Metal Removal by WIDIA™

Cost-effective | Versatile | Reliable

Milling | Turning | Drilling

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.

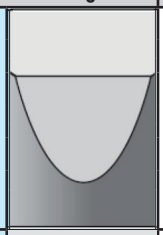
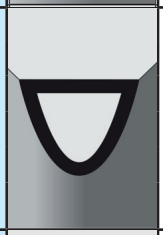
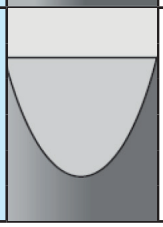
METAL REMOVAL BY WIDIA

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.

GRADES ON DIFFERENT MACHINING CONDITIONS

wear resistance ← → toughness

Coating	Grade Description		05	10	15	20	25	30	35
MR1000K 	Uncoated grade with micro-fine substrate suited for machining cast iron in medium to finish applications.	P							
		M							
		K							
		N							
		S							
		H							
MR2500P 	PVD TiAlN-coated grade with micro-fine substrate suited for machining steel and cast iron in medium to finish applications.	P							
		M							
		K							
		N							
		S							
		H							
MR3000P 	Uncoated carbide that's great for general-purpose turning grade for steels and ideal for medium machining to heavy roughing.	P							
		M							
		K							
		N							
		S							
		H							

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

SELECT THE CUTTING SPEED

Indexable Milling												
	Material group	Material Specification	MR1000K			MR3000P			MR2500P		
			m/min			m/min			m/min		
			max.	start	min.	max.	start	min.	max.	start	min.
P	1	Low carbon steel (<0.3%C)				210	195	180	330	290	270
	2	Medium & High carbon steel(>0.3%C)				150	130	120	275	250	200
	3	Alloy/Tool steels <35HRc				125	110	100	255	220	175
	4	Alloy/Tool steels 36 to 48HRc				110	100	80	225	190	150
	5	Ferritic, Martensitic & PH SS (<35HRc)				100	80	60	185	175	150
	6	Ferritic, Martensitic & PH SS 36 to 48HRc)							165	130	100
M	1	Austenitic SS									
	2	Austenitic SS									
	3	Austenitic SS : Duplex									
K	1	Gray CI	145	110	90				250	220	185
	2	Ductile, Compacted graphite and malleable CI <80KSI	150	120	85				200	180	150
	3	Ductile, Compacted graphite and malleable CI >80KSI	155	115	70				180	150	120

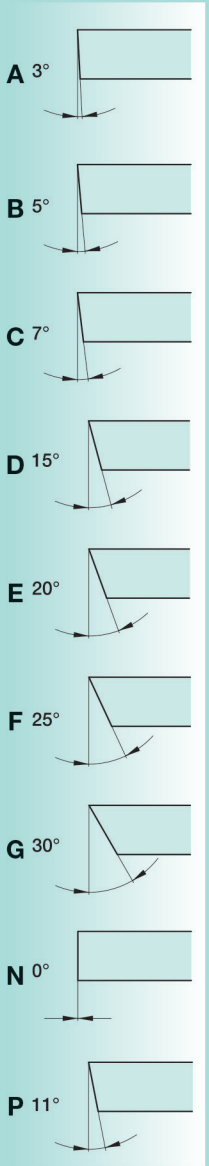
ISO INSERT NOMENCLATURE

S

Insert Shape

P

Insert Clearance Angle



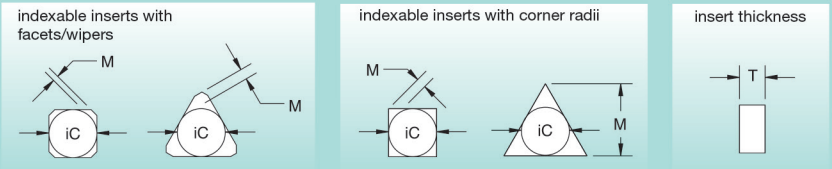
K

Tolerance Class

N

Geometry and Clamping Type

symbol	hole	shape of hole	chipbreaker	shape of insert's section
N	without		without	
R			single-sided	
F			double-sided	
A	with	cylindrical hole	without	
M			single-sided	
G			double-sided	
W	with	partly cylindrical hole, 40–60° countersink	without	
T			single-sided	
Q	with	partly cylindrical hole, 40–60° double countersink	without	
U			double-sided	
B	with	partly cylindrical hole, 70–90° countersink	without	
H			single-sided	
C	with	partly cylindrical hole, 70–90° double countersink	without	
J			double-sided	
X	special design			



iC	tolerances on "iC"		tolerances on "M"	
	classes J, K, L, M, N (+/-)	class U (+/-)	classes M & N (+/-)	class U (+/-)
4,76–10,00	0,051	0,076	0,076	0,127
11,11–14,29	0,076	0,127	0,127	0,203
15,00–20,64	0,102	0,178	0,152	0,279
22,00–31,16	0,127	0,254	0,178	0,381
31,75–35,00	0,152	0,254	0,2	0,381

	iC (+/-)	M (+/-)	T (+/-)		iC (+/-)	M (+/-)	T (+/-)
A	0,025	0,005	0,025	J	0,05–0,15*	0,005	0,025
B	0,025	0,005	0,013	K	0,05–0,15*	0,013	0,025
C	0,025	0,013	0,025	L	0,05–0,15*	0,025	0,025
D	0,025	0,013	0,013	M	0,05–0,15*	0,08–0,20*	0,013
E	0,025	0,025	0,025	N	0,05–0,15*	0,08–0,20*	0,025
F	0,013	0,005	0,025	P**	0,038	0,038	0,038
G	0,025	0,025	0,013	U	0,08–0,25*	0,13–0,30*	0,013
H	0,013	0,013	0,025				

*See table above for tolerances according to insert size and class.

ISO INSERT NOMENCLATURE

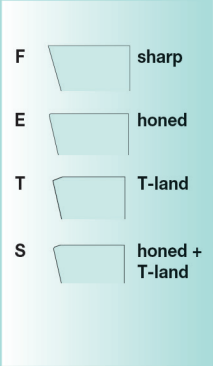
12
Size
(Cutting Edge Length)

03
Insert Thickness

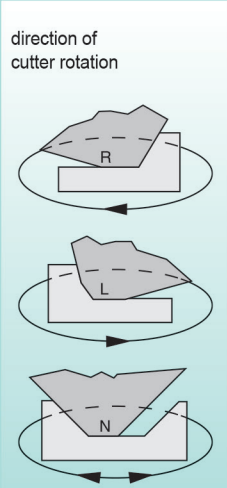
symbol	thickness
T1	1,98
02	2,38
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94

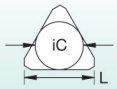
ED
Corner
Configuration

S
Cutting Edge
Form



R
Insert Hand



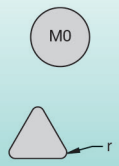


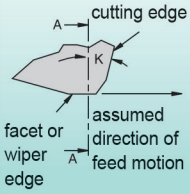
inscribed circle "iC" versus
cutting edge length "L"

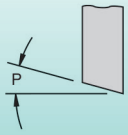
For shapes A, L, and X, see position #1;
use length of leading cutting edge.

iC	"L" for shapes						
	S	T	R	O	C	H	E
6,00	–	–	06	–	–	–	–
6,35	06	11	06	02	06	03	06
8,00	–	–	08	–	–	–	–
9,52	09	16	09	04	09	05	09
10,00	–	–	10	–	–	–	–
12,00	–	–	12	–	–	–	–
12,70	12	22	12	05	12	07	13
15,88	15	27	15	06	16	09	16
16,00	–	–	16	–	–	–	–
19,05	19	33	19	07	19	11	19
20,00	–	–	20	–	–	–	–
25,00	–	–	25	–	–	–	–
25,40	25	4					

radius







MO	round insert
01	0,1mm
02	0,2mm
04	0,4mm
05	0,5mm
08	0,8mm
10	1,0mm
12	1,2mm
15	1,5mm
16	1,6mm
24	2,4mm
32	3,2mm

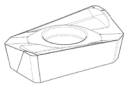
If letter is replaced by number(s), refer to table for radius "r."

lead angle K	
A	45°
D	60°
E	75°
P	90°

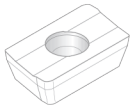
wiper edge clearance P	
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

INSERTS FOLLOWING THE GRADE MR2500P

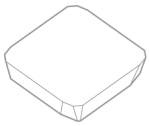
APMT/APPT

Insert	Description	Insert grade	Work material	Ordering code
	APMT160408PDR	MR2500P	Steel & Cast Iron	6740742
	APMT1135PDR	MR2500P	Steel & Cast Iron	6741543
	APPT160408PDSR	MR2500P	Steel & Cast Iron	6882765

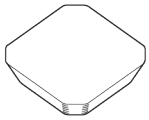
XPNT

Insert	Description	Insert grade	Work material	Ordering code
	XPNT160412	MR2500P	Steel & Cast Iron	6655361

SPKN

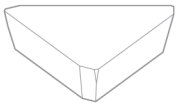
Insert	Description	Insert grade	Work material	Ordering code
	SPKN1203EDR	MR2500P	Steel & Cast Iron	6740745
	SPKN1203EDL	MR3000P	Steel	6882811
	SPKN1203EDL	MR1000K	Cast Iron	6882812
	SPKN1203EDL	MR2500P	Steel & Cast Iron	6882813
	SPKN1504EDR	MR2500P	Steel & Cast Iron	6740746
	SPKN1504EDR	MR1000K	Cast Iron	6882814
	SPKN1504EDL	MR2500P	Steel & Cast Iron	6882815
	SPKN1203EDR	MR1000K	Cast Iron	6841023
	SPKN1504EDR	MR3000P	Steel & Cast Iron	6841025
	SPKN1203EDR	MR3000P	Steel & Cast Iron	6841024

SEKN

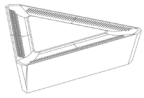
Insert	Description	Insert grade	Work material	Ordering code
	SEKN1203AFN	MR2500P	Steel & Cast Iron	6882764

INSERTS FOLLOWING THE GRADE MR2500P

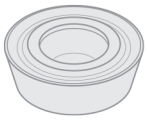
TPKN

Insert	Description	Insert grade	Work material	Ordering code
	TPKN1603PDR	MR2500P	Steel & Cast Iron	6882769
	TPKN2204PDR	MR2500P	Steel & Cast Iron	6740781
	TPKN2204PDR	MR1000K	Cast Iron	6882816
	TPKN2204PDL	MR2500P	Steel & Cast Iron	6882817
	TPKN2204PDR	MR3000P	Steel & Cast Iron	6841022

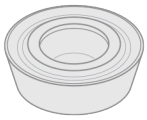
TPKR

Insert	Description	Insert grade	Work material	Ordering code
	TPKR1603PDR	MR2500P	Steel & Cast Iron	6882770

RDMX/RDEX

Insert	Description	Insert grade	Work material	Ordering code
	RDMX10T300	MR2500P	Steel & Cast Iron	6655352
	RDMX1604M0T	MR2500P	Steel & Cast Iron	6882768
	RDMX12T3	MR2500P	Steel & Cast Iron	6826650
	RDEX12T3	MR2500P	Steel & Cast Iron	6826649
	RDEX1003	MR2500P	Steel & Cast Iron	6826648

RPMT

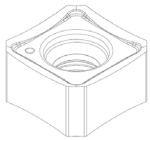
Insert	Description	Insert grade	Work material	Ordering code
	RPMT1204MO	MR2500P	Steel & Cast Iron	6740744

RPMW

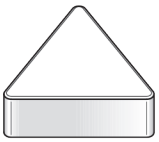
Insert	Description	Insert grade	Work material	Ordering code
	RPMW1003M0T	MR2500P	Steel & Cast Iron	6882766
	RPMW1204M0	MR2500P	Steel & Cast Iron	6882767

INSERTS FOLLOWING THE GRADE MR2500P

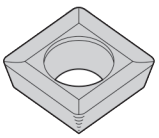
SNMX

Insert	Description	Insert grade	Work material	Ordering code
	SNMX1206	MR2500P	Steel & Cast Iron	6689762

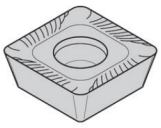
TNUN

Insert	Description	Insert grade	Work material	Ordering code
	TNUN270620	MR3000P	Steel & Cast Iron	6894066

SDMT

Insert	Description	Insert grade	Work material	Ordering code
	SDMT1204PDRMH	MR2500P	Steel & Cast Iron	6768345

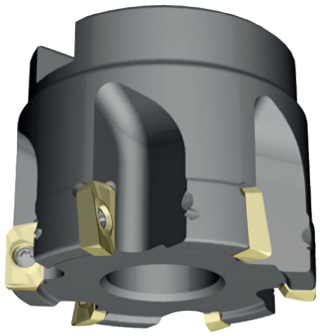
SOMT

Insert	Description	Insert grade	Work material	Ordering code
	SOMT060204ML	MR2500P	Steel & Cast Iron	6882818
	SOMT09T306-MRT2	MR2500P	Steel & Cast Iron	6826647

Milling Cutter

CUTTER NOMENCLATURE

MR	EM	D080	Z05	A16	AP11
(1) Brand	(2) Insert Material	(3) Diameter	(4) Effective number of Teeth	(5) Mounting Size	(6) Style of Insert Used
MR - MR brand	EM - End Mill SM - Shell Mill FM - Face Mill	016 - 16mm 025 - 25mm 032 - 32mm	03 - 3 05 - 5 07 - 7 09 - 9	A - Cylindrical Shank S - Shell Mill 16 - 16mm 20 - 20mm 25 - 25mm 32 - 32mm	AP11 - APMT11 AP16 - APMT16 SP12 - SPKN12 SP15 - SPKN15 TP22 - TPKN22



Milling Cutter

ISO Nomencalture	MRW MM	Mounting style	Mounting size	Z	OAL	Insert style
MRFMD080Z05S27SP12	7160643	Shell Mill	27	5	50	SPKN12
MRFMD100Z07S32SP12	7160644	Shell Mill	32	7	50	SPKN12
MRFMD125Z08S40SP12	7160645	Shell Mill	40	8	63	SPKN12
MRFMD160Z10S40SP12	7160646	Shell Mill	40	10	63	SPKN12
MRFMD080Z05S27SP15	7160703	Shell Mill	27	5	50	SPKN15
MRFMD100Z07S32SP15	7160704	Shell Mill	32	7	50	SPKN15
MRFMD125Z08S40SP15	7160754	Shell Mill	40	8	63	SPKN15
MRFMD160Z10S40SP15	7160755	Shell Mill	40	10	63	SPKN15
MRFMD080Z05S27TP22	7160756	Shell Mill	27	5	50	TPKN22
MRFMD100Z07S32TP22	7160757	Shell Mill	32	7	50	TPKN22
MRFMD125Z08S40TP22	7160758	Shell Mill	40	8	63	TPKN22
MRFMD160Z10S40TP22	7160759	Shell Mill	40	10	63	TPKN22

ISO Nomencalture	MRW MM	Mounting style	Mounting size	Z	OAL	Insert style
MREMD016Z02A16AP11	7160753	Cylindrical Shank	16	2	170	APMT11
MREMD020Z02A20AP11	7160760	Cylindrical Shank	20	2	170	APMT11
MREMD025Z03A25AP11	7160761	Cylindrical Shank	25	3	210	APMT11
MREMD032Z03A32AP11	7160762	Cylindrical Shank	32	3	250	APMT11
MRSMD040Z04S16AP11	7160763	Shell Mill	16	4	40	APMT11
MRSMD050Z05S22AP11	7160765	Shell Mill	22	5	40	APMT11
MRSMD063Z06S22AP11	7160766	Shell Mill	22	6	40	APMT11
MRSMD080Z08S27AP11	7160767	Shell Mill	27	8	50	APMT11
MRSMD100Z09S32AP11	7160768	Shell Mill	32	9	50	APMT11

ISO Nomencalture	MRW MM	Mounting style	Mounting size	Z	OAL	Insert style
MREMD020Z02A20AP16	7160791	Cylindrical Shank	20	2	170	APMT 16
MREMD025Z02A25AP16	7160792	Cylindrical Shank	25	2	210	APMT 16
MREMD032Z03A32AP16	7160793	Cylindrical Shank	32	3	250	APMT 16
MRSMD040Z04S16AP16	7160794	Shell Mill	16	4	40	APMT 16
MRSMD050Z05S22AP16	7160795	Shell Mill	22	5	40	APMT 16
MRSMD063Z06S22AP16	7160796	Shell Mill	22	6	40	APMT 16
MRSMD080Z07S27AP16	7160797	Shell Mill	27	7	50	APMT 16
MRSMD100Z08S32AP16	7160798	Shell Mill	32	8	50	APMT 16
MRSMD125Z09S40AP16	7160799	Shell Mill	40	9	63	APMT 16

Solid End Mills

4-Flute

- Multipurpose tools for a wide range of workpiece materials
- Various lengths-of-cut and overall lengths
- Four flutes for high Metal Removal Rates (MRR) and tool life

Short Series

Cutting Diameter	Flute Length	Overall Length	Shank Diameter	Ordering Code
1	3	50	4	7111712
2	6	50	4	7111713
3	8	50	4	7111714
4	11	50	4	7111715
5	13	50	6	7111716
6	16	50	6	7111688
8	20	60	8	7111689
10	25	75	10	7111690
12	30	75	12	7111781
16	45	100	16	7111782
20	45	100	20	7111783

Long Series

Cutting Diameter	Flute Length	Overall Length	Shank Diameter	Ordering Code
3	12	75	4	7111784
4	15	75	4	7111785
5	20	75	6	7111786
6	20	75	6	7111787
8	25	100	8	7111788
10	30	100	10	7111789
12	35	100	12	7111790
16	50	150	16	7111811
20	55	150	20	7111812
16	45	100	16	7111782
20	45	100	20	7111783

APPLICATIONS


Slotting:
Square End


Side Milling/
Shoulder Milling:
Square End

DIN 6527


Corner Style:
Square End


Cylindrical/Plain
Shank


Cylindrical/Plain
Shank

Tool Dimensions:
Flute Configuration:
4

METAL REMOVAL
BY WIDIA™

Cost-effective | Versatile | Reliable

Turning

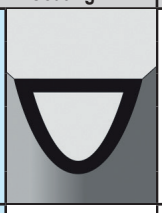
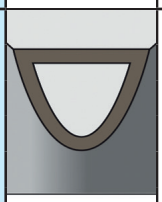
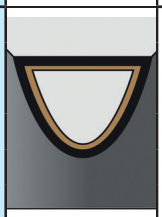
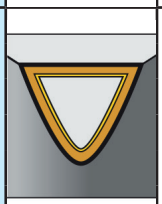
DIFFERENT MACHINING CONDITIONS

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
MMT4	For finishing with a positive cutting edge for reduced cutting forces and superior surface quality.	0.6-4	0.15-0.3
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
MFT3	For finishing to medium turning operations with optimal chip control over a wide range of cutting conditions and workpiece materials.	0.5-3	0.1-0.3

Grades

wear resistance ◄——► toughness

Coating		Grade Description		05	10	15	20	25	30	35	40	45
MR2500P		PVD TiAlN-coated grade with micro-fine substrate suited for machining steel and cast iron in medium to finish turning applications.	P	■	■	■						
			K		■	■						
MR2000P		CVD-coated carbide, great for general-purpose turning for steels and ideal for medium machining to heavy roughing.	P		■	■	■	■	■	■	■	
			K						■	■	■	■
MR2500M		Composition: An advanced PVD-AlTiN-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				■	■	■			
			M					■	■	■		
			K					■	■	■		
			N					■	■	■		
			S					■	■	■		
MR2510P		**Composition:** A tough cobalt-enriched carbide grade with a multilayer MTCVD TiCN-Al_2O_3 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				■	■	■			
			K						■	■	■	
MR2000K		**Composition:** A multilayered coating with moderately thick MTCVD TiCN-Al_2O_3 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	■								
			K	■	■	■	■					

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

Turning

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

ISO INSERT NOMENCLATURE

C — Insert Shape

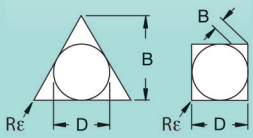
H	Hexagon 120°	
O	Octagon 135°	
P	Pentagon 108°	
R	Round –	
S	Square 90°	
T	Triangular 60°	
C D E M V	Rhomboid 80° 55° 75° 86° 35°	
W	Trigon 80° with enlarged corner angles	
L	Rectangular 90°	
A B N/K	Parallelogram 85° 82° 55°	

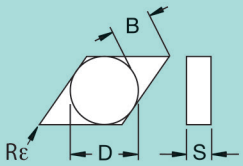
N — Insert Clearance Angle

A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Indicated for other clearance angles requiring descriptions.

M — Tolerance Class

Tolerances apply prior to edge prep and coating.





D = Theoretical diameter of the insert inscribed circle
S = Thickness
B = See figures below

G — Insert Features

N	
R	
F	
A	
M	
G	
W	
T	
Q	
U	
B	
H	
C	
J	
X V	Special Design

12 — Size

"D" mm	Code for mm cutting edge length "L10" 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	–	–	–	–

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 "Rε"	Hand of Insert (optional)	Cutting Edge (optional)	Chip breaker (optional)

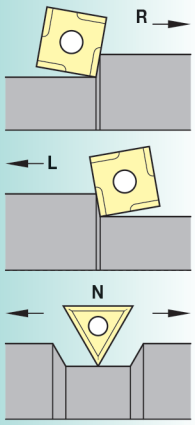
symbol mm	thickness mm
–	0,79
T0	1,00
01	1,59
T1	1,98
02	2,38
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
9	9,52
11	11,11
12	12,70

symbol mm	corner radius mm
X0	0,04
01	0,1
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
28	2,8
32	3,2
00	round insert
M0	round insert
–	round insert

R = Right Hand

L = Left Hand

N = Neutral



F Sharp

E Rounded

T Chamfered

S Chamfered and Rounded

K Double-Chamfered

P Double-Chamfered and Rounded

.. MA

..MP

MRT1

MRT2

MRT3

MRT4

MMT1

MMT2

MMT3

MFT1

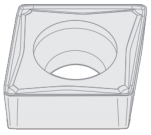
MFT2

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

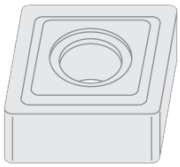
"D" mm	± Tolerance on "B" Class M Tolerance Shapes S, T, C, R, & W mm	Shape D mm	Shape V mm	Class U Tolerance Shapes S, T, & C mm
3,97	0,08	–	–	–
4,76	0,08	–	–	0,13
5,56	0,08	0,11	–	0,13
6,35	0,08	0,11	–	0,13
7,94	0,08	0,11	–	0,13
9,52	0,08	0,11	0,18	0,13
11,11	0,13	0,15	–	–
12,70	0,13	0,15	0,25	0,20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

INSERTS FOLLOWING THE GRADE MR2000P

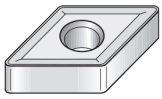
CCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	CCMT060204MRT2	MR2000P	Steel & Cast Iron	6655316
	CCMT060208MFT2	MR2000P	Steel & Cast Iron	6655317
	CCMT09T304MRT2	MR2000P	Steel & Cast Iron	6655319
	CCMT09T308MRT2	MR2000P	Steel & Cast Iron	6655320

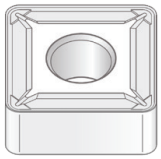
CNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMG120404MRT1	MR2000P	Steel & Cast Iron	6655331
	CNMG120408MMT1	MR2000P	Steel & Cast Iron	6655332
	CNMG120408MRT1	MR2000P	Steel & Cast Iron	6655335
	CNMG190612MRT2	MR2000P	Steel & Cast Iron	6740715
	CNMG120404MRT2	MR2000P	Steel & Cast Iron	6740718
	CNMG190612MRT1	MR2000P	Steel & Cast Iron	6755261
	CNMG120412MRT1	MR2000P	Steel & Cast Iron	6772974
	CNMG190608MRT2	MR2000P	Steel & Cast Iron	6851880
	CNMG190616MRT3	MR2000P	Steel & Cast Iron	7267948
	CNMG160612MRT3	MR2000P	Steel & Cast Iron	7279926
	CNMG160616MRT3	MR2000P	Steel & Cast Iron	7279927
	CNMG120412MRT4	MR2000P	Steel & Cast Iron	7291501
	CNMG120412MRT4	MR2000P	Steel & Cast Iron	7294585

DNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	DNMG150608MMT1	MR2000P	Steel & Cast Iron	6797566
	DNMG150608MRT1	MR2000P	Steel & Cast Iron	6797565
	DNMG150604MRT2	MR2000P	Steel & Cast Iron	7052718

SNMG

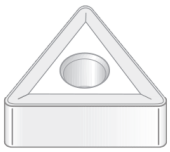
Insert	Description	Insert Grade	Work Material	Ordering Code
	SNMG190612MRT2	MR2000P	Steel & Cast Iron	6740716
	SNMG120412MRT1	MR2000P	Steel & Cast Iron	6870146
	SNMG120408MRT1	MR2000P	Steel & Cast Iron	6870144
	SNMG150612MRT3	MR2000P	Steel & Cast Iron	7279942
	SNMG190616MRT1	MR2000P	Steel & Cast Iron	7279941

INSERTS FOLLOWING THE GRADE MR2000P

TCMT

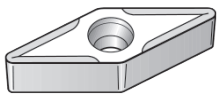
Insert	Description	Insert Grade	Work Material	Ordering Code
	TCMT16T308MRT2	MR2000P	Steel & Cast Iron	6940313

TNMG



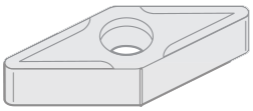
Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMG160408MMT1	MR2000P	Steel & Cast Iron	6655328
	TNMG160404MRT1	MR2000P	Steel & Cast Iron	6655329
	TNMG160412MRT1	MR2000P	Steel & Cast Iron	6655330
	TNMG160404MFT1	MR2000P	Steel & Cast Iron	6740717
	TNMG160408MRT1	MR2000P	Steel & Cast Iron	6870156
	TNMG160412MMT1	MR2000P	Steel & Cast Iron	6905623
	TNMG220408MRT1	MR2000P	Steel & Cast Iron	7049956
	TNMG220412MRT1	MR2000P	Steel & Cast Iron	7049957

VBMT



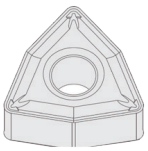
Insert	Description	Insert Grade	Work Material	Ordering Code
	VBMT160408MRT2	MR2000P	Steel & Cast Iron	6870256

VNMG



Insert	Description	Insert Grade	Work Material	Ordering Code
	VNMG12T304MRT2	MR2000P	Steel & Cast Iron	6740720
	VNMG12T308MRT2	MR2000P	Steel & Cast Iron	6870254

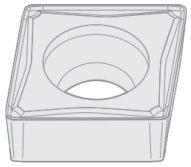
WNMG



Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMG060408MRT1	MR2000P	Steel & Cast Iron	6655337
	WNMG080408MMT1	MR2000P	Steel & Cast Iron	6655338
	WNMG080412MRT1	MR2000P	Steel & Cast Iron	6655339
	WNMG080412MMT1	MR2000P	Steel & Cast Iron	6905624
	WNMG080408MRT1	MR2000P	Steel & Cast Iron	6870253
	WNMG060412MRT1	MR2000P	Steel & Cast Iron	6870155

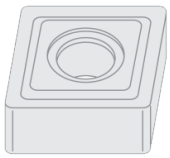
INSERTS FOLLOWING THE GRADE MR2500P

CCMT



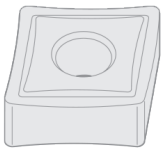
Insert	Description	Insert Grade	Work Material	Ordering Code
	CCMT060204MRT2	MR2500P	Steel & Cast Iron	6740667
	CCMT060208MFT2	MR2500P	Steel & Cast Iron	6740668
	CCMT060208MFT2	MR2500P	Steel & Cast Iron	6927966
	CCMT09T304MRT2	MR2500P	Steel & Cast Iron	6740669
	CCMT09T304MRT2	MR2500P	Steel & Cast Iron	6966078
	CCMT09T304MRT2	MR2500P	Steel & Cast Iron	7275445
	CCMT09T308MFT2	MR2500P	Steel & Cast Iron	6780840
	CCMT09T308MFT2	MR2500P	Steel & Cast Iron	7161961
	CCMT09T308MRT2	MR2500P	Steel & Cast Iron	6740670
	CCMT09T308MRT2	MR2500P	Steel & Cast Iron	6966077

CNMG



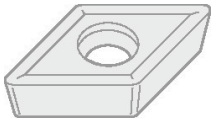
Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMG120404MRT2	MR2500P	Steel & Cast Iron	6740749
	CNMG120408MMT1	MR2500P	Steel & Cast Iron	6870252
	CNMG120408MMT2	MR2500P	Steel & Cast Iron	6741544
	CNMG120408MRT1	MR2500P	Steel & Cast Iron	6870251
	CNMG190612MRT1	MR2500P	Steel & Cast Iron	6755262
	CNMG190612MRT2	MR2500P	Steel & Cast Iron	6749002

CNMP



Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMP120408	MR2500P	Steel & Stainless Steel	6749253

DCMT



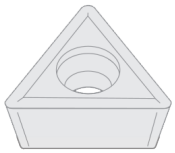
Insert	Description	Insert Grade	Work Material	Ordering Code
	DCMT11T304MMT1	MR2500P	Steel & Cast Iron	7049954
	DCMT11T308MMT1	MR2500P	Steel & Cast Iron	7049953

INSERTS FOLLOWING THE GRADE MR2500P

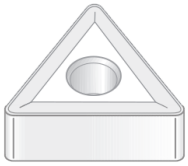
SCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	SCMT120408MRT2	MR2500P	Steel & Cast Iron	6740739
	SCMT09T308MRT2	MR2500P	Steel & Cast Iron	6826646
	SCMT09T308MRT2	MR2500P	Steel & Cast Iron	7161950
	SCMT120408MRT2	MR2500P	Steel & Cast Iron	7161962

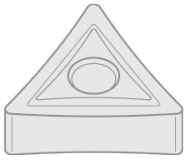
TCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	TCMT110204MRT2	MR2500P	Steel & Cast Iron	6740735
	TCMT110208MFT2	MR2500P	Steel & Cast Iron	6740736
	TCMT16T304MRT2	MR2500P	Steel & Cast Iron	6740737
	TCMT16T308MRT2	MR2500P	Steel & Cast Iron	6740738
	TCMT16T308MRT2	MR2500P	Steel & Cast Iron	6927964
	TCMT220408MMT1	MR2500P	Steel & Cast Iron	7049955

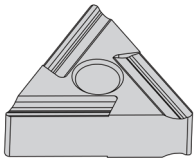
TNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMG160404MFT1	MR2500P	Steel & Cast Iron	6740747
	TNMG160408MFT1	MR2500P	Steel & Cast Iron	7267947
	TNMG160408MMT1	MR2500P	Steel & Cast Iron	6826644
	TNMG160408MMT2	MR2500P	Steel & Cast Iron	6740748
	TNMG160412MRT1	MR2500P	Steel & Cast Iron	7116746
	TNMG220416MRT1	MR2500P	Steel & Cast Iron	7052717

TNMP

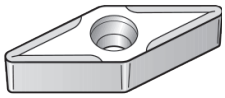
Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMP160408	MR2500P	Steel & Stainless Steel	6749252

TNMX

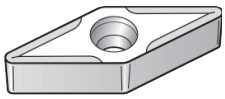
Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMX160404L	MR2500P	Steel & Cast Iron	7139308
	TNMX160404R	MR2500P	Steel & Cast Iron	7139307

INSERTS FOLLOWING THE GRADE MR2500P

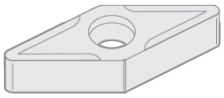
VBMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	VBMT160404MRT2	MR2500P	Steel & Cast Iron	6870259
	VBMT160408MRT2	MR2500P	Steel & Cast Iron	6870258

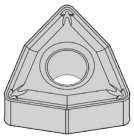
VCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	VCMT16T308MRT2	MR2500P	Steel & Cast Iron	6826645

VNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	VNMG12T304MRT2	MR2500P	Steel & Cast Iron	6749003
	VNMG12T308MRT2	MR2500P	Steel & Cast Iron	6749004
	VNMG160408MMT1	MR2500P	Steel & Cast Iron	7049958

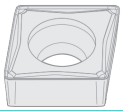
WNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMG080412MRT1	MR2500P	Steel & Cast Iron	6758425
	WNMG08408MMT1	MR2500P	Steel & Cast Iron	6758424

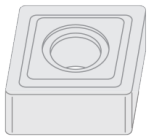
Steel

MR2510P

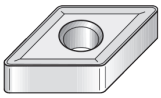
CCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	CCMT09T304MRT2	MR2510P	Steel	7231824
	CCMT120408MRT2	MR2510P	Steel	7260488
	CCMT120412MRT2	MR2510P	Steel	7260541

CNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	CNMG120404MRT2	MR2510P	Steel	7260057
	CNMG120408MMT1	MR2510P	Steel	7172194
	CNMG120408MRT1	MR2510P	Steel	7172193
	CNMG120408MRT3	MR2510P	Steel	7172263
	CNMG120412MRT1	MR2510P	Steel	7172192
	CNMG120412MRT3	MR2510P	Steel	7172264
	CNMG120412MRT4	MR2510P	Steel	7294586
	CNMG160612MRT3	MR2510P	Steel	7260058
	CNMG160616MRT3	MR2510P	Steel	7260059
	CNMG190612MRT1	MR2510P	Steel	7172191
	CNMG190616MRT3	MR2510P	Steel	7273303

DNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	DNMG150604MRT2	MR2510P	Steel	7273032
	DNMG150608MMT1	MR2510P	Steel	7273033
	DNMG150612MRT3	MR2510P	Steel	7303364

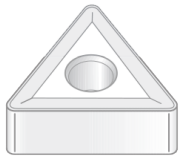
SNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	SNMG120408MRT1	MR2510P	Steel	7172196
	SNMG120412MRT1	MR2510P	Steel	7263305
	SNMG150612MRT3	MR2510P	Steel	7260076
	SNMG190612MRT2	MR2510P	Steel	7172195
	SNMG190616MRT1	MR2510P	Steel	7260078

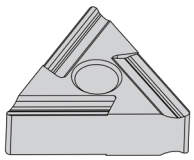
Steel

MR2510P

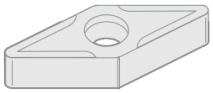
TNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMG160404MFT1	MR2510P	Steel	7271782
	TNMG160408MMT1	MR2510P	Steel	7172188
	TNMG160408MMT2	MR2510P	Steel	7183748
	TNMG160408MMT4	MR2510P	Steel	7231823
	TNMG160408MRT3	MR2510P	Steel	7172262
	TNMG160412MRT1	MR2510P	Steel	7172189
	TNMG220412MRT1	MR2510P	Steel	7172190
	TNMG220416MRT1	MR2510P	Steel	7260143
	TNMG220416MRT2	MR2510P	Steel	7260141

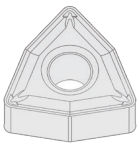
TNMX

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMX160404-L	MR2510P	Steel	7260144
	TNMX160404-R	MR2510P	Steel	7260145
	TNMX160408-L	MR2510P	Steel	7260146
	TNMX160408-L	MR2510P	Steel	7248397
	TNMX160408-R	MR2510P	Steel	7260147
	TNMX160408-R	MR2510P	Steel	7248398

VNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	VNMG12T304MRT2	MR2510P	Steel	7242053
	VNMG12T308MRT2	MR2510P	Steel	7242055
	VNMG160408MMT1	MR2510P	Steel	7260148

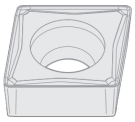
WNMG

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

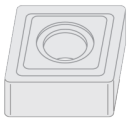
Stainless Steel

MR2500M

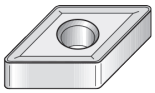
CCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	CCMT060204MRT2	MR2500M	Stainless Steel	7258985
	CCMT060208MFT2	MR2500M	Stainless Steel	7258987
	CCMT09T304MRT2	MR2500M	Stainless Steel	7260040
	CCMT09T308MRT2	MR2500M	Stainless Steel	7260053
	CCMT120408MRT2	MR2500M	Stainless Steel	7260490
	CCMT120412MRT2	MR2500M	Stainless Steel	7260543

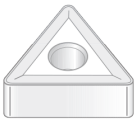
CNMG

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

DNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	DNMG150604MMT3	MR2500M	Stainless Steel	7294587
	DNMG150608MMT3	MR2500M	Stainless Steel	7294588
	DNMG150612MRT4	MR2500M	Stainless Steel	7303365

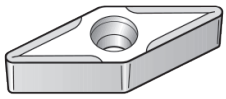
TNMG

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

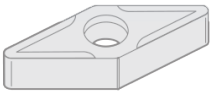
Stainless Steel

MR2500M

VBMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	VBMT110304MFT3	MR2500M	Stainless Steel	7304765
	VBMT110308MFT3	MR2500M	Stainless Steel	7304766
	VBMT160404MMT3	MR2500M	Stainless Steel	7303368
	VBMT160408MMT3	MR2500M	Stainless Steel	7303369

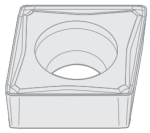
VNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	VNMG160404MMT4	MR2500M	Stainless Steel	7303366
	VNMG160408MMT1	MR2500M	Stainless Steel	7303367

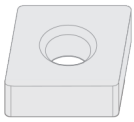
Cast Iron

MR2000K

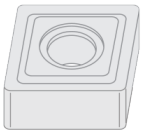
CCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	CCMT060204MRT2	MR2000K	Cast Iron	7258984
	CCMT060208MFT2	MR2000K	Cast Iron	7258986
	CCMT09T304MRT2	MR2000K	Cast Iron	7258988
	CCMT09T308MRT1	MR2000K	Cast Iron	7260052
	CCMT09T308MRT2	MR2000K	Cast Iron	7260051
	CCMT120408MRT2	MR2000K	Cast Iron	7260489
	CCMT120412MRT2	MR2000K	Cast Iron	7260542

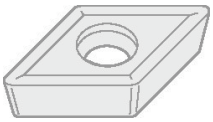
CNMA

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
	CNMG120404MRT1	MR2000K	Cast Iron	7279925
	CNMG160616MRT3	MR2000K	Cast Iron	7260060
	CNMG190612MRT1	MR2000K	Cast Iron	7260073
	CNMG190612MRT2	MR2000K	Cast Iron	7260074
	CNMG190616MRT3	MR2000K	Cast Iron	7260075

DCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	DCMT11T304MMT1	MR2000K	Cast Iron	7279923
	DCMT11T308MMT1	MR2000K	Cast Iron	7279924

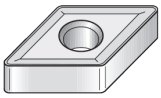
Cast Iron

MR2000K

DNMA

Insert	Description	Insert Grade	Work Material	Ordering Code
	DNMA150408	MR2000K	Cast Iron	7311508

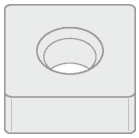
DNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	DNMG150404MMT4	MR2000K	Cast Iron	7311507
	DNMG150604MMT1	MR2000K	Cast Iron	7279928
	DNMG150608MMT1	MR2000K	Cast Iron	7279929

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
	SNMG190612MRT2	MR2000K	Cast Iron	7260077
	SNMG190616MRT1	MR2000K	Cast Iron	7260079

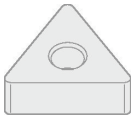
Cast Iron

MR2000K

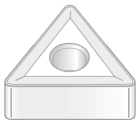
TCMT

Insert	Description	Insert Grade	Work Material	Ordering Code
	TCMT16T308MRT2	MR2000K	Cast Iron	7166727
	TCMT110204MRT2	MR2000K	Cast Iron	7304763
	TCMT110208MFT2	MR2000K	Cast Iron	7304764

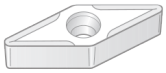
TNMA

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMA160408MA	MR2000K	Cast Iron	7166728
	TNMA160412MA	MR2000K	Cast Iron	7166729

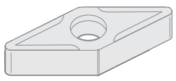
TNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	TNMG160408MRT1	MR2000K	Cast Iron	7166730
	TNMG160412MRT1	MR2000K	Cast Iron	7166731
	TNMG160404MFT1	MR2000K	Cast Iron	7260090
	TNMG220416MRT2	MR2000K	Cast Iron	7260142

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
	VNMG160408MMT1	MR2000K	Cast Iron	7279922

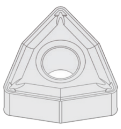
Cast Iron

MR2000K

WNMA

Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMA060408	MR2000K	Cast Iron	7166735
	WNMA080408	MR2000K	Cast Iron	7166736
	WNMA080412	MR2000K	Cast Iron	7166737

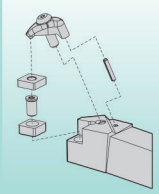
WNMG

Insert	Description	Insert Grade	Work Material	Ordering Code
	WNMG060408MRT1	MR2000K	Cast Iron	7166738
	WNMG060412MRT1	MR2000K	Cast Iron	7271783
	WNMG080408MRT1	MR2000K	Cast Iron	7166739
	WNMG080412MRT1	MR2000K	Cast Iron	7166740

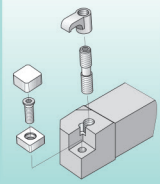
ISO NOMENCLATURE FOR TOOLHOLDERS

P — Insert Holding Method

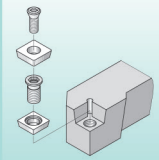
D



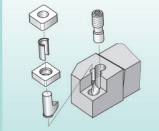
C



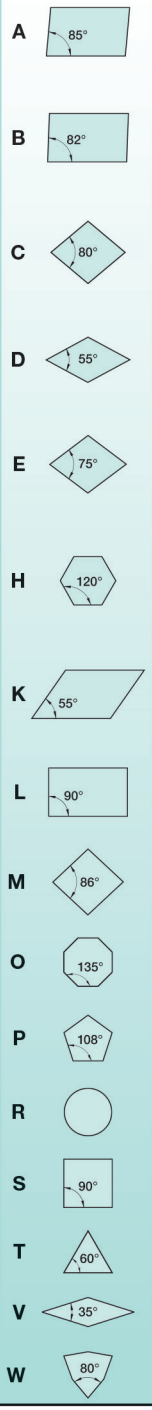
S



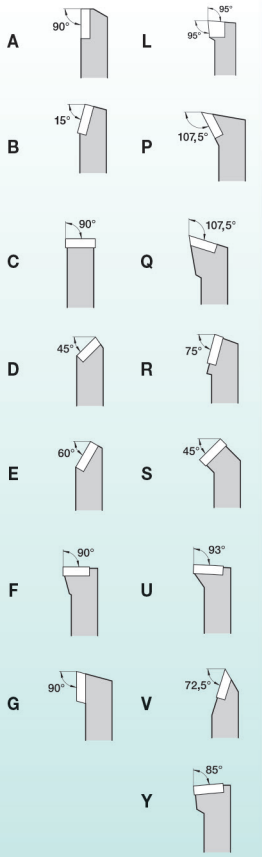
P



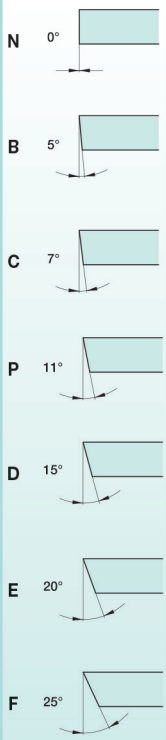
C — Insert Shape



L — Tool Style or Lead Angle



N — Insert Clearance Angle



R — Hand of Tool

R =

Right Hand

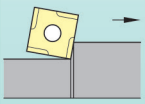
L =

Left Hand

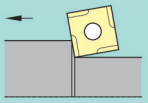
N =

Neutral

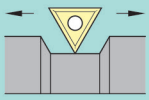
R



L



N



Additional Information

C =

Deep Pocket for Ceramic Insert

S =

Single Pocket Locating Wall

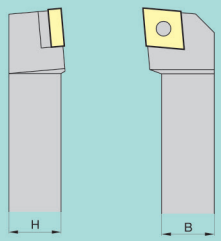
F =

Straight Shank, No Offset

ISO NOMENCLATURE FOR TOOLHOLDERS

25 **25**

Shank Dimensions



The seventh and eighth position shall be a significant two-digit number that indicates the holder cross section.

- 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.

  Example: 8,0mm = 08

M

Tool Length

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

12

Insert Size

KC

Additional Information

KC = D-Style Clamping

04

Insert Thickness (optional)

04 = 4,76mm

06 = 6,35mm

Cutting Edge Length L10

H	Hexagon 120°	
O	Octagon 135°	
P	Pentagon 108°	
S	Square 90°	
T	Triangular 60°	
R	Round –	
C	Rhomboid 80°	
D	55°	
E	75°	
M	86°	
V	35°	
W	Trigon 80° with enlarged corner angles	
L	Rectangular 90°	
A	Parallelogram 85°	
B	82°	
K	55°	

ISO NOMENCLATURE FOR BORING BARS

S — Bar Type

A — Steel Bar with Coolant

S — Steel Bar without Coolant

C — Carbide Bar

D — DeVibrator Bar with Coolant

D — Tunable Bar with Coolant

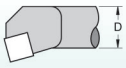
E — Carbide Bar with Coolant

B — DeVibrator

H — Interchangeable Head

L — Heavy Metal Bar with Coolant

32 — Bar Diameter



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

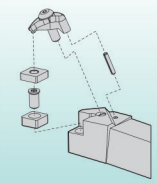
S — Bar Length**

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

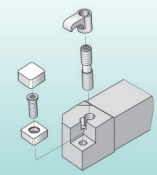
**Used only when more than one length is available or a special length is required.

P — Insert Holding Method

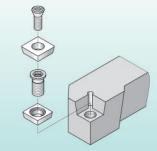
D



C



S



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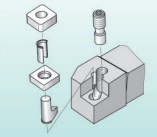
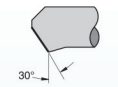


C — Insert Shape

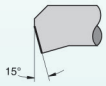
A	85°
B	82°
C	80°
D	55°
E	75°
H	120°
K	55°
L	90°
M	86°
O	135°
P	108°
R	
S	90°
T	60°
V	35°
W	80°

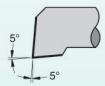
ISO NOMENCLATURE FOR BORING BARS

L
Bar Style or Lead Angle

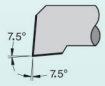
E


F


K


L


(E-style inserts)

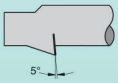
L


P

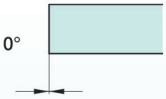

Q

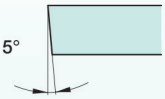

S

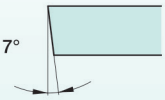

U

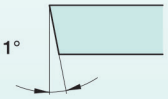

X


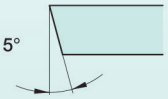
N
Insert Clearance Angle

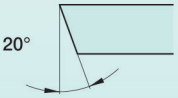
N 0°


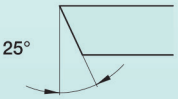
B 5°


C 7°


P 11°


D 15°


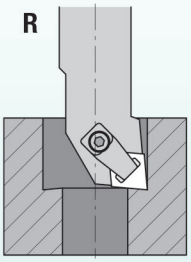
E 20°


F 25°


L
Hand of Tool

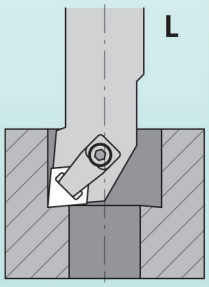
R =

Right-Hand Boring Bar



L =

Left-Hand Boring Bar



12
Insert Size Cutting Edge Length L10

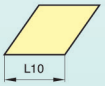
H


O

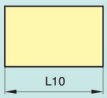

P

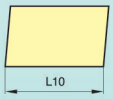

S


T


CDE
M
V


W


L


A
B
K


R


KC04
Additional Information

M... =

M.. MF, MN, MX, for ceramic and PcBN inserts

KC =

D-Style Clamping

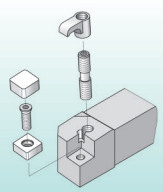
+ =

Insert thickness

ISO NOMENCLATURE FOR CARTRIDGES

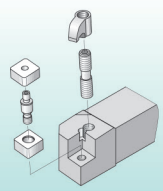
S — Insert Clamping System

C



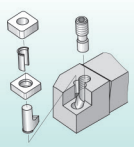
Top Clamping by Clamping Finger for Inserts without Hole.

M



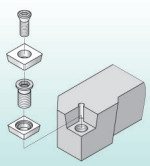
Top and Hole Clamping for Inserts with Hole.

P



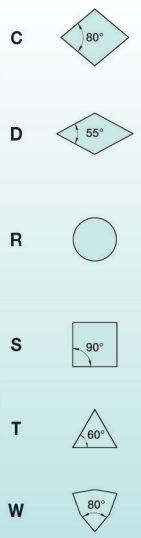
Insert Clamping by Toggle Lever for Insert Hole.

S

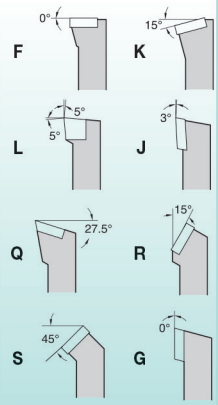


Center Clamping by Screw for Inserts with Hole.

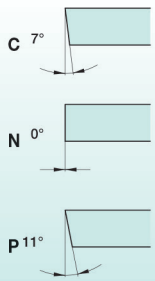
T — Insert Shape



F — Cartridge Style

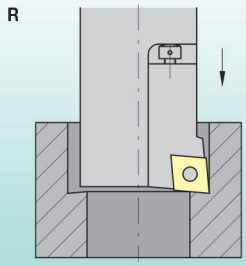


C — Insert Clearance Angle

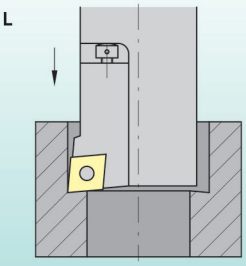


R — Hand of Tool

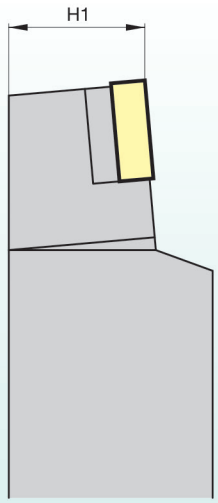
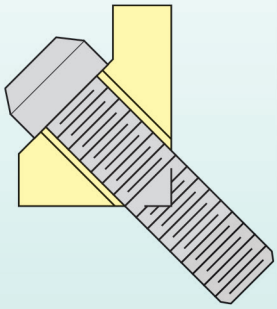
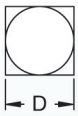
Right-Hand Cartridge



Left-Hand Cartridge



ISO NOMENCLATURE FOR CARTRIDGES

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

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	PDJNL3232P15 MRW	6870704
ISO TOOL HOLDER 'P' CLAMPING	PDJNL2525M15 MRW	6870703
ISO TOOL HOLDER 'P' CLAMPING	PDJNR2525M 15 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 'P' CLAMPING	MWLNR2020K08 MRW	6870677
ISO TOOL HOLDER 'M' CLAMPING	MWLNL2020K08 MRW	6870676
ISO TOOL HOLDER 'M' CLAMPING	MWLNL2525M08 MRW	6870699
ISO TOOL HOLDER 'M' CLAMPING	MWLNR2525M08 MRW	6870698
ISO TOOL HOLDER 'M' CLAMPING	MWLNL2020M06 MRW	6870697
ISO TOOL HOLDER 'M' CLAMPING	MWLNR2020M06 MRW	6870696
ISO TOOL HOLDER 'M' CLAMPING	MWLNL2525M06 MRW	6870695
ISO TOOL HOLDER 'M' CLAMPING	MWLNR2525M06 MRW	6870694
ISO TOOL HOLDER 'M' CLAMPING	MTJNR2020K16 MRW	6870693
ISO TOOL HOLDER 'M' CLAMPING	MTJNL2020K16 MRW	6870692
ISO TOOL HOLDER 'M' CLAMPING	MTJNR2525M16 MRW	6870691
ISO TOOL HOLDER 'M' CLAMPING	MTJNR2525M16 MRW	6870260
ISO TOOL HOLDER 'M' CLAMPING	MCLNL2020K12 MRW	7149159
ISO TOOL HOLDER 'M' CLAMPING	MCLNR2020K12 MRW	7149160
ISO TOOL HOLDER 'M' CLAMPING	MCLNL2525M12 MRW	7149231
ISO TOOL HOLDER 'M' CLAMPING	MCLNR2525M12 MRW	7149232
ISO TOOL HOLDER 'M' CLAMPING	MSBNR2525M12 MRW	7149233
ISO TOOL HOLDER 'M' CLAMPING	MSBNL2525M12 MRW	7149234
ISO TOOL HOLDER 'M' CLAMPING	MSBNR2020M12 MRW	7149235
ISO TOOL HOLDER 'M' CLAMPING	MSBNL2020M12 MRW	7149236
ISO TOOL HOLDER 'M' CLAMPING	MDJNL2525M15 MRW	7149237
ISO TOOL HOLDER 'M' CLAMPING	MDJNR2525M15 MRW	7149238
ISO TOOL HOLDER 'M' CLAMPING	MDJNL2020K15 MRW	7149239
ISO TOOL HOLDER 'M' CLAMPING	MDJNR2020K15 MRW	7149240
ISO TOOL HOLDER 'M' CLAMPING	MVVNN2020K16 MRW	7149241
ISO TOOL HOLDER 'M' CLAMPING	MVVNN2525M16 MRW	7149242
ISO TOOL HOLDER 'P' CLAMPING	PCKNL2525M12 MRW	7221663
ISO TOOL HOLDER 'P' CLAMPING	PCKNR2525M12 MRW	7221664

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	S16RSCLCR09T3 MRW	7215354
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
M CLAMPING BORING BAR	S25SMTFNR16F3 MRW	7140746
M CLAMPING BORING BAR	S25SMWLNR08F3 MRW	7140747
M CLAMPING BORING BAR	S40SMTFNR16F3 MRW	7140748

CARTRIDGES

Description	ISO Text	Ordering Code
SCREW ON CARTRDIGE	STFCR12CA16 MRW	6870724
SCREW ON CARTRDIGE	STFCR10CA11 MRW	6870723
P CLAMPING CARTRIDGE	PTFNR12CA16 MRW	6870722
P CLAMPING CARTRIDGE	PTFNL16CA16 MRW	6870720
P CLAMPING CARTRIDGE	PTFNR16CA16 MRW	6870719
P CLAMPING CARTRIDGE	PSKNR16CA12 MRW	7202499

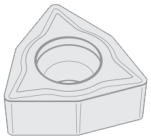
METAL REMOVAL
BY WIDIA™

Cost-effective | Versatile | Reliable

Drilling

INSERTS FOLLOWING THE GRADE MR2500P

WCMT/WCMX

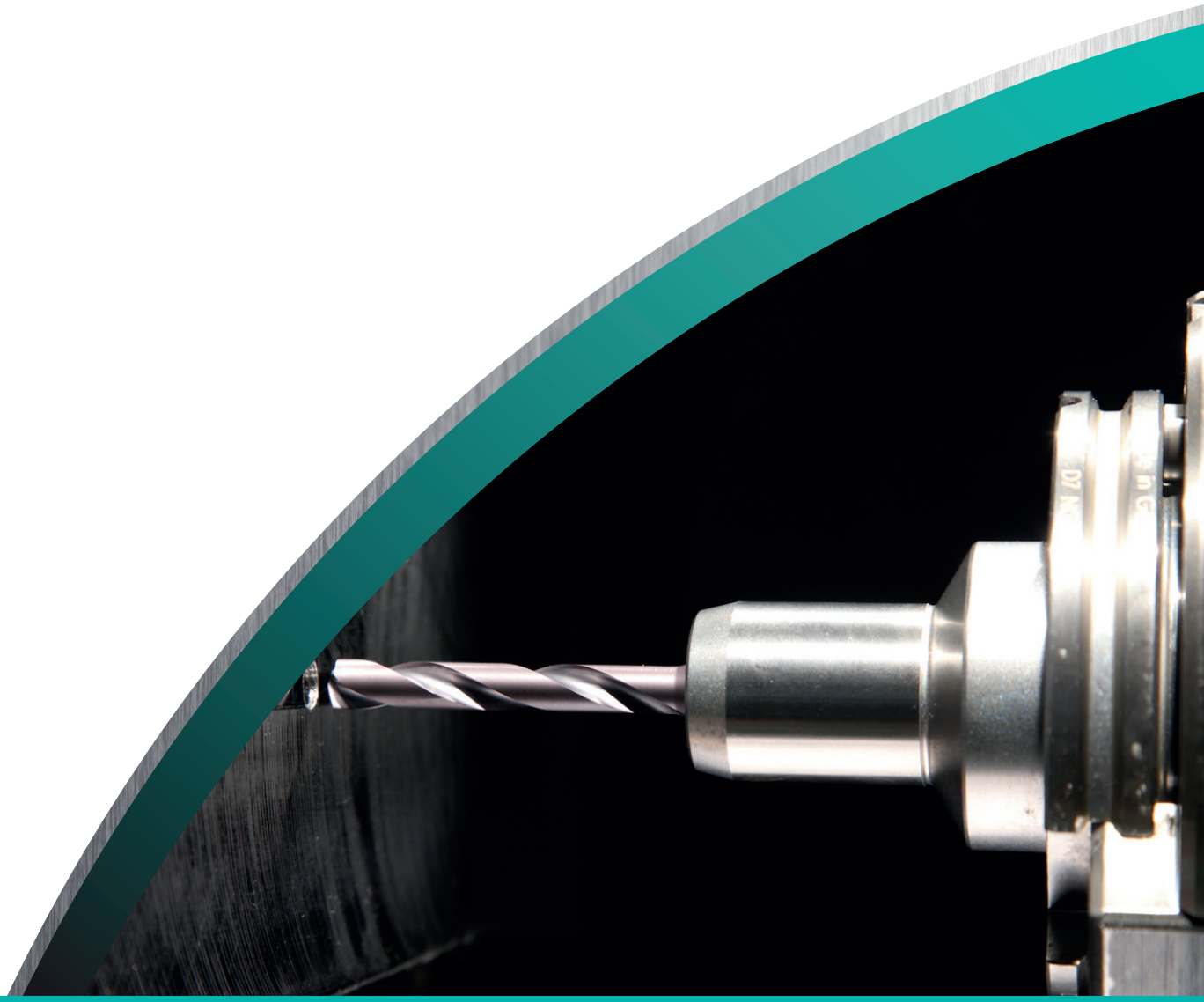
Insert	Description	Insert Grade	Work Material	Ordering Code
	WCMX030208-MRT2 WCMT040204-MRT2	MR2500P MR2500P	Steel & Cast Iron Steel & Cast Iron	6870150 6740731
	WCMT050308-MRT2 WCMT06T308-MRT2	MR2500P MR2500P	Steel & Cast Iron Steel & Cast Iron	6740732 6740733
	WCMT080408-MRT2 WCMT080412-MRT2	MR2500P MR2500P	Steel & Cast Iron Steel & Cast Iron	6740734 6870151

Universal Solid Carbide Drills (UniDrill)

The UniDrill is a multifaceted high-performance-tool with a universal application profile, making it ideal for small & medium sized shops.

The UniDrill

- Works on diverse material types
- Enables better cross hole and inclined exit capability
- Facilitates longer tool life
- Feasible to make other intermediate sizes



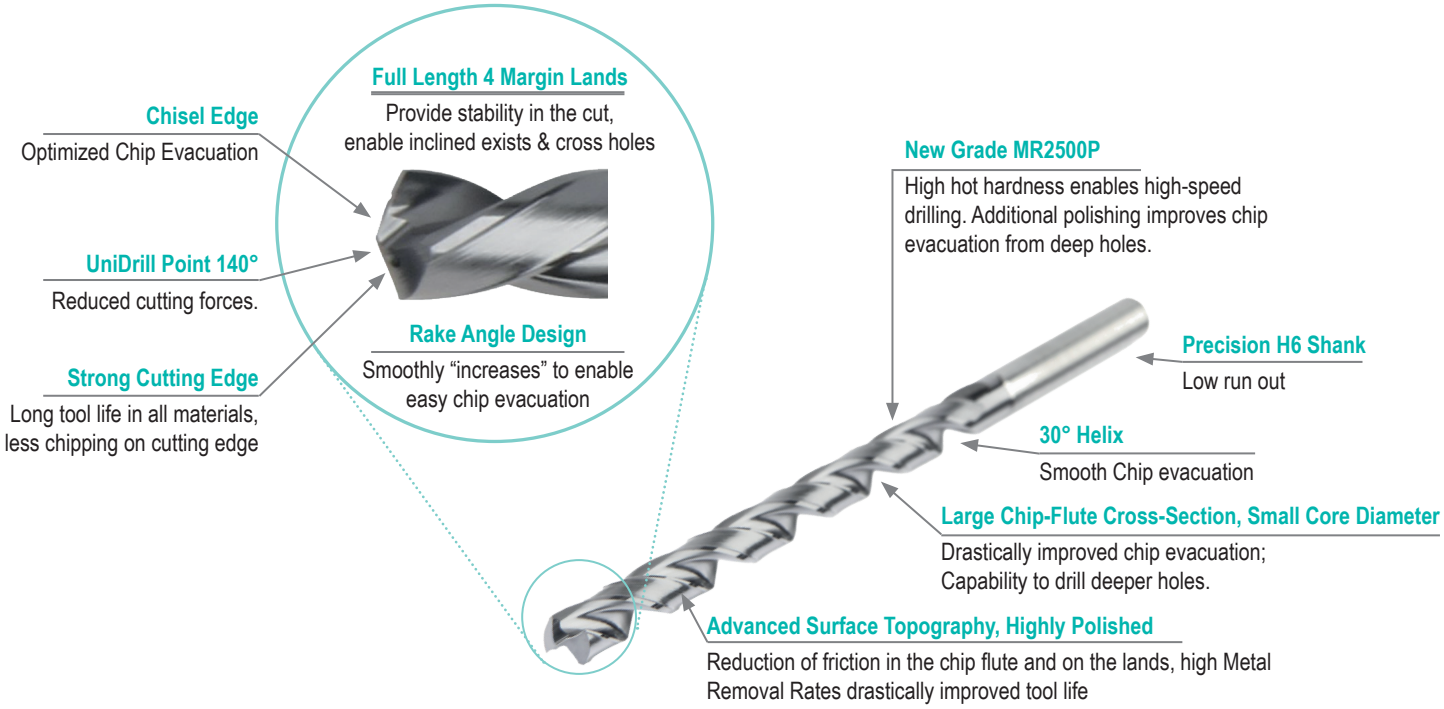
SC UniDrill **MR2500P**

MRW	Coolant	Length Ratio	Diameter range
	non-coolant	~3 & 5 xD	3.0 – 14.0 mm (.1181” - .5511”)

H	
S	○
N	○
K	●
M	○
P	●

Full length **4 margin lands**	• Improves hole straightness • Improves hole alignment when drilling through cross holes
Cutting Grade MR2500P	• A multilayer, TiAlN-based PVD coating • High hot hardness enables higher cutting speeds
Cone Point Geometry 140°	• Low thrust prevents workpiece flexing • Excellent centering capabilities • Ideal for piloting Deep-Hole Drills
Shank Styles	• Cylindrical

Features



Feed & Speed Charts - Metric

Universal Drill, Grade MR2500P-
Drill Dia 3.0 mm to 14.0 mm

P		•
M		o
K		•
N		o
S		o
H		

		Cutting Speed - Vc Range - m/min			METRIC Recommended Feed Rate by Revolution								
		min	Starting Value	max		3.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0
P	0	70	90	115	mm/r	0.05 - 0.11	0.08 - 0.14	0.09 - 0.19	0.11 - 0.22	0.13 - 0.26	0.15 - 0.30	0.19 - 0.36	0.24 - 0.46
	1	60	70	100	mm/r	0.06 - 0.13	0.09 - 0.16	0.11 - 0.22	0.13 - 0.26	0.15 - 0.31	0.18 - 0.35	0.22 - 0.42	0.28 - 0.54
	2	80	90	100	mm/r	0.06 - 0.13	0.08 - 0.16	0.12 - 0.22	0.14 - 0.26	0.17 - 0.31	0.20 - 0.35	0.24 - 0.42	0.31 - 0.53
	3	50	70	90	mm/r	0.07 - 0.15	0.09 - 0.17	0.13 - 0.23	0.15 - 0.28	0.19 - 0.33	0.22 - 0.38	0.26 - 0.47	0.34 - 0.59
	4	50	70	100	mm/r	0.06 - 0.15	0.08 - 0.17	0.12 - 0.23	0.14 - 0.28	0.17 - 0.33	0.19 - 0.38	0.23 - 0.47	0.29 - 0.59
	5	40	50	70	mm/r	0.06 - 0.12	0.08 - 0.14	0.10 - 0.18	0.12 - 0.22	0.16 - 0.26	0.18 - 0.28	0.22 - 0.36	0.26 - 0.42
	6	30	40	60	mm/r	0.05 - 0.07	0.06 - 0.10	0.08 - 0.14	0.10 - 0.18	0.12 - 0.22	0.14 - 0.24	0.18 - 0.32	0.23 - 0.41
M	1	30	40	50	mm/r	0.04 - 0.07	0.05 - 0.09	0.08 - 0.11	0.09 - 0.12	0.10 - 0.14	0.12 - 0.16	0.14 - 0.18	0.16 - 0.20
	2	40	50	60	mm/r	0.04 - 0.08	0.06 - 0.10	0.08 - 0.12	0.09 - 0.14	0.10 - 0.16	0.12 - 0.18	0.14 - 0.20	0.16 - 0.22
	3	30	40	50	mm/r	0.04 - 0.07	0.06 - 0.09	0.08 - 0.11	0.09 - 0.12	0.10 - 0.14	0.12 - 0.16	0.14 - 0.18	0.16 - 0.20
K	1	80	120	160	mm/r	0.11 - 0.22	0.12 - 0.24	0.16 - 0.31	0.20 - 0.38	0.23 - 0.44	0.25 - 0.49	0.31 - 0.60	0.38 - 0.74
	2	80	100	130	mm/r	0.10 - 0.17	0.12 - 0.19	0.16 - 0.25	0.20 - 0.31	0.23 - 0.36	0.25 - 0.40	0.31 - 0.48	0.38 - 0.60
	3	70	80	100	mm/r	0.07 - 0.15	0.09 - 0.19	0.12 - 0.25	0.14 - 0.30	0.17 - 0.35	0.19 - 0.40	0.25 - 0.48	0.30 - 0.60
N	1	90	230	270	mm/r	0.08 - 0.14	0.10 - 0.16	0.12 - 0.20	0.16 - 0.24	0.20 - 0.28	0.24 - 0.32	0.28 - 0.40	0.32 - 0.48
	2	90	220	270	mm/r	0.08 - 0.16	0.10 - 0.20	0.12 - 0.24	0.16 - 0.28	0.20 - 0.32	0.24 - 0.36	0.28 - 0.44	0.32 - 0.52
	3	90	180	225	mm/r	0.12 - 0.14	0.13 - 0.16	0.14 - 0.20	0.16 - 0.24	0.20 - 0.28	0.24 - 0.32	0.28 - 0.40	0.32 - 0.44
	4	90	130	270	mm/r	0.08 - 0.16	0.10 - 0.20	0.12 - 0.24	0.16 - 0.28	0.20 - 0.32	0.24 - 0.36	0.28 - 0.40	0.32 - 0.48
S	1	10	20	30	mm/r	0.03 - 0.08	0.04 - 0.09	0.06 - 0.11	0.07 - 0.12	0.09 - 0.14	0.10 - 0.15	0.12 - 0.17	0.14 - 0.19
	2	10	20	30	mm/r	0.03 - 0.08	0.04 - 0.09	0.06 - 0.11	0.07 - 0.12	0.09 - 0.14	0.10 - 0.15	0.12 - 0.17	0.14 - 0.19
	3	15	25	35	mm/r	0.03 - 0.08	0.04 - 0.09	0.06 - 0.11	0.07 - 0.12	0.09 - 0.14	0.10 - 0.15	0.12 - 0.17	0.14 - 0.19
	4	20	30	40	mm/r	0.03 - 0.05	0.03 - 0.05	0.04 - 0.08	0.05 - 0.09	0.05 - 0.11	0.07 - 0.12	0.08 - 0.13	0.09 - 0.14

Non Through Coolant - 3XD

Sl No	MM	Description	Grade	L x D	Dia Size (D1)	OAL (L)	LS	Shank Dia (D)
1	7231636	SC DRILL 3MM 3XD NTC MRW	MR2500P	3	3	62	36	6
3	7297987	SC DRILL 3.3MM 3XD NTC MRW	MR2500P	3	3.3	62	36	6
2	7231637	SC DRILL 3.5MM 3XD NTC MRW	MR2500P	3	3.5	62	36	6
4	7297988	SC DRILL 3.8MM 3XD NTC MRW	MR2500P	3	3.8	62	36	6
5	7231638	SC DRILL 4MM 3XD NTC MRW	MR2500P	3	4	65	36	6
6	7231639	SC DRILL 4.2MM 3XD NTC MRW	MR2500P	3	4.2	65	36	6
7	7231640	SC DRILL 4.5MM 3XD NTC MRW	MR2500P	3	4.5	65	36	6
8	7297989	SC DRILL 4.8MM 3XD NTC MRW	MR2500P	3	4.8	65	36	6
9	7231741	SC DRILL 5MM 3XD NTC MRW	MR2500P	3	5	65	36	6
10	7231742	SC DRILL 5.1MM 3XD NTC MRW	MR2500P	3	5.1	65	36	6
11	7297990	SC DRILL 5.2MM 3XD NTC MRW	MR2500P	3	5.2	65	36	6
12	7231743	SC DRILL 5.5MM 3XD NTC MRW	MR2500P	3	5.5	65	36	6
13	7231744	SC DRILL 6MM 3XD NTC MRW	MR2500P	3	6	65	36	6
14	7231745	SC DRILL 6.5MM 3XD NTC MRW	MR2500P	3	6.5	79	36	8
15	7231746	SC DRILL 6.8MM 3XD NTC MRW	MR2500P	3	6.8	79	36	8
16	7300713	SC DRILL 6.9MM 3XD NTC MRW	MR2500P	3	6.9	79	36	8
17	7231747	SC DRILL 7MM 3XD NTC MRW	MR2500P	3	7	79	36	8
18	7231748	SC DRILL 7.1MM 3XD NTC MRW	MR2500P	3	7.1	79	36	8
19	7231749	SC DRILL 7.5MM 3XD NTC MRW	MR2500P	3	7.5	79	36	8
20	7231750	SC DRILL 8MM 3XD NTC MRW	MR2500P	3	8	79	36	8
21	7231751	SC DRILL 8.5MM 3XD NTC MRW	MR2500P	3	8.5	89	40	10
22	7231752	SC DRILL 9MM 3XD NTC MRW	MR2500P	3	9	89	40	10
23	7231753	SC DRILL 10MM 3XD NTC MRW	MR2500P	3	10	89	40	10
24	7231754	SC DRILL 10.2MM 3XD NTC MRW	MR2500P	3	10.2	102	45	12
25	7298021	SC DRILL 10.3MM 3XD NTC MRW	MR2500P	3	10.3	102	45	12
26	7231755	SC DRILL 10.5MM 3XD NTC MRW	MR2500P	3	10.5	102	45	12
27	7298022	SC DRILL 10.8MM 3XD NTC MRW	MR2500P	3	10.8	102	45	12
28	7231756	SC DRILL 11MM 3XD NTC MRW	MR2500P	3	11	102	45	12
29	7231757	SC DRILL 11.5MM 3XD NTC MRW	MR2500P	3	11.5	102	45	12
30	7298023	SC DRILL 11.8MM 3XD NTC MRW	MR2500P	3	11.8	102	45	12
31	7231758	SC DRILL 12MM 3XD NTC MRW	MR2500P	3	12	102	45	12
32	7231759	SC DRILL 12.5MM 3XD NTC MRW	MR2500P	3	12.5	107	45	14
33	7298024	SC DRILL 12.7MM 3XD NTC MRW	MR2500P	3	12.7	107	45	14
34	7231760	SC DRILL 13MM 3XD NTC MRW	MR2500P	3	13	107	45	14
35	7231761	SC DRILL 13.5MM 3XD NTC MRW	MR2500P	3	13.5	107	45	14
36	7231762	SC DRILL 14MM 3XD NTC MRW	MR2500P	3	14	107	45	14

Non Through Coolant - 5XD

Sl No	MM	Description	Grade	L x D	Dia Size (D1)	OAL (L)	LS	Shank Dia (D)
1	7231806	SC DRILL 3MM 5XD NTC MRW	MR2500P	5	3	65	36	6
2	7298025	SC DRILL 3.2MM 5XD NTC MRW	MR2500P	5	3.2	65	36	6
3	7298026	SC DRILL 3.3MM 5XD NTC MRW	MR2500P	5	3.3	65	36	6
4	7231807	SC DRILL 3.5MM 5XD NTC MRW	MR2500P	5	3.5	65	36	6
5	7298027	SC DRILL 3.7MM 5XD NTC MRW	MR2500P	5	3.7	65	36	6
6	7298028	SC DRILL 3.8MM 5XD NTC MRW	MR2500P	5	3.8	65	36	6
7	7231808	SC DRILL 4MM 5XD NTC MRW	MR2500P	5	4	74	36	6
8	7231809	SC DRILL 4.2MM 5XD NTC MRW	MR2500P	5	4.2	74	36	6
9	7231810	SC DRILL 4.5MM 5XD NTC MRW	MR2500P	5	4.5	74	36	6
10	7298029	SC DRILL 4.8MM 5XD NTC MRW	MR2500P	5	4.8	82	36	6
11	7231831	SC DRILL 5MM 5XD NTC MRW	MR2500P	5	5	82	36	6
12	7231832	SC DRILL 5.1MM 5XD NTC MRW	MR2500P	5	5.1	82	36	6
13	7298030	SC DRILL 5.2MM 5XD NTC MRW	MR2500P	5	5.2	82	36	6
14	7231833	SC DRILL 5.5MM 5XD NTC MRW	MR2500P	5	5.5	82	36	6
15	7231834	SC DRILL 6MM 5XD NTC MRW	MR2500P	5	6	82	36	6
16	7298031	SC DRILL 6.2MM 5XD NTC MRW	MR2500P	5	6.2	91	36	8
17	7298032	SC DRILL 6.3MM 5XD NTC MRW	MR2500P	5	6.3	91	36	8
18	7231835	SC DRILL 6.5MM 5XD NTC MRW	MR2500P	5	6.5	91	36	8
19	7231836	SC DRILL 6.8MM 5XD NTC MRW	MR2500P	5	6.8	91	36	8
20	7300714	SC DRILL 6.9MM 5XD NTC MRW	MR2500P	5	6.9	91	36	8
21	7231837	SC DRILL 7MM 5XD NTC MRW	MR2500P	5	7	91	36	8
22	7231838	SC DRILL 7.1MM 5XD NTC MRW	MR2500P	5	7.1	91	36	8
23	7298033	SC DRILL 7.2MM 5XD NTC MRW	MR2500P	5	7.2	91	36	8
24	7231839	SC DRILL 7.5MM 5XD NTC MRW	MR2500P	5	7.5	91	36	8
25	7231840	SC DRILL 8MM 5XD NTC MRW	MR2500P	5	8	91	36	8
26	7231841	SC DRILL 8.5MM 5XD NTC MRW	MR2500P	5	8.5	103	40	10
27	7298034	SC DRILL 8.7MM 5XD NTC MRW	MR2500P	5	8.7	103	40	10
28	7298035	SC DRILL 8.8MM 5XD NTC MRW	MR2500P	5	8.8	103	40	10
29	7231842	SC DRILL 9MM 5XD NTC MRW	MR2500P	5	9	103	40	10
30	7231843	SC DRILL 9.2MM 5XD NTC MRW	MR2500P	5	9.2	103	40	10
31	7298036	SC DRILL 9.5MM 5XD NTC MRW	MR2500P	5	9.5	103	40	10
32	7298037	SC DRILL 9.7MM 5XD NTC MRW	MR2500P	5	9.7	103	40	10
33	7231844	SC DRILL 10MM 5XD NTC MRW	MR2500P	5	10	103	40	10
34	7231845	SC DRILL 10.2MM 5XD NTC MRW	MR2500P	5	10.2	118	45	12
35	7298038	SC DRILL 10.3MM 5XD NTC MRW	MR2500P	5	10.3	118	45	12
36	7231846	SC DRILL 10.5MM 5XD NTC MRW	MR2500P	5	10.5	118	45	12
37	7298039	SC DRILL 10.7MM 5XD NTC MRW	MR2500P	5	10.7	118	45	12
38	7298040	SC DRILL 10.8MM 5XD NTC MRW	MR2500P	5	10.8	118	45	12
39	7231847	SC DRILL 11MM 5XD NTC MRW	MR2500P	5	11	118	45	12
40	7298041	SC DRILL 11.1MM 5XD NTC MRW	MR2500P	5	11.1	118	45	12
41	7231848	SC DRILL 11.5MM 5XD NTC MRW	MR2500P	5	11.5	118	45	12
42	7298042	SC DRILL 11.8MM 5XD NTC MRW	MR2500P	5	11.8	118	45	12
43	7231849	SC DRILL 12MM 5XD NTC MRW	MR2500P	5	12	118	45	12
44	7231850	SC DRILL 12.5MM 5XD NTC MRW	MR2500P	5	12.5	124	45	14
45	7298043	SC DRILL 12.7MM 5XD NTC MRW	MR2500P	5	12.7	124	45	14
46	7231851	SC DRILL 13MM 5XD NTC MRW	MR2500P	5	13	124	45	14
47	7231852	SC DRILL 13.5MM 5XD NTC MRW	MR2500P	5	13.5	124	45	14
48	7231853	SC DRILL 14MM 5XD NTC MRW	MR2500P	5	14	124	45	14

Through Coolant - 3XD

Sl No	MM	Description	Grade	L x D	Dia Size (D1)	OAL (L)	LS	Shank Dia (D)
1	7325775	SC DRILL 4MM 3XD COOLANT MRW	MR2500P	3	4	65	36	6
2	7325776	SC DRILL 4.2MM 3XD COOLANT MRW	MR2500P	3	4.2	65	36	6
3	7325777	SC DRILL 4.5MM 3XD COOLANT MRW	MR2500P	3	4.5	65	36	6
4	7325778	SC DRILL 4.8MM 3XD COOLANT MRW	MR2500P	3	4.8	65	36	6
5	7325779	SC DRILL 5MM 3XD COOLANT MRW	MR2500P	3	5	65	36	6
6	7325780	SC DRILL 5.1MM 3XD COOLANT MRW	MR2500P	3	5.1	65	36	6
7	7325791	SC DRILL 5.2MM 3XD COOLANT MRW	MR2500P	3	5.2	65	36	6
8	7325792	SC DRILL 5.5MM 3XD COOLANT MRW	MR2500P	3	5.5	65	36	6
9	7325793	SC DRILL 6MM 3XD COOLANT MRW	MR2500P	3	6	65	36	6
10	7325794	SC DRILL 6.5MM 3XD COOLANT MRW	MR2500P	3	6.5	79	36	8
11	7325795	SC DRILL 6.8MM 3XD COOLANT MRW	MR2500P	3	6.8	79	36	8
12	7325796	SC DRILL 6.9MM 3XD COOLANT MRW	MR2500P	3	6.9	79	36	8
13	7325797	SC DRILL 7MM 3XD COOLANT MRW	MR2500P	3	7	79	36	8
14	7325798	SC DRILL 7.1MM 3XD COOLANT MRW	MR2500P	3	7.1	79	36	8
15	7325799	SC DRILL 7.2MM 3XD COOLANT MRW	MR2500P	3	7.2	79	36	8
16	7325800	SC DRILL 7.5MM 3XD COOLANT MRW	MR2500P	3	7.5	79	36	8
17	7325801	SC DRILL 8MM 3XD COOLANT MRW	MR2500P	3	8	79	36	8
18	7325802	SC DRILL 8.5MM 3XD COOLANT MRW	MR2500P	3	8.5	89	40	10
19	7325803	SC DRILL 9MM 3XD COOLANT MRW	MR2500P	3	9	89	40	10
20	7325804	SC DRILL 10MM 3XD COOLANT MRW	MR2500P	3	10	89	40	10
21	7325805	SC DRILL 10.2MM 3XD COOLANT MRW	MR2500P	3	10.2	102	45	12
22	7325806	SC DRILL 10.5MM 3XD COOLANT MRW	MR2500P	3	10.3	102	45	12
23	7325807	SC DRILL 10.3MM 3XD COOLANT MRW	MR2500P	3	10.5	102	45	12
24	7325808	SC DRILL 10.8MM 3XD COOLANT MRW	MR2500P	3	10.8	102	45	12
25	7325809	SC DRILL 11MM 3XD COOLANT MRW	MR2500P	3	11	102	45	12
26	7325810	SC DRILL 11.5MM 3XD COOLANT MRW	MR2500P	3	11.5	102	45	12
27	7325811	SC DRILL 11.8MM 3XD COOLANT MRW	MR2500P	3	11.8	102	45	12
28	7325812	SC DRILL 12MM 3XD COOLANT MRW	MR2500P	3	12	102	45	12
29	7325813	SC DRILL 12.5MM 3XD COOLANT MRW	MR2500P	3	12.5	107	45	14
30	7325814	SC DRILL 12.7MM 3XD COOLANT MRW	MR2500P	3	12.7	107	45	14
31	7325815	SC DRILL 13MM 3XD COOLANT MRW	MR2500P	3	13	107	45	14
32	7325816	SC DRILL 13.5MM 3XD COOLANT MRW	MR2500P	3	13.5	107	45	14
33	7325817	SC DRILL 14MM 3XD COOLANT MRW	MR2500P	3	14	107	45	14

Through Coolant - 5XD

Sl No	MM	Description	Grade	L x D	Dia Size (D1)	OAL (L)	LS	Shank Dia (D)
1	7331103	SC DRILL 4MM 5XD COOLANT MRW	MR2500P	5	4	74	36	6
2	7331104	SC DRILL 4.2MM 5XD COOLANT MRW	MR2500P	5	4.2	74	36	6
3	7331105	SC DRILL 4.5MM 5XD COOLANT MRW	MR2500P	5	4.5	74	36	6
4	7331106	SC DRILL 4.8MM 5XD COOLANT MRW	MR2500P	5	4.8	82	36	6
5	7331107	SC DRILL 5MM 5XD COOLANT MRW	MR2500P	5	5	82	36	6
6	7331108	SC DRILL 5.1MM 5XD COOLANT MRW	MR2500P	5	5.1	82	36	6
7	7331109	SC DRILL 5.2MM 5XD COOLANT MRW	MR2500P	5	5.2	82	36	6
8	7331110	SC DRILL 5.5MM 5XD COOLANT MRW	MR2500P	5	5.5	82	36	6
9	7331161	SC DRILL 6MM 5XD COOLANT MRW	MR2500P	5	6	82	36	6
10	7331162	SC DRILL 6.2MM 5XD COOLANT MRW	MR2500P	5	6.2	91	36	8
11	7331163	SC DRILL 6.3MM 5XD COOLANT MRW	MR2500P	5	6.3	91	36	8
12	7331164	SC DRILL 6.5MM 5XD COOLANT MRW	MR2500P	5	6.5	91	36	8
13	7331165	SC DRILL 6.8MM 5XD COOLANT MRW	MR2500P	5	6.8	91	36	8
14	7331166	SC DRILL 6.9MM 5XD COOLANT MRW	MR2500P	5	6.9	91	36	8
15	7331167	SC DRILL 7MM 5XD COOLANT MRW	MR2500P	5	7	91	36	8
16	7331168	SC DRILL 7.1MM 5XD COOLANT MRW	MR2500P	5	7.1	91	36	8
17	7331169	SC DRILL 7.2MM 5XD COOLANT MRW	MR2500P	5	7.2	91	36	8
18	7331170	SC DRILL 7.5MM 5XD COOLANT MRW	MR2500P	5	7.5	91	36	8
19	7331171	SC DRILL 8MM 5XD COOLANT MRW	MR2500P	5	8	91	36	8
20	7331172	SC DRILL 8.5MM 5XD COOLANT MRW	MR2500P	5	8.5	103	40	10
21	7331173	SC DRILL 8.7MM 5XD COOLANT MRW	MR2500P	5	8.7	103	40	10
22	7331174	SC DRILL 8.8MM 5XD COOLANT MRW	MR2500P	5	8.8	103	40	10
23	7331175	SC DRILL 9MM 5XD COOLANT MRW	MR2500P	5	9	103	40	10
24	7331176	SC DRILL 9.2MM 5XD COOLANT MRW	MR2500P	5	9.2	103	40	10
25	7331177	SC DRILL 9.5MM 5XD COOLANT MRW	MR2500P	5	9.5	103	40	10
26	7331178	SC DRILL 9.7MM 5XD COOLANT MRW	MR2500P	5	9.7	103	40	10
27	7331179	SC DRILL 10MM 5XD COOLANT MRW	MR2500P	5	10	103	40	10
28	7331180	SC DRILL 10.2MM 5XD COOLANT MRW	MR2500P	5	10.2	118	45	12
29	7331181	SC DRILL 10.3MM 5XD COOLANT MRW	MR2500P	5	10.3	118	45	12
30	7331182	SC DRILL 10.5MM 5XD COOLANT MRW	MR2500P	5	10.5	118	45	12
31	7331183	SC DRILL 10.7MM 5XD COOLANT MRW	MR2500P	5	10.7	118	45	12
32	7331184	SC DRILL 10.8MM 5XD COOLANT MRW	MR2500P	5	10.8	118	45	12
33	7331185	SC DRILL 11MM 5XD COOLANT MRW	MR2500P	5	11	118	45	12
34	7331186	SC DRILL 11.1MM 5XD COOLANT MRW	MR2500P	5	11.1	118	45	12
35	7331187	SC DRILL 11.5MM 5XD COOLANT MRW	MR2500P	5	11.5	118	45	12
36	7331188	SC DRILL 11.8MM 5XD COOLANT MRW	MR2500P	5	11.8	118	45	12
37	7331189	SC DRILL 12MM 5XD COOLANT MRW	MR2500P	5	12	118	45	12
38	7331190	SC DRILL 12.5MM 5XD COOLANT MRW	MR2500P	5	12.5	124	45	14
39	7331191	SC DRILL 12.7MM 5XD COOLANT MRW	MR2500P	5	12.7	124	45	14
40	7331192	SC DRILL 13MM 5XD COOLANT MRW	MR2500P	5	13	124	45	14
41	7331193	SC DRILL 13.5MM 5XD COOLANT MRW	MR2500P	5	13.5	124	45	14
42	7331194	SC DRILL 14MM 5XD COOLANT MRW	MR2500P	5	14	124	45	14

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