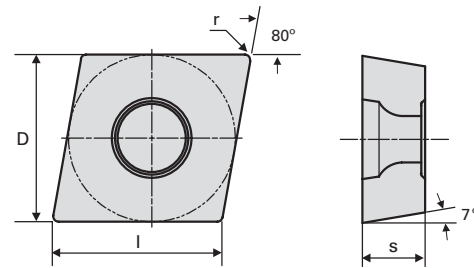
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

WNMG 080412

Recommended Cutting Condition

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

CCMT 0602



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

CCMT 060204

Recommended Cutting Condition

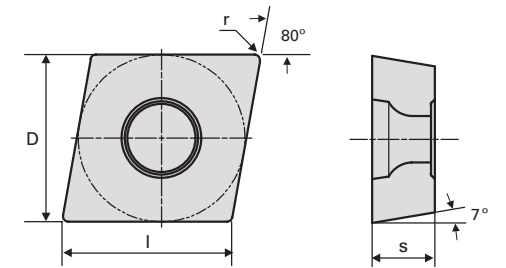
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.08	0.20	0.14	180	330	300	0.2	2.1	1.0
	Low Alloys	200	0.08	0.17	0.13	120	280	250	0.2	1.8	1.0
	High Alloys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

CCMT 060208

Recommended Cutting Condition

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

CCMT 09T3



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

CCMT 09T304

Recommended Cutting Condition

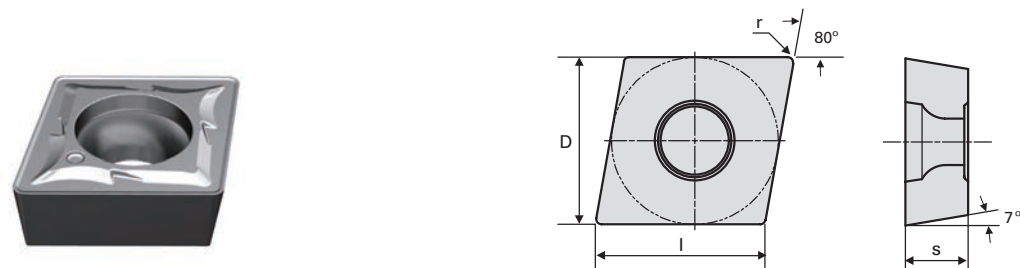
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

CCMT 09T308

Recommended Cutting Condition

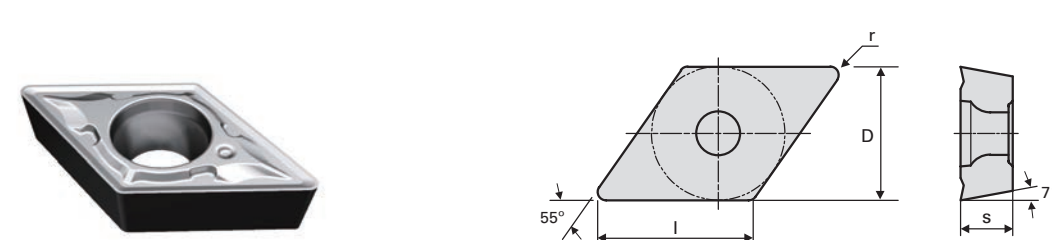
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys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

CCMT 1204



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

DCMT 0702



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

CCMT 120408

Recommended Cutting Condition

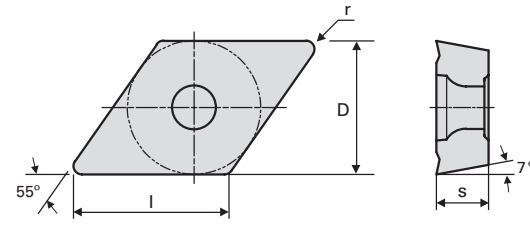
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloys	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloys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

DCMT 070204

Recommended Cutting Condition

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

DCMT 11T3



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

DCMT 11T304

Recommended Cutting Condition

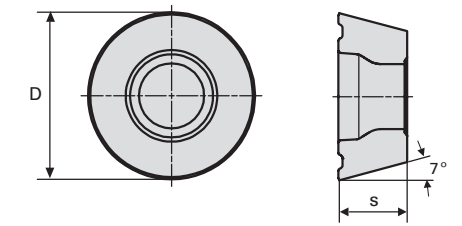
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

DCMT 11T308

Recommended Cutting Condition

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

RCMT 0602



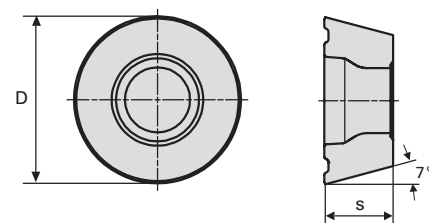
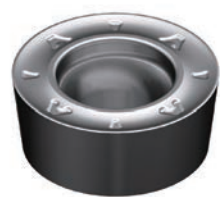
Designation	Grade	Dimensions			
		L	D	s	r
RCMT 0602M0	YG801	-	6.00	2.38	-

RCMT 0602M0

Recommended Cutting Condition

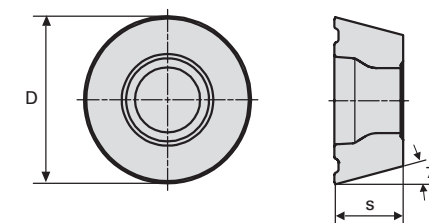
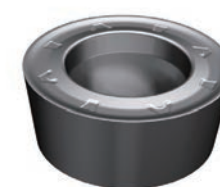
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.0	1.0
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.0	1.0
	High Alloys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

RCMT 0803



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

RCMT 10T3



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

RCMT 0803M0

Recommended Cutting Condition

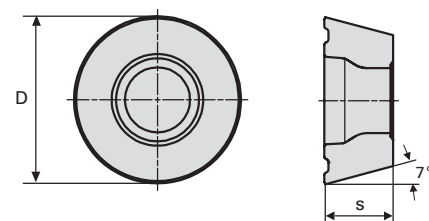
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.15	0.40	0.33	180	330	255	0.5	2.4	1.2
	Low Alloys	200	0.15	0.35	0.28	120	280	200	0.5	2.4	1.2
	High Alloys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

RCMT 10T3M0

Recommended Cutting Condition

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

RCMT 1204



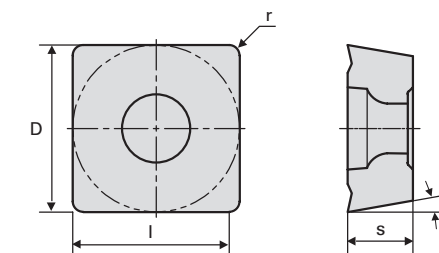
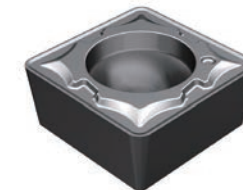
Designation	Grade	Dimensions			
		I	D	s	r
RCMT 1204M0	YG801	-	12.00	4.76	-

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 09T3



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

SCMT 09T304

Recommended Cutting Condition

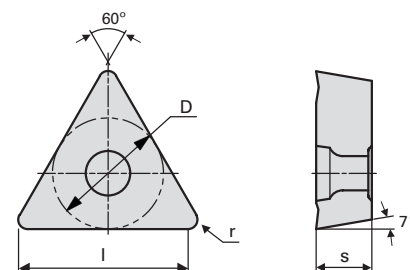
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.26	0.19	180	330	300	0.2	4.0	2.5
	Low Alloys	200	0.10	0.23	0.17	120	280	250	0.2	3.3	2.5
	High Alloys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

SCMT 09T308

Recommended Cutting Condition

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

TCMT 1102



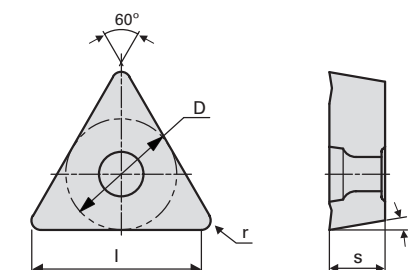
Designation	Grade	Dimensions			
		I	D	s	r
TCMT 110204-UF	YG801	11.00	6.35	2.38	0.4

TCMT 110204

Recommended Cutting Condition

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

TCMT 16T3



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

TCMT 16T304

Recommended Cutting Condition

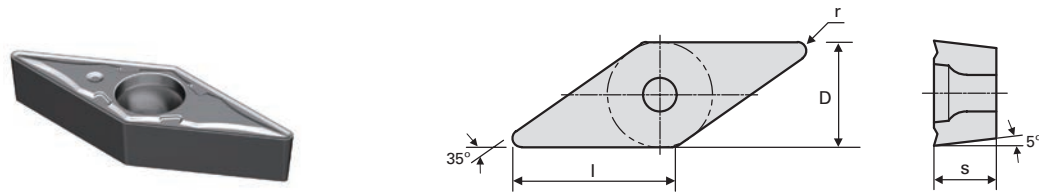
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.20	180	330	300	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloys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

TCMT 16T308

Recommended Cutting Condition

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

VBMT 1604



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

VBMT 160404

Recommended Cutting Condition

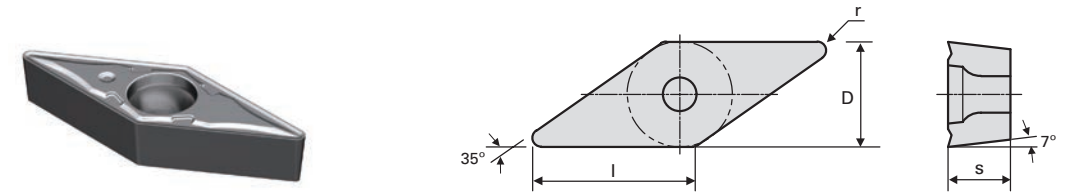
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
P	Non Alloys	120	0.11	0.23	0.17	180	330	255	0.2	3.0	2.0
	Low Alloys	200	0.10	0.20	0.15	120	280	200	0.2	2.5	2.0
	High Alloys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

VBMT 160408

Recommended Cutting Condition

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

VCMT 1604



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

VCMT 160404

Recommended Cutting Condition

Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
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	Low Alloys	200	0.10	0.20	0.15	120	280	200	0.2	2.5	2.0
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H	Hardened Materials	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

VCMT 160408

Recommended Cutting Condition

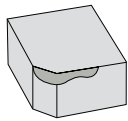
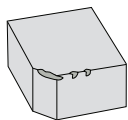
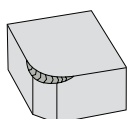
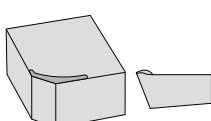
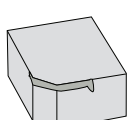
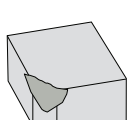
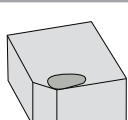
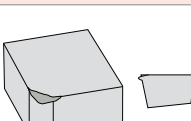
Material			Cutting Conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev.)			Vc (m/min.)			Depth Of Cut (mm)		
			Min.	Max.	Recommend	Min.	Max.	Recommend	Min.	Max.	Recommend
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	Low Alloys	200	0.19	0.36	0.28	120	280	200	0.5	3.5	2.5
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S	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



YGTURN

TECHNICAL INFORMATION

Damage of Insert & Counter Measure

Trouble Type	Cause	Solution
 Rapid Flank wear	1. Inappropriate feed(f) rate 2. Cutting speed(s) too high	1. Adjust feed(f) rate according to depth(ap), width(ae) 2. Reduce cutting speed(s)
 Chipping	1. Feed(f) rate too high 2. Cutting speed(s) too low 3. Vibration of holder & machine 4. Lack of toughness of cutting edge 5. Lack of rigid of shank type holder	1. Reduce feed(f) rate 2. Increase cutting speed(s) 3. Reduce the tool overhang & improve the rigidity of machine and workpiece 4. Apply big size shank type holder 5. Increase honing size
 Thermal crack	1. Insufficient coolant 2. Cutting speed(s) too high 3. Workpiece too hardened	1. Check cooling system, supply enough coolant or use dry milling 2. Reduce cutting speed(s) 3. Apply workpiece with high toughness
 Built-up edge	1. Cutting speed(s) too low 2. Insufficient coolant 3. Not enough rake angle	1. Increase cutting speed(s) 2. Supply enough coolant 3. Increase rake angle of change inserts
 Notch wear	1. Scaling or work hardening in workpiece surface area 2. Burrs in workpiece	1. Change/Vary cutting condition (feed & depth) 2. Change path or direction
 Fracture	1. Wrong insert shape or corner radius 2. Corner radius too small 3. Cutting force fluctuation too high	1. Choose the insert with bigger corner or radius 2. Reduce feed rate and depth 3. Choose thicker insert
 Cratering	1. Insufficient coolant supply 2. Cutting speed(s) and feed(f) rate too high 3. Workpiece too softened	1. Increase coolant supply or concentration 2. Reduce cutting speed(s) and feed(f) rate 3. Apply workpiece with high wear resistance
 Plastic deformation	1. Feed(f) and depth of cut too high 2. Cutting speed(s) too high 3. Too much stress applied on the cutting edge	1. Reduce cutting speed(s) 2. Supply enough coolant 3. Choose insert with bigger corner radius 4. Reduce feed rate and depth of cut 5. Apply workpiece with high wear resistance or high thermal conductivity

1. APKT 100305PDTR

Test Condition

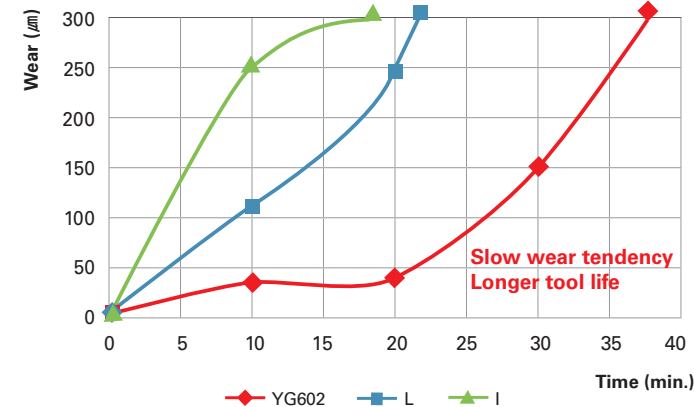
Workpiece (Alloy Tool Steel)	DIN: X100CrMoV5 1 AISI: D2 JIS: SKD11
Workpiece HB	210 ~ 220
Workpiece Size	150 × 200 × 120
Vc (m/min.)	140
fz (mm/tooth)	0.10
ap/ae (mm)	8 / 3
Coolant	Dry



Test samples

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

Test Result



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

Tool life comparison results

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

2. APKT 100305PDTR

Test Condition

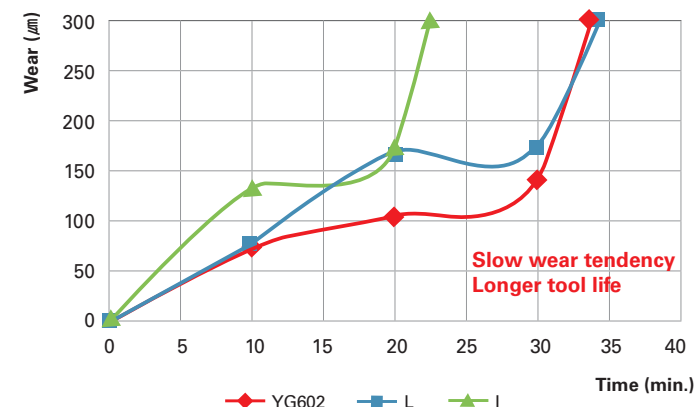
Workpiece (Stainless steel)	DIN: X2CrNi19-11 AISI: 304 JIS: SUS304
Workpiece HB	170 ~ 180
Workpiece Size	300 × 80 × 150
Vc (m/min.)	180
fz (mm/tooth)	0.08
ap/ae (mm)	8 / 3
Coolant	Dry



Test samples

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

Test Result



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

Tool life comparison results

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

3. APMT 160408PDTR

Test Condition

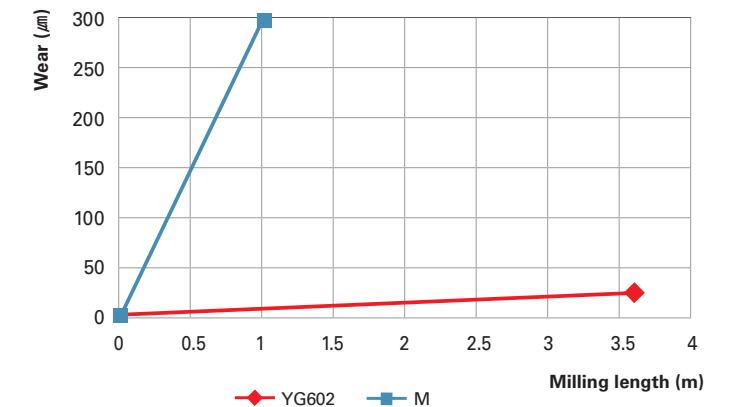
Workpiece (Alloy steel)	DIN: 42CrMo4 AISI: 4140 JIS: SCM440
Workpiece HB	270 ~ 290
Workpiece Size	200 × 300 × 150
Vc (m/min.)	200
fz (mm/tooth)	0.18
ap/ae (mm)	2 / 20
Coolant	Dry



Test samples

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

Test Result



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

Tool life comparison results

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

4. RDKT 1204M0

Test Condition

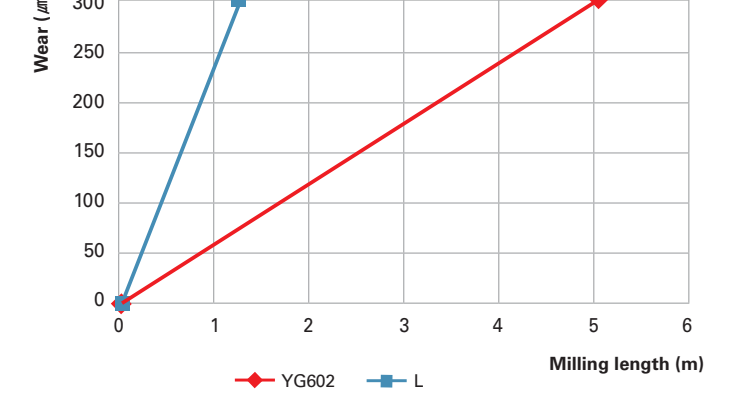
Workpiece (Alloy Tool Steel)	DIN: X100CrMoV5 1 AISI: D2 JIS: SKD11
Workpiece HB	200 ~ 210
Workpiece Size	120 × 100 × 150
Vc (m/min.)	120
fz (mm/tooth)	0.20
ap/ae (mm)	1.5 / 20
Coolant	Dry



Test samples

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

Test Result



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

Tool life comparison results

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