



**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 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

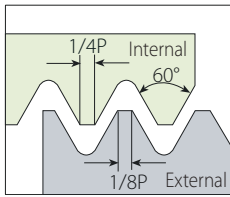


No. of Flutes (Z) 5-6  
Cutting Dia. (D2) 48-58  
Tool Overhang (L1) max.200

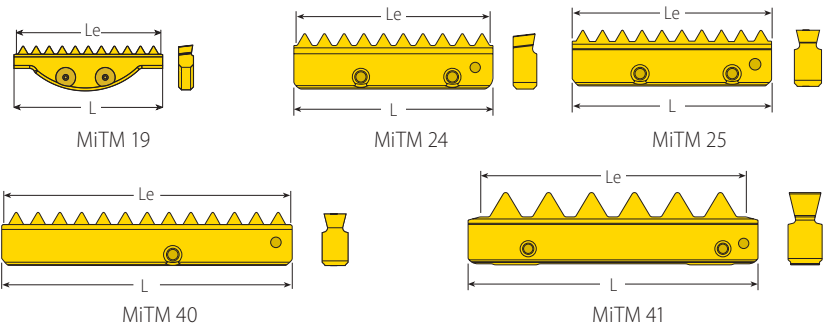


## ISO Metric

### External / Internal



Defined by: R262 (DIN 13)  
Tolerance class: 6g/6H



### Standard MiTM

L	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
mm	mm	External	Internal	Le	Zt	
19	0.5		R19I0.50ISOTM...	1	20.0	40
	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
	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	2.5		R24I2.50ISOTM...	1	25.0	10
	1.0	R25E1.00ISOTM...	R25I1.00ISOTM...	2	24.0	24
	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
40	1.0		R40I1.00ISOTM...	2	39.0	39
	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
	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

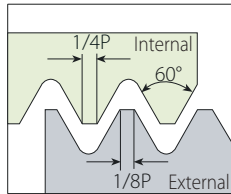
\* 3.0 ISO inserts do not fit into toolholder RTMC2517...  
For external insert 3.0 ISO use for CNC program (D2 + 0.5mm).

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)...

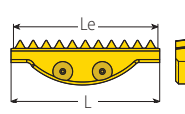


## American UN - UNC, UNF, UNEF, UNS

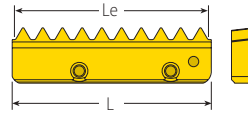
### External / Internal



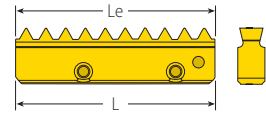
Defined by: ANSI B1.1:74  
Tolerance class: 2A/2B



MiTM 19



MiTM 24



MiTM 25

### Standard MiTM



L	Pitch	Ordering Code		Cutting Edge	Teeth	Toolholder
mm	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
	10		R24I10UNTM...	1	22.86	9
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

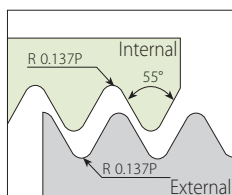
Standard MiTM

	L		Pitch		Ordering Code		Cutting Edge		Teeth		Toolholder
	mm	tpi	External	Internal					Le	Zt	
	40	20		R40I20UNTM...	2	39.37	31	(B)RTMC....L			
		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	RTMC....B			
		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				

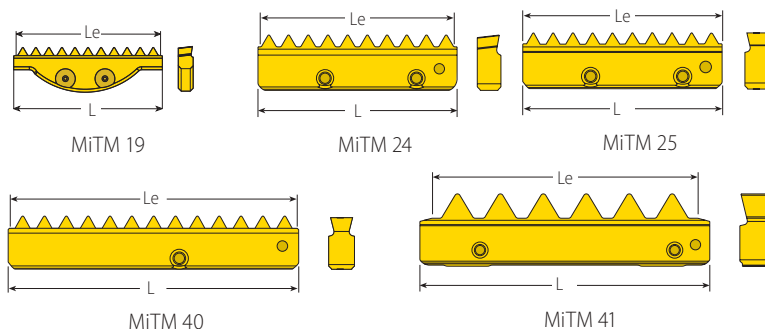
MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I20UNTM(S)...

## 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	Le		Zt	
	19	19	R19EI19WTM...			1	20.05	15	RTMC....A
		16	R19EI16WTM...			1	19.05	12	
		14	R19EI14WTM...			1	19.96	11	
	24	19	R24EI19WTM...			1	24.06	18	RTMC....M
		14	R24EI14WTM...			1	23.59	13	
		12	R24EI12WTM...			1	23.28	11	
	25	16	R25EI16WTM...			2	23.81	15	(B)RTMC....S
		14	R25EI14WTM...			2	23.58	13	
		12	R25EI12WTM...			2	23.28	11	
		11	R25EI11WTM...			2	23.09	10	
	40	16	R40EI16WTM...			2	39.69	25	(B)RTMC....L
		14	R40EI14WTM...			2	39.91	22	
		12	R40EI12WTM...			2	38.10	18	
		11	R40EI11WTM...			2	39.25	17	
	41	8		R41I8WTM...		2	38.10	12	RTMC....B
		7		R41I7WTM...		2	39.91	11	
		6		R41I6WTM...		2	38.10	9	

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

MiTM

L	Pitch	Ordering Code	Cutting Edge	Teeth	Toolholder	
mm	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

MiTM 19      MiTM 24      MiTM 25

MiTM 40      MiTM 41

Standard MiTM

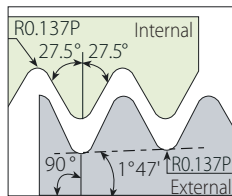
MiTM

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

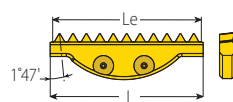


## BSPT

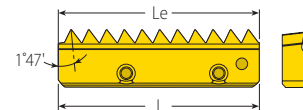
### External / Internal



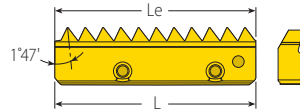
Defined by: B.S. 21:1985  
Tolerance class: Standard BSPT



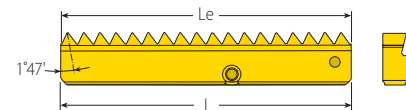
MiTM 19



MiTM 24



MiTM 25



MiTM 40

### Standard MiTM



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

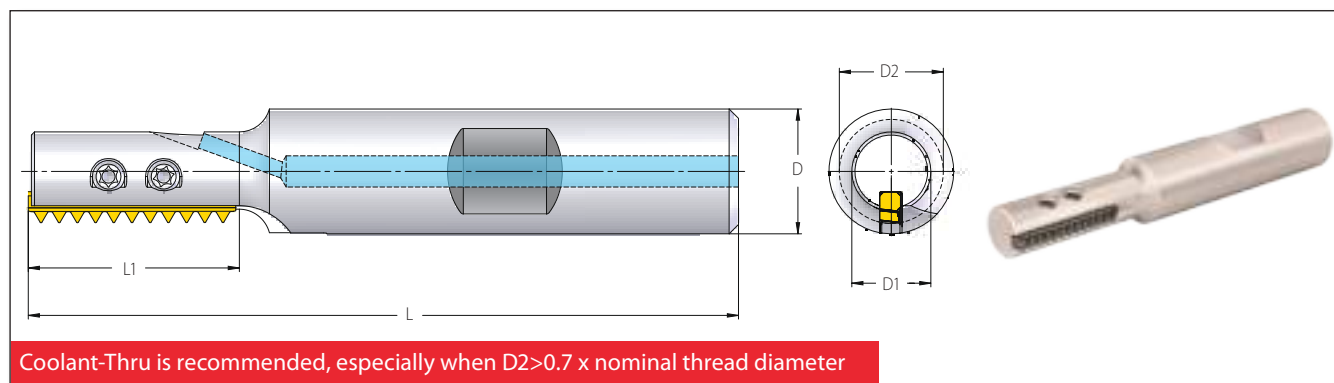
### Plug Insert



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



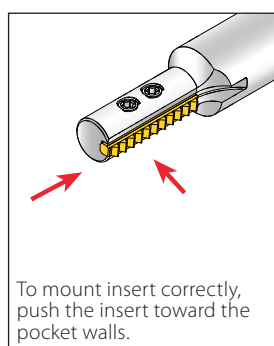
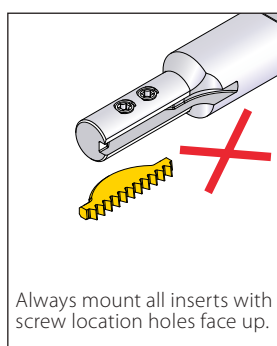
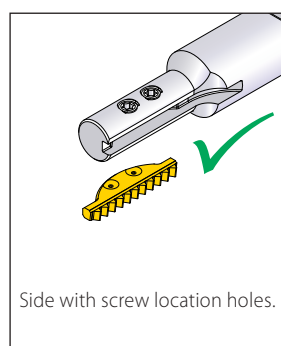
### RTMC - for Standard Threads

#### Spare Parts

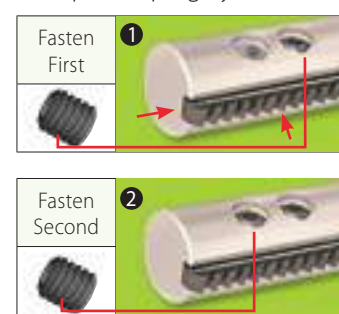
Insert Style	Ordering Code	Dimensions mm						No. of Flutes		
mm		L	L1	D	D1	D2	Z		Location Screw x2	Torx+ Screwdriver
19	RTMC1210-20A1	68	20	12	7.5	10	1		SLD3IP6 (M3x0.5)	<b>KIP6</b> Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM
	RTMC1212-25A1	73.5	25.2	12	8.7	11.75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

### Standard Thread Application by Toolholder

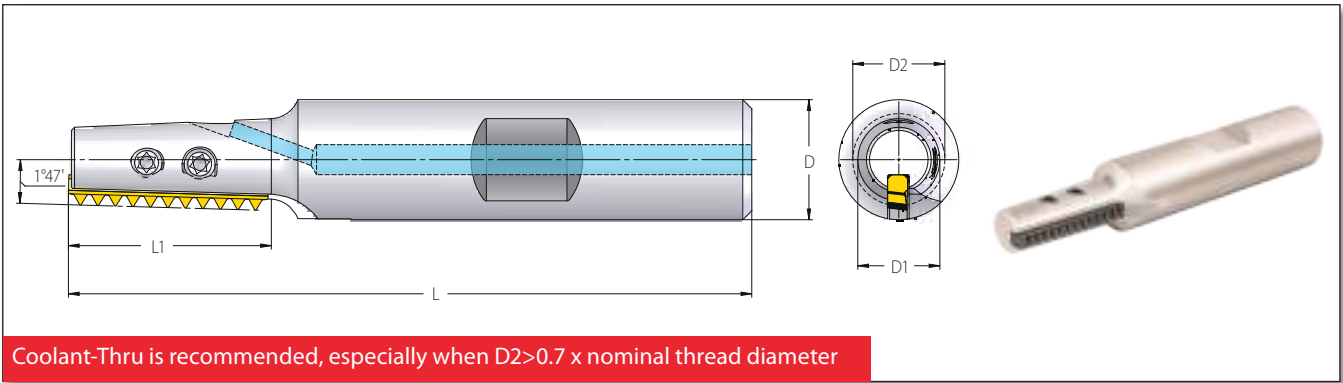
Toolholder	Min. Thread Dia.							
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)	
RTMC1210-20A1	10	M12x1.75	M11x0.5; M11x0.75; M11.5x1; M12x1.25; M12x1.5	1/2-13	7/16-32UN; 7/16-28UNEF; 7/16-27UNS; 1/2-24UNS; 1/2-20UNF; 1/2-18UNS; 1/2-16UN; 1/2-14UNS	1/2-16	1/4-19	
RTMC1212-25A1	11.75	M14x2.0; M16x2.0	M12.5x0.5; M13x0.75; M13x1; M13.5x1.25; M14x1.5; M14x1.75	9/16-12	1/2-32UN; 9/16-28UNS; 9/16-27UNS; 9/16-24UNEF; 9/16-20UN; 9/16-18UNF; 9/16-16UN; 9/16-14UNS;	5/8-14	1/4-14	





#### 2 Step Clamping System



# Conical Toolholders (MiTM 19)



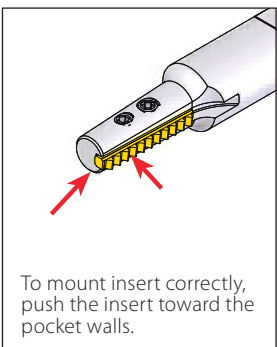
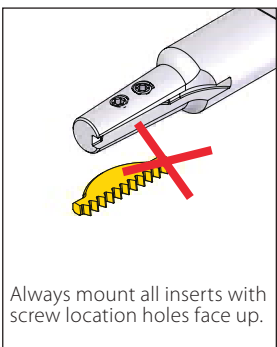
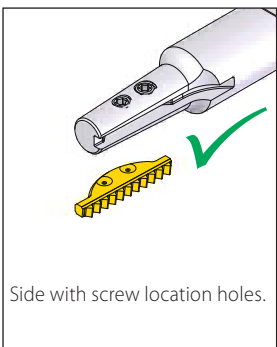
## RTMNC - for Conical Threads

								Spare Parts	
Insert Style	Ordering Code	Dimensions mm			No. of Flutes				
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
19	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

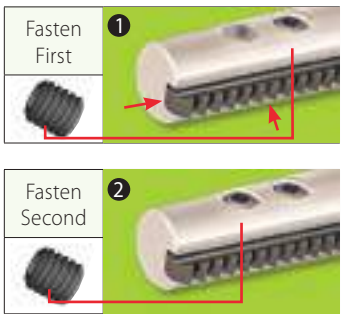
## Conical Thread Application by Toolholder

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

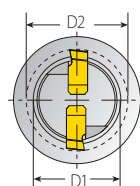
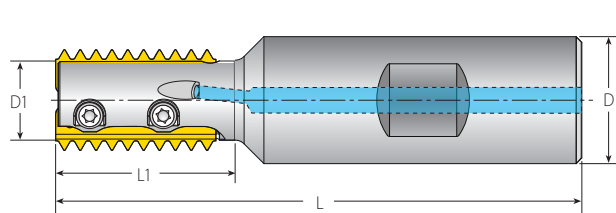
\* Using MiTM 19 tools the maximum thread length is 10.5mm.



### 2 Step Clamping System





## Standard Toolholders (MiTM 24)



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

### RTMC - for Standard Threads

#### Spare Parts

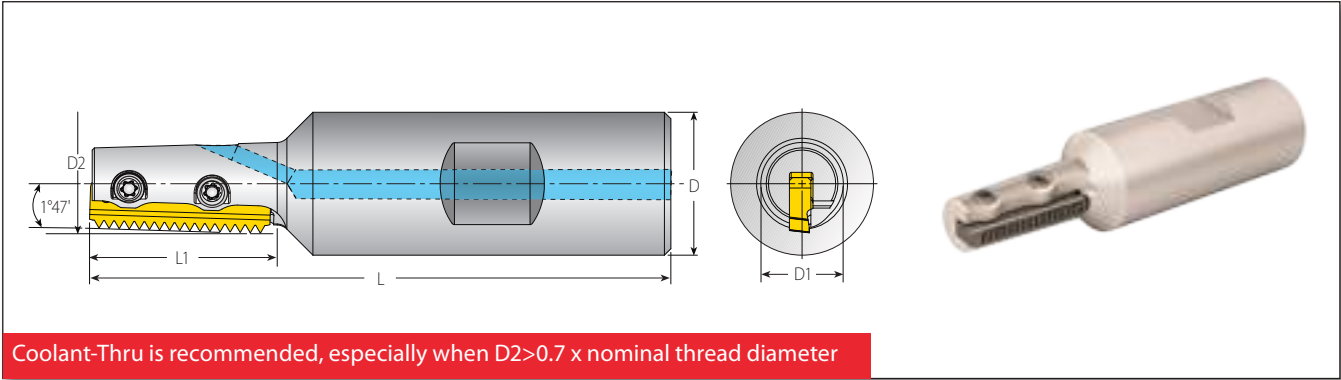
Insert Style	Ordering Code	Dimensions mm						No. of Flutes		
mm		L	L1	D	D1	D2	Z		Location Screw x2	Torx+ Screwdriver
24	RTMC2013-26M1	82	26	20	10.7	13.6	1		SLD4IP8 (M4x0.7)	<b>KIP8</b> Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM
	RTMC2015-30M1	85	30	20	11.9	15.1	1			
	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	-	<sup>11</sup> / <sub>16</sub> -12UN; <sup>5</sup> / <sub>8</sub> -14UNS; <sup>5</sup> / <sub>8</sub> -16UN; <sup>5</sup> / <sub>8</sub> -18UNF; <sup>5</sup> / <sub>8</sub> -20UN; <sup>5</sup> / <sub>8</sub> -24UNEF; <sup>5</sup> / <sub>8</sub> -28UN; <sup>5</sup> / <sub>8</sub> -32UN	<sup>11</sup> / <sub>16</sub> -14; <sup>3</sup> / <sub>4</sub> -12	<sup>3</sup> / <sub>8</sub> -19; <sup>1</sup> / <sub>2</sub> -14
RTMC2015-30M1	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>11</sup> / <sub>16</sub> -16UN; <sup>11</sup> / <sub>16</sub> -20UN; <sup>11</sup> / <sub>16</sub> -24UNEF; <sup>11</sup> / <sub>16</sub> -28UN; <sup>11</sup> / <sub>16</sub> -32UN	<sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14
RTMC2016-28M2	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>11</sup> / <sub>16</sub> -24UNEF; <sup>11</sup> / <sub>16</sub> -28UN; <sup>11</sup> / <sub>16</sub> -32UN	<sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14
RTMC2016-36M1	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>11</sup> / <sub>16</sub> -24UNEF; <sup>11</sup> / <sub>16</sub> -28UN; <sup>11</sup> / <sub>16</sub> -32UN	<sup>3</sup> / <sub>4</sub> -12	<sup>1</sup> / <sub>2</sub> -14



# Conical Toolholders (MiTM 24)

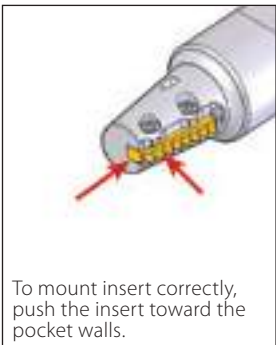
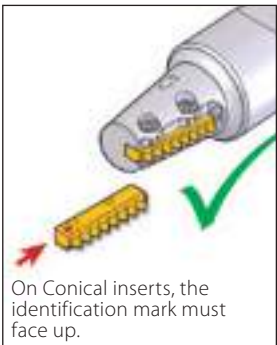


## RTMC - for Conical Threads

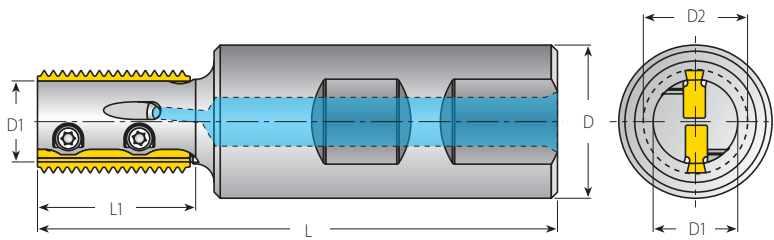
RTMC - for Conical Threads								Spare Parts	
Insert Style	Ordering Code	Dimensions mm			No. of Flutes				
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
24	RTMNC2014-26M1	81	26	20	11.5	13.9	1	SLD4IP8 (M4x0.7)	<b>KIP8</b> Use the included Vardex Torx+ screwdriver only. Recommended max. torque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

## Conical Thread Application by Toolholder

Toolholder	Thread Dia.			
	D2 (mm)	NPT	NPTF	BSPT
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

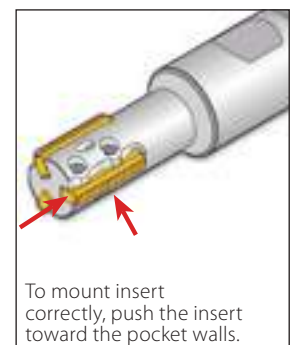
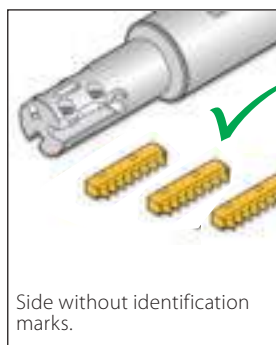
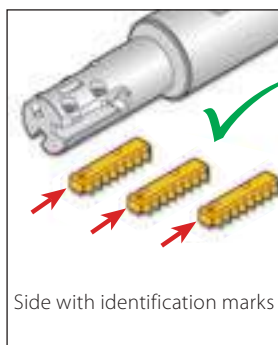
### RTMC - for Standard Threads

#### Spare Parts

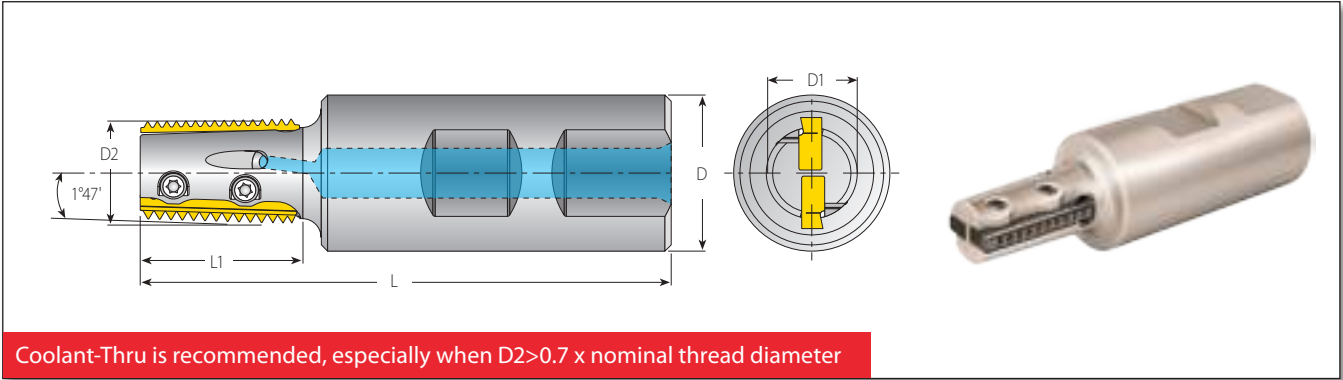
Insert Style	Ordering Code	Dimensions mm					No. of Flutes		
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
25	RTMC2517-26S2	85	26	25	14	17	2	SLD4IP8 (M4x0.7)	<b>KIP8</b> Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM
	RTMC2517-36S2	95	36		14	17	2		
	RTMC2519-32S2	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	-	$\frac{7}{8}$ -10UNS; $\frac{13}{16}$ -12UN; $\frac{7}{8}$ -14UNF; $\frac{3}{4}$ -16UNF; $\frac{3}{4}$ -18UNS; $\frac{3}{4}$ -20UNEF	$\frac{7}{8}$ -11; $\frac{7}{8}$ -12; $\frac{7}{8}$ -14; $\frac{7}{8}$ -16	$\frac{1}{2}$ -14
RTMC2517-36S2							
RTMC2519-32S2	19	M22x2.5 M24x3	M21x1; M21x1.5; M22x2	$\frac{7}{8}$ -9; 1-8	$\frac{7}{8}$ -20UNEF; $\frac{7}{8}$ -18UNS; $\frac{7}{8}$ -16UN; $\frac{7}{8}$ -14UNF; $\frac{7}{8}$ -12UN; $\frac{7}{8}$ -10UNS	$\frac{7}{8}$ -16; $\frac{7}{8}$ -14; $\frac{15}{16}$ -12; $\frac{15}{16}$ -11	$\frac{5}{8}$ -14
RTMC2519-44S2							
RTMC2520-37S3	20.5	M24x3	M22x1; M23x1.5; M23x2; M23.5x2.5	1-8	$\frac{15}{16}$ -9UN; 1-10UNS; $\frac{15}{16}$ -12UN; 1-14UNS; $\frac{15}{16}$ -16UN; $\frac{7}{8}$ -18UNS; $\frac{7}{8}$ -20UNEF	1-11; 1-12; 1-14; 1-16	$\frac{5}{8}$ -14
RTMC2520-44S3							
RTMC2522-43S3	22	M27x3	M24x1; M24x1.5; M25x2; M25x2.5	-	1 $\frac{1}{16}$ -8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; $\frac{15}{16}$ -20UNEF	1-11; 1-12; 1-14; 1-16	$\frac{3}{4}$ -14
RTMC2522-55S3							
RTMC2530-55S5	30	-	M32x1; M32x1.5; M33x2; M33x2.5; M34x3	-	1 $\frac{3}{8}$ -8UN; 1 $\frac{3}{8}$ -9UN; 1 $\frac{3}{8}$ -10UN; 1 $\frac{1}{2}$ -12UN; 1 $\frac{1}{2}$ -14UNS; 1 $\frac{1}{2}$ -16UN; 1 $\frac{1}{2}$ -18UNEF; 1 $\frac{1}{2}$ -20UN	1 $\frac{3}{8}$ -11; 1 $\frac{3}{8}$ -12; 1 $\frac{1}{2}$ -14; 1 $\frac{1}{2}$ -16	1-11
BRTMC2530-80S4							



# Conical Toolholders (MiTM 25)

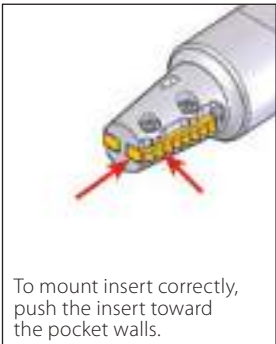
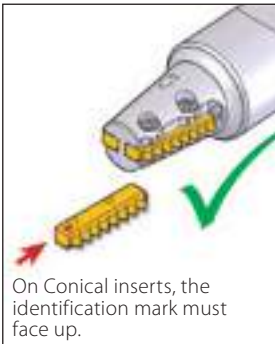


## RTMNC - for Conical Threads

								Spare Parts	
Insert Style	Ordering Code	Dimensions mm			No. of Flutes				
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
25	RTMNC2517-26S2	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 NxM
	RTMNC2522-43S3	102	43	25	18	22.2	3		
	RTMNC2528-43S4	103	43	25	25	28.4	4		

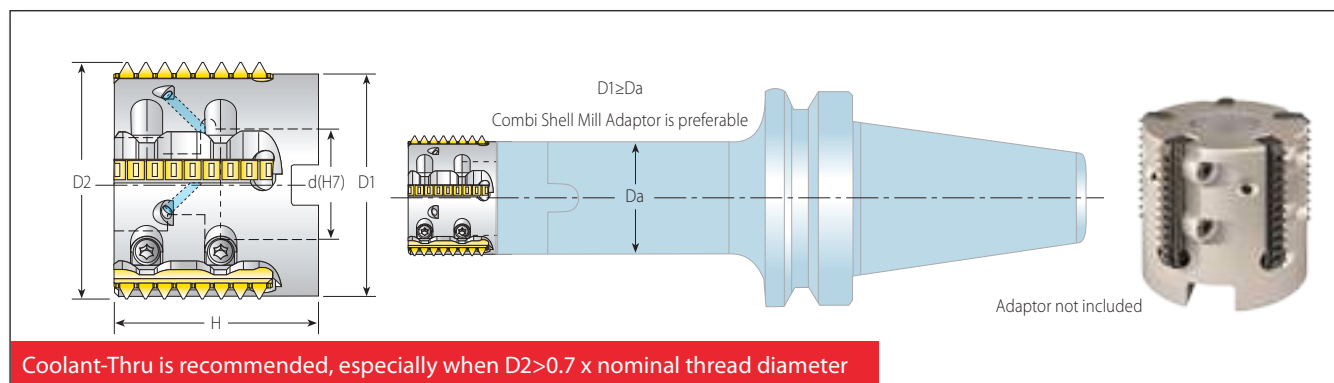
## Conical Thread Application by Toolholder

Toolholder		Thread Dia.		
	D2(mm)	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			
mm		D1	D2	d(H7)	H	Z		Location Screw x2	Torx+ Screwdriver	Holder Screw
Standard	25	RTMC-D36-16-25S5	32	36	16	33.5	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	22	38.0	6			M10x1.50x35
		RTMC-D52-27-25S8	48	52	27	40.0	8			M12x1.75x30
Conical		RTMNC-D36-16-25S5	32	35.9*	16	33.5	5			M8x1.25x35

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

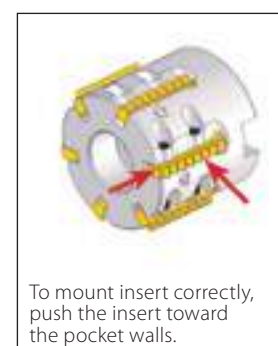
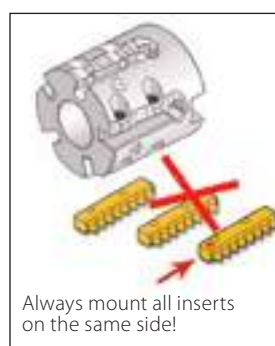
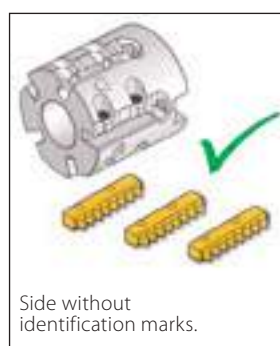
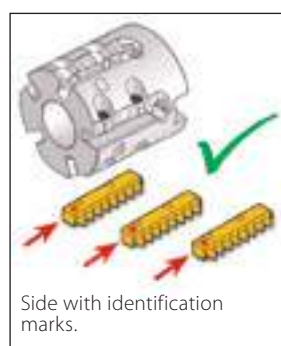
### Standard Thread Applications by Toolholder

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 <sup>1</sup> / <sub>16</sub> -12UN; 1 <sup>1</sup> / <sub>8</sub> -14UNS; 1 <sup>1</sup> / <sub>16</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>7</sup> / <sub>8</sub> -12UN; 1 <sup>3</sup> / <sub>16</sub> -16UN; 1 <sup>3</sup> / <sub>16</sub> -20UN; 1 <sup>1</sup> / <sub>16</sub> -8UN; 1 <sup>7</sup> / <sub>8</sub> -10UNS; 1 <sup>7</sup> / <sub>8</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

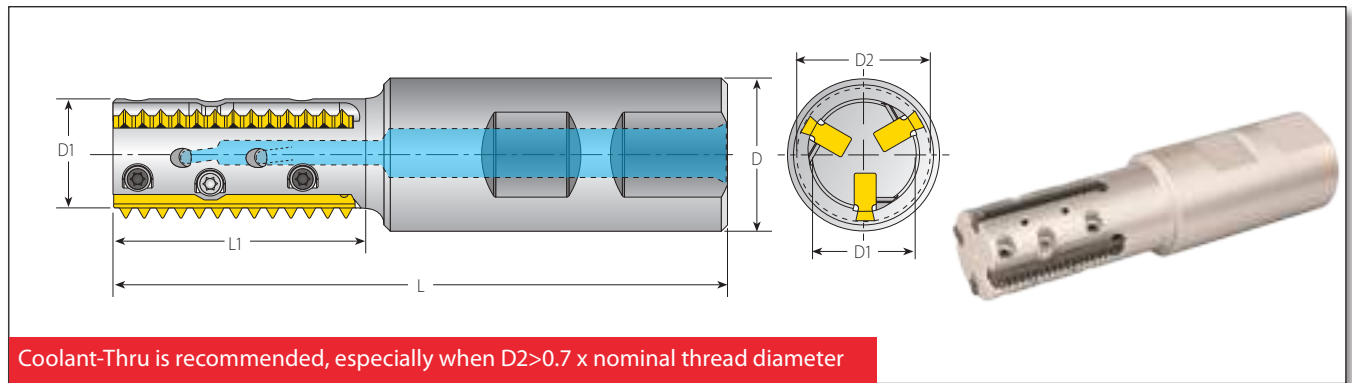
Toolholder		Thread Dia.			
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC-D36-16-25S5	35.9*	1 <sup>1</sup> / <sub>4</sub> -11.5; 1 <sup>1</sup> / <sub>2</sub> -11.5; 2-11.5 2 <sup>1</sup> / <sub>2</sub> -8 (and up)	1 <sup>1</sup> / <sub>4</sub> -11.5; 1 <sup>1</sup> / <sub>2</sub> -11.5; 2-11.5 2 <sup>1</sup>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

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





## Standard Toolholders (MiTM 40)

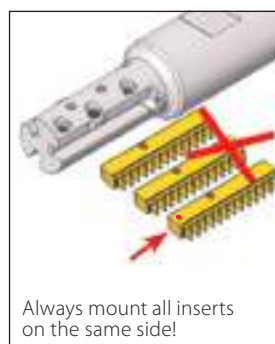


### RTMC - for Standard Threads

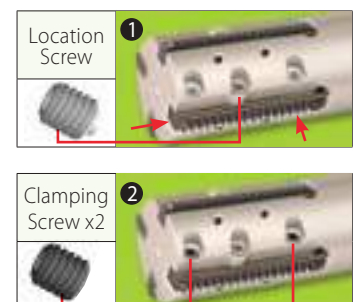
Insert Style	Ordering Code	Dimensions mm						No. of Flutes	Spare Parts		
mm		L	L1	D	D1	D2	Z		Location Screw	Clamping Screw x2	Torx+ Screwdriver
40	RTMC2522-43L3	102	43	25	18	22	3		SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	<b>KIP8</b> Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 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

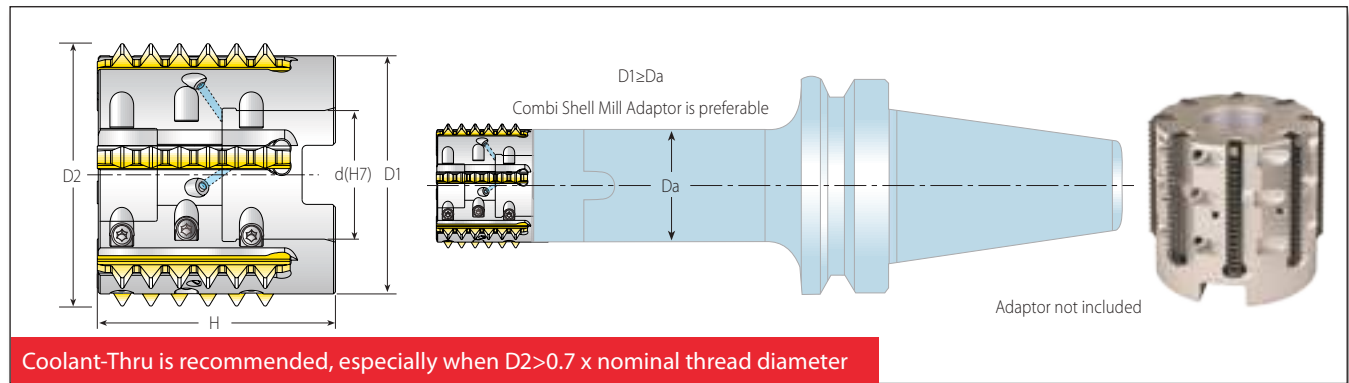
Toolholder		Min. Thread Dia.						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS		BSF	BSP(G)
RTMC2522-43L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 <sup>11</sup> / <sub>16</sub> -8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 1 <sup>5</sup> / <sub>16</sub> -20UNEF		1-11; 1-12; 1-14; 1-16;	¾-14
RTMC2522-65L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 <sup>11</sup> / <sub>16</sub> -8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 1 <sup>5</sup> / <sub>16</sub> -20UNEF		1-11; 1-12; 1-14; 1-16;	¾-14
RTMC3230-55L4	30	-	M32x1; M32x1.5 M33x2; M33x2.5; M34x3	-	1 <sup>3</sup> / <sub>8</sub> -8UN; 1 <sup>3</sup> / <sub>8</sub> -9UN; 1 <sup>3</sup> / <sub>8</sub> -10UN; 1 <sup>1</sup> / <sub>16</sub> -12UN; 1 <sup>3</sup> / <sub>8</sub> -14UNS; 1 <sup>1</sup> / <sub>16</sub> -16UN; 1 <sup>1</sup> / <sub>16</sub> -18UNEF; 1 <sup>1</sup> / <sub>16</sub> -20UN		1 <sup>3</sup> / <sub>8</sub> -11; 1 <sup>3</sup> / <sub>8</sub> -12; 1 <sup>3</sup> / <sub>8</sub> -14; 1 <sup>3</sup> / <sub>8</sub> -16	1-11
BRTMC3230-80L3	30	-	M32x1; M32x1.5 M33x2; M33x2.5; M34x3	-	1 <sup>3</sup> / <sub>8</sub> -8UN; 1 <sup>3</sup> / <sub>8</sub> -9UN; 1 <sup>3</sup> / <sub>8</sub> -10UN; 1 <sup>1</sup> / <sub>16</sub> -12UN; 1 <sup>3</sup> / <sub>8</sub> -14UNS; 1 <sup>1</sup> / <sub>16</sub> -16UN; 1 <sup>1</sup> / <sub>16</sub> -18UNEF; 1 <sup>1</sup> / <sub>16</sub> -20UN		1 <sup>3</sup> / <sub>8</sub> -11; 1 <sup>3</sup> / <sub>8</sub> -12; 1 <sup>3</sup> / <sub>8</sub> -14; 1 <sup>3</sup> / <sub>8</sub> -16	1-11



#### 2 Step Clamping System







## Shell Mill (MiTM 40)



### Conical and Standard Shell Mills

#### Spare Parts

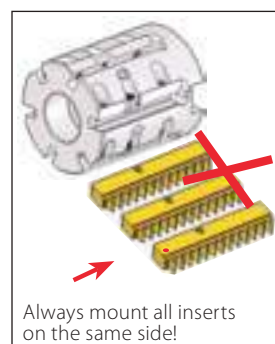
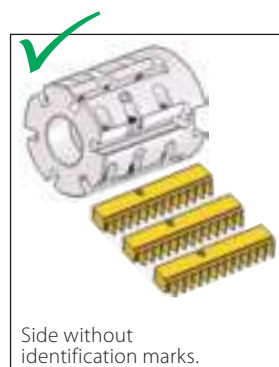
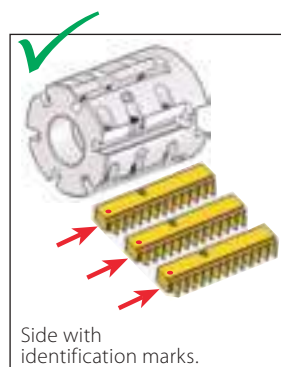
Insert Style		Ordering Code	Dimensions mm				No. of Flutes				
mm			D1	D2	d(H7)	H	Z	Location Screw	Clamping Screw x2	Torx+ Screwdriver	Holder Screw
Standard	40	RTMC-D44-22-40L6	40	44	22	48	6	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 Use the included Vardex Torx+ screwdriver only. Recommended max. torque 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				

### Standard Thread Application by Toolholder

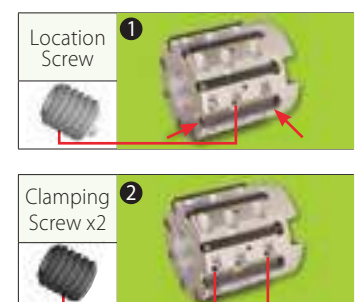
Toolholder			Min. Thread Dia.			
		D2 (mm)	ISO (fine)	UN/UNF/UNEF/UNS	BSW	BSP(G)
Standard	RTMC-D44-22-40L6	44	M48x1; M48x1.5; M48x2; M48x3	1⅞-12UN; 1⅜-16UN; 1⅜-20UN; 1⅝-8UN; 1⅞-10UNS; 1⅞-14UNS	2-16 2-12	1½-11
	RTMC-D52-27-40L8	52	M55x1; M55x1.5; M55x2; M56x3	2¼-8UN; 2¼-10UN; 2¼-12UN; 2¼-14UN; 2¼-16UN; 2¼-18UN; 2¼-20UN	2¼-16 2¼-12	2-11

### Conical Thread Application by Toolholder

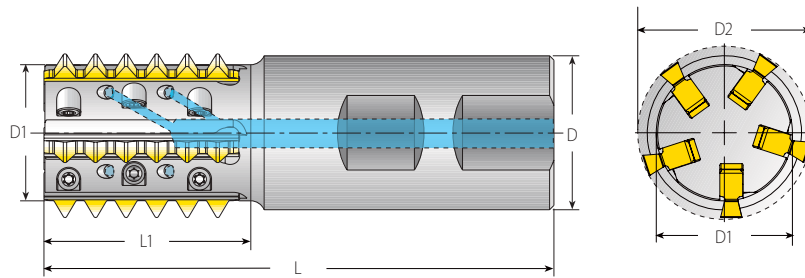
Toolholder			Min. Thread Dia.		
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC-D45-22-40L6	45	2-11.5; 2½-8 (and up)	2-11.5; 2½-8; 3-8	2-6x11



#### 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

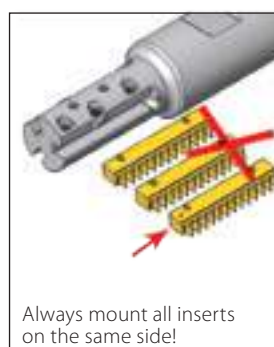
#### Spare Parts

Insert Style	Ordering Code	Dimensions mm					No. of Flutes			
mm		L	L1	D	D1	D2*	Z	Location Screw x2	Clamping Screw	Torx+ Screwdriver
41	RTMC2521-45B1	105	45	25	16.0	21.2	1	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	<b>KIP8</b> Use the included Vardex Torx+ screwdriver only. Recommended max. torque 1.2 NxM
	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			

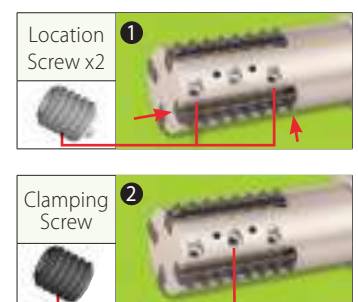
### Standard Thread Application by Toolholder

Toolholder	Min. Thread Dia.							
	D2* (mm)	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 $\frac{1}{8}$ -7; 1 $\frac{1}{4}$ -7; 1 $\frac{3}{8}$ -6; 1 $\frac{1}{2}$ -6	1 $\frac{1}{16}$ -8UN; 1 $\frac{1}{16}$ -6UN	1-8BSW; 1 $\frac{1}{8}$ -7BSW	-	-
RTMC2524-43B2	24.5	M30x3.5; M36x4	M28x3; M45x4	1 $\frac{1}{8}$ -7; 1 $\frac{3}{8}$ -6	1 $\frac{1}{8}$ -8UN; 1 $\frac{1}{16}$ -6UN	1 $\frac{3}{8}$ -8BSF; 1 $\frac{1}{4}$ -7BSW	-	-
RTMC3230-43B3	30.0	M36x4; M42x4.5	M34x3; M34x3.5; M45x4	1 $\frac{3}{8}$ -6	1 $\frac{3}{8}$ -8UN; 1 $\frac{1}{16}$ -6UN	1 $\frac{3}{8}$ -8BSF; 1 $\frac{3}{4}$ -7BSF; 1 $\frac{1}{2}$ -6BSW	-	-
RTMC3230-65B3	30.0	M36x4; M42x4.5	M34x3; M34x3.5; M45x4	1 $\frac{3}{8}$ -6	1 $\frac{3}{8}$ -8UN; 1 $\frac{1}{16}$ -6UN	1 $\frac{3}{8}$ -8BSF; 1 $\frac{3}{4}$ -7BSF; 1 $\frac{1}{2}$ -6BSW	-	-
RTMC3236-43B5	35.9	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1 $\frac{3}{4}$ -5; 2-4.5; 2 $\frac{1}{2}$ -4	1 $\frac{1}{8}$ -8UN; 1 $\frac{1}{8}$ -6UN	1 $\frac{1}{8}$ -8BSF; 1 $\frac{3}{4}$ -7BSF; 1 $\frac{1}{8}$ -6BSF	2 $\frac{1}{2}$ -8	2 $\frac{1}{2}$ -8
RTMC3236-65B4	35.9	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1 $\frac{3}{4}$ -5; 2-4.5; 2 $\frac{1}{2}$ -4	1 $\frac{1}{8}$ -8UN; 1 $\frac{1}{8}$ -6UN	1 $\frac{1}{8}$ -8BSF; 1 $\frac{3}{4}$ -7BSF; 1 $\frac{1}{8}$ -6BSF	2 $\frac{1}{2}$ -8	2 $\frac{1}{2}$ -8

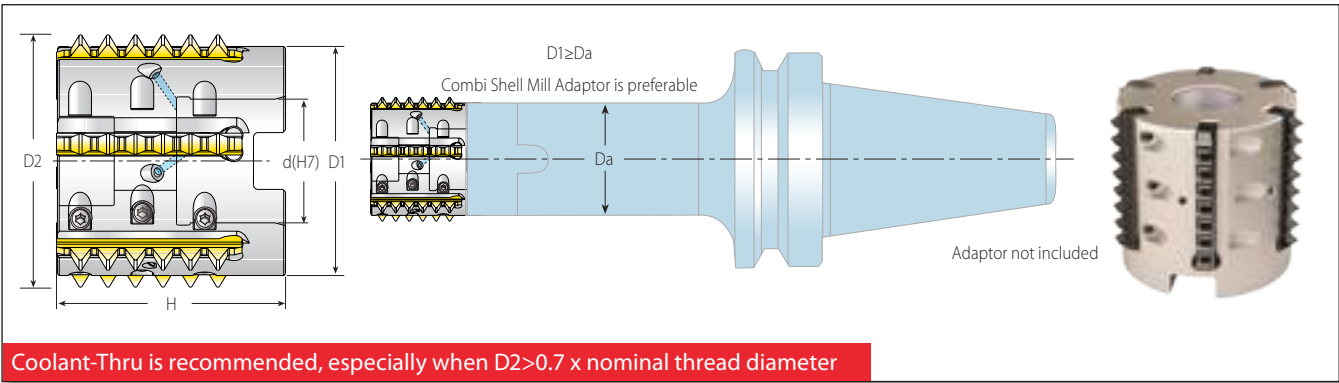
\* For external applications, inserts R41E... use for CNC program (D2+0.6mm).







#### 2 Step Clamping System



# Shell Mill (MiTM 41)



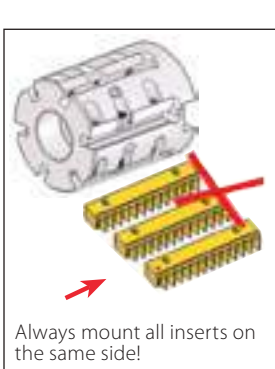
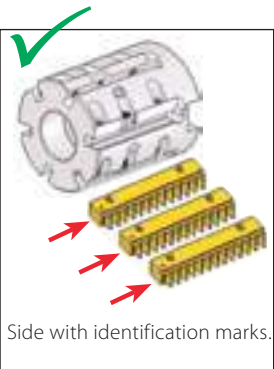
## Standard Shell Mill

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 NxM	M10x1.5x40
	RTMC-D58-27-41B6	50	57.9	27	50	6				M12x1.75x40

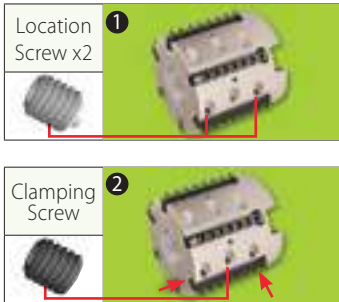
## Standard Thread Application by Toolholder

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)
<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	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
<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</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</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</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 <b>steels and general use.</b>	
<b>VTX</b>	TiAlN coated carbide grade. Ideal for <b>Stainless Steels.</b>	