



# MiTM

## Super Fast Thread Milling System



METRIC

# MiTM

## New Family of Thread Milling Tools

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



See it in action

### MiTM 19 (A)

For Small Bores



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



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

### MiTM 24 (M)

For Medium Bores



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



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

### MiTM 25 (S)

For Standard Applications



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



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



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



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

### MiTM 40 (L)

For Long Threads



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



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



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

### MiTM 41 (B)

For Large Pitches



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



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



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# VARGUS GENiUS™ | Tool Selector and CNC Program Generator



The most popular and advanced thread turning and thread milling software on the market today.

Now available in 4 versions at [www.vargus.com](http://www.vargus.com)



# MiTM Ordering Code System

## MiTM Inserts

<b>R</b>	<b>25</b>	<b>I</b>	<b>1.00</b>	<b>ISO</b>	<b>TM</b>	<b>VBX</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>1 - Product Line</b>	<b>2 - Insert Style</b>	<b>3 - Type of Insert</b>	<b>4 - Pitch</b>	<b>5 - Standard</b>	<b>6 - System</b>	<b>7 - Carbide Grade</b>
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

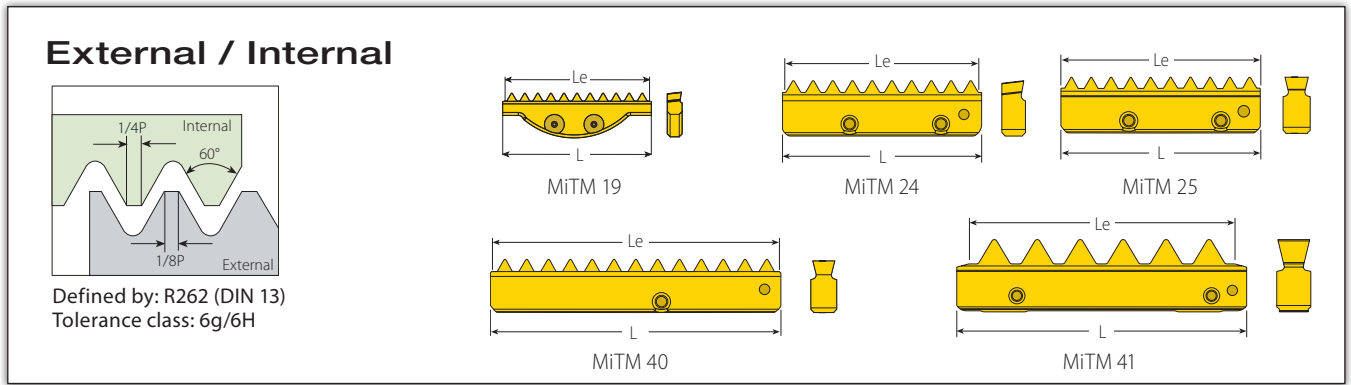
## MiTM Holders (Standard and Conical)

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

## MiTM Shell Mill

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

# ISO Metric



## Standard MiTM

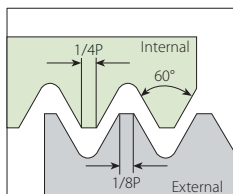
	L mm	Pitch mm	Ordering Code		Cutting Edge	Le	Teeth Zt	Toolholder	
			External	Internal					
	19	0.5		R19I0.50ISOTM...	1	20.0	40	RTMC...A	
		0.75		R19I0.75ISOTM...	1	20.0	27		
		1.0		R19I1.00ISOTM...	1	20.0	20		
		1.25		R19I1.25ISOTM...	1	20.0	16		
		1.5		R19I1.50ISOTM...	1	19.5	13		
		1.75		R19I1.75ISOTM...	1	19.25	11		
		2.0		R19I2.00ISOTM...	1	20.0	10		
	24	0.5		R24I0.50ISOTM...	1	24.5	49	RTMC...M	
		0.75		R24I0.75ISOTM...	1	24.75	33		
		1.0		R24I1.00ISOTM...	1	24.0	24		
		1.25		R24I1.25ISOTM...	1	25.0	20		
		1.5		R24I1.50ISOTM...	1	24.0	16		
		1.75		R24I1.75ISOTM...	1	24.5	14		
		2.0		R24I2.00ISOTM...	1	24.0	12		
	25	1.0	R25E1.00ISOTM...	R25I1.00ISOTM...	2	24.0	24	(B)RTMC...S	
		1.25	R25E1.25ISOTM...	R25I1.25ISOTM...	2	23.75	19		
		1.5	R25E1.50ISOTM...	R25I1.50ISOTM...	2	24.0	16		
		2.0	R25E2.00ISOTM...	R25I2.00ISOTM...	2	24.0	12		
		2.5	R25E2.50ISOTM...	R25I2.50ISOTM...	2	25.0	10		
		3.0	*R25E3.00ISOTM...	*R25I3.00ISOTM...	2	24.0	8		* See note below
			40	1.0		R40I1.00ISOTM...	2		39.0
1.5				R40I1.50ISOTM...	2	39.0	26		
2.0				R40I2.00ISOTM...	2	38.0	19		
2.5				R40I2.50ISOTM...	2	37.5	15		
3.0				R40I3.00ISOTM...	2	39.0	13		
	41	3.0	R41E3.00ISOTM...	R41I3.00ISOTM...	2	39.0	13	RTMC...B	
		3.5	R41E3.50ISOTM...	R41I3.50ISOTM...	2	38.5	11		
		4.0	R41E4.00ISOTM...	R41I4.00ISOTM...	2	40.0	10		
		4.5	R41E4.50ISOTM...	R41I4.50ISOTM...	2	40.5	9		
		5.0	R41E5.00ISOTM...	R41I5.00ISOTM...	2	40.0	8		
		5.5	R41E5.50ISOTM...	R41I5.50ISOTM...	2	38.5	7		
		6.0	R41E6.00ISOTM...	R41I6.00ISOTM...	2	36.0	6		

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

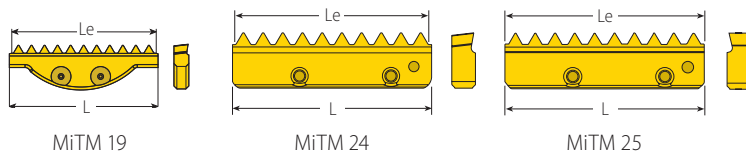
MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I2.00ISOTM(S)...

# American (UNC, UNF, UNEF, UNS)




## External / Internal



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



## Standard MiTM

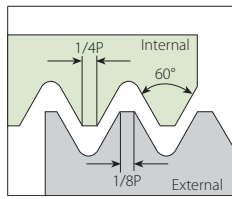
	L mm	Pitch tpi	Ordering Code		Cutting Edge Le	Teeth Zt	Toolholder
			External	Internal			
	19	32		R19I32UNTM...	1	19.84	RTMC...A
		28		R19I28UNTM...	1	19.96	
		27		R19I27UNTM...	1	19.76	
		24		R19I24UNTM...	1	20.11	
		20		R19I20UNTM...	1	19.05	
		18		R19I18UNTM...	1	19.76	
		16		R19I16UNTM...	1	19.05	
		14		R19I14UNTM...	1	19.96	
		13		R19I13UNTM...	1	19.54	
	24	32		R24I32UNTM...	1	24.61	RTMC...M
		28		R24I28UNTM...	1	24.49	
		24		R24I24UNTM...	1	24.34	
		20		R24I20UNTM...	1	24.13	
		18		R24I18UNTM...	1	23.99	
		16		R24I16UNTM...	1	23.81	
		14		R24I14UNTM...	1	23.59	
		12		R24I12UNTM...	1	23.28	
		10		R24I10UNTM...	1	22.86	
	25	20	R25E20UNTM...	R25I20UNTM...	2	24.13	(B)RTMC...S
		18	R25E18UNTM...	R25I18UNTM...	2	23.99	
		16	R25E16UNTM...	R25I16UNTM...	2	23.81	
		14	R25E14UNTM...	R25I14UNTM...	2	23.58	
		12	R25E12UNTM...	R25I12UNTM...	2	23.28	
		10	R25E10UNTM...	R25I10UNTM...	2	22.86	
		9	*R25E9UNTM...	*R25I9UNTM...	2	22.58	
		8	*R25E8UNTM...	*R25I8UNTM...	2	22.22	

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

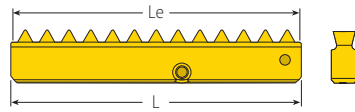
MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I20UNTM(S)...

# American (UNC, UNF, UNEF, UNS)

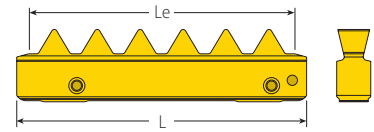
## External / Internal



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





MiTM 40



MiTM 41

## Standard MiTM (con't)

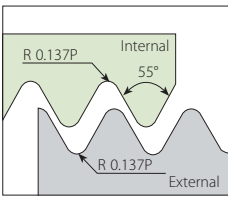
	L		Ordering Code		Cutting Edge	Teeth	Toolholder
	mm	tpi	External	Internal			
 40		20		R40I20UNTM...	2	39.37	(B)RTMC...L
		18		R40I18UNTM...	2	39.51	
		16		R40I16UNTM...	2	39.69	
		14		R40I14UNTM...	2	39.91	
		12		R40I12UNTM...	2	38.10	
		10		R40I10UNTM...	2	38.10	
		9		R40I9UNTM...	2	39.51	
		8		R40I8UNTM...	2	38.10	
 41		8	R41E8UNTM...	R41I8UNTM...	2	38.10	RTMC...B
		7	R41E7UNTM...	R41I7UNTM...	2	39.91	
		6	R41E6UNTM...	R41I6UNTM...	2	38.10	
		5	R41E5UNTM...	R41I5UNTM...	2	35.56	
		4.5	R41E4.5UNTM...	R41I4.5UNTM...	2	39.51	
		4	R41E4UNTM...	R41I4UNTM...	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: R25I20UNTM(S)...

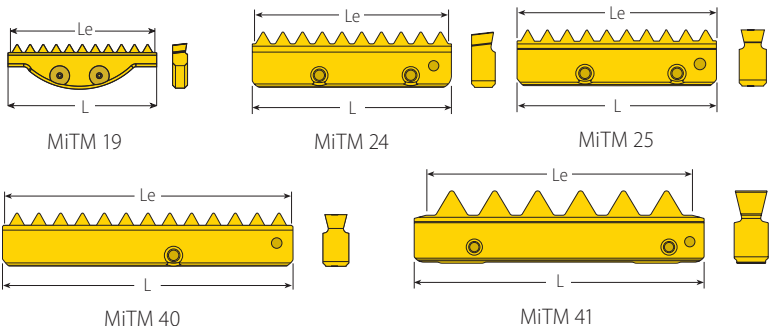


# Whitworth for BSF, BSP (G)






### External / Internal



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



## Standard MiTM

	L	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
	mm	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

MiTM 19      MiTM 24      MiTM 25  
MiTM 40      MiTM 41

## Standard MiTM

L	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
mm	tpi	External+Internal	Le	Zt		
19	18	R19EI18NPTTM...	1	19.76	14	RTMNC...A
24	18	R24EI18NPTTM...	1	23.99	17	RTMNC...M
25	14	R25EI14NPTTM...	1	23.58	13	RTMNC...S
	11.5	R25EI11.5NPTTM...	1	24.30	11	
40	8	R25EI8NPTTM...	1	22.22	7	RTMNC-D36-16-25S5
	11.5	R40EI11.5NPTTM...	1	37.55	17	
41	8	R40EI8NPTTM...	1	38.10	12	RTMNC-D45-22-40L6
	8	R41EI8NPTTM...	1	38.10	12	RTMC...B

# NPTF

**External / Internal**

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

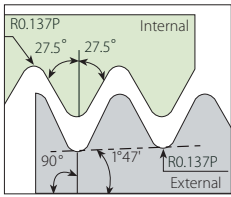
MiTM 19      MiTM 24      MiTM 25  
MiTM 40      MiTM 41

## Standard MiTM

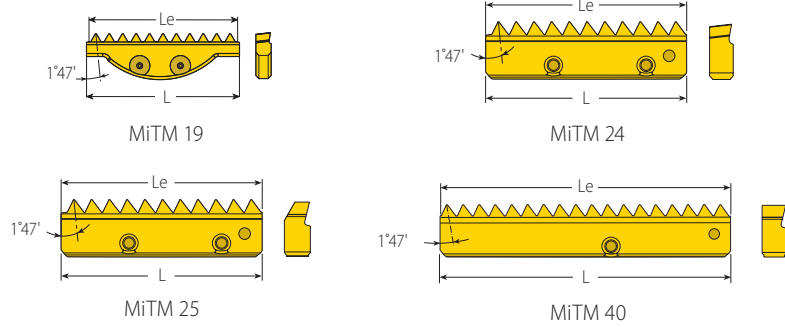
L	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
mm	tpi	External+Internal	Le	Zt		
19	18	R19EI18NPTFTM...	1	19.76	14	RTMNC...A
24	18	R24EI18NPTFTM...	1	23.99	17	RTMNC...M
25	14	R25EI14NPTFTM...	1	23.58	13	RTMNC...S
	11.5	R25EI11.5NPTFTM...	1	24.30	11	
40	8	R25EI8NPTFTM...	1	22.22	7	RTMNC-D36-16-25S5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

# BSPT

## External / Internal



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



## Standard MiTM



L	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
mm	tpi	External+Internal	Le	Zt		
19	19	R19EI19BSPTTM...	1	20.05	15	RTMNC...A
24	19	R24EI19BSPTTM...	1	24.06	18	RTMNC 2014-26M1
25	14	R25EI14BSPTTM...	1	23.58	13	RTMNC...S
	11	R25EI11BSPTTM...	1	23.09	10	
40	11	R40EI11BSPTTM...	1	39.25	17	RTMNC-D45-22-40L6

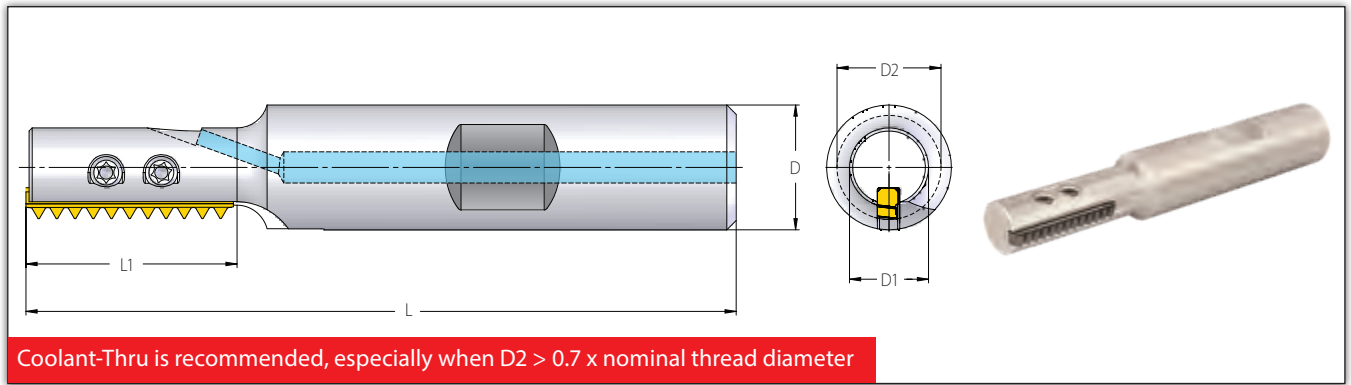
## Plug Insert \*




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

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

## Standard Toolholders (MiTM 19)

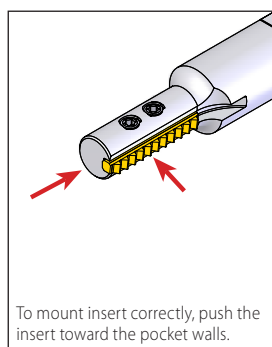
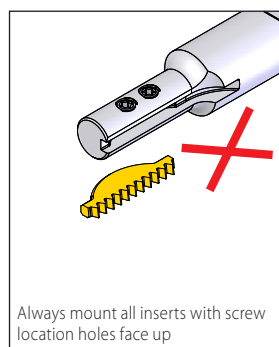
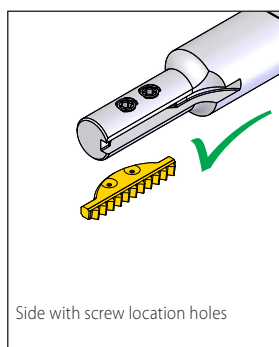


### RTMC - for Standard Threads

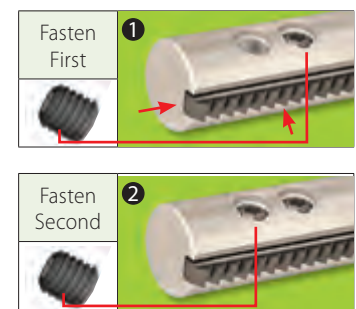
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes		
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
19	RTMC 1210-20A1	68	20	12	7.5	10	1	SLD3IP6 (M3x0.5)	<b>KIP6</b> • Use the included Vardex Torx+ screwdriver only • Recommended max. torque 1.2 NxM
	RTMC 1212-25A1	73.5	25.2	12	8.7	11.75	1		

### Standard Thread Application by Toolholder

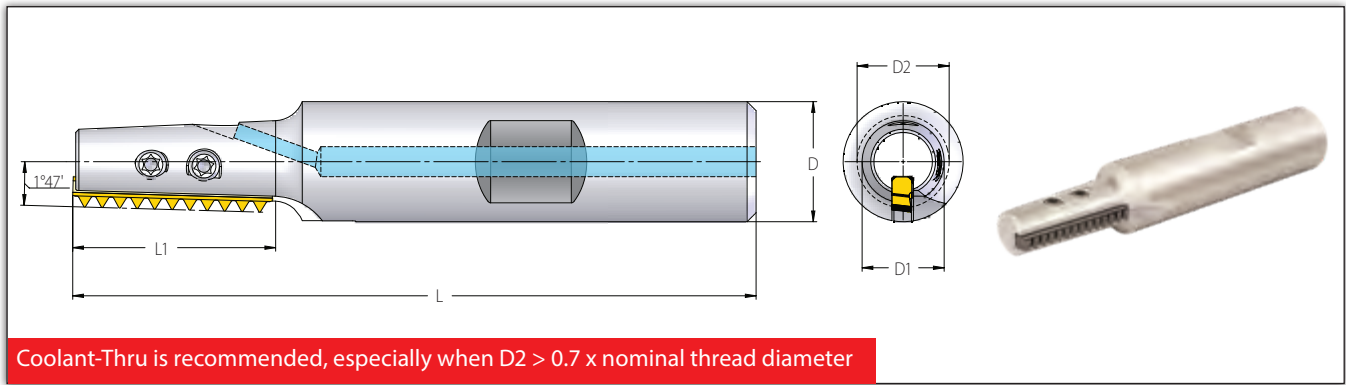
Toolholder	Min. Thread Ø						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC 1210-20A1	10	12x1.75	11x0.5; 11X0.75; 11.5x1; 12x1.25; 12x1.5	½-13	¼-32UN; ⅞-28UNEF; ⅞-27UNS; ½-24UNS; ½-20UNF; ½-18UNS; ½-16UN; ½-14UNS	½-16	¼-19
RTMC 1212-25A1	11.75	14x2.0; 16x2.0	M12.5x0.5; M13X0.75; M13x1; M13.5x1.25; M14x1.5; M14x1.75	⅝-12	½-32UN; ⅞-28UNS; ⅞-27UNS; ⅞-24UNEF; ⅞-20UN; ⅞-18UNF; ⅞-16UN; ⅞-14UNS;	⅝-14	¼-14



### 2 Step Clamping System!





# Conical Toolholders (MiTM 19)



## RTMNC - for Conical Threads

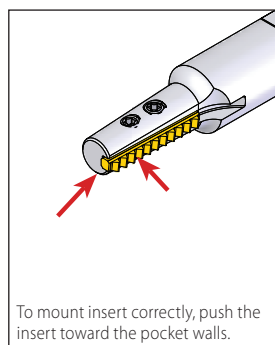
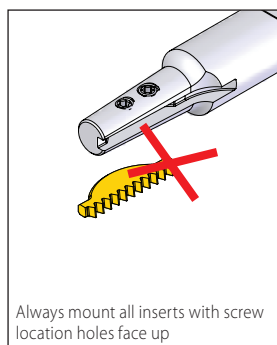
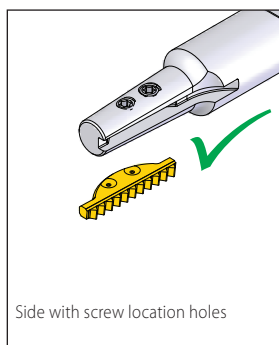
### Spare Parts

Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes		
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
19	RTMNC 1210-19A1	66.5	19	12	8	10.6	1	SLD3IP6 (M3x0.5)	<b>KIP6</b> •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM

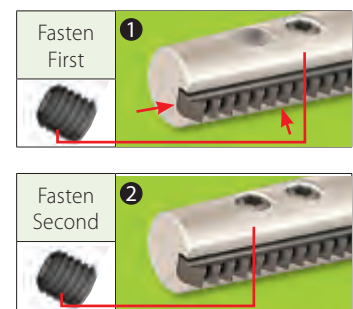
## Conical Thread Application by Toolholder

Toolholder				
	D2 (mm)	NPT	NPTF	BSPT
RTMNC 1210-19A1	10.6	1/4-18* 3/8-18	1/4-18* 3/8-18	1/4-19* 3/8-19

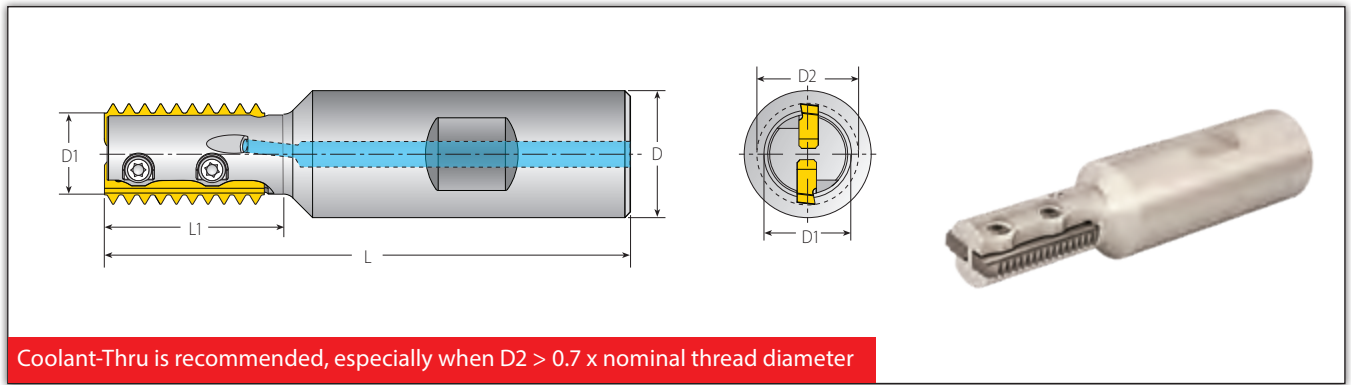
\* Using MiTM 19 tools the maximum thread length is 10.5mm.





### 2 Step Clamping System!



## Standard Toolholders (MiTM 24)

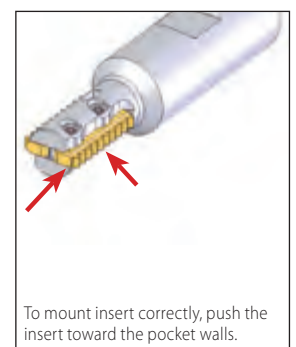
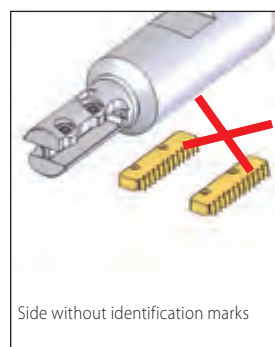
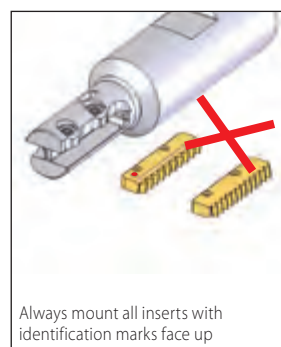
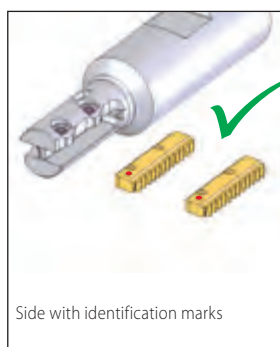


### RTMC - for Standard Threads

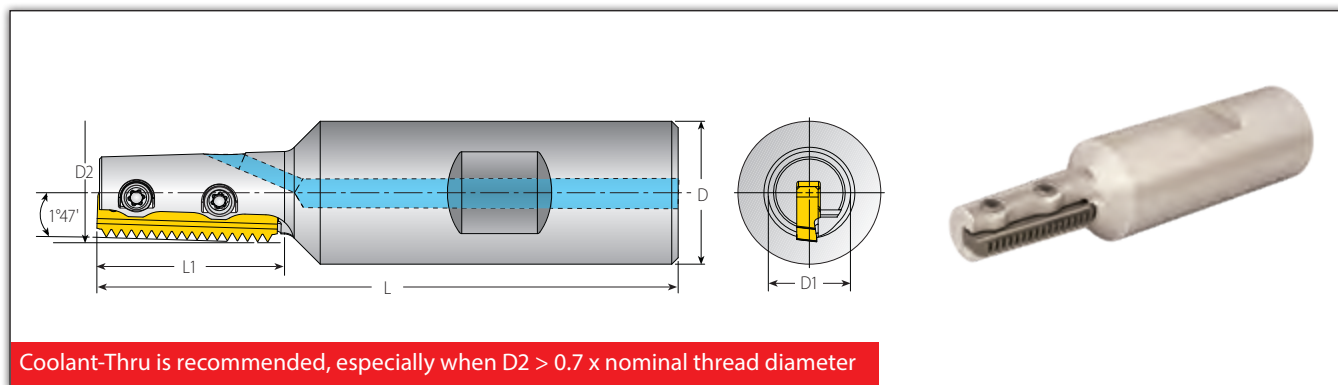
RTMC - for Standard Threads								Spare Parts	
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes		
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
24	RTMC 2013-26M1	82	26	20	10.7	13.6	1	SLD4IP8 (M4x0.7)	<b>KIP8</b> •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 Nm
	RTMC 2015-30M1	85	30	20	11.9	15.1	1		
	RTMC 2016-28M2	83	28	20	12.6	16	2		
	RTMC 2016-36M1	91	36	20	12.6	16	1		

### Standard Thread Application by Toolholder



Toolholder	Min. Thread Ø						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC 2013-26M1	13.6	M16x2	M14.5x0.5; M15x0.75; M15x1; M15x1.25; M16x1.5; M16x1.75	-	<sup>1</sup> / <sub>16</sub> -12UN; <sup>5</sup> / <sub>16</sub> -14UNS; <sup>5</sup> / <sub>16</sub> -16UN; <sup>5</sup> / <sub>16</sub> -18UNF; <sup>5</sup> / <sub>16</sub> -20UN; <sup>5</sup> / <sub>16</sub> -24UNEF; <sup>5</sup> / <sub>16</sub> -28UN; <sup>5</sup> / <sub>16</sub> -32UN	<sup>1</sup> / <sub>16</sub> -14; <sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14, <sup>3</sup> / <sub>8</sub> -19
RTMC 2015-30M1	15.1	M18x2.5	M16x0.5; M17x0.75; M17x1; M17x1.25; M17x1.5; M18x1.75; M18x2	<sup>3</sup> / <sub>4</sub> -10	<sup>3</sup> / <sub>4</sub> -12UN; <sup>3</sup> / <sub>4</sub> -14UNS; <sup>1</sup> / <sub>16</sub> -16UN; <sup>1</sup> / <sub>16</sub> -20UN; <sup>1</sup> / <sub>16</sub> -24UNEF; <sup>1</sup> / <sub>16</sub> -28UN; <sup>1</sup> / <sub>16</sub> -32UN	<sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14
RTMC 2016-28M2	16	M20x2.5	M17x0.5; M17x0.75; M18x1; M18x1.25; M18x1.5; M18x1.75; M19x2	<sup>3</sup> / <sub>4</sub> -10	<sup>3</sup> / <sub>4</sub> -12UN; <sup>3</sup> / <sub>4</sub> -14UNS; <sup>3</sup> / <sub>4</sub> -16UN; <sup>3</sup> / <sub>4</sub> -18UNS; <sup>3</sup> / <sub>4</sub> -20UNEF; <sup>1</sup> / <sub>16</sub> -24UNEF; <sup>1</sup> / <sub>16</sub> -28UN; <sup>1</sup> / <sub>16</sub> -32UN	<sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14
RTMC 2016-36M1	16	M20x2.5	M17x0.5; M17x0.75; M18x1; M18x1.25; M18x1.5; M18x1.75; M19x2	<sup>3</sup> / <sub>4</sub> -10	<sup>3</sup> / <sub>4</sub> -12UN; <sup>3</sup> / <sub>4</sub> -14UNS; <sup>3</sup> / <sub>4</sub> -16UN; <sup>3</sup> / <sub>4</sub> -18UNS; <sup>3</sup> / <sub>4</sub> -20UNEF; <sup>1</sup> / <sub>16</sub> -24UNEF; <sup>1</sup> / <sub>16</sub> -28UN; <sup>1</sup> / <sub>16</sub> -32UN	<sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14



## Conical Toolholders (MiTM 24)

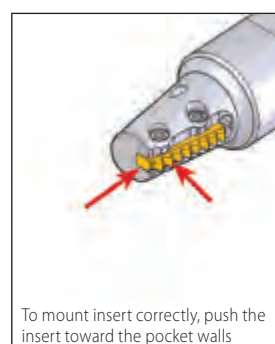
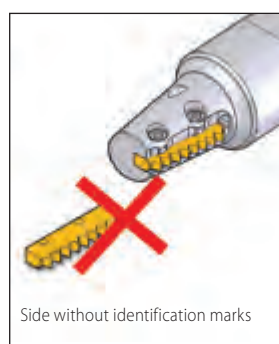
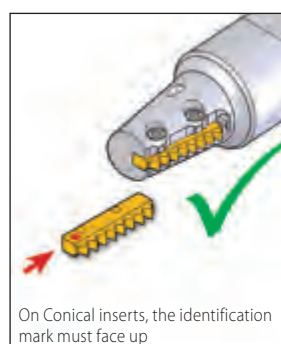


### RTMC - for Conical Threads

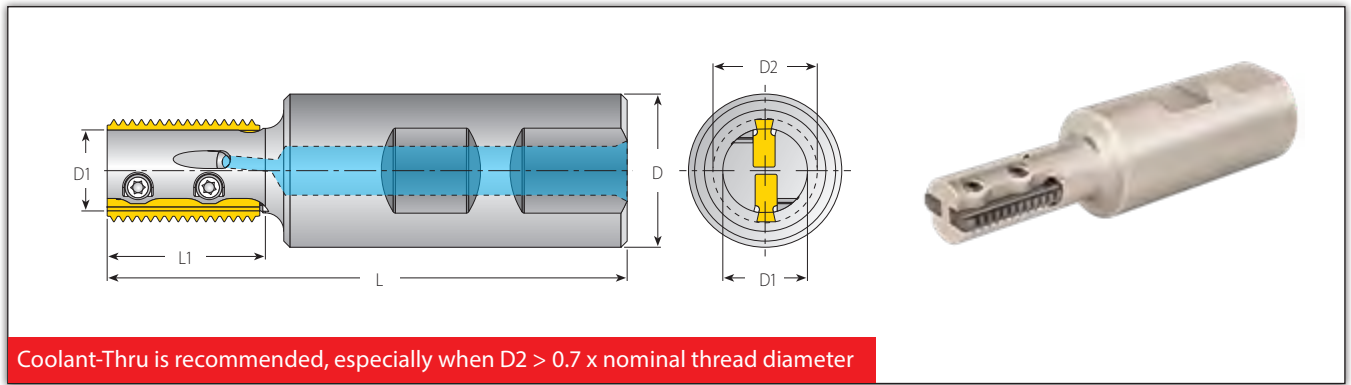
RTMC - for Conical Threads								Spare Parts	
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes		
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
24	RTMNC 2014-26M1	81	26	20	11.5	13.9	1	SLD4IP8 (M4x0.7)	<b>KIP8</b> •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM

### Conical Thread Application by Toolholder

Toolholder				
	D2 (mm)	NPT	NPTF	BSPT
RTMNC 2014-26M1	13.9	3/8-18	3/8-18	3/8-19



# Standard Toolholders (MiTM 25)

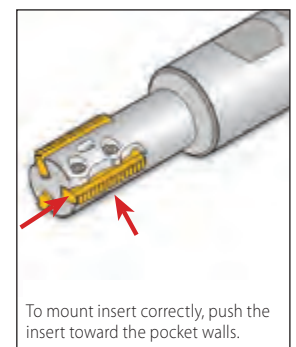
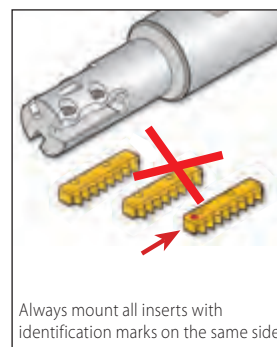
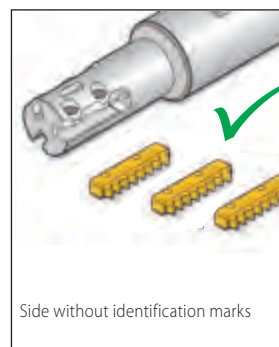
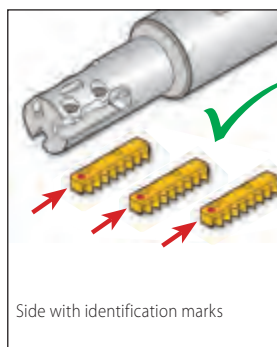


## RTMC - for Standard Threads

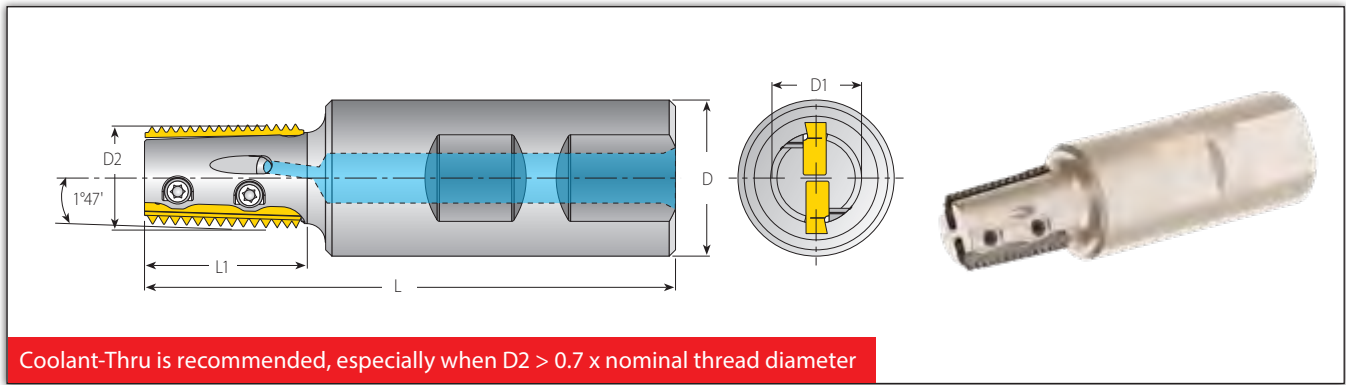
RTMC - for Standard Threads								Spare Parts	
Insert Style	Ordering Code	Dimensions (mm)			No. of Flutes				
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
25	RTMC 2517-26S2	85	26	25	14	17	2	SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM
	RTMC 2517-36S2	95	36		14	17	2		
	RTMC 2519-32S2	92	32		15	19	2		
	RTMC 2519-44S2	104	44		15	19	2		
	RTMC 2520-37S3	96	37		16.5	20.5	3		
	RTMC 2520-44S3	103	44		16.5	20.5	3		
	RTMC 2522-43S3	102	43		18	22	3		
	RTMC 2522-55S3	114	55		18	22	3		
	RTMC 2530-55S5	115	55		26	30	5		
BRTMC 2530-80S4	140	80	26	30	4				

## Standard Thread Application by Toolholder

Toolholder	Min.Thread Ø						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC 2517-26S2	17	M20x2.5	M19x1; M19x1.5;	-	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
RTMC 2517-36S2			M20x2				
RTMC 2519-32S2	19	M22x2.5 M24x3	M21x1; M21x1.5;	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
RTMC 2519-44S2			M22x2				
RTMC 2520-37S3	20.5	M24x3	M22x1; M23x1.5;	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
RTMC 2520-44S3			M23x2; M23.5x2.5				
RTMC 2522-43S3	22	M27x3	M24x1; M24x1.5;	-	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
RTMC 2522-55S3			M25x2; M25x2.5				
RTMC 2530-55S5	30	-	M32x1; M32x1.5;	-	1 3/8-8UN; 1 3/8-9UN; 1 3/8-10UN; 1 5/16-12UN; 1 3/8-14UNS; 1 5/16-16UN; 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
BRTMC 2530-80S4			M33x2; M33x2.5; M34x3				





# Conical Toolholders (MiTM 25)



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

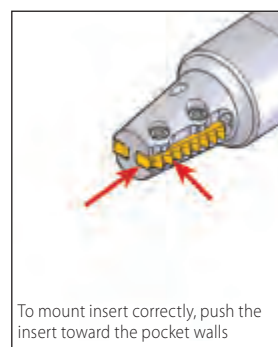
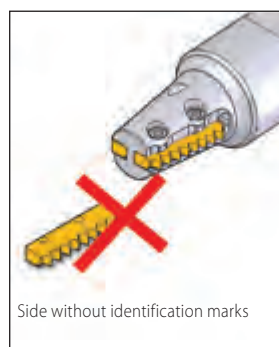
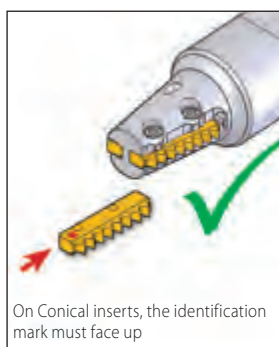
## RTMNC - for Conical Threads

### Spare Parts

Insert Style	Ordering Code	Dimensions (mm)						No. of Flutes	Spare Parts	
		L	L1	D	D1	D2	Z			
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver	
25	RTMNC 2517-26S2	85	26	25	14	17.2	2	SLD4IP8 (M4x0.7)	<b>KIP8</b> •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 Nm	
	RTMNC 2522-43S3	102	43	25	18	22.2	3			
	RTMNC 2528-43S4	103	43	25	25	28.4	4			

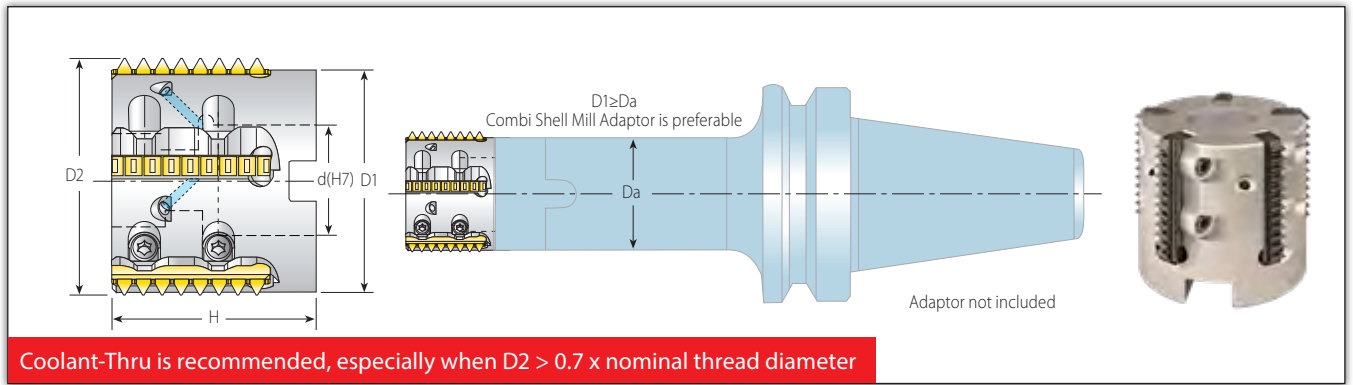
## Conical Thread Application by Toolholder

Toolholder	D2(mm)	Thread Ø		
		NPT	NPTF	BSPT
RTMNC 2517-26S2	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
RTMNC 2522-43S3	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
RTMNC 2528-43S4	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

Conical and Standard Shell Mills							Spare Parts		
Insert Style	Ordering Code	Dimensions (mm)				No. of Flutes			
mm		D1	D2	d(H7)	H	Z	Location Screw x2	Torx+ Screwdriver	Holder Screw
Standard	25	RTMC D36-16-25S5	32	36.0	16	33.5	SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM	M8x1.25x35
		RTMC D44-22-25S6	40	44.0	22	38.0			M10x1.50x35
		RTMC D52-27-25S8	48	52.0	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 (36.4 mm)

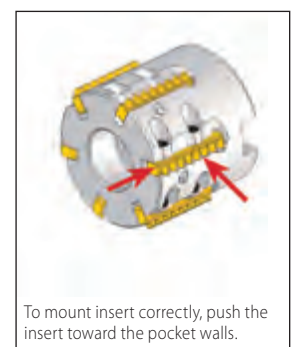
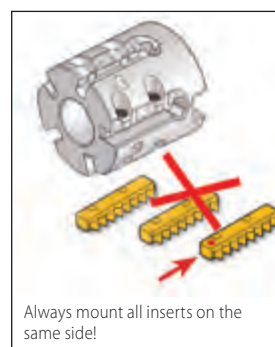
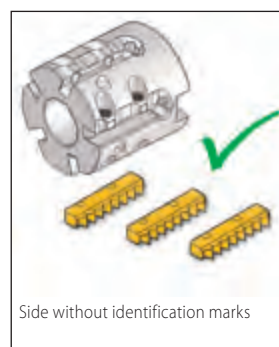
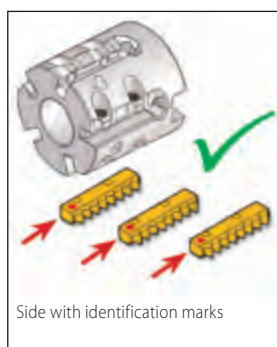
## Standard Thread Applications by Toolholder

Toolholder		Min. Thread Ø				
		D2(mm)	ISO (fine)	UN/UNF/UNEF/UNS	BSW	BSP(G)
Standard	RTMC D36-16-25S5	36	M38x1; M39x1.5; M39x2; M40x3	1 <sup>1</sup> / <sub>6</sub> -12UN; 1 <sup>1</sup> / <sub>6</sub> -14UNS; 1 <sup>1</sup> / <sub>6</sub> -16UN; 1 <sup>1</sup> / <sub>2</sub> -18UNEF; 1 <sup>1</sup> / <sub>2</sub> -20UN	1 <sup>3</sup> / <sub>4</sub> -16 1 <sup>3</sup> / <sub>4</sub> -12	1 <sup>1</sup> / <sub>4</sub> -11
	RTMC D44-22-25S6	44	M48x1; M48x1.5; M48x2; M48x3	1 <sup>1</sup> / <sub>6</sub> -12UN; 1 <sup>1</sup> / <sub>6</sub> -16UN; 1 <sup>1</sup> / <sub>6</sub> -20UN; 1 <sup>1</sup> / <sub>2</sub> -8UN; 1 <sup>1</sup> / <sub>2</sub> -10UNS; 1 <sup>1</sup> / <sub>2</sub> -14UNS	2-16 2-12	1 <sup>1</sup> / <sub>2</sub> -11
	RTMC D52-27-25S8	52	M55x1; M55x1.5; M55x2; M56x3	2 <sup>1</sup> / <sub>4</sub> -8UN; 2 <sup>1</sup> / <sub>4</sub> -10UN; 2 <sup>1</sup> / <sub>4</sub> -12UN; 2 <sup>1</sup> / <sub>4</sub> -14UN; 2 <sup>1</sup> / <sub>4</sub> -16UN; 2 <sup>1</sup> / <sub>4</sub> -18UN; 2 <sup>1</sup> / <sub>4</sub> -20UN	2 <sup>1</sup> / <sub>4</sub> -16 2 <sup>1</sup> / <sub>4</sub> -12	2-11

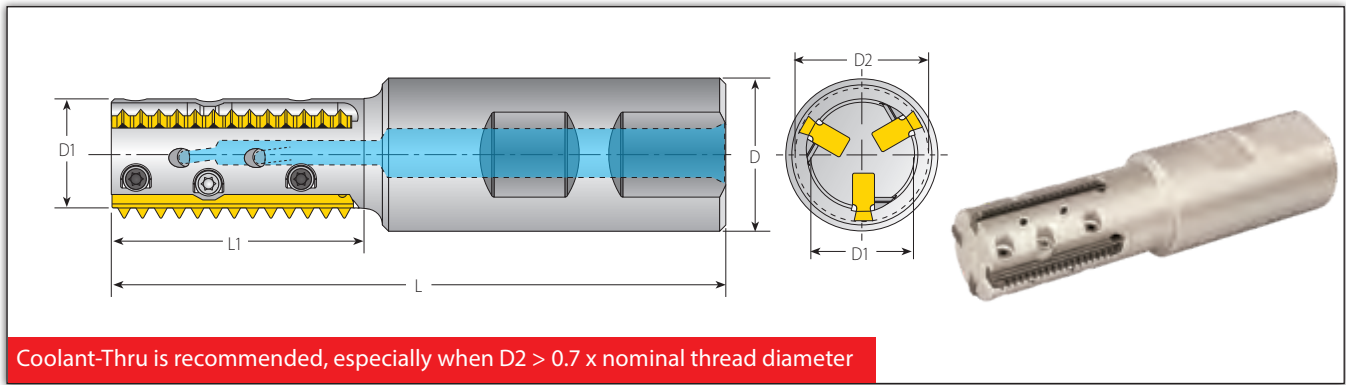
## Conical Thread Applications by Toolholder

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

\* For inserts 8NPT and 8NPTF use for CNC program (36.4 mm)



# Standard Toolholders (MiTM 40)

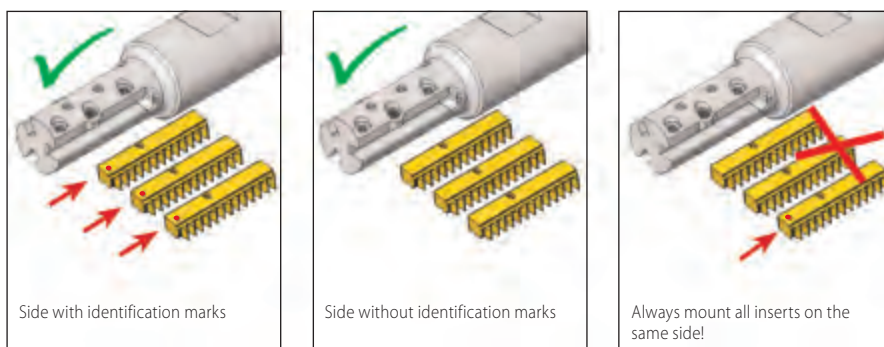


## RTMC - for Standard Threads

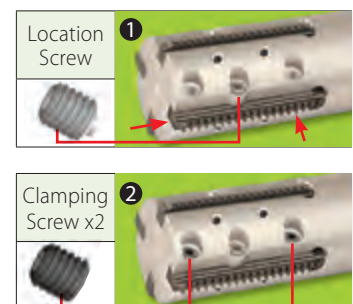
Insert Style	Ordering Code	Dimensions (mm)						No. of Flutes	Spare Parts		
		L	L1	D	D1	D2	Z		Location Screw	Clamping Screw x2	Torx+ Screwdriver
mm											
40	RTMC 2522-43L3	102	43	25	18	22	3	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM	
	RTMC 2522-65L3	124	65	25	18	22	3				
	RTMC 3230-55L4	117	55	32	26	30	4				
	BRTMC 3230-80L3	142	80	32	26	30	3				

## Standard Thread Application by Toolholder

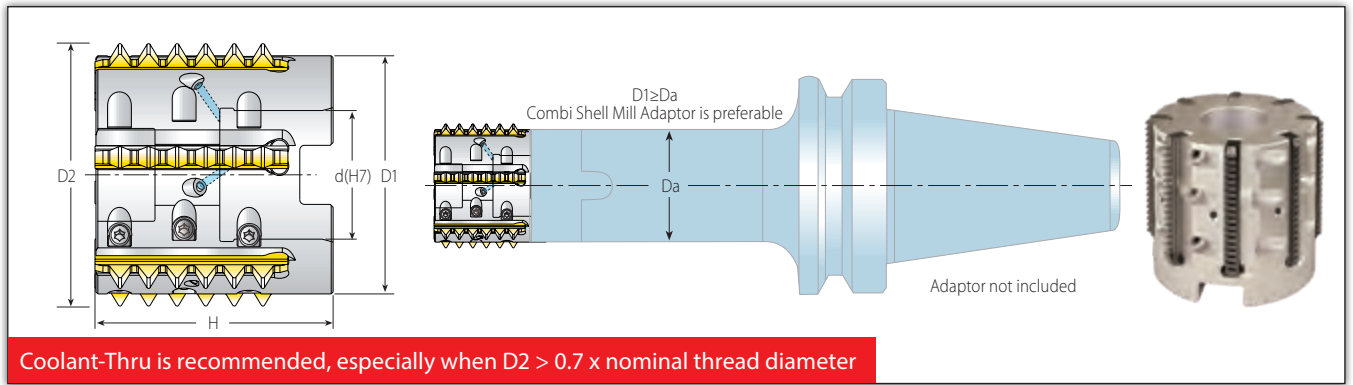
Toolholder	Min. Thread Ø							
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS		BSF	BSP(G)
RTMC 2522-43L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 1/16-8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 1 5/16-20UNEF		1-11; 1-12; 1-14; 1-16;	3/4-14
RTMC 2522-65L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 1/16-8UN; 1-9UN; 1-10UNS; 1-12UNF 1-14UNS; 1-16UN; 1-18UN; 1 5/16-20UNEF		1-11; 1-12; 1-14; 1-16;	3/4-14
RTMC 3230-55L4	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
BRTMC 3230-80L3	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

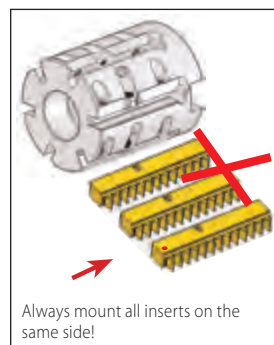
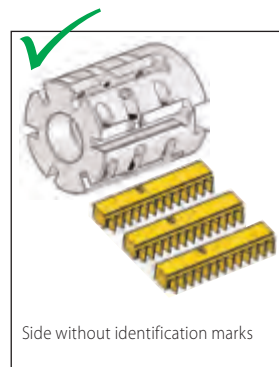
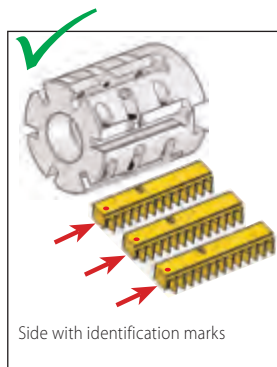
Conical and Standard Shell Mills							Spare Parts			
Insert Style	Ordering Code	Dimensions (mm)				No. of Flutes				
mm		D1	D2	d(H7)	H	Z	Location Screw	Clamping Screw x2	Torx+ Screwdriver	Holder Screw
Standard	RTMC D44-22-40L6	40	44	22	48	6	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	Torx+ Screwdriver	M10x1.5x40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

## Standard Thread Application per Toolholder

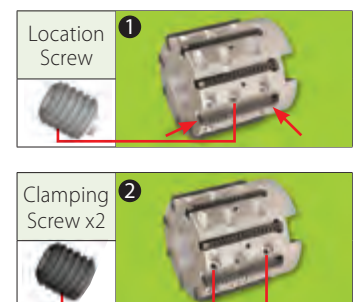
Toolholder		Min. Thread Ø					
		D2 (mm)	ISO (fine)	UN/UNF/UNEF/UNS		BSW	BSP(G)
Standard	RTMC D44-22-40L6	44	M48x1; M48x1.5; M48x2; M48x3	1 7/8-12UN; 1 13/16-16UN; 1 13/16-20UN; 1 5/16-8UN; 1 7/8-10UNS; 1 7/8-14UNS		2-16 2-12	1 1/2-11
	RTMC D52-27-40L8	52	M55x1; M55x1.5; M55x2; M56x3	2 1/4-8UN; 2 1/4-10UN;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

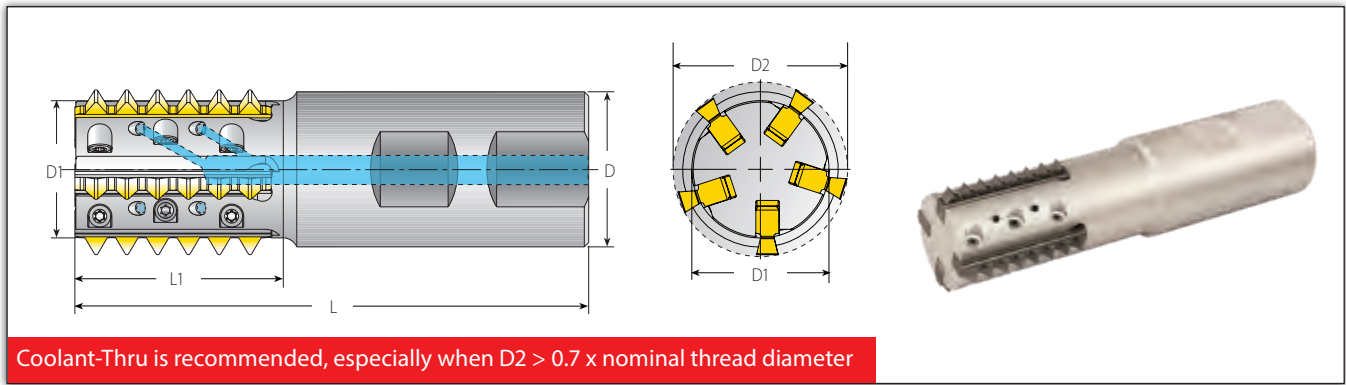
Toolholder		Min. Thread Ø			
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC D45-22-40L6	45	2-11.5; 2 1/2-8 (and up)	2-11.5; 2 1/2-8; 3-8	2-6x11



### 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

RTMC - for Standard Threads								Spare Parts			
Insert Style	Ordering Code	Dimensions (mm)						No. of Flutes			
mm		L	L1	D	D1	D2*	Z	Location Screw x2	Clamping Screw	Torx+ Screwdriver	
41	RTMC 2521-45B1	105	45	25	16.0	21.2	1	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	Torx+ KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM	
	RTMC 2524-43B2	104	43	25	19.2	24.5	2				
	RTMC 3230-43B3	106.5	43	32	24.2	30.0	3				
	RTMC 3230-65B3	128.5	65	32	24.2	30.0	3				
	RTMC 3236-43B5	106	43	32	28.3	35.9	5				
	RTMC 3236-65B4	128	65	32	28.3	35.9	4				

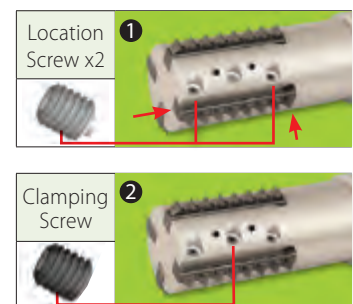
## Standard Thread Application by Toolholder

Toolholder	Min. Thread Ø							
	D2* (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSW/BSF	NPT	NPTF
RTMC 2521-45B1	21.2	M27x3; M30x3.5; M33x3.5; M36x4; M39x4	M30x3; M42x4	1-8, 1½-7; 1¼-7; 1¾-6; 1½-6	1½-8UN; 1¾-6UN	1-8BSW; 1½-7BSW	-	-
RTMC 2524-43B2	24.5	M30x3.5; M36x4	M28x3; M45x4	1½-7; 1¾-6	1½-8UN; 1¾-6UN	1¾-8BSF; 1¼-7BSW	-	-
RTMC 3230-43B3	30.0	M36x4; M42x4.5	M34x3; M34x3.5; M45x4	1¾-6	1¾-8UN; 1¾-6UN	1¾-8BSF; 1¼-7BSF; 1½-6BSW	-	-
RTMC 3230-65B3	30.0	M36x4; M42x4.5	M34x3; M34x3.5; M45x4	1¾-6	1¾-8UN; 1¾-6UN	1¾-8BSF; 1¼-7BSF; 1½-6BSW	-	-
RTMC 3236-43B5	35.9	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1¾-5; 2-4.5; 2½-4	1¾-8UN; 1¾-6UN	1¾-8BSF; 1¼-7BSF; 1¾-6BSF	2½-8	2½-8
RTMC 3236-65B4	35.9	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1¾-5; 2-4.5; 2½-4	1¾-8UN; 1¾-6UN	1¾-8BSF; 1¼-7BSF; 1¾-6BSF	2½-8	2½-8

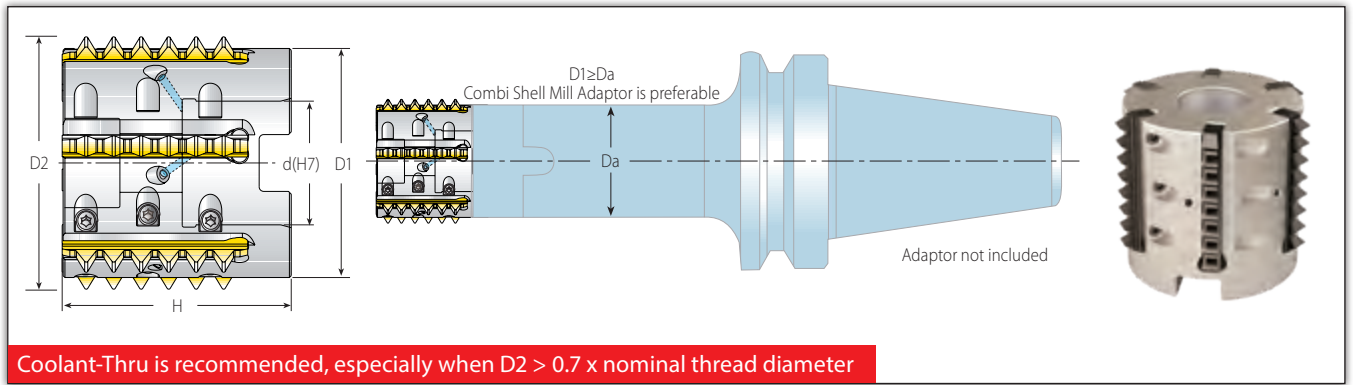
\* For external applications, inserts R41E... use for CNC program (D2+0.6mm)



## 2 Step Clamping System!



# Shell Mill (MiTM 41)



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

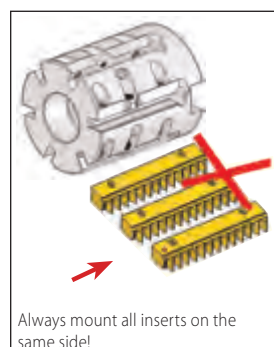
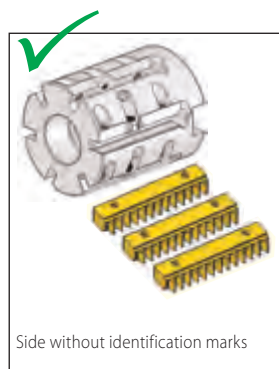
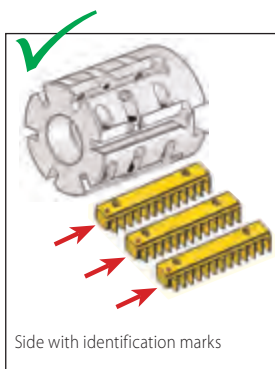
## Standard Shell Mill

Standard Shell Mill						Spare Parts				
Insert Style	Ordering Code	Dimensions (mm)				No. of Flutes				
mm		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)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 Nm	M10x1.5x40
	RTMC D58-27-41B6	50	57.9	27	50	6				M12x1.75x40

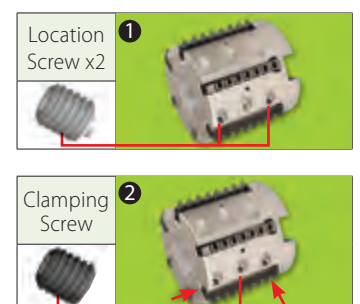
## Standard Thread Application by Toolholder

Toolholder	D2* (mm)	Min. Thread Ø						
		ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	NPT	NPTF
RTMC D48-22-41B5	47.9	M56x5.5; M64x6	M55x4; M70x6;	2¼-4.5; 2½-4	2½-8UN; 2½-6UN	2¼-8; 2¼-6	2½-8	2½-8
RTMC D58-27-41B6	57.9	M68x6	M64x4; M70x6	2¾-4	2½-8UN; 2½-6UN	2½-8; 2¾-6	2½-8	2½-8

\* 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	Vardex No.	Material	Hardness Brinell HB	Vc [m/min]		Feed f [mm/tooth]		
				VBX	VTX	f (Excluding MiTM 19)	f (for MiTM 19)	
<b>P</b> 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	90-60	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
<b>M</b> 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
<b>K</b> 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
<b>N<sub>(K)</sub></b> 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	
<b>S<sub>(M)</sub></b> 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
<b>H<sub>(K)</sub></b> 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

### Grades

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





MITM



Super Fast Thread Milling System

**VARDEx**

Advanced Threading Solutions