



POSITIVE & NEGATIVE  
INSERTS

*Aydosa*

TURNING

# CONTENTS

## NEGATIVE INSERTS

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 **CNMG/M** PAGE 01  
80° RHOMBIC

 **DNMG** PAGE 02  
55° RHOMBIC

 **KNUX** PAGE 03  
55° PARALLELOGRAM

 **SNMG/M** PAGE 04  
90° SQUARE

 **TNMG** PAGE 05  
60° TRIANGLE

 **VNMG** PAGE 06  
35° RHOMBIC

 **WNMG** PAGE 07  
80° TRIGON

## POSITIVE INSERTS

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 **CCMT** PAGE 08  
80° RHOMBIC

 **DCMT** PAGE 09  
55° RHOMBIC

 **RCMT** PAGE 10  
ROUND

 **SCMT** PAGE 11  
90° SQUARE

 **TCMT** PAGE 12  
60° TRIANGLE

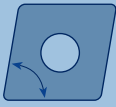
 **TPMR** PAGE 13  
60° TRIANGLE

 **VCMT** PAGE 14  
35° RHOMBIC

## TECHNICAL

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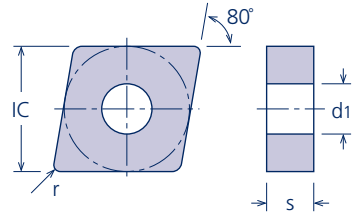
KEY CODE	PAGE 15
GRADE CHART	PAGE 16
RECOMMENDED DEPTH OF CUT AND CUTTING FEED	PAGE 17
RECOMMENDED CUTTING SPEED	PAGE 18





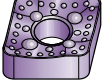


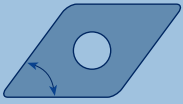
80°  
RHOMBIC

# CNMG/M

NEGATIVE INSERTS



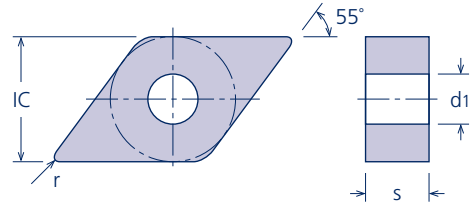
CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	PVD	CVD				PVD	CVD
FY - FINISHING 	CNMG120404FY...	1100055-..	12.7	4.76	0.4	5.16						•	
MX - MEDIUM 	CNMG120404MX...	1100070-..	12.7	4.76	0.4	5.16	•						
	CNMG120408MX...	1100071-..	12.7	4.76	0.8	5.16	•						
	CNMG120412MX...	1100072-..	12.7	4.76	1.2	5.16	•						
	CNMG160612MX...	1100105-..	15.88	6.35	1.2	6.35	•						
	CNMG160616MX...	1100106-..	15.88	6.35	1.6	6.35							
MY - MEDIUM 	CNMG120408MY...	1100075-..	12.7	4.76	0.8	5.16	•		•	•	•	•	
	CNMG120412MY...	1100076-..	12.7	4.76	1.2	5.16	•				•		
RX - ROUGHING 	CNMG120408RX...	1100095-..	12.7	4.76	0.8	5.16	•	•	•	•	•	•	
	CNMG120412RX...	1100096-..	12.7	4.76	1.2	5.16	•	•	•	•	•	•	
	CNMG190612RX...	1100163-..	19.05	6.35	1.2	7.93	•						
	CNMG190616RX...	1100164-..	19.05	6.35	1.6	7.93	•						
HX - HEAVY 	CNMM190612HX...	1100200-..	19.05	6.35	1.2	7.93	•				•		
	CNMM190616HX...	1100201-..	19.05	6.35	1.6	7.93	•				•		
	CNMM190624HX...	1100202-..	19.05	6.35	2.4	7.93	•				•		
Ordering Example: 10 off 1100055-22 or 10 off CNMG120404FY8220						24	31	32	34	35	22	38	

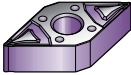
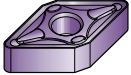
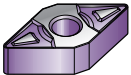



55°  
RHOMBIC

# DNMG

NEGATIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	PVD	CVD				PVD	CVD
FY - FINISHING 	DNMG150604FY...	1100333-..	12.7	6.35	0.4	5.16						●	
MX - MEDIUM 	DNMG110408MX...	1100274-..	9.53	4.76	0.8	3.81	●						
	DNMG150404MX...	1100301-..	12.7	4.76	0.4	5.16	●						
	DNMG150408MX...	1100302-..	12.7	4.76	0.8	5.16	●						
	DNMG150604MX...	1100345-..	12.7	6.35	0.4	5.16	●		●				
	DNMG150608MX...	1100346-..	12.7	6.35	0.8	5.16	●						
	DNMG150612MX...	1100347-..	12.7	6.35	1.2	5.16	●						
MY - MEDIUM 	DNMG110408MY...	1100277-..	9.53	4.76	0.8	3.81			●		●		
	DNMG150608MY...	1100349-..	12.7	6.35	0.8	5.16	●		●	●	●	●	
RX - ROUGHING 	DNMG150612RX...	1100367-..	12.7	6.35	1.2	5.16		●	●				
							24	31	32	34	35	22	38

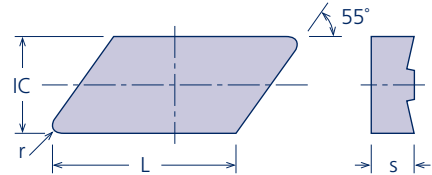
Ordering Example: 10 off 1100333-22 or 10 off DNMG150604FY8220



55°  
PARALLELOGRAM

# KNUX

NEGATIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			L	IC	s	R	PVD	CVD				PVD	CVD
	KNUX160405L11...	1100450-...	16	9.53	4.8	0.5	●						
	KNUX160405R11...	1100451-...	16	9.53	4.8	0.5	●						
	KNUX160410L11...	1100452-...	16	9.53	4.8	1.0	●						
	KNUX160410R11...	1100453-...	16	9.53	4.8	1.0	●						
							24	31	32	34	35	22	38

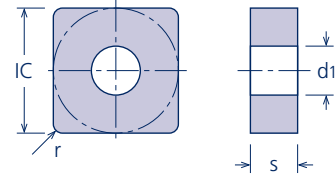
Ordering Example: 10 off 1100450-24 or 10 off KNUX160405L115230







90°  
SQUARE

# SNMG/M

NEGATIVE INSERTS

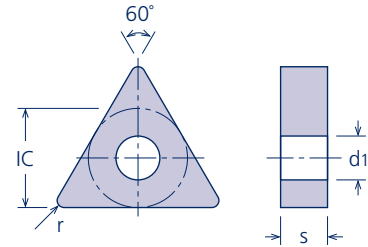






CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	PVD	CVD				PVD	CVD
<b>MX - MEDIUM</b> 	SNMG120408MX...	1100552-...	12.7	4.76	0.8	5.16	●						
	SNMG120412MX...	1100553-...	12.7	4.76	1.2	5.16	●						
	SNMG150612MX...	1100585-...	15.88	6.35	1.2	6.35	●						
<b>MY - MEDIUM</b> 	SNMG120408MY...	1100555-...	12.7	4.76	0.8	5.16	●			●	●	●	
<b>RX - ROUGHING</b> 	SNMG120412RX...	1100574-...	12.7	4.76	1.2	5.16		●	●				
	SNMG190612RX...	1100622-...	19.05	6.35	1.2	7.93	●						
	SNMG190616RX...	1100623-...	19.05	6.35	1.6	7.93							
<b>HX - HEAVY</b> 	SNMM190612HX...	1100661-...	19.05	6.35	1.2	7.93	●						
	SNMM190616HX...	1100662-...	19.05	6.35	1.6	7.93	●						
	SNMM190624HX...	1100663-...	19.05	6.35	2.4	7.93	●						
	SNMM250724HX...	1100669-...	25.4	7.94	2.4	9.12	●						
	SNMM250924HX...	1100675-...	25.4	9.52	2.4	9.12	●						
Ordering Example: 10 off 1100552-24 or 10 off SNMG120408MX5230							24	31	32	34	35	22	38



# TNMG

NEGATIVE INSERTS



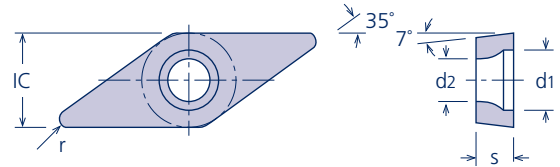
CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	PVD	CVD				PVD	CVD
FY - FINISHING 	TNMG160404FY...	1100784-..	9.53	4.76	0.4	3.81						•	
MX - MEDIUM 	TNMG160404MX... TNMG160408MX... TNMG160412MX... TNMG220404MX... TNMG220408MX... TNMG220412MX...	1100799-.. 1100800-.. 1100801-.. 1100840-.. 1100841-.. 1100842-..	9.53 9.53 9.53 12.7 12.7 12.7	4.76 4.76 4.76 4.76 4.76 4.76	0.4 0.8 1.2 0.4 0.8 1.2	3.81 3.81 3.81 5.16 5.16 5.16	• • • • • •			•			
MY - MEDIUM 	TNMG160408MY... TNMG160412MY...	1100803-.. 1100804-..	9.53 9.53	4.76 4.76	0.8 1.2	3.81 3.81	• •			• •	• •	• •	•
RX - ROUGHING 	TNMG160408RX... TNMG160412RX... TNMG270616RX... TNMG330924RX...	1100819-.. 1100820-.. 1100882-.. 1100894-..	9.53 9.53 15.88 19.05	4.76 4.76 6.35 9.52	0.8 1.2 1.6 2.4	3.81 3.81 6.35 7.93	• • • •	•	•	•	•	•	
							24	31	32	34	35	22	38

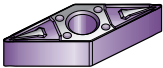

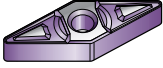
Ordering Example: 10 off 1100781-22 or 10 off TNMG160404FY8220



# VNMG

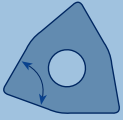
NEGATIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	PVD	CVD				PVD	CVD
FY - FINISHING 	VNMG160404FY...	1101003-..	9.53	4.76	0.4	3.81						•	
MX - MEDIUM 	VNMG160404MX...	1101009-..	9.53	4.76	0.4	3.81	•						
	VNMG160408MX...	1101010-..	9.53	4.76	0.8	3.81	•						
MY - MEDIUM 	VNMG160408MY...	1101013-..	9.53	4.76	0.8	3.81		•	•		•		
							24	31	32	34	35	22	38

Ordering Example: 10 off 1101003-22 or 10 off VNMG160404FY8220

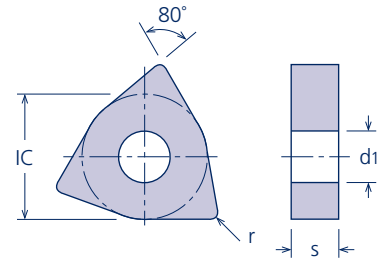



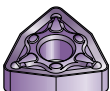




80°  
TRIGON

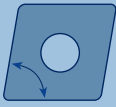
# WNMG

NEGATIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	PVD	CVD				PVD	CVD
FY - FINISHING 	WNMG080404FY...	1101098-..	12.7	4.76	0.4	5.16						•	
MX - MEDIUM 	WNMG060404MX...	1101075-..	9.53	4.76	0.4	3.81	•						
	WNMG060408MX...	1101076-..	9.53	4.76	0.4	3.81	•						
	WNMG080404MX...	1101111-..	12.7	4.76	0.4	5.16	•						
	WNMG080408MX...	1101112-..	12.7	4.76	0.8	5.16	•						
	WNMG080412MX...	1101113-..	12.7	4.76	1.2	5.16	•						
MY - MEDIUM 	WNMG060408MY...	1101079-..	9.53	4.76	0.8	3.81					•		
	WNMG080408MY...	1101115-..	12.7	4.76	0.8	5.16	•		•	•	•	•	
	WNMG080412MY...	1101116-..	12.7	4.76	1.2	5.16	•				•	•	
RX - ROUGHING 	WNMG080408RX...	1101127-..	12.7	4.76	0.8	5.16	•	•	•	•	•		
	WNMG080412RX...	1101128-..	12.7	4.76	1.2	5.16	•	•	•	•	•		
							24	31	32	34	35	22	38

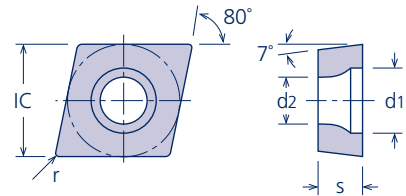
Ordering Example: 10 off 1101098-22 or 10 off WNMG080404FY8220




**80°**  
RHOMBIC

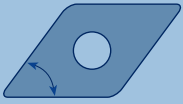
# CCMT

POSITIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)					5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	d2	PVD	CVD			PVD	CVD	
<b>MK - MEDIUM</b> 	CCMT060204MK...	1102017-..	6.35	2.38	0.4	3.7	2.8						•	
	CCMT060208MK...	1102018-..	6.35	2.38	0.8	3.7	2.8						•	
	CCMT09T304MK...	1102036-..	9.53	3.97	0.4	6.0	4.4						•	
	CCMT09T308MK...	1102037-..	9.53	3.97	0.8	6.0	4.4						•	
	CCMT120408MK...	1102067-..	12.7	4.76	0.8	7.5	5.5						•	
								24	31	32	34	35	22	38

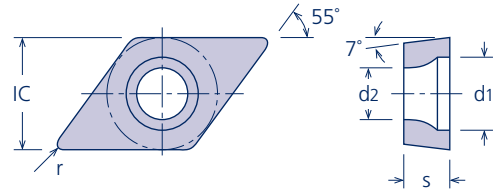
Ordering Example: 10 off 1102017-22 or 10 off CCMT060204MK8220

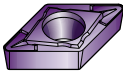


55°  
RHOMBIC

# DCMT

POSITIVE INSERTS



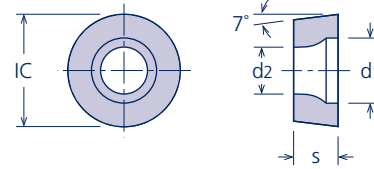
CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)					5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	d2	PVD	CVD			PVD	CVD	
<b>MK - MEDIUM</b> 	DCMT070204MK...	1102163-..	6.35	2.38	0.4	3.7	2.8						•	
	DCMT070208MK...	1102164-..	6.35	2.38	0.8	3.7	2.8						•	
	DCMT11T304MK...	1102186-..	9.53	3.97	0.4	6.0	4.4						•	
	DCMT11T308MK...	1102187-..	9.53	3.97	0.8	6.0	4.4						•	
							24	31	32	34	35	22	38	


Ordering Example: 10 off 1102163-22 or 10 off DCMT070204MK8220



# RCMT

POSITIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)				5230	6210	6215	6225	6230	8220	9220
			IC	s	d1	d2	PVD	CVD				PVD	CVD
<b>MO - MEDIUM</b> 	RCMT0803M0...	1102310-..	8	3.18	4.5	3.4						•	
	RCMT10T3M0...	1102315-..	10	3.97	6.0	4.4						•	
	RCMT1204M0...	1102320-..	12	4.76	6.0	4.4						•	
							24	31	32	34	35	22	38

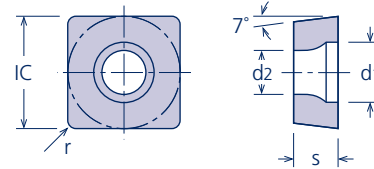
Ordering Example: 10 off 1102310-22 or 10 off RCMT0803M08220




90°  
SQUARE

# SCMT

POSITIVE INSERTS



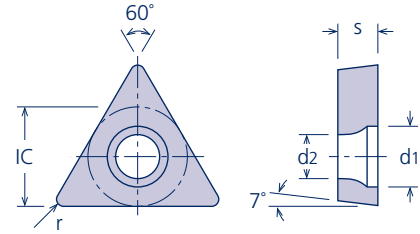
CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)					5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	d2	PVD	CVD			PVD	CVD	
MK - MEDIUM 	SCMT09T308MK...	1102407-..	9.53	3.97	0.8	6.0	4.4						●	
								24	31	32	34	35	22	38


Ordering Example: 10 off 1102407-22 or 10 off SCMT09T308MK8220



# TCMT

POSITIVE INSERTS

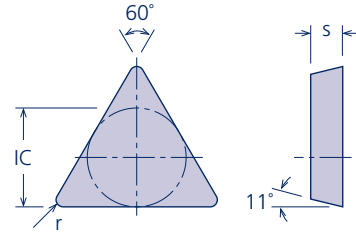



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)					5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	d2	PVD	CVD			PVD	CVD	
MK - MEDIUM 	TCMT110204MK...	1102590-..	6.35	2.38	0.4	3.7	2.8						•	
	TCMT16T304MK...	1102617-..	9.53	3.97	0.4	6.0	4.4						•	
	TCMT16T308MK...	1102618-..	9.53	3.97	0.8	6.0	4.4						•	
Ordering Example: 10 off 1102590-22 or 10 off TCMT110204MK8220							24	31	32	34	35	22	38	



# TPMR

POSITIVE INSERTS

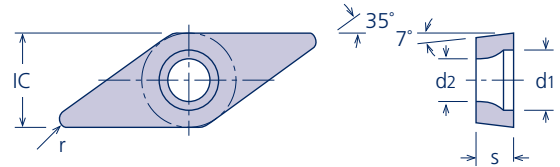


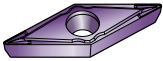
CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)			5230	6210	6215	6225	6230	8220	9220
			IC	s	r	PVD	CVD				PVD	CVD
	TPMR110204...	1102707-..	6.35	3.18	0.4						•	
	TPMR160304...	1102714-..	9.53	3.18	0.4						•	
	TPMR160308...	1102715-..	9.53	3.18	0.8						•	
Ordering Example: 10 off 1102707-22 or 10 off TPMR1102048220						24	31	32	34	35	22	38



# VCMT

POSITIVE INSERTS



CHIP BREAKER	DESCRIPTION	ITEM NUMBER	DIMENSIONS (mm)					5230	6210	6215	6225	6230	8220	9220
			IC	s	r	d1	d2	PVD	CVD				PVD	CVD
<b>MK - MEDIUM</b> 	VCMT110304MK...	1102807-..	6.35	3.18	0.4	3.7	2.8						•	
	VCMT160404MK...	1102819-..	9.53	4.76	0.4	6.0	4.4						•	
	VCMT160408MK...	1102820-..	9.53	4.76	0.4	6.0	4.4						•	•
							24	31	32	34	35	22	38	

Ordering Example: 10 off 1102807-22 or 10 off VCMT110304MK8220



# TECHNICAL

## KEY CODE

<b>C</b>	<b>N</b>	<b>M</b>	<b>G</b>	<b>12</b>	<b>04</b>	<b>08</b>	<b>(E)</b>	<b>(N)</b>	<b>MY</b>
1	2	3	4	5	6	7	8	9	10

1	SHAPE	
C	Rhombic 80°	
D	Rhombic 55°	
K	Parallelogram 55°	
R	Round	
S	Square 90°	
T	Triangle 60°	
V	Rhombic 35°	
W	Trigon 80°	

2	CLEARANCE ANGLE	
N		0°
C		7°
P		11°

3	TOLERANCE (mm)				
		G	M	U	IC
IC		± 0.025	± 0.05 ± 0.08 ± 0.10 ± 0.13 ± 0.15	± 0.08 ± 0.13 ± 0.18 ± 0.25 ± 0.25	4.76 - 10.0 12.0 - 12.7 15.88 - 20.0 25.0 - 25.4 31.75 - 32.0
s		± 0.13	± 0.13	± 0.13	4.76 - 32.0
m		± 0.025	± 0.08 ± 0.13 ± 0.15 ± 0.18 ± 0.20	± 0.13 ± 0.20 ± 0.27 ± 0.38 ± 0.38	4.76 - 9.53 12.7 15.88 - 19.05 25.4 31.75

4	INSERT TYPE	
A		
G		
M		
N		
R		
T		
W		
X	Special Design	

5	INSERT CUTTING EDGE LENGTH (L) (mm)													
IC of Insert (mm)	6.35	8.00	9.53	10.00	12.00	12.70	15.88	16.00	19.05	20.00	25.00	25.40	32.00	
80°	06	09			12	16			19					
55°	07	11			15									
55°			16											
		08	09	10	12	12	15	16	19	20	25	25	32	
	06	09			12	15			19			25		
	11	16			22	27			33					
35°	11	16												
80°			06			08								

6	INSERT THICKNESS (mm)	
01	1.59	
T1	1.98	
02	2.38	
03	3.18	
T3	3.97	
04	4.76	
05	5.56	
06	6.35	
07	7.94	
09	9.52	

7	CORNER RADIUS (mm)	
00/M0	Round	
02	0.2	
04	0.4	
08	0.8	
12	1.2	
16	1.6	
20	2.0	
24	2.4	
32	3.2	

9	HAND OF INSERT (Optional)		
	R	N	L

8	CUTTING EDGE CONDITION (Optional)	
F	Sharp	
E	Round	
T	Negative land	
S	Negative land and round	

10	INSERT CHIPBREAKER (Optional)	
	Cutting geometry identification specific to manufacturer.	

# TECHNICAL

## GRADE CHART

GRADE	COATING	COATING STRUCTURE	APPLICATION	WORKPIECE MATERIAL							MACHINING CONDITION			
				P	M	K	N	S	H	●	●	✱		
<b>5 SERIES GRADES</b>														
5230 P30 Moderately Alloyed	PVD Dark Purple	AlTiN - Special PVD coating ensures ultra smooth surface, providing excellent resistance to built-up edge.	Turning - Renamed from 8230 to 5230. - First choice for stainless steel and other sticky materials under average to difficult conditions. (General purpose stainless steel grade). - Also suitable for steel, provided application does not result in excessive heat generation.	★★	★★★						★	★★	★★★	
<b>6 SERIES GRADES</b>														
6210 K10	CVD (Thick) Gold	TiN-MT (TiCN)-X-αAl2O3-TiN - Coating incorporates fine grain alpha alumina. - X = special interlayer to prevent peeling. - Special post coating treatment reduces built-up edge.	Turning - First choice for grey cast iron. Also suitable for ductile cast iron under average to good conditions.		★★★						★★★★	★★★	★	
6215 P15 / K20 Moderately Alloyed	CVD (Thick) Gold	TiN-MT (TiCN)-X-αAl2O3-TiN - Coating incorporates fine grain alpha alumina. - X = special interlayer to prevent peeling. - Special post coating treatment reduces built-up edge.	Turning - First choice for ductile cast iron and high speed machining of steel under good conditions.	★★★		★★★					★★★★	★★	★	P
6225 P25 Moderately Alloyed	CVD (Thick) Gold	TiN-MT (TiCN)-X-αAl2O3-TiN - Coating incorporates fine grain alpha alumina. - X = special interlayer to prevent peeling. - Special post coating treatment reduces built-up edge.	Turning - First choice for steel under average conditions. (General purpose steel turning grade).	★★★							★★	★★★	★	
6230 P30 Moderately Alloyed	CVD (Thick) Gold	TiN-MT (TiCN)-X-αAl2O3-TiN - Coating incorporates fine grain alpha alumina. - X = special interlayer to prevent peeling. - Special post coating treatment reduces built-up edge.	Turning - First choice for steel under average to difficult conditions.	★★★							★	★★	★★★	
<b>8 SERIES GRADES</b>														
8220 Micrograin	PVD Dark Purple	AlTiN - Special PVD coating ensures ultra smooth surface, providing excellent resistance to built-up edge.	Turning - Multi-material grade, provided application does not result in excessive heat generation. - Suitable for small to medium depths of cut and feed rates. (Small to medium load). - Excellent in small component machining and positive Inserts. - Generates excellent workpiece finish.	★★	★★★	★		★★			★★★★	★★	★	
<b>9 SERIES GRADES</b>														
9220 Micrograin	CVD (Thick) Gold	TiN-MT (TiCN)-X-αAl2O3-TiN - Coating incorporates fine grain alpha alumina. - X = Special interlayer to prevent peeling. - Special post coating treatment reduces built-up edge.	Turning - Note that 6120 was renamed to 9220. - 9220 is an improved 6120. - Excellent in small component machining. - Suitable for small to medium depths of cut and feed rates. (Small to medium load).	★★		★★					★★★★	★★	★	

P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Heat-resist. Alloy, Titanium Alloy H Hardened Materials

● Good ● Average ✱ Difficult

★★★ Excellent ★★ Good ★ Fair

# TECHNICAL

## RECOMMENDED DEPTH OF CUT AND CUTTING FEED

INSERT	DEPTH OF CUT (mm)			CUTTING FEED (mm/rev)		
	REC	MIN	MAX	REC	MIN	MAX
<b>C</b>						
CCMT060204MK	0.6	0.2	2.4	0.11	0.06	0.17
CCMT060208MK	0.6	0.3	2.4	0.15	0.08	0.23
CCMT09T304MK	0.8	0.3	3.0	0.15	0.08	0.23
CCMT09T308MK	0.8	0.5	3.0	0.20	0.10	0.30
CCMT120408MK	0.95	0.6	3.5	0.23	0.12	0.35
CNMG120404FY	0.5	0.1	1.5	0.10	0.05	0.20
CNMG120404MX	1.5	0.4	2.5	0.15	0.10	0.30
CNMG120408MX	3	0.5	5.5	0.25	0.12	0.45
CNMG120412MX	3	0.5	5.5	0.28	0.15	0.60
CNMG160412MX	4	0.8	7.0	0.35	0.18	0.60
CNMG160416MX	4	1.0	7.0	0.40	0.23	0.65
CNMG120408MY	3	0.5	5.5	0.25	0.12	0.45
CNMG120412MY	3	0.5	5.5	0.28	0.13	0.60
CNMG120408RX	3	0.5	5.5	0.28	0.15	0.50
CNMG120412RX	3	0.5	5.5	0.30	0.18	0.60
CNMG190612RX	5	1.0	10.0	0.40	0.25	0.70
CNMG190616RX	5	1.5	10.0	0.50	0.30	0.80
CNMM190612H	6	1.0	12.0	0.50	0.25	0.70
CNMM190616HX	6	1.5	12.0	0.55	0.30	0.90
CNMM190624HX	6	2.0	12.0	0.55	0.35	1.00
<b>D</b>						
DCMT070204MK	0.6	0.2	2.4	0.11	0.06	0.17
DCMT070208MK	0.6	0.3	2.4	0.15	0.08	0.23
DCMT11T304MK	0.8	0.3	3.0	0.15	0.08	0.23
DCMT11T308MK	0.8	0.5	3.0	0.20	0.10	0.30
DNMG150604FY	0.5	0.1	1.5	0.11	0.05	0.20
DNMG110408MX	2	0.5	5.0	0.25	0.15	0.45
DNMG150404MX	2	0.4	6.0	0.20	0.10	0.30
DNMG150408MX	3	0.5	6.0	0.25	0.15	0.45
DNMG150604MX	2	0.4	6.0	0.20	0.10	0.30
DNMG150608MX	3	0.5	6.0	0.25	0.15	0.45
DNMG150612MX	3	0.8	6.0	0.30	0.18	0.50
DNMG110408MY	2	0.5	5.0	0.25	0.12	0.45
DNMG150608MY	3	0.5	6.0	0.25	0.12	0.45
DNMG150612RX	3.5	1.0	6.0	0.35	0.20	0.60
<b>K</b>						
KNUX160405L11	3	1.0	6.0	0.30	0.20	0.35
KNUX160405R11	3	1.0	6.0	0.30	0.20	0.35
KNUX160410L11	3	1.5	6.0	0.40	0.30	0.60
KNUX160410R11	3	1.5	6.0	0.40	0.30	0.60
<b>R</b>						
RCMT0803M0	2.0	0.8	3.0	0.20	0.05	0.25
RCMT10T3M0	2.5	1.0	3.5	0.25	0.06	0.30
RCMT1204M0	3.0	1.2	4.5	0.30	0.08	0.35
<b>S</b>						
SCMT09T308MK	0.8	0.5	3.0	0.20	0.10	0.30
SNMG120408MX	3	0.5	5.5	0.25	0.12	0.45
SNMG120412MX	3	0.5	5.5	0.30	0.18	0.55
SNMG150612MX	4	0.8	7.0	0.35	0.18	0.60

INSERT	DEPTH OF CUT (mm)			CUTTING FEED (mm/rev)		
	REC	MIN	MAX	REC	MIN	MAX
<b>S</b>						
SNMG120408MY	3	0.5	5.5	0.25	0.12	0.45
SNMG120412RX	3.5	1.0	6.0	0.35	0.20	0.60
SNMG190612RX	5	1.0	10.0	0.40	0.25	0.65
SNMG190616RX	5	1.5	10.0	0.45	0.30	0.75
SNMM190612HX	6	1.0	12.0	0.50	0.25	0.70
SNMM190616HX	6	1.5	12.0	0.55	0.30	0.80
SNMM190624HX	6	2.0	12.0	0.55	0.35	1.00
SNMM250724HX	6	2.0	15.0	1.00	0.4	1.20
SNMM250924HX	6	2.0	15.0	1.00	0.4	1.20
<b>T</b>						
TCMT110204MK	0.7	0.2	2.5	0.13	0.06	0.19
TCMT16T304MK	0.8	0.3	3.0	0.15	0.08	0.23
TCMT16T308MK	0.8	0.5	3.0	0.20	0.10	0.30
TNMG160404FY	0.5	1.0	1.5	0.10	0.05	0.20
TNMG160404MX	1.5	0.4	4.5	0.20	0.10	0.30
TNMG160408MX	2.5	0.5	4.5	0.25	0.12	0.45
TNMG160412MX	2.5	0.5	4.5	0.25	0.15	0.60
TNMG220404MX	2.5	0.4	5.5	0.20	0.10	0.30
TNMG220408MX	3.5	0.5	6.0	0.30	0.15	0.50
TNMG220412MX	3.5	0.8	6.0	0.30	0.18	0.60
TNMG160408MY	2.5	0.5	4.5	0.25	0.12	0.45
TNMG160412MY	2.5	0.5	4.5	0.25	0.15	0.60
TNMG160408RX	3.0	0.7	5.5	0.30	0.20	0.55
TNMG160412RX	3.0	1.0	5.5	0.35	0.20	0.60
TNMG270616RX	5.0	2.0	10.0	0.50	0.30	0.70
TNMG320924RX	6.5	2.5	13.0	0.60	0.40	0.90
TPMR110204	0.7	0.2	2.5	0.13	0.06	0.19
TPMR160304	0.8	0.3	3.0	0.15	0.08	0.23
TPMR160308	0.8	0.5	3.0	0.20	0.10	0.30
<b>V</b>						
VCMT110304MK	0.5	0.07	1.8	0.10	0.05	0.15
VCMT160404MK	0.7	0.22	2.6	0.14	0.07	0.20
VCMT160408MK	0.7	0.40	2.7	0.18	0.09	0.25
VNMG160404FY	0.5	0.4	3.5	0.15	0.10	0.30
VNMG160404MX	1.0	0.5	4.0	0.20	0.10	0.30
VNMG160408MX	2.0	0.5	4.0	0.25	0.15	0.50
VNMG160408MY	2.0	0.5	4.0	0.25	0.15	0.50
<b>W</b>						
WNMG080404FY	0.5	0.1	1.5	0.10	0.05	0.20
WNMG060404MX	1.0	0.4	2.5	0.15	0.10	0.30
WNMG060408MX	2.0	0.5	3.0	0.25	0.12	0.45
WNMG080404MX	1.5	0.4	2.5	0.15	0.10	0.30
WNMG080408MX	2.5	0.5	4.0	0.25	0.12	0.45
WNMG080412MX	2.5	0.5	4.0	0.28	0.15	0.60
WNMG060408MY	2.0	0.5	3.0	0.25	0.12	0.45
WNMG080408MY	2.5	0.5	4.0	0.25	0.12	0.45
WNMG080412MY	2.5	0.5	4.0	0.28	0.15	0.60
WNMG080408RX	3.0	0.7	5.0	0.30	0.20	0.50
WNMG080412RX	3.0	1.0	5.0	0.35	0.20	0.55

# TECHNICAL

## RECOMMENDED CUTTING SPEED

MATERIAL GROUP Material Example: SAE/AISI(EN)	HARDNESS / TENSILE STRENGTH	CUTTING SPEED Vc (m/min)						
		5230	6210	6215	6225	6230	8220	9220
		PVD	CVD				PVD	CVD
<b>P STEEL</b>								
<b>Mild Steel</b> Material Example: 1020(EN3A)	180 HB	130 240	-	180 350	160 320	150 300	130 270	150 300
<b>Carbon Steel</b> Material Example: 1043(EN8) / 1055(EN9)	180 - 300 HB	100 180	-	150 320	140 300	130 280	100 210	130 280
<b>Alloy Steel</b> Material Example: 4140H(EN19) / 4340(EN24) / 3316(EN36B)	350 HB	100 180	-	150 320	140 300	130 280	100 210	130 280
<b>M STAINLESS STEEL</b>								
<b>Stainless steel (Austenitic)</b> Material Example: 303 / 304 / 316	270 HB	100 180	-	-	-	-	100 210	-
<b>Stainless steel (Martensitic)</b> Material Example: 420	270 HB	100 180	-	-	-	-	100 210	-
<b>K CAST IRON</b>								
<b>Gray Cast Iron</b> Material Example: GG	350 MPa	-	200 350	170 320	-	-	100 210	150 300
<b>Nodular (Ductile) Cast Iron</b> Material Example: GGG	800 MPa	-	150 300	150 280	-	-	70 150	130 260
<b>N NON-FERROUS METAL</b>								
<b>Aluminium Alloy</b>	-	-	-	-	-	-	100 1000	-
<b>S HEAT-RESISTANT ALLOY, TITANIUM ALLOY</b>								
<b>Ti Alloy</b> Material Example: Ti6Al4V	35 - 45 HRc	-	-	-	-	-	30 60	-
<b>High Temperature Alloys</b> Material Example: Inconel 718	200 HB	-	-	-	-	-	20 40	-
<b>H HARDENED MATERIALS</b>								
<b>Hardened Steel</b> Material Example: D2 / H13	40 - 55HRc	-	30 70	-	-	-	30 70	30 70
		<b>24</b>	<b>31</b>	<b>32</b>	<b>34</b>	<b>35</b>	<b>22</b>	<b>38</b>

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