



METAL REMOVAL
BY **WIDIA™**

Cost-effective | Versatile | Reliable



Turning



METAL REMOVAL
BY WIDIA™

Cost-effective | Versatile | Reliable

THE METAL CUTTING TOOL PHILOSOPHY



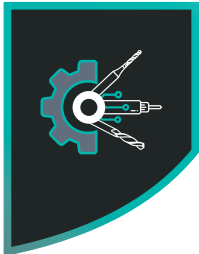
Cost-effective

Get more for less. MRW offers quality tools at prices that makes them budget-friendly.



Reliable

Tested, trusted. Every MRW tool carries the legacy of WIDIA's technical expertise and pioneering innovation.



Versatile

One tool, many solutions. Most MRW tools provide versatility in operations with a single tool. Productivity, inventory and sourcing simplified.



Available

Just get it. MRW redefines productivity with most tools readily available at retailers across the country.

METAL REMOVAL BY WIDIA

MRW addresses customer needs by providing them with innovative products and latest technologies. Our precision metalworking tools cover applications like ISO turning, milling, drilling and solid end mills.






Our solutions meet customers' machining needs in the transportation, general engineering and die & mold industries – and enable them to gain a competitive edge.

DIFFERENT MACHINING CONDITIONS

Chip Breaker Details:

Chip Breaker Geometries	Cutting Conditions	Ap (mm)	f (mm/rev)
.. MA	Very stable cutting edge design offers maximum stability and rigidity. Recommended for cast iron machining.	1 - 4	0.1 - 0.7
..MP	For medium-duty machining of tough work materials, such as stainless steel. Minimises tendency for materials to adhere to insert.	0.5 - 4	0.5 - 2
MRT1	For medium-duty roughing. Outstanding chip control. High edge strength for interrupted cuts, forging skin, or scale.	1 - 3.5	0.1 - 0.4
MRT2	Geometry for small- to medium-chip cross-sections.	0.5 - 5	0.08 - 0.6
MRT3	For rough to medium turning of all kinds of steel.	1.1 - 5.6	0.3 - 0.6
MRT4	For medium to rough turning of stainless steel	0.75 - 5	0.15 - 0.5
MMT1	Geometry for medium to rough turning. Outstanding chip control, even at lower depths of cuts.	0.8 - 5	0.1 - 0.4
MMT2	Provides good chip control and low cutting forces. Can be used for steel, stainless steel, and cast iron.	0.5 - 2	0.05 - 0.2
MMT3	For medium machining of steel and finishing of stainless steel.	0.25 - 3	0.05 - 0.25
MFT1	For finish turning, producing smooth, accurate surfaces. Very good chip control, especially at low depths of cut.	0.2 - 2.5	0.06 - 0.2
MFT2	For medium turning to finish turning with strong cutting edge that works well in interrupted cuts.	0.5 - 2	0.05 - 0.2

Grades

Coating	Grade Description	wear resistance ← → toughness									
		05	10	15	20	25	30	35	40	45	
MR2500P	 <p>PVD TiAlN-coated grade with micro-fine substrate suited for machining steel and cast iron in medium to finish turning applications.</p>	P									
		K									
MR2000P	 <p>CVD-coated carbide, great for general-purpose turning for steels and ideal for medium machining to heavy roughing.</p>	P									
		K									
MR2500M	 <p>Composition: An advanced PVD-AITiN-coated grade with a tough, ultra-fine-grain unalloyed substrate Application: For general-purpose machining of most steels, stainless steels, high-temp alloys, titaniums, irons, and non-ferrous materials. Speeds may vary from low to medium and will handle interruptions and high feed rates.</p>	P									
		M									
		K									
		N									
		S									
MR2510P	 <p>Composition: A tough cobalt-enriched carbide grade with a multilayer MTCVD TiCN-Al₂O₃ coating with superior interlayer adhesion. Application: Best general-purpose turning grade for most steels and ferritic and martensitic stainless steels. The substrate design ensures adequate deformation resistance with excellent insert edge strength. Coating layers offer good wear resistance over a wide range of machining conditions, and the post-coat treatment minimizes microchipping and improves coating adhesion to substrate, leading to long tool life and improved workpiece finishes.</p>	P									
		K									
WK15CT	 <p>Composition: A multilayered coating with moderately thick MTCVD TiCN-Al₂O₃ layers over a highly deformation-resistant carbide substrate. Application: Designed for high-speed machining of gray and ductile irons. The substrate and coating architecture together with post-coat treatment ensure a tremendous tool life advantage, especially when cutting higher tensile strength ductile and gray irons where workpiece size consistency and reliability of tool life are critical. Excellent both in continuous cuts and varied depths of cut.</p>	P									
		K									

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	Steel
H	Hardened Materials



SELECT THE CUTTING SPEED

Turning																	
	Material group	Material Specification	MR2000K			MR2500M			MR2000P			MR2500P			MR2510P		
			m/min			m/min			m/min			m/min			m/min		
			max.	start	min.	max.	start	min.	max.	start	min.	max.	start	min.	max.	start	min.
P	1	Low carbon steel (<0.3%C)							360	275	135	330	290	270	360	275	135
	2	Medium & High carbon steel (>0.3%C)							320	195	135	275	250	200	320	195	135
	3	Alloy/Tool steels <35HRc							225	155	135	255	220	175	225	155	135
	4	Alloy/Tool steels 36 to 48HRc							180	105	75	225	190	150	180	105	75
	5	Ferritic, Martensitic & PH SS (<35HRc)							270	195	120	185	175	150	270	195	120
	6	Ferritic, Martensitic & PH SS 36 to 48HRc)							225	150	105	165	130	100	225	150	105
M	1	Austenitic SS				250	180	100									
	2	Austenitic SS				225	165	100									
	3	Austenitic SS : Duplex				200	150	100									
K	1	Gray CI	500	360	240				250	220	185	250	220	185			
	2	Ductile, Compacted graphite and malleable CI <80KSI	420	270	160				200	180	150	200	180	150			
	3	Ductile, Compacted graphite and malleable CI >80KSI	330	215	135				180	150	120	180	150	120			

ISO INSERT NOMENCLATURE

C		N		M		G		12																																																																																																																																																																																																									
Insert Shape		Insert Clearance Angle		Tolerance Class		Insert Features		Size																																																																																																																																																																																																									
H	Hexagon 120°		A 3°	<p>Tolerances apply prior to edge prep and coating.</p>	N		<p>Code for mm cutting edge length "L10"</p> <table border="1"> <thead> <tr> <th>"D"</th> <th colspan="7">mm</th> </tr> <tr> <th>mm</th> <th>C</th> <th>D</th> <th>R</th> <th>S</th> <th>T</th> <th>V</th> <th>W</th> </tr> </thead> <tbody> <tr> <td>3,97</td> <td>S4</td> <td>04</td> <td>03</td> <td>03</td> <td>06</td> <td>—</td> <td>—</td> </tr> <tr> <td>4,76</td> <td>04</td> <td>05</td> <td>04</td> <td>04</td> <td>08</td> <td>08</td> <td>S3</td> </tr> <tr> <td>5,56</td> <td>05</td> <td>06</td> <td>05</td> <td>05</td> <td>09</td> <td>09</td> <td>03</td> </tr> <tr> <td>6,00</td> <td>—</td> <td>—</td> <td>06</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>6,35</td> <td>06</td> <td>07</td> <td>06</td> <td>06</td> <td>11</td> <td>11</td> <td>04</td> </tr> <tr> <td>7,94</td> <td>08</td> <td>09</td> <td>07</td> <td>07</td> <td>13</td> <td>13</td> <td>05</td> </tr> <tr> <td>8,00</td> <td>—</td> <td>—</td> <td>08</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>9,52</td> <td>09</td> <td>11</td> <td>09</td> <td>09</td> <td>16</td> <td>16</td> <td>06</td> </tr> <tr> <td>10,00</td> <td>—</td> <td>—</td> <td>10</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>11,11</td> <td>11</td> <td>13</td> <td>11</td> <td>11</td> <td>19</td> <td>19</td> <td>07</td> </tr> <tr> <td>12,00</td> <td>—</td> <td>—</td> <td>12</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>12,70</td> <td>12</td> <td>15</td> <td>12</td> <td>12</td> <td>22</td> <td>22</td> <td>08</td> </tr> <tr> <td>14,29</td> <td>14</td> <td>17</td> <td>14</td> <td>14</td> <td>24</td> <td>24</td> <td>09</td> </tr> <tr> <td>15,88</td> <td>16</td> <td>19</td> <td>15</td> <td>15</td> <td>27</td> <td>27</td> <td>10</td> </tr> <tr> <td>16,00</td> <td>—</td> <td>—</td> <td>16</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>17,46</td> <td>17</td> <td>21</td> <td>17</td> <td>17</td> <td>30</td> <td>30</td> <td>11</td> </tr> <tr> <td>19,05</td> <td>19</td> <td>23</td> <td>19</td> <td>19</td> <td>33</td> <td>33</td> <td>13</td> </tr> <tr> <td>20,00</td> <td>—</td> <td>—</td> <td>20</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>22,22</td> <td>22</td> <td>27</td> <td>22</td> <td>22</td> <td>38</td> <td>38</td> <td>15</td> </tr> <tr> <td>25,00</td> <td>—</td> <td>—</td> <td>25</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>25,40</td> <td>25</td> <td>31</td> <td>25</td> <td>25</td> <td>44</td> <td>44</td> <td>17</td> </tr> <tr> <td>31,75</td> <td>32</td> <td>38</td> <td>31</td> <td>31</td> <td>54</td> <td>54</td> <td>21</td> </tr> <tr> <td>32,00</td> <td>—</td> <td>—</td> <td>32</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> </tbody> </table>	"D"	mm							mm	C	D	R	S	T	V	W	3,97	S4	04	03	03	06	—	—	4,76	04	05	04	04	08	08	S3	5,56	05	06	05	05	09	09	03	6,00	—	—	06	—	—	—	—	6,35	06	07	06	06	11	11	04	7,94	08	09	07	07	13	13	05	8,00	—	—	08	—	—	—	—	9,52	09	11	09	09	16	16	06	10,00	—	—	10	—	—	—	—	11,11	11	13	11	11	19	19	07	12,00	—	—	12	—	—	—	—	12,70	12	15	12	12	22	22	08	14,29	14	17	14	14	24	24	09	15,88	16	19	15	15	27	27	10	16,00	—	—	16	—	—	—	—	17,46	17	21	17	17	30	30	11	19,05	19	23	19	19	33	33	13	20,00	—	—	20	—	—	—	—	22,22	22	27	22	22	38	38	15	25,00	—	—	25	—	—	—	—	25,40	25	31	25	25	44	44	17	31,75	32	38	31	31	54	54	21	32,00	—	—	32	—	—	—	—	R	
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O	Octagon 135°		B 5°	F																																																																																																																																																																																																													
P	Pentagon 108°		C 7°	A																																																																																																																																																																																																													
R	Round —		D 15°	M																																																																																																																																																																																																													
S	Square 90°		E 20°	G																																																																																																																																																																																																													
T	Triangular 60°		F 25°	W																																																																																																																																																																																																													
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W	Trigon 80° with enlarged corner angles		N 0°	C																																																																																																																																																																																																													
L	Rectangular 90°		P 11°	J																																																																																																																																																																																																													
A	Parallelogram 85°		Indicated for other clearance angles requiring descriptions.	X	Special Design																																																																																																																																																																																																												
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N/K	55°																																																																																																																																																																																																																

tolerance class	tolerance on "D"	tolerance on "B"	tolerance on "S"
C	±0,025	±0,013	±0,025
H	±0,013	±0,013	±0,025
E	±0,025	±0,025	±0,025
G	±0,025	±0,025	±0,013
M	See tables on next page		±0,013
U	See tables on next page		±0,013



ISO INSERT NOMENCLATURE

04		08						MRT	
Thickness S		Corner Radius "Re"		Hand of Insert (optional)		Cutting Edge (optional)		Chip breaker (optional)	
symbol	thickness	symbol	corner radius	<p>R = Right Hand</p> <p>L = Left Hand</p> <p>N = Neutral</p>		F	Sharp	.. MA	
mm	mm	mm	mm			E	Rounded	..MP	
—	0,79	X0	0,04			T	Chamfered	MRT1	
T0	1,00	01	0,1			S	Chamfered and Rounded	MRT2	
01	1,59	02	0,2			MRT3			
T1	1,98	04	0,4			MRT4			
02	2,38	08	0,8			MMT1			
03	3,18	12	1,2			MMT2			
T3	3,97	16	1,6			MMT3			
04	4,76	20	2,0			MFT1			
05	5,56	24	2,4			MFT2			
06	6,35	28	2,8						
07	7,94	32	3,2						
9	9,52	00	round insert						
11	11,11	M0							
12	12,70	—							

± Tolerance on "D"					± Tolerance on "B"				
"D"	Class M Tolerance			Class U Tolerance	"D"	Class M Tolerance			Class U Tolerance
	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C		Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
mm	mm	mm	mm	mm	mm	mm	mm	mm	
3,97	0,05	—	—	—	3,97	0,08	—	—	—
4,76	0,05	—	—	0,08	4,76	0,08	—	—	0,13
5,56	0,05	0,05	0,05	0,08	5,56	0,08	0,11	—	0,13
6,35	0,05	0,05	0,05	0,08	6,35	0,08	0,11	—	0,13
7,94	0,05	0,05	0,05	0,08	7,94	0,08	0,11	—	0,13
9,52	0,05	0,05	0,05	0,08	9,52	0,08	0,11	0,18	0,13
11,11	0,08	0,08	0,08	0,13	11,11	0,13	0,15	—	—
12,70	0,08	0,08	0,08	0,13	12,70	0,13	0,15	0,25	0,20
14,29	0,08	0,08	0,08	0,13	14,29	0,13	0,15	—	—
15,88	0,10	0,10	0,10	0,18	15,88	0,15	0,18	—	0,27
17,46	0,10	0,10	0,10	0,18	17,46	0,15	0,18	—	0,27
19,05	0,10	0,10	0,10	0,18	19,05	0,15	0,18	—	0,27
22,22	0,13	—	—	0,25	22,22	0,15	—	—	0,38
25,40	0,13	—	—	0,25	25,40	0,18	—	—	0,38
31,75	0,15	—	—	0,25	31,75	0,20	—	—	0,38

INSERTS FOLLOWING THE GRADE MR2000P

◆ CNMG

Insert	Description	Insert grade	Work material	Ordering code
	CNMG120404-MRT1	MR2000P	Steel & Cast Iron	6655331
	CNMG120408-MMT1	MR2000P	Steel & Cast Iron	6655332
	CNMG120408-MRT1	MR2000P	Steel & Cast Iron	6655335
	CNMG120404-MRT2	MR2000P	Steel & Cast Iron	6740718
	CNMG190612-MRT2	MR2000P	Steel & Cast Iron	6740715
	CNMG190608-MRT2	MR2000P	Steel & Cast Iron	6851880
	CNMG120412-MRT1	MR2000P	Steel & Cast Iron	6772974
	CNMG190612-MRT1	MR2000P	Steel & Cast Iron	6755261

◆ TNMG

Insert	Description	Insert grade	Work material	Ordering code
	TNMG160404-MRT1	MR2000P	Steel & Cast Iron	6655329
	TNMG160408-MMT1	MR2000P	Steel & Cast Iron	6655328
	TNMG160412-MRT1	MR2000P	Steel & Cast Iron	6655330
	TNMG160404-MFT1	MR2000P	Steel & Cast Iron	6740717
	TNMG160408-MRT1	MR2000P	Steel & Cast Iron	6870156
	TNMG160412-MMT1	MR2000P	Steel & Cast Iron	6905623

◆ WNMG

Insert	Description	Insert grade	Work material	Ordering code
	WNMG060408-MRT1	MR2000P	Steel & Cast Iron	6655337
	WNMG080408-MMT1	MR2000P	Steel & Cast Iron	6655338
	WNMG080412-MRT1	MR2000P	Steel & Cast Iron	6655339
	WNMG080412-MMT1	MR2000P	Steel & Cast Iron	6905624
	WNMG080408-MRT1	MR2000P	Steel & Cast Iron	6870253
	WNMG060412-MRT1	MR2000P	Steel & Cast Iron	6870155




INSERTS FOLLOWING THE GRADE MR2000P


◆ VNMG

Insert	Description	Insert grade	Work material	Ordering code
	VNMG12T304-MRT2	MR2000P	Steel & Cast Iron	6740720
	VNMG12T308-MRT2	MR2000P	Steel & Cast Iron	6870254

◆ SNMG

Insert	Description	Insert grade	Work material	Ordering code
	SNMG190612-MRT2	MR2000P	Steel & Cast Iron	6740716
	SNMG120412-MRT1	MR2000P	Steel & Cast Iron	6870146
	SNMG120408-MRT1	MR2000P	Steel & Cast Iron	6870144

◆ CCMT


Insert	Description	Insert grade	Work material	Ordering code
	CCMT060204-MRT2	MR2000P	Steel & Cast Iron	6655316
	CCMT060208-MFT2	MR2000P	Steel & Cast Iron	6655317
	CCMT09T304-MRT2	MR2000P	Steel & Cast Iron	6655319
	CCMT09T308-MRT2	MR2000P	Steel & Cast Iron	6655320

INSERTS FOLLOWING THE GRADE MR2500P


◆ DNMG

Insert	Description	Insert grade	Work material	Ordering code
	DNMG150608-MMT1	MR2000P	Steel & Cast Iron	6797566
	DNMG150608-MRT1	MR2000P	Steel & Cast Iron	6797565

◆ VBMT

Insert	Description	Insert grade	Work material	Ordering code
	VBMT160408-MRT2	MR2000P	Steel & Cast Iron	6870256

◆ CNMG

Insert	Description	Insert grade	Work material	Ordering code
	CNMG120404-MRT2	MR2500P	Steel & Cast Iron	6740749
	CNMG120408-MMT2	MR2500P	Steel & Cast Iron	6741544
	CNMG190612-MRT2	MR2500P	Steel & Cast Iron	6749002
	CNMG120408-MMT1	MR2500P	Steel & Cast Iron	6870252
	CNMG120408-MRT1	MR2500P	Steel & Cast Iron	6870251
	CNMG190612-MRT1	MR2500P	Steel & Cast Iron	6755262



INSERTS FOLLOWING THE GRADE MR2500P

◆ CNMP

Insert	Description	Insert grade	Work material	Ordering code
	CNMP120408	MR2500P	Steel & Stainless Steel	6749253



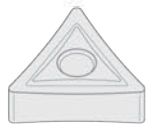
◆ TNMG

Insert	Description	Insert grade	Work material	Ordering code
	TNMG160404-MFT1	MR2500P	Steel & Cast Iron	6740747
	TNMG160408-MMT2	MR2500P	Steel & Cast Iron	6740748
	TNMG160408-MMT1	MR2500P	Steel & Cast Iron	6826644



◆ TNMP

Insert	Description	Insert grade	Work material	Ordering code
	TNMP160408	MR2500P	Steel & Stainless Steel	6749252




INSERTS FOLLOWING THE GRADE MR2500P


◆ VNMG

Insert	Description	Insert grade	Work material	Ordering code
	VNMG12T304-MRT2	MR2500P	Steel & Cast Iron	6749003
	VNMG12T308-MRT2	MR2500P	Steel & Cast Iron	6749004

◆ CCMT

Insert	Description	Insert grade	Work material	Ordering code
	CCMT060204-MRT2	MR2500P	Steel & Cast Iron	6740667
	CCMT060208-MFT2	MR2500P	Steel & Cast Iron	6740668
	CCMT09T304-MRT2	MR2500P	Steel & Cast Iron	6740669
	CCMT09T308-MRT2	MR2500P	Steel & Cast Iron	6740670
	CCMT060208MFT2	MR2500P	Steel & Cast Iron	6927966
	CCMT09T308-MFT2	MR2500P	Steel & Cast Iron	6780840


◆ TCMT

Insert	Description	Insert grade	Work material	Ordering code
	TCMT110204-MRT2	MR2500P	Steel & Cast Iron	6740735
	TCMT110208-MFT2	MR2500P	Steel & Cast Iron	6740736
	TCMT16T304-MRT2	MR2500P	Steel & Cast Iron	6740737
	TCMT16T308-MRT2	MR2500P	Steel & Cast Iron	6740738




INSERTS FOLLOWING THE GRADE MR2500P

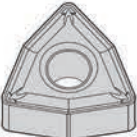
◆ VBMT/VCMT

Insert	Description	Insert grade	Work material	Ordering code
	VBMT160408MRT2	MR2500P	Steel & Cast Iron	6870258
	VBMT160404MRT2	MR2500P	Steel & Cast Iron	6870259
	VCMT16T308MRT2	MR2500P	Steel & Cast Iron	6826645

◆ SCMT

Insert	Description	Insert grade	Work material	Ordering code
	SCMT120408-MRT2	MR2500P	Steel & Cast Iron	6740739
	SCMT09T308-MRT2	MR2500P	Steel & Cast Iron	6826646


◆ WNMG

Insert	Description	Insert grade	Work material	Ordering code
	WNMG080412-MRT1	MR2500P	Steel & Cast Iron	6758425
	WNMG080408-MMT1	MR2500P	Steel & Cast Iron	6758424

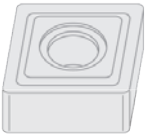
Steel

MR2510P

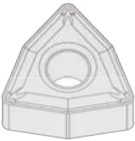
◆ TNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMG160408MMT1	MR2510P	Steel	7172188
	TNMG160412MRT1	MR2510P	Steel	7172189
	TNMG160408MRT3	MR2510P	Steel	7172262
	TNMG220412MRT1	MR2510P	Steel	7172190
	TNMG160408MMT2	MR2510P	Steel	7183748


◆ CNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMG190612MRT1	MR2510P	Steel	7172191
	CNMG120412MRT1	MR2510P	Steel	7172192
	CNMG120408MRT1	MR2510P	Steel	7172193
	CNMG120408MMT1	MR2510P	Steel	7172194
	CNMG120408MRT3	MR2510P	Steel	7172263
	CNMG120412MRT3	MR2510P	Steel	7172264

◆ WNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMG080408MMT1	MR2510P	Steel	7172197
	WNMG080412MRT1	MR2510P	Steel	7172198
	WNMG080408MRT1	MR2510P	Steel	7172199
	WNMG060408MRT1	MR2510P	Steel	7183749

◆ SNMG


Insert	Description	Insert Grade	Work Material	Ordering Code
	SNMG190612MRT2	MR2510P	Steel	7172195
	SNMG120408MRT1	MR2510P	Steel	7172196




Stainless Steel

MR2500M

◆ TNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMG160404MRT4	MR2500M	Stainless Steel	7172621
	TNMG160408MRT4	MR2500M	Stainless Steel	7172622
	TNMG160412MRT3	MR2500M	Stainless Steel	7172623


◆ CNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMG120404MMT3	MR2500M	Stainless Steel	7172624
	CNMG120408MRT4	MR2500M	Stainless Steel	7172625
	CNMG120412MRT4	MR2500M	Stainless Steel	7172626

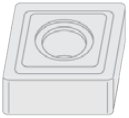
Cast Iron

MR2000K


◆ CNMA

Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMA120404MA	MR2000K	Cast Iron	7166715
	CNMA120408MA	MR2000K	Cast Iron	7166716
	CNMA120412MA	MR2000K	Cast Iron	7166717
	CNMA190616MA	MR2000K	Cast Iron	7183750


◆ CNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMG120408MRT1	MR2000K	Cast Iron	7166718
	CNMG120408MRT1	MR2000K	Cast Iron	7166719
	CNMG120412MRT1	MR2000K	Cast Iron	7166720


◆ SCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	SCMT09T308MRT2	MR2000K	Cast Iron	7166721
	SCMT120408MRT2	MR2000K	Cast Iron	7166722


◆ SNMA

Insert	Description	Insert Grade	Work Material	Ordering Code
	SNMA120408	MR2000K	Cast Iron	7166723
	SNMA120412	MR2000K	Cast Iron	7166724

◆ SNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	SNMG120408MRT1	MR2000K	Cast Iron	7166725
	SNMG120412MRT1	MR2000K	Cast Iron	7166726

◆ TCMT


Insert	Description	Insert Grade	Work Material	Ordering Code
	TCMT16T308MRT2	MR2000K	Cast Iron	7166727




Cast Iron

MR2000K


◆ TNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMA160408MA	MR2000K	Cast Iron	7166728
	TNMA160412MA	MR2000K	Cast Iron	7166729
	TNMG160408MRT1	MR2000K	Cast Iron	7166730
	TNMG160412MRT1	MR2000K	Cast Iron	7166731


◆ VBMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	VBMT160408MRT2	MR2000K	Cast Iron	7166732

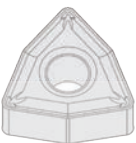
◆ VNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	VNMG12T304MRT2	MR2000K	Cast Iron	7166733
	VNMG12T308MRT2	MR2000K	Cast Iron	7166734

◆ WNMA

Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMA060408	MR2000K	Cast Iron	7166735
	WNMA080408	MR2000K	Cast Iron	7166736
	WNMA080412MA	MR2000K	Cast Iron	7166737

◆ WNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMG060408MRT1	MR2000K	Cast Iron	7166738
	WNMG080408MRT1	MR2000K	Cast Iron	7166739
	WNMG080412MRT1	MR2000K	Cast Iron	7166740

ISO NOMENCLATURE FOR TOOLHOLDERS


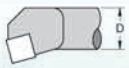











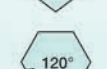






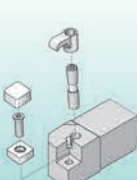
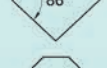
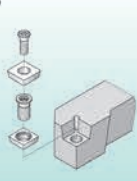

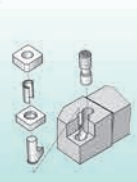





P	C	L	N	R	
Insert Holding Method	Insert Shape	Tool Style or Lead Angle	Insert Clearance Angle	Hand of Tool	Additional Information
<p>D</p>	<p>A </p>	<p>A L </p>	<p>N </p>	<p>R =</p>	<p>C =</p>
<p>C</p>	<p>B </p>	<p>B P </p>	<p>B </p>	<p>Right Hand</p>	<p>Deep Pocket for Ceramic Insert</p>
<p>S</p>	<p>C </p>	<p>C Q </p>	<p>C </p>	<p>L =</p>	<p>S =</p>
<p>P</p>	<p>D </p>	<p>D R </p>	<p>P </p>	<p>Left Hand</p>	<p>F =</p>
	<p>E </p>	<p>E S </p>	<p>D </p>	<p>N =</p>	<p>Straight Shank, No Offset</p>
	<p>H </p>	<p>F U </p>	<p>E </p>	<p>R</p>	
	<p>K </p>	<p>G V </p>	<p>F </p>	<p>L</p>	
	<p>L </p>	<p>Y </p>		<p>N</p>	
	<p>M </p>				
	<p>O </p>				
	<p>P </p>				
	<p>R </p>				
	<p>S </p>				
	<p>T </p>				
	<p>V </p>				
	<p>W </p>				



ISO NOMENCLATURE FOR TOOLHOLDERS














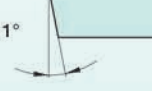



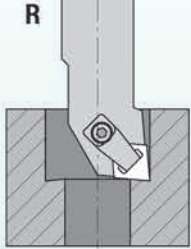
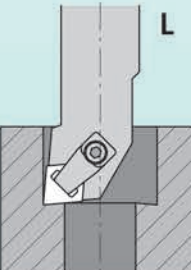










25	25	M	12	KC	04																																																
Shank Dimensions		Tool Length	Insert Size	Additional Information	Insert Thickness (optional)																																																
		<table border="1"> <thead> <tr> <th>L1</th> <th>ISO</th> </tr> </thead> <tbody> <tr><td>32</td><td>A</td></tr> <tr><td>40</td><td>B</td></tr> <tr><td>50</td><td>C</td></tr> <tr><td>60</td><td>D</td></tr> <tr><td>70</td><td>E</td></tr> <tr><td>80</td><td>F</td></tr> <tr><td>90</td><td>G</td></tr> <tr><td>100</td><td>H</td></tr> <tr><td>110</td><td>J</td></tr> <tr><td>125</td><td>K</td></tr> <tr><td>140</td><td>L</td></tr> <tr><td>150</td><td>M</td></tr> <tr><td>160</td><td>N</td></tr> <tr><td>170</td><td>P</td></tr> <tr><td>180</td><td>Q</td></tr> <tr><td>200</td><td>R</td></tr> <tr><td>250</td><td>S</td></tr> <tr><td>300</td><td>T</td></tr> <tr><td>350</td><td>U</td></tr> <tr><td>400</td><td>V</td></tr> <tr><td>450</td><td>W</td></tr> <tr><td>500</td><td>Y</td></tr> <tr><td>Special Design</td><td>X</td></tr> </tbody> </table>	L1	ISO	32	A	40	B	50	C	60	D	70	E	80	F	90	G	100	H	110	J	125	K	140	L	150	M	160	N	170	P	180	Q	200	R	250	S	300	T	350	U	400	V	450	W	500	Y	Special Design	X		<p>KC = D-Style Clamping</p>	<p>04 = 4,76mm 06 = 6,35mm</p>
L1	ISO																																																				
32	A																																																				
40	B																																																				
50	C																																																				
60	D																																																				
70	E																																																				
80	F																																																				
90	G																																																				
100	H																																																				
110	J																																																				
125	K																																																				
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160	N																																																				
170	P																																																				
180	Q																																																				
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400	V																																																				
450	W																																																				
500	Y																																																				
Special Design	X																																																				
<p>The seventh and eighth position shall be a significant two-digit number that indicates the holder cross section.</p> <ul style="list-style-type: none"> If the dimension for the width "B" or the height "H" is represented by a one-digit number, a 0 (zero) will be used in front of it. <p>Example: 8,0mm = 08</p>			<p style="text-align: center;">Cutting Edge Length L10</p> <table border="0"> <tr> <td>H Hexagon 120°</td> <td></td> <td>C Rhomboid 80°</td> <td></td> </tr> <tr> <td>O Octagon 135°</td> <td></td> <td>D 55°</td> <td></td> </tr> <tr> <td>P Pentagon 108°</td> <td></td> <td>E 75°</td> <td></td> </tr> <tr> <td>S Square 90°</td> <td></td> <td>M 86°</td> <td></td> </tr> <tr> <td>T Triangular 60°</td> <td></td> <td>V 35°</td> <td></td> </tr> <tr> <td>R Round</td> <td></td> <td>W Trigon 80° with enlarged corner angles</td> <td></td> </tr> <tr> <td></td> <td></td> <td>L Rectangular 90°</td> <td></td> </tr> <tr> <td></td> <td></td> <td>A Parallelogram 85°</td> <td></td> </tr> <tr> <td></td> <td></td> <td>B 82°</td> <td></td> </tr> <tr> <td></td> <td></td> <td>K 55°</td> <td></td> </tr> </table>			H Hexagon 120°		C Rhomboid 80°		O Octagon 135°		D 55°		P Pentagon 108°		E 75°		S Square 90°		M 86°		T Triangular 60°		V 35°		R Round		W Trigon 80° with enlarged corner angles				L Rectangular 90°				A Parallelogram 85°				B 82°				K 55°									
H Hexagon 120°		C Rhomboid 80°																																																			
O Octagon 135°		D 55°																																																			
P Pentagon 108°		E 75°																																																			
S Square 90°		M 86°																																																			
T Triangular 60°		V 35°																																																			
R Round		W Trigon 80° with enlarged corner angles																																																			
		L Rectangular 90°																																																			
		A Parallelogram 85°																																																			
		B 82°																																																			
		K 55°																																																			

ISO NOMENCLATURE FOR BORING BARS

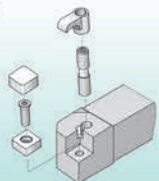
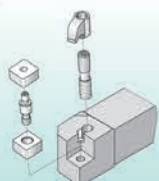
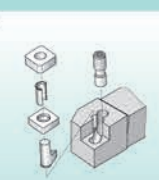
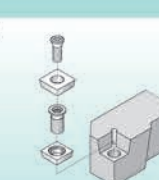

















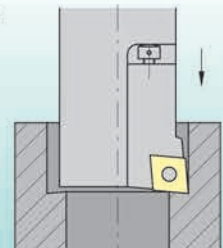
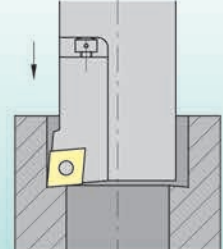
S	32	S	P	C
Bar Type	Bar Diameter	Bar Length**	Insert Holding Method	Insert Shape
<p>A </p> <p>Steel Bar with Coolant</p>	<p></p> <p>Metric: A two-digit number indicates the bar diameter in mm. If the diameter is represented by a one digit number, a 0 (zero) will be used in front of it. Example: 8mm = 08</p>	<p>3 = F 3.5 = G 4 = H 4.5 = J 5 = K 5.5 = L 6 = M 6.5 = N 7 = Q 8 = R 10 = S 12 = T 14 = U 16 = V 18 = W 20 = Y</p> <p>**Used only when more than one length is available or a special length is required.</p>	<p>D </p>	<p>A </p>
<p>S </p> <p>Steel Bar without Coolant</p>			<p>B </p>	
<p>C </p> <p>Carbide Bar</p>			<p>C </p>	
<p>D </p> <p>DeVibrator Bar with Coolant</p>			<p>D </p>	
<p>D </p> <p>Tunable Bar with Coolant</p>			<p>E </p>	
<p>E </p> <p>Carbide Bar with Coolant</p>			<p>H </p>	
<p>B </p> <p>DeVibrator</p>			<p>K </p>	
<p>H </p> <p>Interchangeable Head</p>			<p>L </p>	
<p>L </p> <p>Heavy Metal Bar with Coolant</p>			<p>M </p>	
			<p>C </p>	<p>O </p>
			<p>S </p>	<p>P </p>
			<p>P </p>	<p>R </p>
				<p>S </p>
				<p>T </p>
				<p>V </p>
				<p>W </p>



ISO NOMENCLATURE FOR BORING BARS

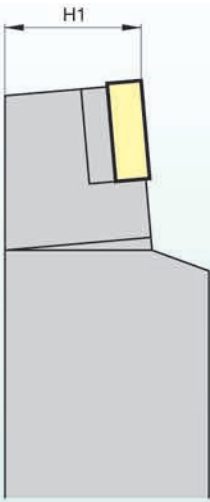
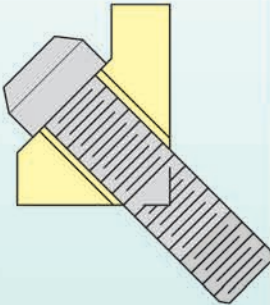

L	N	L	12	KC04
Bar Style or Lead Angle	Insert Clearance Angle	Hand of Tool	Insert Size Cutting Edge Length L10	Additional Information
<p>E </p> <p>F </p> <p>K </p> <p>L </p> <p>(E-style inserts)</p> <p>L </p> <p>P </p> <p>Q </p> <p>S </p> <p>U </p> <p>X </p>	<p>N 0° </p> <p>B 5° </p> <p>C 7° </p> <p>P 11° </p> <p>D 15° </p> <p>E 20° </p> <p>F 25° </p>	<p>R = Right-Hand Boring Bar</p>  <p>L = Left-Hand Boring Bar</p> 	<p>H </p> <p>O </p> <p>P </p> <p>S </p> <p>T </p> <p>CDE M V </p> <p>W </p> <p>L </p> <p>A B K </p> <p>R </p>	<p>M... = M.. MF, MN, MX, for ceramic and PcBN inserts</p> <p>KC = D-Style Clamping</p> <p>+ = Insert thickness</p>

ISO NOMENCLATURE FOR CARTRIDGES

S	T	F	C	R
<p>Insert Clamping System</p>	<p>Insert Shape</p>	<p>Cartridge Style</p>	<p>Insert Clearance Angle</p>	<p>Hand of Tool</p>
<p>C</p>  <p>Top Clamping by Clamping Finger for Inserts without Hole.</p> <p>M</p>  <p>Top and Hole Clamping for Inserts with Hole.</p> <p>P</p>  <p>Insert Clamping by Toggle Lever for Insert Hole.</p> <p>S</p>  <p>Center Clamping by Screw for Inserts with Hole.</p>	<p>C </p> <p>D </p> <p>R </p> <p>S </p> <p>T </p> <p>W </p>	<p>F  K </p> <p>L  J </p> <p>Q  R </p> <p>S  G </p>	<p>C </p> <p>N </p> <p>P </p>	<p>Right-Hand Cartridge</p> <p>R </p> <p>Left-Hand Cartridge</p> <p>L </p>



ISO NOMENCLATURE FOR CARTRIDGES

10	C	A	3	
Cartridge Size	Identifying Code of Cartridge	Mounting Design of Cartridge	Insert Size	Additional Information
 <p>H1 = Cutting Edge Height of Cartridge, in Inches</p>	<p>C = Cartridge</p>	<p>A-Design Conforming to ISO 5611</p> 	 <p>Insert iC Number of 1/8ths of "D"</p>	

TOOLHOLDERS



Description	ISO text	Ordering code
ISO TOOL HOLDER 'P' CLAMPING	PSBNR2020M12 MRW	6870707
ISO TOOL HOLDER 'P' CLAMPING	PSBNR2525M12 MRW	6870706
ISO TOOL HOLDER 'P' CLAMPING	PDJNL3232P15 MRW	6870705
ISO TOOL HOLDER 'P' CLAMPING	PDJNR3232P15 MRW	6870704
ISO TOOL HOLDER 'P' CLAMPING	PDJNL2525M15 MRW	6870703
ISO TOOL HOLDER 'P' CLAMPING	PDJNR2525M15 MRW	6870702
ISO TOOL HOLDER 'P' CLAMPING	PCLNL2525M12 MRW	6870701
ISO TOOL HOLDER 'P' CLAMPING	PCLNR2525M12 MRW	6870680
ISO TOOL HOLDER 'P' CLAMPING	PCLNL2020K12 MRW	6870679
ISO TOOL HOLDER 'P' CLAMPING	PCLNR2020K12 MRW	6870678
ISO TOOL HOLDER 'M' CLAMPING	MWLN2020K08 MRW	6870677
ISO TOOL HOLDER 'M' CLAMPING	MWLN2020K08 MRW	6870676
ISO TOOL HOLDER 'M' CLAMPING	MWLN2525M08 MRW	6870299
ISO TOOL HOLDER 'M' CLAMPING	MWLN2525M08 MRW	6870298
ISO TOOL HOLDER 'M' CLAMPING	MWLN2020M06 MRW	6870297
ISO TOOL HOLDER 'M' CLAMPING	MWLN2020M06 MRW	6870296
ISO TOOL HOLDER 'M' CLAMPING	MWLN2525M06 MRW	6870295
ISO TOOL HOLDER 'M' CLAMPING	MWLN2525M06 MRW	6870294
ISO TOOL HOLDER 'M' CLAMPING	MTJNR2020K16 MRW	6870293
ISO TOOL HOLDER 'M' CLAMPING	MTJNL2020K16 MRW	6870292
ISO TOOL HOLDER 'M' CLAMPING	MTJNR2525M16 MRW	6870291
ISO TOOL HOLDER 'M' CLAMPING	MTJNL2525M16 MRW	6870260



BORING BARS



Description	ISO text	Ordering code
P CLAMPING BORING BAR	S32SPCLNR12F3 MRW	6870718
P CLAMPING BORING BAR	S32SPCLNL12F3 MRW	6870717
P CLAMPING BORING BAR	S25TPCLNR12F3 MRW	6870716
P CLAMPING BORING BAR	S25TPCLNL12F3 MRW	6870715
SCREW ON BORING BAR	S20SSCLCR09T3 MRW	6870714
SCREW ON BORING BAR	S20SSCLCL09T3 MRW	6870713
SCREW ON BORING BAR	S16RSCLCL09T3 MRW	6870712
SCREW ON BORING BAR	S12MSCLCR06F3 MRW	6870711
SCREW ON BORING BAR	S10KSCLCL06F3 MRW	6870710
SCREW ON BORING BAR	S08HSCLCR06F3 MRW	6870709
SCREW ON BORING BAR	S08HSCLCL06F3 MRW	6870708

CARTRIDGES



Description	ISO text	Ordering code
SCREW ON CARTRIDGE	STFCR12CA16 MRW	6870724
SCREW ON CARTRIDGE	STFCR10CA11 MRW	6870723
P CLAMPING CARTRIDGE	PTFNR12CA16 MRW	6870722
P CLAMPING CARTRIDGE	PTFNL16CA16 MRW	6870720
P CLAMPING CARTRIDGE	PTFNR16CA16 MRW	6870719



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