



MiTM

Super Fast Thread Milling System

Inserts | Toolholders

Vardex Ordering Code System

MiTM Inserts

R	25	I	1.00	ISO	TM	VBX
1	2	3	4	5	6	7
1 - Product Line	2 - Insert Style	3 - Type of Insert	4 - Pitch	5 - Standard	6 - System	7 - Carbide Grade
R- MiTM line	19, 24, 25, 40, 41	I - Internal E - External EI-External+Internal NC- Plug	0.5-6.0 mm 32-4 TPI	ISO- ISO Metric UN-American UN W- BSW, BSP NPT-NPT NPTF-NPTF BSPT-BSPT	TM	VBX VTX

MiTM Holders

R	TM	C	25	17	-	26	S	2
1	2	3	4	5		6	7	8
1 - Product Line	2 - Holder Type	3 - Cooling	4 - Shank Dia. [mm]	5 - Cutting Dia. [mm]				
R - MiTM line BR - MiTM with Anti-vibration System	TM - Standard Holder TMN - Conical Holder	C- Coolant Channel	12, 20, 25, 32	10 - 36				
6 - Tool Overhang [mm]	7 - Insert Style	8 - No. of Flutes						
19 - 80	A - 19 M - 24 S - 25 L - 40 B - 41	1 - 5						

MiTM Shell Mill

R	TM	C	-	D36	-	16	-	25S	5
1	2	3		4		5		6	7
1 - Product Line	2 - Holder Type	3 - Cooling	4 - Cutting Dia. [mm]		5 - Drive Hole Dia. [mm]				
R - MiTM line	TM - Standard Holder TMN - Conical Holder	C- Coolant Channel	36 - 58		16, 22, 27				
6 - Insert Style	7 - No. of Flutes								
25S 40L 41B	5 - 8								

MiTM

The VARDEX Multi-flute Indexable Thread Milling (MiTM) system for fast machining, reduces cycle times when machining threads with long inserts. Nickel coating for all MiTM toolholders provides better anti-rust protection.



MiTM

MiTM 19 (A) For Small Bores



Standard
No. of Flutes (Z) 1
Cutting Dia. (D2) 10.0-11.75
Tool Overhang (L1) 20.0-25.2



Conical
No. of Flutes (Z) 1
Cutting Dia. (D2) 10.2
Tool Overhang (L1) 19.0

MiTM 24 (M) For Medium Bores



Standard
No. of Flutes (Z) 1-2
Cutting Dia. (D2) 13.6-16
Tool Overhang (L1) 26-36



Conical
No. of Flutes (Z) 1
Cutting Dia. (D2) 13.9
Tool Overhang (L1) 26

MiTM 25 (S) For Standard Applications



Standard
No. of Flutes (Z) 2-5
Cutting Dia. (D2) 17-30
Tool Overhang (L1) 26-80



Conical
No. of Flutes (Z) 2-4
Cutting Dia. (D2) 17-28
Tool Overhang (L1) 26-43



Shell Mill
No. of Flutes (Z) 5-8
Cutting Dia. (D2) 36-52
Tool Overhang (L1) max.200



Shell Mill Conical
No. of Flutes (Z) 5
Cutting Dia. (D2) 36
Tool Overhang (L1) max.200

MiTM 40 (L) For Long Threads



Standard
No. of Flutes (Z) 3-4
Cutting Dia. (D2) 22-30
Tool Overhang (L1) 43-80



Shell Mill
No. of Flutes (Z) 6-8
Cutting Dia. (D2) 44-52
Tool Overhang (L1) max.200



Shell Mill Conical
No. of Flutes (Z) 6
Cutting Dia. (D2) 45
Tool Overhang (L1) max.200

MiTM 41 (B) For Large Pitches

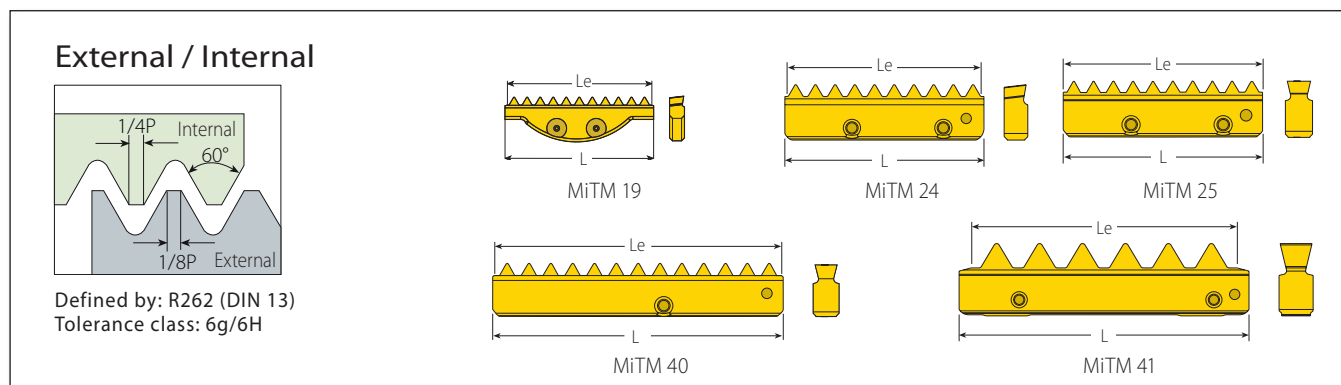


Standard
No. of Flutes (Z) 1-5
Cutting Dia. (D2) 24.5-36
Tool Overhang (L1) 43-65



Shell Mill
No. of Flutes (Z) 5-6
Cutting Dia. (D2) 48-58
Tool Overhang (L1) max.200

ISO Metric



Standard MiTM

MiTM

Insert Style	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
		External	Internal			
19	0.5		R19I0.50ISOTM...	1	20.0	RTMC...A
	0.75		R19I0.75ISOTM...	1	20.0	
	1.0		R19I1.00ISOTM...	1	20.0	
	1.25		R19I1.25ISOTM...	1	20.0	
	1.5		R19I1.50ISOTM...	1	19.5	
	1.75		R19I1.75ISOTM...	1	19.25	
	2.0		R19I2.00ISOTM...	1	20.0	
24	0.5		R24I0.50ISOTM...	1	24.5	RTMC...M
	0.75		R24I0.75ISOTM...	1	24.75	
	1.0		R24I1.00ISOTM...	1	24.0	
	1.25		R24I1.25ISOTM...	1	25.0	
	1.5		R24I1.50ISOTM...	1	24.0	
	1.75		R24I1.75ISOTM...	1	24.5	
	2.0		R24I2.00ISOTM...	1	24.0	
25	2.5		R24I2.50ISOTM...	1	25.0	(B)RTMC...S
	1.0	R25E1.00ISOTM...	R25I1.00ISOTM...	2	24.0	
	1.25	R25E1.25ISOTM...	R25I1.25ISOTM...	2	23.75	
	1.5	R25E1.50ISOTM...	R25I1.50ISOTM...	2	24.0	
	2.0	R25E2.00ISOTM...	R25I2.00ISOTM...	2	24.0	
40	2.5	R25E2.50ISOTM...	R25I2.50ISOTM...	2	25.0	(B)RTMC...L
	3.0	*R25E3.00ISOTM...	*R25I3.00ISOTM...	2	24.0	
	1.0		R40I1.00ISOTM...	2	39.0	
	1.5		R40I1.50ISOTM...	2	39.0	
	2.0		R40I2.00ISOTM...	2	38.0	
41	2.5		R40I2.50ISOTM...	2	37.5	RTMC...B
	3.0		R40I3.00ISOTM...	2	39.0	
	3.0	R41E3.00ISOTM...	R41I3.00ISOTM...	2	39.0	
	3.5	R41E3.50ISOTM...	R41I3.50ISOTM...	2	38.5	
	4.0	R41E4.00ISOTM...	R41I4.00ISOTM...	2	40.0	
	4.5	R41E4.50ISOTM...	R41I4.50ISOTM...	2	40.5	
	5.0	R41E5.00ISOTM...	R41I5.00ISOTM...	2	40.0	
	5.5	R41E5.50ISOTM...	R41I5.50ISOTM...	2	38.5	
	6.0	R41E6.00ISOTM...	R41I6.00ISOTM...	2	36.0	

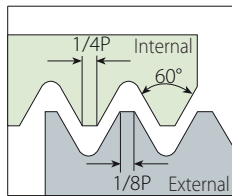
* 3.0 ISO inserts do not fit into toolholder RTMC2517...
For external insert 3.0 ISO use for CNC program (D2 + 0.5mm).

MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I2.00ISOTM(S)...

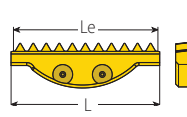


American UN - UNC, UNF, UNEF, UNS

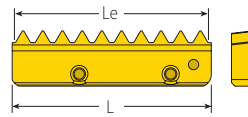
External / Internal



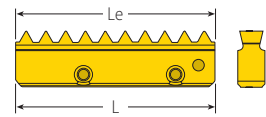
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



MiTM 19



MiTM 24



MiTM 25

Standard MiTM



Insert Style	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
L	TPI	External	Internal	Le	Zt	
19	32		R19I32UNTM...	1	19.84	25
	28		R19I28UNTM...	1	19.96	22
	27		R19I27UNTM...	1	19.76	21
	24		R19I24UNTM...	1	20.11	19
	20		R19I20UNTM...	1	19.05	15
	18		R19I18UNTM...	1	19.76	14
	16		R19I16UNTM...	1	19.05	12
	14		R19I14UNTM...	1	19.96	11
	13		R19I13UNTM...	1	19.54	10
	12		R19I12UNTM...	1	19.05	9
24	32		R24I32UNTM...	1	24.61	31
	28		R24I28UNTM...	1	24.49	27
	24		R24I24UNTM...	1	24.34	23
	20		R24I20UNTM...	1	24.13	19
	18		R24I18UNTM...	1	23.99	17
	16		R24I16UNTM...	1	23.81	15
	14		R24I14UNTM...	1	23.59	13
	12		R24I12UNTM...	1	23.28	11
25	20	R25E20UNTM...	R25I20UNTM...	2	24.13	19
	18	R25E18UNTM...	R25I18UNTM...	2	23.99	17
	16	R25E16UNTM...	R25I16UNTM...	2	23.81	15
	14	R25E14UNTM...	R25I14UNTM...	2	23.58	13
	12	R25E12UNTM...	R25I12UNTM...	2	23.28	11
	10	R25E10UNTM...	R25I10UNTM...	2	22.86	9
	9	*R25E9UNTM...	*R25I9UNTM...	2	22.58	8
	8	*R25E8UNTM...	*R25I8UNTM...	2	22.22	7

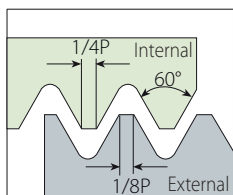
* 8 UN & 9 UN inserts do not fit into toolholder RTMC2517...
For external insert 8 UN use for CNC program (D2 + 0.5mm).

MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I20UNTM(S)...

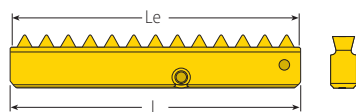


American UN - UNC, UNF, UNEF, UNS (con't)

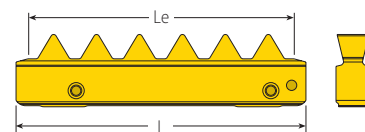
External / Internal



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



MiTM 40



MiTM 41

Standard MiTM

MiTM



Insert Style	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
L	TPI	External	Internal	Le	Zt	
40	20		R40I20UNTM...	2	39.37	31
	18		R40I18UNTM...	2	39.51	28
	16		R40I16UNTM...	2	39.69	25
	14		R40I14UNTM...	2	39.91	22
	12		R40I12UNTM...	2	38.10	18
	10		R40I10UNTM...	2	38.10	15
	9		R40I9UNTM...	2	39.51	14
	8		R40I8UNTM...	2	38.10	12
41	8	R41E8UNTM...	R41I8UNTM...	2	38.10	12
	7	R41E7UNTM...	R41I7UNTM...	2	39.91	11
	6	R41E6UNTM...	R41I6UNTM...	2	38.10	9
	5	R41E5UNTM...	R41I5UNTM...	2	35.56	7
	4.5	R41E4.5UNTM...	R41I4.5UNTM...	2	39.51	7
	4	R41E4UNTM...	R41I4UNTM...	2	38.10	6

(B)RTMC...L

RTMC...B

MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I20UNTM(S)...



Whitworth for BSF, BSP (G)

External / Internal

Defined by: B.S.84:1956, DIN 259,
DIN ISO228/1:1982
Tolerance class: Medium Class A

Standard MiTM

	Insert Style	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
	L	TPI	External+ Internal	Internal	Le	Zt	
	19	19	R19EI19WTM...		1	20.05	RTMC...A
		16	R19EI16WTM...		1	19.05	
		14	R19EI14WTM...		1	19.96	
	24	19	R24EI19WTM...		1	24.06	RTMC...M
		14	R24EI14WTM...		1	23.59	
		12	R24EI12WTM...		1	23.28	
	25	16	R25EI16WTM...		2	23.81	(B)RTMC...S
		14	R25EI14WTM...		2	23.58	
		12	R25EI12WTM...		2	23.28	
		11	R25EI11WTM...		2	23.09	
	40	16	R40EI16WTM...		2	39.69	(B)RTMC...L
		14	R40EI14WTM...		2	39.91	
		12	R40EI12WTM...		2	38.10	
		11	R40EI11WTM...		2	39.25	
	41	8		R41I8WTM...	2	38.10	RTMC...B
		7		R41I7WTM...	2	39.91	
		6		R41I6WTM...	2	38.10	

MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25EI16WTM(S)...

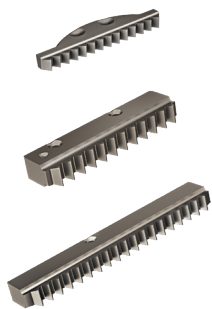


NPT

External / Internal

Defined by: USAS B2.1:1968
Tolerance class: Standard NPT

Standard MiTM



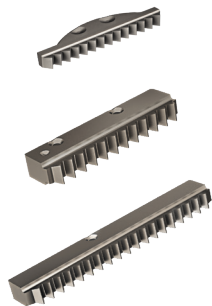
Insert Style	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
L	TPI	External+ Internal	Le	Zt		
19	18	R19EI18NPT-TM...	1	19.76	14	RTMNC... A
24	18	R24EI18NPT-TM...	1	23.99	17	RTMNC... M
25	14	R25EI14NPT-TM...	1	23.58	13	RTMNC... S
	11.5	R25EI11.5NPT-TM...	1	24.30	11	
40	8	R25EI8NPT-TM...	1	22.22	7	RTMNC-D36-16-25S5
	11.5	R40EI11.5NPT-TM...	1	37.55	17	RTMNC-D45-22-40L6
	8	R40EI8NPT-TM...	1	38.10	12	
41	8	R41EI8NPT-TM...	1	38.10	12	RTMC... B

NPTF

External / Internal

Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF

Standard MiTM



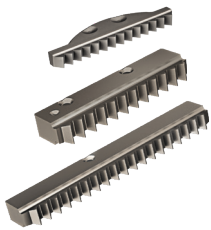
Insert Style	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
L	TPI	External+ Internal	Le	Zt		
19	18	R19EI18NPTFTM...	1	19.76	14	RTMNC... A
24	18	R24EI18NPTFTM...	1	23.99	17	RTMNC... M
25	14	R25EI14NPTFTM...	1	23.58	13	RTMNC... S
	11.5	R25EI11.5NPTFTM...	1	24.30	11	
40	8	R25EI8NPTFTM...	1	22.22	7	RTMNC-D36-16-25S5
	11.5	R40EI11.5NPTFTM...	1	37.55	17	RTMNC-D45-22-40L6
	8	R40EI8NPTFTM...	1	38.10	12	
41	8	R41EI8NPTFTM...	1	38.10	12	RTMC... B

BSPT

External / Internal

Defined by: B.S. 21:1985
Tolerance class: Standard BSPT

Standard MiTM



Insert Style	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
L	TPI	External+ Internal	Le	Zt		
19	19	R19EI19BSPT-TM...	1	20.05	15	RTMNC...A
24	19	R24EI19BSPT-TM...	1	24.06	18	RTMNC 2014-26M1
25	14	R25EI14BSPT-TM...	1	23.58	13	RTMNC...S
	11	R25EI11BSPT-TM...	1	23.09	10	
40	11	R40EI11BSPT-TM...	1	39.25	17	RTMNC-D45-22-40L6

Plug Insert



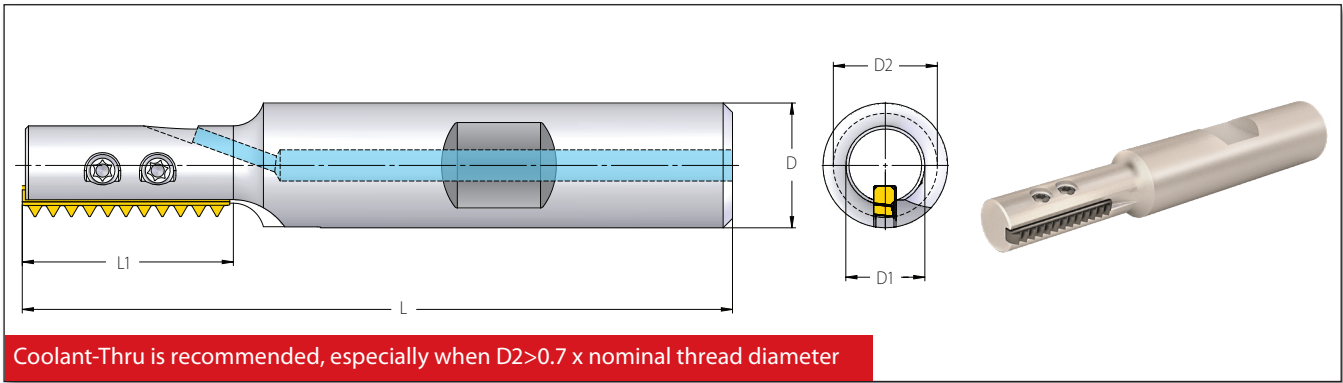
Insert Style	Ordering Code	Teeth	Toolholder
L	External+ Internal	Zt	
24	R24NC		RTMC...M
25	R25NC	No Teeth	(B)RTMC...S RTMNC...S
40	R40NC		(B)RTMC...L RTMNC...L
41	R41NC		RTMC...B

All Types

Fill unused toolholder pockets with plug inserts (R..NC).
This assures balance and prevents instability and chips from packing into empty pockets.

MiTM

Standard Toolholders (MiTM 19)



MITM

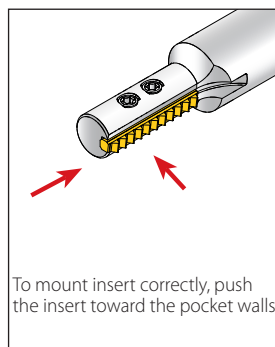
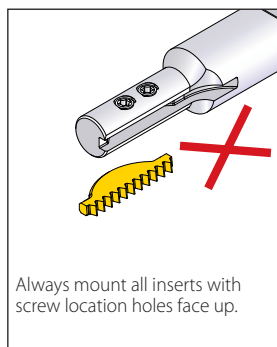
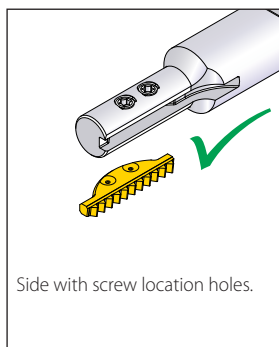
RTMC - for Standard Threads

Spare Parts

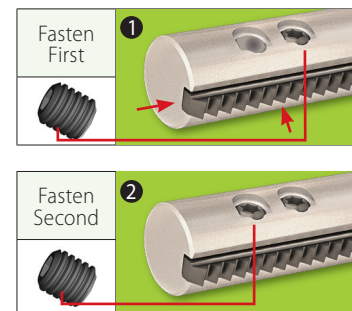
Insert Style	Ordering Code	Dimensions mm						No. of Flutes	 Location Screw x2	 Torx+ Screwdriver
		L	L1	D	D1	D2	Z			
19	RTMC1210-20A1	68	20	12	7.5	10	1	SLD3IP6 (M3x0.5)	KIP6 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	
	RTMC1212-25A1	73.5	25.2	12	8.7	11.75	1			

Standard Thread Application by Toolholder

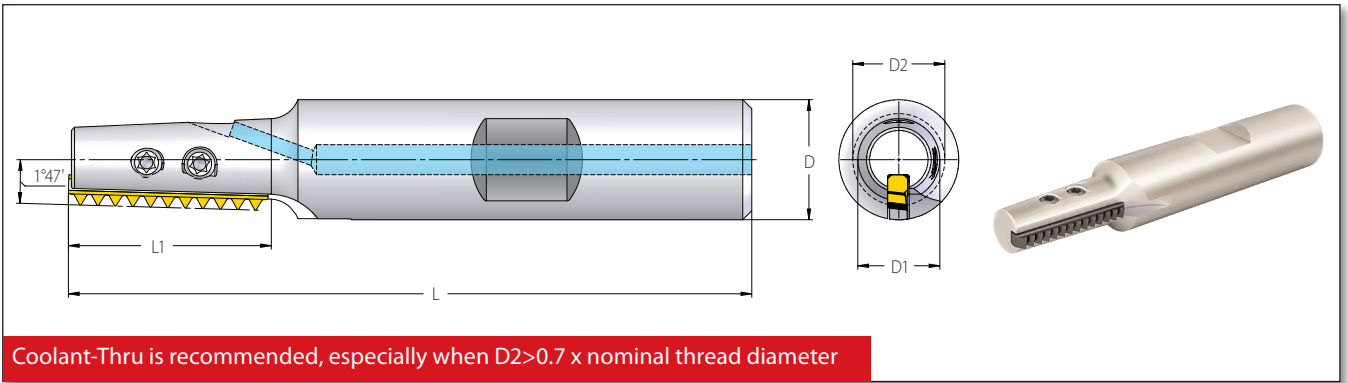
Toolholder	Min. Thread Dia.							
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)	
RTMC1210-20A1	10	M12x1.75	M11x0.5; M11x0.75; M11.5x1; M12x1.25; M12x1.5	½-13	7/16-32UN; 7/16-28UNEF; 7/16-27UNS; ½-24UNS; ½-20UNF; ½-18UNS; ½-16UN; ½-14UNS	½-16	¼-19	
RTMC1212-25A1	11.75	M14x2.0; M16x2.0	M12.5x0.5; M13x0.75; M13x1; M13.5x1.25; M14x1.5; M14x1.75	9/16-12	½-32UN; 9/16-28UNS; 9/16-27UNS; 9/16-24UNEF; 9/16-20UN; 9/16-18UNF; 9/16-16UN; 9/16-14UNS;	5/8-14	¼-14	



2 Step Clamping System





Conical Toolholders (MiTM 19)



Coolant-Thru is recommended, especially when $D2 > 0.7 \times$ nominal thread diameter

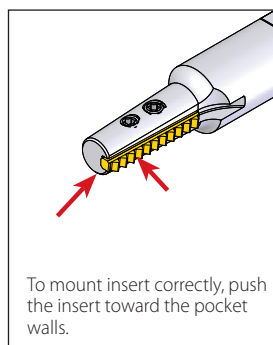
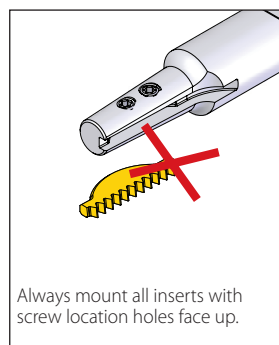
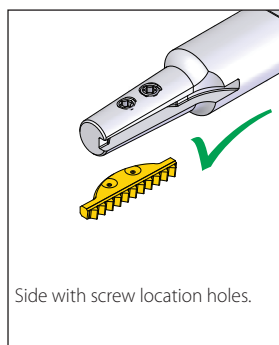
RTMNC - for Conical Threads

Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Spare Parts	
		L	L1	D	D1	D2	Z		 Location Screw x2	 Torx+ Screwdriver
19	RTMNC1210-19A1	66.5	19	12	8	10.6	1	SLD3IP6 (M3x0.5)	KIP6 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	

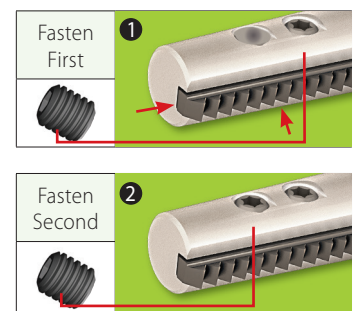
Conical Thread Application by Toolholder

Toolholder	D2 (mm)	NPT	NPTF	BSPT
		RTMNC1210-19A1	10.6	1/4-18* 3/8-18

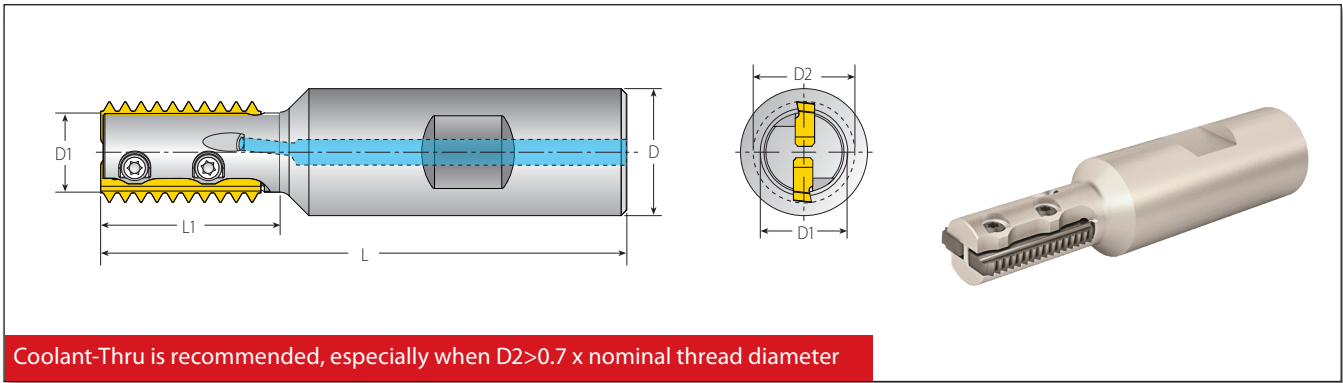
* Using MiTM 19 tools the maximum thread length is 10.5mm.



2 Step Clamping System



Standard Toolholders (MiTM 24)



Coolant-Thru is recommended, especially when $D2 > 0.7 \times$ nominal thread diameter

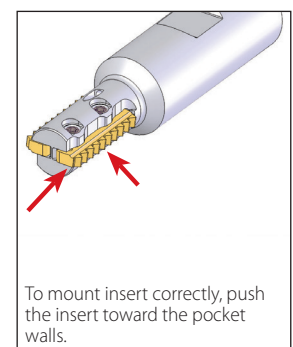
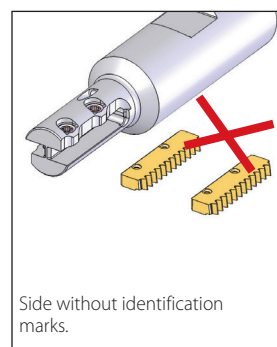
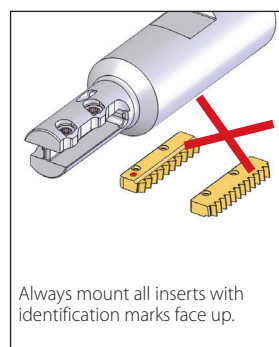
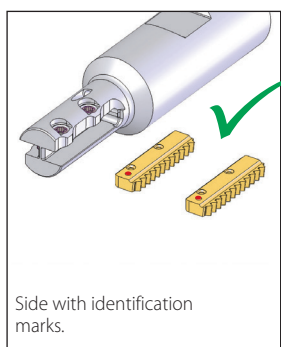
RTMC - for Standard Threads

Spare Parts

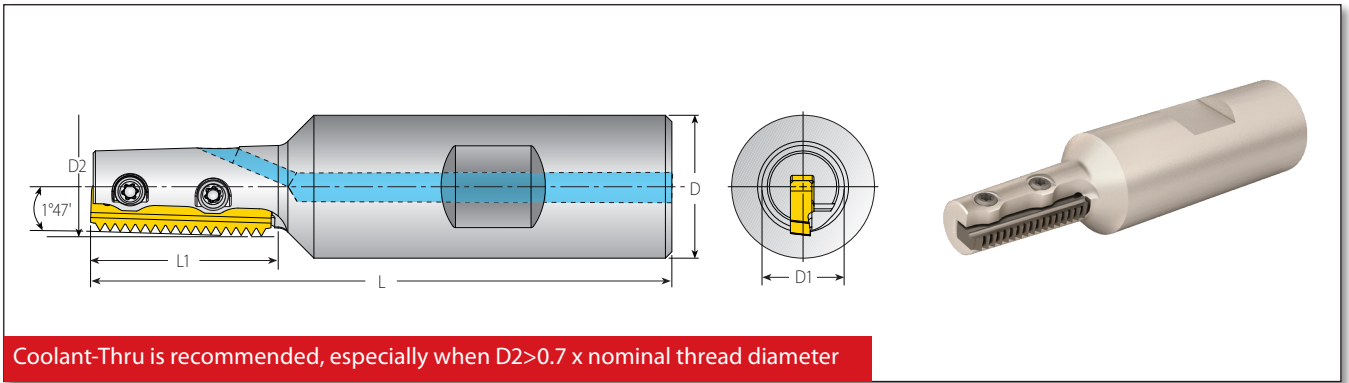
Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Location Screw x2	Torx+ Screwdriver
		L	L1	D	D1	D2	Z			
24	RTMC2013-26M1	82	26	20	10.7	13.6	1	SLD4IP8 (M4x0.7)	KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	
	RTMC2015-30M1	85	30	20	11.9	15.1	1			
	RTMC2016-28M2	83	28	20	12.6	16	2			
	RTMC2016-36M1	91	36	20	12.6	16	1			

Standard Thread Application by Toolholder



Toolholder	Min. Thread Dia.							
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)	
RTMC2013-26M1	13.6	M16x2	M14.5x0.5; M15x0.75; M15x1; M15x1.25; M16x1.5; M16x1.75	-	$\frac{1}{16}$ -12UN; $\frac{5}{16}$ -14UNS; $\frac{9}{16}$ -16UN; $\frac{9}{16}$ -18UNF; $\frac{9}{16}$ -20UN; $\frac{9}{16}$ -24UNEF; $\frac{9}{16}$ -28UN; $\frac{9}{16}$ -32UN	$\frac{1}{16}$ -14; $\frac{3}{4}$ -12	$\frac{3}{8}$ -19; $\frac{1}{2}$ -14	
RTMC2015-30M1	15.1	M18x2.5	M16x0.5; M17x0.75; M17x1; M17x1.25; M17x1.5; M18x1.75; M18x2	$\frac{3}{4}$ -10	$\frac{3}{4}$ -12UN; $\frac{3}{4}$ -14UNS; $\frac{1}{16}$ -16UN; $\frac{1}{16}$ -20UN; $\frac{1}{16}$ -24UNEF; $\frac{1}{16}$ -28UN; $\frac{1}{16}$ -32UN	$\frac{3}{4}$ -12	$\frac{1}{2}$ -14	
RTMC2016-28M2	16	M20x2.5	M17x0.5; M17x0.75; M18x1; M18x1.25; M18x1.5; M18x1.75; M19x2	$\frac{3}{4}$ -10	$\frac{3}{4}$ -12UN; $\frac{3}{4}$ -14UNS; $\frac{3}{4}$ -16UN; $\frac{3}{4}$ -18UNS; $\frac{3}{4}$ -20UNEF; $\frac{1}{16}$ -24UNEF; $\frac{1}{16}$ -28UN; $\frac{1}{16}$ -32UN	$\frac{3}{4}$ -12	$\frac{1}{2}$ -14	
RTMC2016-36M1	16	M20x2.5	M17x0.5; M17x0.75; M18x1; M18x1.25; M18x1.5; M18x1.75; M19x2	$\frac{3}{4}$ -10	$\frac{3}{4}$ -12UN; $\frac{3}{4}$ -14UNS; $\frac{3}{4}$ -16UN; $\frac{3}{4}$ -18UNS; $\frac{3}{4}$ -20UNEF; $\frac{1}{16}$ -24UNEF; $\frac{1}{16}$ -28UN; $\frac{1}{16}$ -32UN	$\frac{3}{4}$ -12	$\frac{1}{2}$ -14	



Conical Toolholders (MiTM 24)

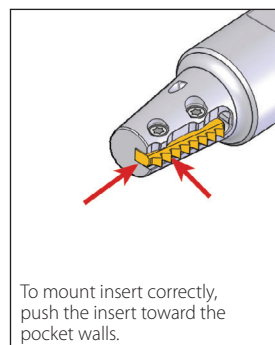
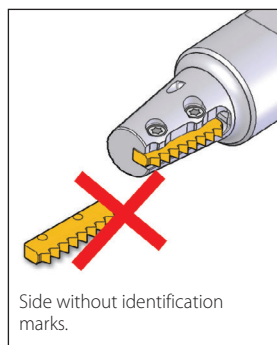
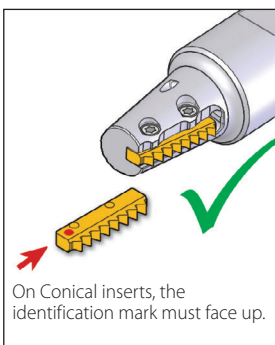


RTMC - for Conical Threads

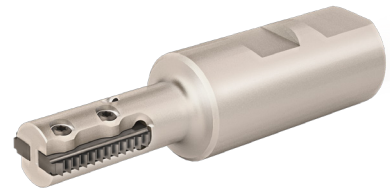
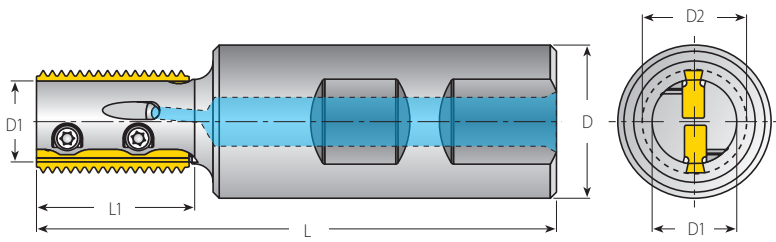
Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Spare Parts	
		L	L1	D	D1	D2	Z		 Location Screw x2	 Torx+ Screwdriver
24	RTMNC2014-26M1	81	26	20	11.5	13.9	1	SLD4IP8 (M4x0.7)	KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	

Conical Thread Application by Toolholder

Toolholder	Thread Dia.	Thread Dia.		
		D2 (mm)	NPT	NPTF
RTMNC2014-26M1	13.9	3/8-18	3/8-18	3/8-19






Standard Toolholders (MiTM 25)



Coolant-Thru is recommended, especially when $D2 > 0.7 \times$ nominal thread diameter

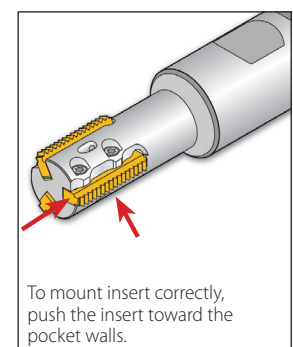
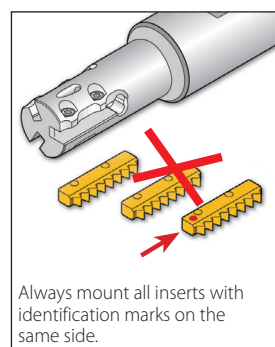
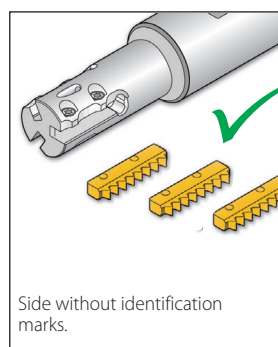
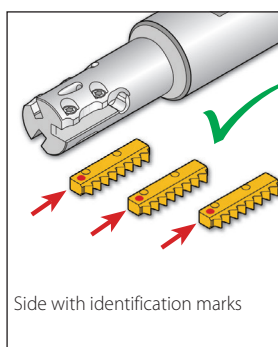
RTMC - for Standard Threads

Spare Parts

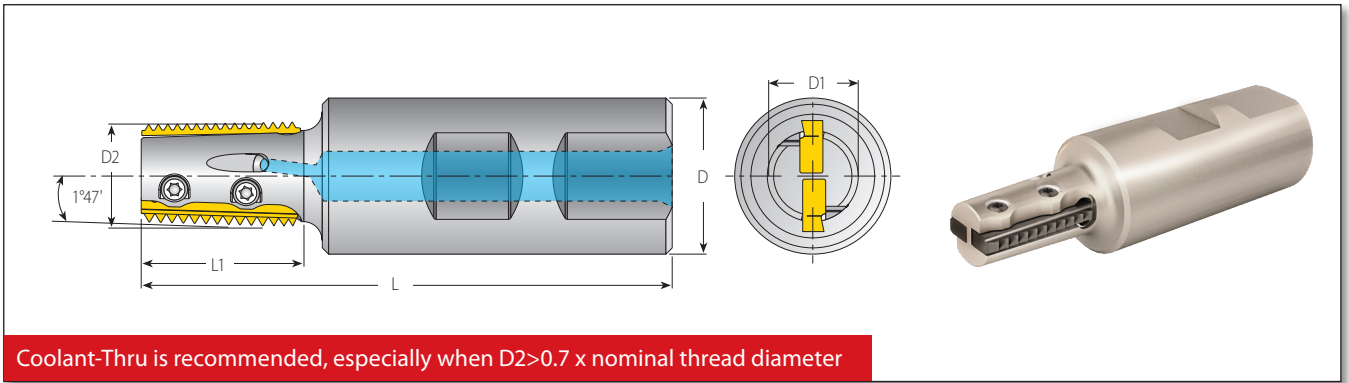
Insert Style	Ordering Code	Dimensions mm						No. of Flutes		
		L	L1	D	D1	D2	Z		Location Screw x2	Torx+ Screwdriver
25	RTMC2517-26S2	85	26	25	14	17	2	SLD4IP8 (M4x0.7)	 KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	
	RTMC2517-36S2	95	36		14	17	2			
	RTMC2519-32S2	92	32		15	19	2			
	RTMC2519-44S2	104	44		15	19	2			
	RTMC2520-37S3	96	37		16.5	20.5	3			
	RTMC2520-44S3	103	44		16.5	20.5	3			
	RTMC2522-43S3	102	43		18	22	3			
	RTMC2522-55S3	114	55		18	22	3			
	RTMC2530-55S5	115	55		26	30	5			
	BRTMC2530-80S4	140	80		26	30	4			

Standard Thread Application by Toolholder



Toolholder	Min.Thread Dia.						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC2517-26S2	17	M20x2.5	M19x1; M19x1.5; M20x2	-	7/8-10UNS; 13/16-12UN; 7/8-14UNF; 3/4-16UNF; 3/4-18UNS; 3/4-20UNEF	7/8-11; 7/8-12; 7/8-14; 7/8-16	1/2-14
RTMC2517-36S2							
RTMC2519-32S2	19	M22x2.5; M24x3	M21x1; M21x1.5; M22x2	7/8-9; 1-8	7/8-20UNEF; 7/8-18UNS; 7/8-16UN; 7/8-14UNF; 7/8-12UN; 7/8-10UNS	7/8-16; 7/8-14; 15/16-12; 15/16-11	5/8-14
RTMC2519-44S2							
RTMC2520-37S3	20.5	M24x3	M22x1; M23x1.5; M23x2; M23.5x2.5	1-8	15/16-9UN; 1-10UNS; 15/16-12UN; 1-14UNS; 15/16-16UN; 7/8-18UNS; 7/8-20UNEF	1-11; 1-12; 1-14; 1-16	5/8-14
RTMC2520-44S3							
RTMC2522-43S3	22	M27x3	M24x1; M24x1.5; M25x2; M25x2.5	-	1 1/16-8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 15/16-20UNEF	1-11; 1-12; 1-14; 1-16	3/4-14
RTMC2522-55S3							
RTMC2530-55S5	30	-	M32x1; M32x1.5; M33x2; M33x2.5; M34x3	-	1 3/8-8UN; 1 3/8-9UN; 1 3/8-10UN; 1 5/16-12UN; 1 3/8-14UNS; 1 7/16-16UN; 1 5/16-18UNEF; 1 5/16-20UN	1 3/8-11; 1 3/8-12; 1 3/8-14; 1 3/8-16	1-11
BRTMC2530-80S4							



Conical Toolholders (MiTM 25)

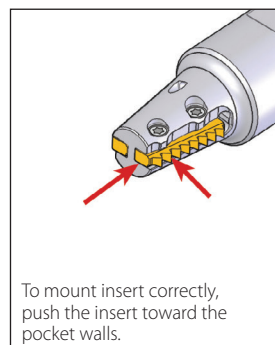
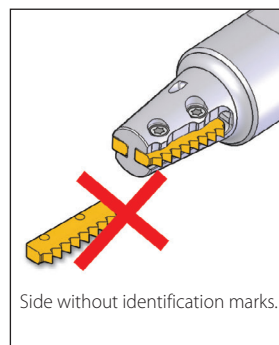
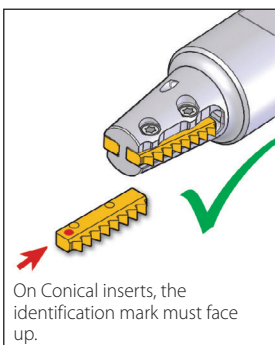


RTMNC - for Conical Threads

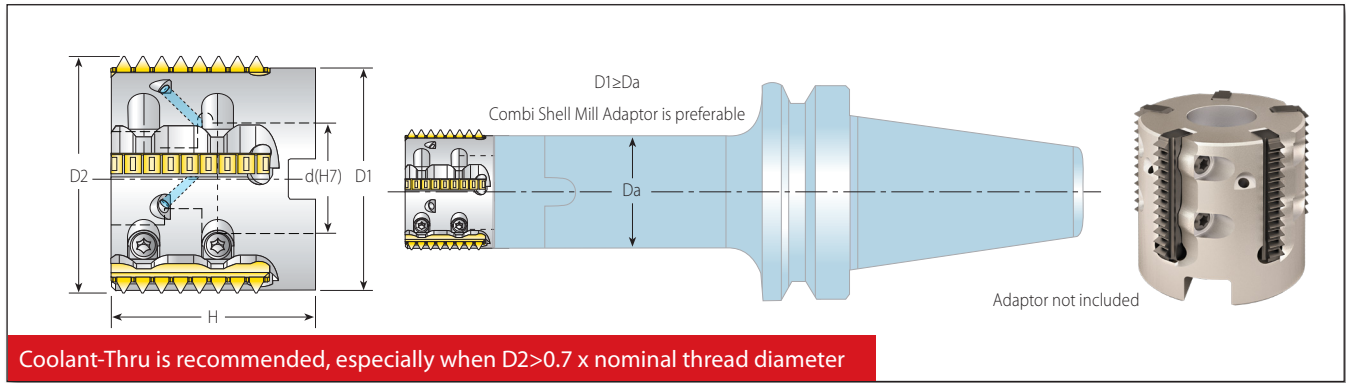
Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Spare Parts	
		L	L1	D	D1	D2	Z		 Location Screw x2	 Torx+ Screwdriver
25	RTMNC2517-26S2	85	26	25	14	17.2	2	SLD4IP8 (M4x0.7)	KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	
	RTMNC2522-43S3	102	43	25	18	22.2	3			
	RTMNC2528-43S4	103	43	25	25	28.4	4			

Conical Thread Application by Toolholder

Toolholder	D2(mm)	Thread Dia.		
		NPT	NPTF	BSPT
RTMNC2517-26S2	17.2	½-14; ¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	½-14; ¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	½-14; ¾-14
RTMNC2522-43S3	22.2	¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	¾-14; 1-11; 1¼-11; 1½-11; 2-11; 2½-11; 3-11; 4-11; 5-11; 6-11
RTMNC2528-43S4	28.4	1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	1-11; 1¼-11; 1½-11; 2-11; 2½-11; 3-11; 4-11; 5-11; 6-11



Shell Mill (MiTM 25)



Conical and Standard Shell Mills

Spare Parts

Insert Style	Ordering Code	Dimensions mm				No. of Flutes			
		D1	D2	d(H7)	H		Z	Location Screw x2	Torx+ Screwdriver
Standard	25	RTMC-D36-16-25S5	32	36	16	33.5	SLD4IP8 (M4x0.7)	Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	M8x1.25x35
		RTMC-D44-22-25S6	40	44	22	38.0			M10x1.50x35
		RTMC-D52-27-25S8	48	52	27	40.0			M12x1.75x30
Conical	RTMNC-D36-16-25S5	32	35.9*	16	33.5	M8x1.25x35			

* For inserts 8NPT and 8NPTF use for CNC program 36.4mm.

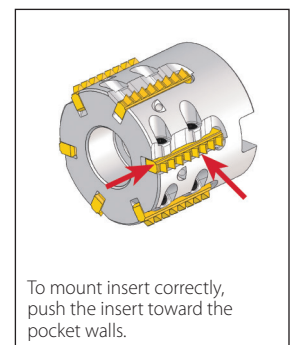
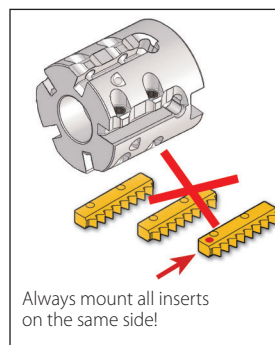
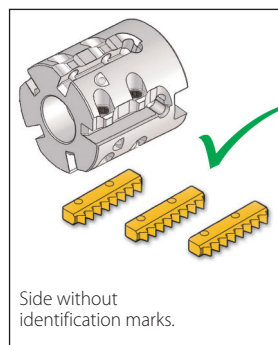
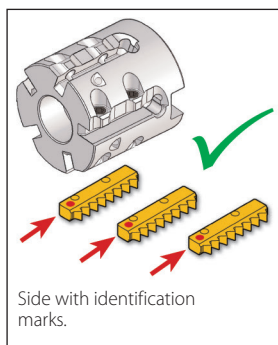
Standard Thread Applications by Toolholder

Toolholder		Min. Thread Dia.				
		D2(mm)	ISO (fine)	UN/UNF/UNEF/UNS	BSW	BSP(G)
Standard	RTMC-D36-16-25S5	36	M38x1; M39x1.5; M39x2; M40x3	1 ¹ / ₁₆ -12UN; 1 ¹ / ₈ -14UNS; 1 ¹ / ₁₆ -16UN; 1 ¹ / ₂ -18UNEF; 1 ¹ / ₂ -20UN	1 ³ / ₄ -16 1 ³ / ₄ -12	1 ¹ / ₄ -11
	RTMC-D44-22-25S6	44	M48x1; M48x1.5; M48x2; M48x3	1 ⁷ / ₈ -12UN; 1 ³ / ₁₆ -16UN; 1 ³ / ₁₆ -20UN; 1 ¹⁵ / ₁₆ -8UN; 1 ⁷ / ₈ -10UNS; 1 ⁷ / ₈ -14UNS	2-16 2-12	1 ¹ / ₂ -11
	RTMC-D52-27-25S8	52	M55x1; M55x1.5; M55x2; M56x3	2 ¹ / ₄ -8UN; 2 ¹ / ₄ -10UN; 2 ¹ / ₄ -12UN; 2 ¹ / ₄ -14UN; 2 ¹ / ₄ -16UN; 2 ¹ / ₄ -18UN; 2 ¹ / ₄ -20UN	2 ¹ / ₄ -16 2 ¹ / ₄ -12	2-11

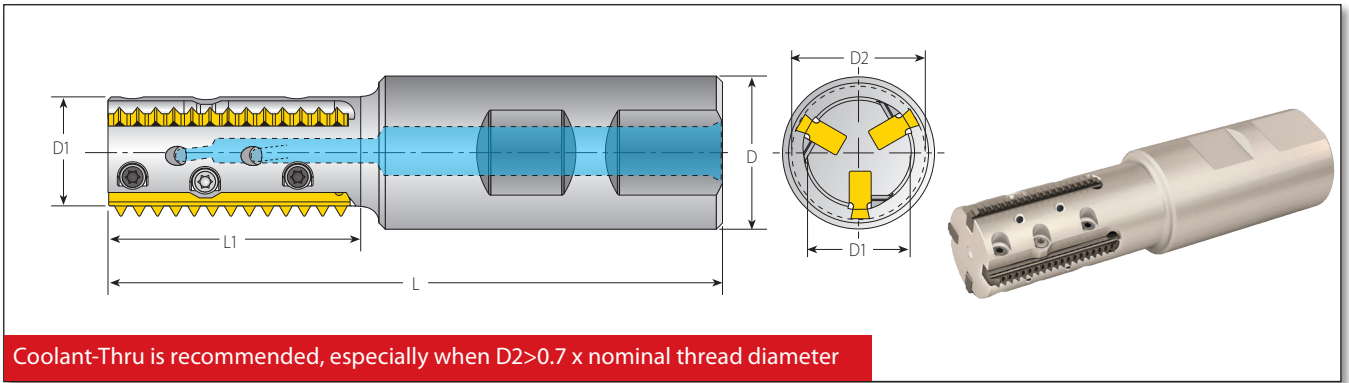
Conical Thread Applications by Toolholder

Toolholder		Thread Dia.			
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC-D36-16-25S5	35.9*	1 ¹ / ₄ -11.5; 1 ¹ / ₂ -11.5; 2-11.5 2 ¹ / ₂ -8 (and up)	1 ¹ / ₄ -11.5; 1 ¹ / ₂ -11.5; 2-11.5 2 ¹ / ₂ -8; 3-8	1 ¹ / ₂ -6x11

* For inserts 8NPT and 8NPTF use for CNC program 36.4mm.



Standard Toolholders (MiTM 40)

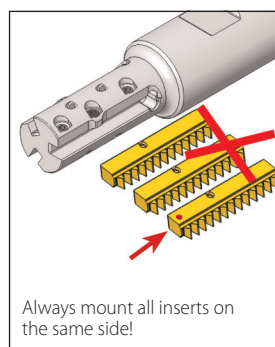
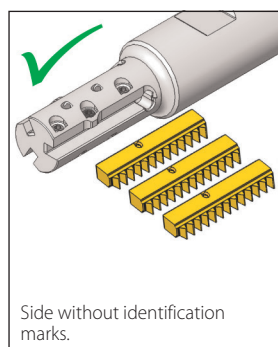
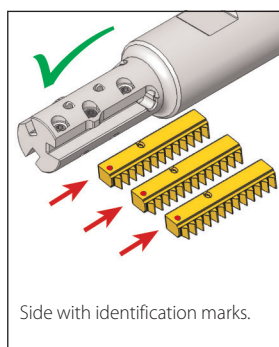


RTMC - for Standard Threads

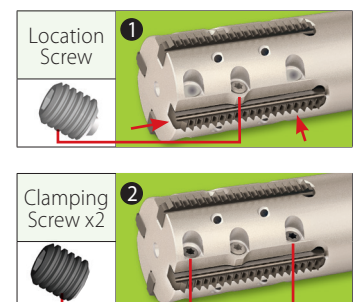
Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Spare Parts		
		L	L1	D	D1	D2	Z		Location Screw	Clamping Screw x2	Torx+ Screwdriver
40	RTMC2522-43L3	102	43	25	18	22	3	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	Torx+ Screwdriver KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	
	RTMC2522-65L3	124	65	25	18	22	3				
	RTMC3230-55L4	117	55	32	26	30	4				
	BRTMC3230-80L3	142	80	32	26	30	3				

Standard Thread Application by Toolholder

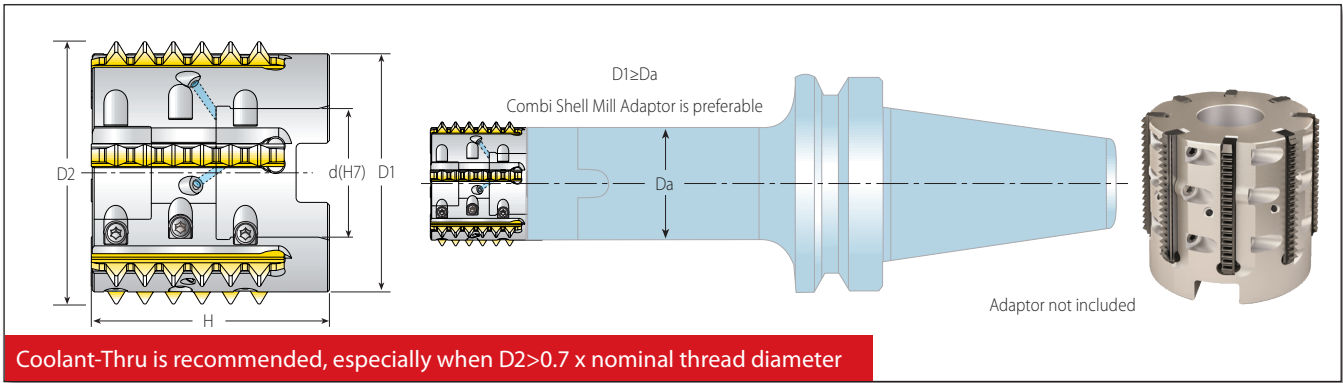
Toolholder	Min. Thread Dia.								
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS			BSF	BSP(G)
RTMC2522-43L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 ¹¹ / ₁₆ -8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 1 ¹ / ₁₆ -20UNEF			1-11; 1-12; 1-14; 1-16;	3/4-14
RTMC2522-65L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 ¹¹ / ₁₆ -8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 1 ¹ / ₁₆ -20UNEF			1-11; 1-12; 1-14; 1-16;	3/4-14
RTMC3230-55L4	30	-	M32x1; M32x1.5 M33x2; M33x2.5; M34x3	-	1 ³ / ₈ -8UN; 1 ³ / ₈ -9UN; 1 ³ / ₈ -10UN; 1 ¹ / ₁₆ -12UN; 1 ³ / ₈ -14UNS; 1 ¹ / ₁₆ -16UN; 1 ¹ / ₁₆ -18UNEF; 1 ¹ / ₁₆ -20UN			1 ³ / ₈ -11; 1 ³ / ₈ -12; 1 ³ / ₈ -14; 1 ³ / ₈ -16;	1-11
BRTMC3230-80L3	30	-	M32x1; M32x1.5 M33x2; M33x2.5; M34x3	-	1 ³ / ₈ -8UN; 1 ³ / ₈ -9UN; 1 ³ / ₈ -10UN; 1 ¹ / ₁₆ -12UN; 1 ³ / ₈ -14UNS; 1 ¹ / ₁₆ -16UN; 1 ¹ / ₁₆ -18UNEF; 1 ¹ / ₁₆ -20UN			1 ³ / ₈ -11; 1 ³ / ₈ -12; 1 ³ / ₈ -14; 1 ³ / ₈ -16;	1-11



2 Step Clamping System



Shell Mill (MiTM 40)



Conical and Standard Shell Mills

Spare Parts

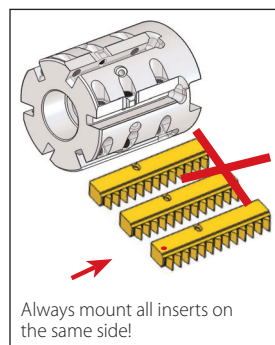
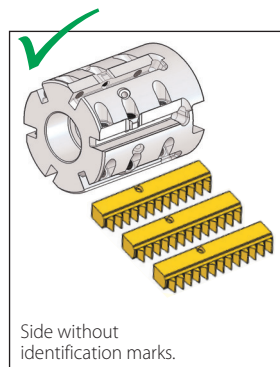
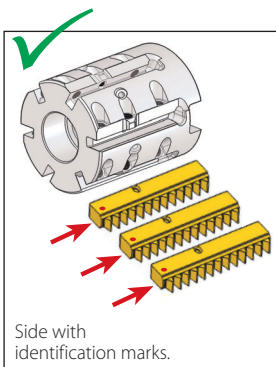
Insert Style	Ordering Code	Dimensions mm				No. of Flutes	Spare Parts				
		D1	D2	d(H7)	H		Z	Location Screw	Clamping Screw x2	Torx+ Screwdriver	Holder Screw
Standard	40	RTMC-D44-22-40L6	40	44	22	48	6	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM	M10x1.5x40
		RTMC-D52-27-40L8	48	52	27	50	8				M12x1.75x40
Conical		RTMNC-D45-22-40L6	40	45	22	48	6				M10x1.5x40

Standard Thread Application by Toolholder

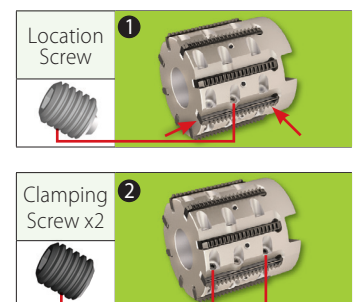
Toolholder		Min. Thread Dia.				
		D2 (mm)	ISO (fine)	UN/UNF/UNEF/UNS	BSW	BSP(G)
Standard	RTMC-D44-22-40L6	44	M48x1; M48x1.5; M48x2; M48x3	1 7/8-12UN; 1 13/16-16UN; 1 13/16-20UN; 1 15/16-8UN; 1 7/8-10UNS; 1 7/8-14UNS	2-16 2-12	1 1/2-11
	RTMC-D52-27-40L8	52	M55x1; M55x1.5; M55x2; M56x3	2 1/4-8UN; 2 1/4-10UN; 2 1/4-12UN; 2 1/4-14UN; 2 1/4-16UN; 2 1/4-18UN; 2 1/4-20UN	2 1/4-16 2 1/4-12	2-11

Conical Thread Application by Toolholder

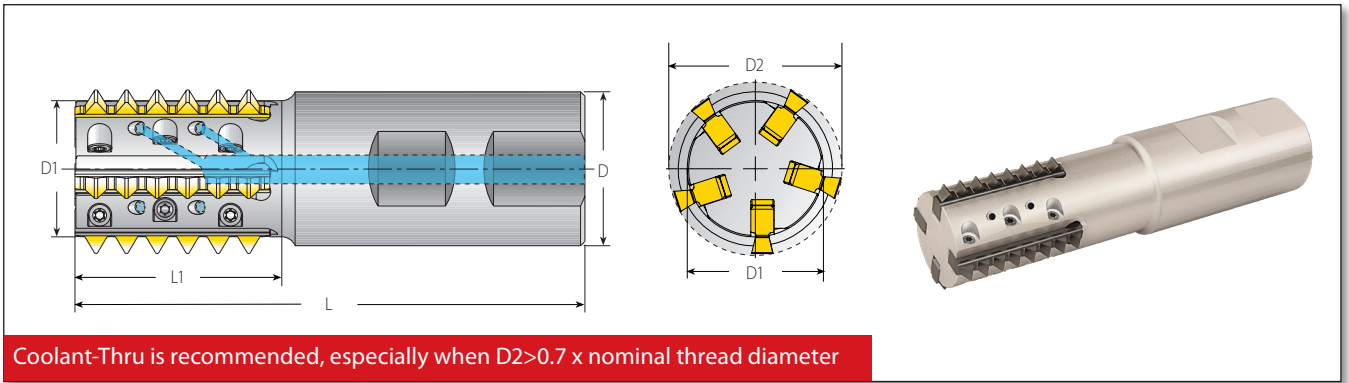
Toolholder		Min. Thread Dia.			
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC-D45-22-40L6	45	2-11.5; 2 1/2-8 (and up)	2-11.5; 2 1/2-8; 3-8	2-6x11



2 Step Clamping System



Standard Toolholders (MiTM 41)



Coolant-Thru is recommended, especially when $D2 > 0.7 \times$ nominal thread diameter

RTMC - for Standard Threads

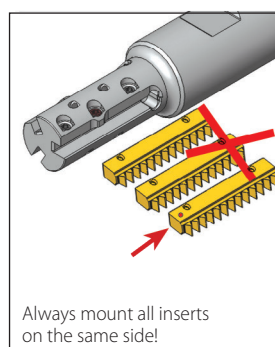
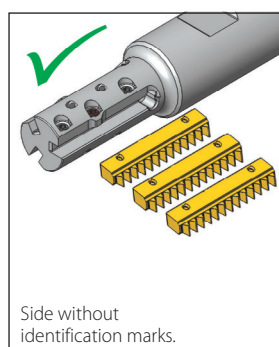
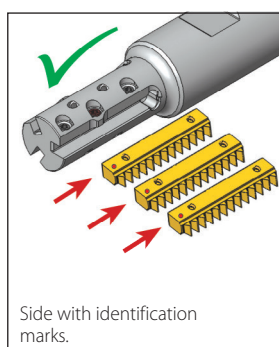
Spare Parts

Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Location Screw x2	Clamping Screw	Torx+ Screwdriver
		L	L1	D	D1	D2*	Z				
41	RTMC2521-45B1	105	45	25	16.0	21.2	1	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 Nm	
	RTMC2524-43B2	104	43	25	19.2	24.5	2				
	RTMC3230-43B3	106.5	43	32	24.2	30.0	3				
	RTMC3230-65B3	128.5	65	32	24.2	30.0	3				
	RTMC3236-43B5	106	43	32	28.3	35.9	5				
	RTMC3236-65B4	128	65	32	28.3	35.9	4				

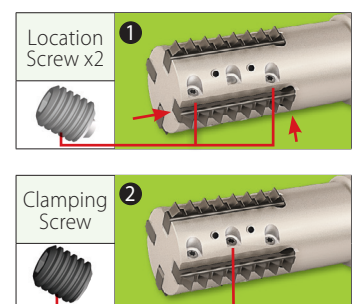
Standard Thread Application by Toolholder

Toolholder	D2* (mm)	Min. Thread Dia.							
		ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSW/BSF	NPT	NPTF	
RTMC2521-45B1	21.2	M27x3; M30x3.5; M33x3.5; M36x4; M39x4	M30x3; M42x4	1-8, 1 1/8-7; 1 1/4-7; 1 3/8-6; 1 1/2-6	1 1/16-8UN; 1 7/16-6UN	1-8BSW; 1 1/8-7BSW	-	-	
RTMC2524-43B2	24.5	M30x3.5; M36x4	M28x3; M45x4	1 1/8-7; 1 3/8-6	1 1/8-8UN; 1 7/16-6UN	1 3/8-8BSF; 1 1/4-7BSW	-	-	
RTMC3230-43B3	30.0	M36x4; M42x4.5	M34x3; M34x3.5; M45x4	1 3/8-6	1 3/8-8UN; 1 7/16-6UN	1 3/8-8BSF; 1 3/4-7BSF; 1 1/2-6BSW	-	-	
RTMC3230-65B3	30.0	M36x4; M42x4.5	M34x3; M34x3.5; M45x4	1 3/8-6	1 3/8-8UN; 1 7/16-6UN	1 3/8-8BSF; 1 3/4-7BSF; 1 1/2-6BSW	-	-	
RTMC3236-43B5	35.9	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1 3/4-5; 2-4.5; 2 1/2-4	1 5/8-8UN; 1 5/8-6UN	1 5/8-8BSF; 1 3/4-7BSF; 1 5/8-6BSF	2 1/2-8	2 1/2-8	
RTMC3236-65B4	35.9	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1 3/4-5; 2-4.5; 2 1/2-4	1 5/8-8UN; 1 5/8-6UN	1 5/8-8BSF; 1 3/4-7BSF; 1 5/8-6BSF	2 1/2-8	2 1/2-8	

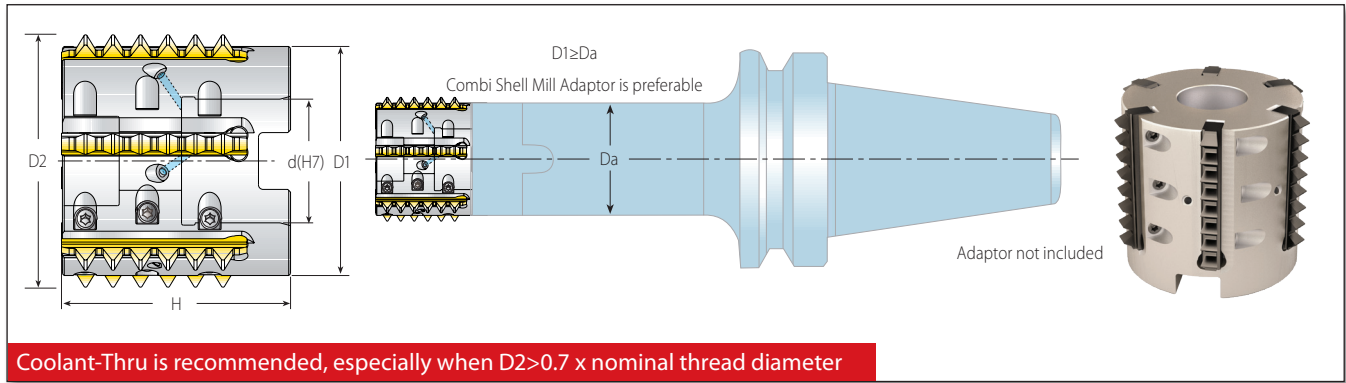
* For external applications, inserts R41E... use for CNC program (D2+0.6mm).



2 Step Clamping System



Shell Mill (MiTM 41)



MITM

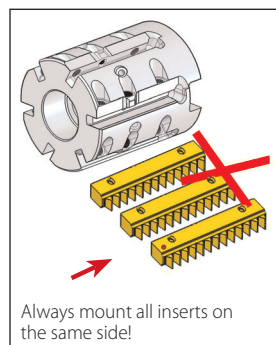
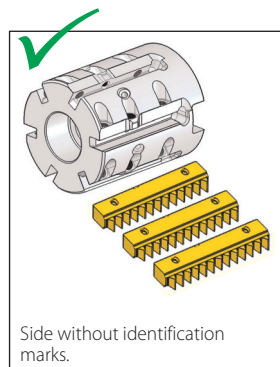
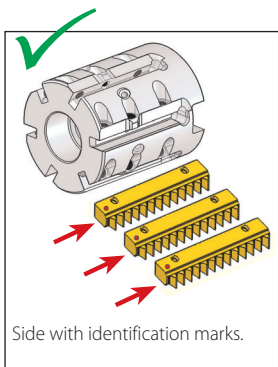
Standard Shell Mill

Insert Style	Ordering Code	Dimensions mm					No. of Flutes	Spare Parts			
		D1	D2*	d(H7)	H	Z		Location Screw x2	Clamping Screw	Torx+ Screwdriver	Holder Screw
41	RTMC-D48-22-41B5	40	47.9	22	50	5	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	Torx+ Screwdriver	Holder Screw	
	RTMC-D58-27-41B6	50	57.9	27	50	6					

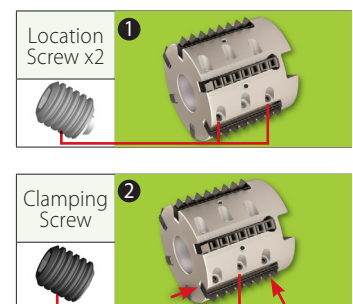
Standard Thread Application by Toolholder

Toolholder	Min. Thread Dia.							
	D2* (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	NPT	NPTF
RTMC-D48-22-41B5	47.9	M56x5.5; M64x6	M55x4; M70x6;	2 1/4-4.5; 2 1/2-4	2 1/8-8UN; 2 1/8-6UN	2 1/4-8; 2 1/4-6	2 1/2-8	2 1/2-8
RTMC-D58-27-41B6	57.9	M68x6	M64x4; M70x6	2 3/4-4	2 1/2-8UN; 2 1/2-6UN	2 1/2-8; 2 3/4-6	2 1/2-8	2 1/2-8

* For external applications, inserts R41E... use for CNC program (D2+0.6mm).



2 Step Clamping System




Recommended Grades, Cutting Speeds Vc [m/min] and Feed f [mm/tooth]

Material Group	Vargus No.	Material	Hardness Brinell HB	Vc [m/min]		Feed f [mm/tooth]		
				VBX	VTX	(Excluding MiTM 19)	(for MiTM 19)	
P Steel	1	Unalloyed Steel	Low Carbon (C=0.1-0.25%)	125	100-210	90-180	0.1-0.35	0.06-0.2
	2		Medium Carbon (C=0.25-0.55%)	150	100-180	90-170	0.1-0.4	0.06-0.25
	3		High Carbon (C=0.55-0.85%)	170	100-170	90-160	0.1-0.35	0.06-0.2
	4	Low Alloy Steel (alloying elements ≤5%)	Non Hardened	180	80-140	90-155	0.1-0.4	0.06-0.25
	5		Hardened	275	80-150	80-160	0.1-0.35	0.06-0.2
	6		Hardened	350	70-140	70-150	0.1-0.3	0.06-0.2
	7	High Alloy Steel (alloying elements >5%)	Annealed	200	60-130	70-115	0.1-0.35	0.06-0.2
	8		Hardened	325	70-110	60-100	0.1-0.2	0.06-0.1
	9	Cast Steel	Low Alloy (alloying elements <5%)	200	100-170	100-170	0.1-0.3	0.06-0.2
	10		High Alloy (alloying elements >5%)	225	70-120	70-130	0.1-0.2	0.06-0.1
M Stainless Steel	11	Stainless Steel Ferritic	Non Hardened	200	100-170	120-180	0.1-0.3	0.06-0.2
	12		Hardened	330	100-170	120-180	0.1-0.2	0.06-0.1
	13	Stainless Steel Austenitic	Austenitic	180	70-140	100-140	0.1-0.3	0.06-0.2
	14		Super Austenitic	200	70-140	100-140	0.1-0.2	0.06-0.1
	15	Stainless Steel Cast Ferritic	Non Hardened	200	70-140	100-140	0.1-0.3	0.06-0.2
	16		Hardened	330	70-140	100-140	0.1-0.2	0.06-0.1
	17	Stainless Steel Cast Austenitic	Austenitic	200	70-120	100-120	0.1-0.3	0.06-0.2
	18		Hardened	330	70-120	100-120	0.1-0.2	0.06-0.1
K Cast Iron	28	Malleable Cast Iron	Ferritic (short chips)	130	60-130	100-120	0.05-0.16	0.03-0.1
	29		Pearlitic (long chips)	230	60-120	80-100	0.04-0.1	0.02-0.06
	30	Grey Cast Iron	Low Tensile Strength	180	60-130	80-100	0.1-0.3	0.06-0.2
	31		High Tensile Strength	260	60-100	80-100	0.1-0.2	0.06-0.1
	32	Nodular Sg Iron	Ferritic	160	60-125	80-100	0.1-0.3	0.06-0.2
33	Pearlitic		260	50-90	60-90	0.1-0.2	0.06-0.1	
N Non-Ferrous Metals	34	Aluminium Alloys Wrought	Non Aging	60	100-250	-	0.15-0.55	0.09-0.3
	35		Aged	100	100-180	-	0.15-0.5	0.09-0.3
	36	Aluminium Alloys	Cast	75	150-400	-	0.15-0.5	0.09-0.3
	37		Cast & Aged	90	150-280	-	0.1-0.4	0.06-0.25
	38	Aluminium Alloys	Cast Si 13-22%	130	80-150	-	0.15-0.5	0.09-0.3
	39	Copper and Copper Alloys	Brass	90	120-210	100-200	0.15-0.5	0.09-0.3
40	Bronze And Non Leaded Copper		100	120-210	100-200	0.1-0.4	0.06-0.25	
S Heat Resistant Material	19	High Temperature Alloys	Annealed (iron based)	200	20-45	20-40	0.1-0.2	0.06-0.1
	20		Aged (iron based)	280	20-30	20-30	0.04-0.1	0.02-0.06
	21		Annealed (nickel or cobalt based)	250	15-20	15-20	0.04-0.1	0.02-0.06
	22		Aged (nickel or cobalt based)	350	10-15	10-15	0.04-0.1	0.02-0.06
	23	Titanium Alloys	Pure 99.5 Ti	400Rm	70-140	70-120	0.04-0.1	0.02-0.06
24	α+β Alloys		1050Rm	20-50	20-50	0.04-0.1	0.02-0.06	
H Hardened Material	25	Extra Hard Steel	Hardened & Tempered	45-50HRc	15-45	15-45	0.06-0.12	0.04-0.07
	26			51-55HRc	15-40	15-40	0.04-0.08	0.02-0.05

MITM

Grades

Grade	Application	Sample
VBX	TiCN coated carbide grade. Excellent grade for steels and general use.	
VTX	TiAlN coated carbide grade. Ideal for Stainless Steels.	