vargus
NEUMO Ehrenberg Group

MiTM

Super Fast Thread Milling System

METRIC

VARDEX
Advanced Threading Solutions

MiTM

New Family of Thread Milling Tools

The VARDEX Multi-flute Indexable Thread Mill (MiTM), reduces cycle time on machining of threads with long inserts in a variety of holder styles.

MiTM 24 (M)

For Small 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

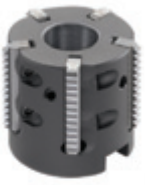
Standard

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) 2-5
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

MiTM CATALOG

TM Gen Software and updated versions can be downloaded from www.vargus.com

MiTM 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	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)

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	20, 25, 32	13.6 - 36

6 - Tool Overhang [mm]	7 - Insert Style	8 - No. of Flutes
26 - 80	M - 24 S - 25 L - 40 B - 41	1 - 5

MiTM Shell Mill

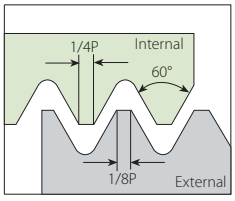
R	TM	C		D36	16	-	25S	5
1	2	3		4	5		6	7

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

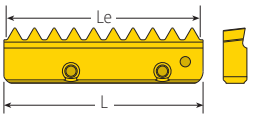
6 - Insert Style	7 - No. of Flutes
25S 40L 41B	5 - 8

ISO Metric

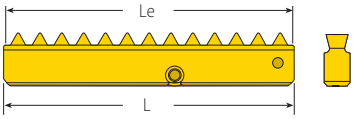
External** / Internal



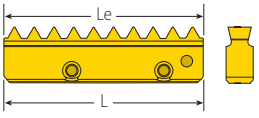
Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



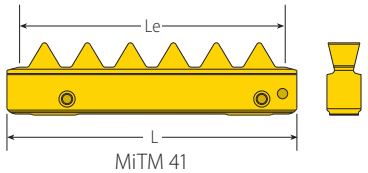
MiTM 24



MiTM 40



MiTM 25



MiTM 41

Standard MiTM

L	Pitch	Ordering Code		Cutting Edge		Teeth	Toolholder
mm	mm	External	Internal		Le	Zt	
24	0.50		R24I0.50ISOTM…	1	24.50	49	RTMC….M
	0.75		R24I0.75ISOTM…	1	24.75	33	
	1.00		R24I1.00ISOTM…	1	24.00	24	
	1.25		R24I1.25ISOTM…	1	25.00	20	
	1.50		R24I1.50ISOTM…	1	24.00	16	
	1.75		R24I1.75ISOTM…	1	24.50	14	
	2.00		R24I2.00ISOTM…	1	24.00	12	
	2.50		R24I2.50ISOTM…	1	25.00	10	
25	1.00	R25E1.00ISOTM...	R25I1.00ISOTM...	2	24.00	24	(B)RTMC….S
	1.50	R25E1.50ISOTM...	R25I1.50ISOTM...	2	24.00	16	
	2.00	R25E2.00ISOTM...	R25I2.00ISOTM...	2	24.00	12	
	2.50	R25E2.50ISOTM...	R25I2.50ISOTM...	2	25.00	10	
	3.00	*R25E3.00ISOTM...	*R25I3.00ISOTM...	2	24.00	8	* See note below
40	1.00		R40I1.00ISOTM...	2	39.00	39	(B)RTMC….L
	1.50		R40I1.50ISOTM...	2	39.00	26	
	2.00		R40I2.00ISOTM...	2	38.00	19	
	2.50		R40I2.50ISOTM...	2	37.50	15	
	3.00		R40I3.00ISOTM...	2	39.00	13	
41	3.00	R41E3.00ISOTM…	R41I3.00ISOTM…	2	39.00	13	RTMC….B
	3.50	R41E3.50ISOTM…	R41I3.50ISOTM…	2	38.50	11	
	4.00	R41E4.00ISOTM…	R41I4.00ISOTM…	2	40.00	10	
	4.50	R41E4.50ISOTM…	R41I4.50ISOTM…	2	40.50	9	
	5.00	R41E5.00ISOTM…	R41I5.00ISOTM…	2	40.00	8	
	5.50	R41E5.50ISOTM…	R41I5.50ISOTM…	2	38.50	7	
	6.00	R41E6.00ISOTM…	R41I6.00ISOTM…	2	36.00	6	

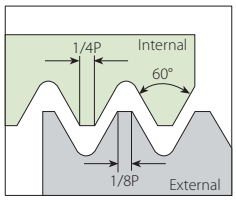
* Note: 3.00 ISO inserts do not fit into toolholder RTMC2517....
For external insert 3.0 ISO use for CNC program (D2 + 0.5mm)

**For External Applications - $\frac{\text{Thread Nominal Dia.}}{\text{Tool Cutting Dia. (D2)}}$ = 0.75 minimum

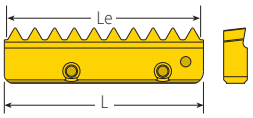
MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I2.00ISOTM(S)…

American UN

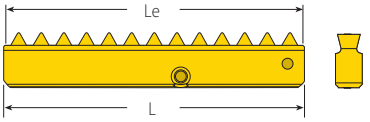
External** / Internal



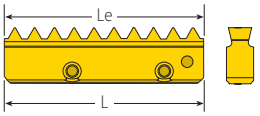
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



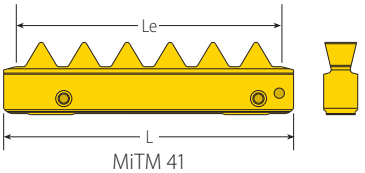
MiTM 24



MiTM 40



MiTM 25



MiTM 41

Standard MiTM

	L	Pitch	Ordering Code		Cutting Edge		Teeth	Toolholder
	mm	tpi	External	Internal		Le	Zt	
	24	32		R24I32UNTM…	1	24.61	31	RTMC….M
		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	(B)RTMC….S
		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	* See note below
		8	*R25E8UNTM…	*R25I8UNTM…	2	22.22	7	
	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	

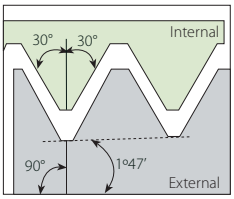
* Note: 8 UN & 9 UN inserts do not fit into toolholder RTMC2517….
For external insert 8 UN use for CNC program (D2 + 0.5mm)

**For External Applications - $\frac{\text{Thread Nominal Dia.}}{\text{Tool Cutting Dia. (D2)}}$ = 0.75 minimum

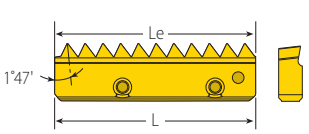
MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25I20UNTM(S)…

NPT

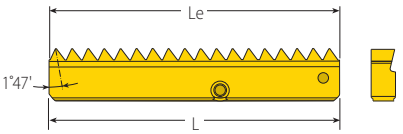
External / Internal



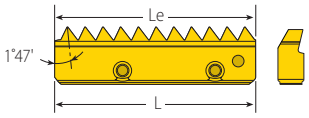
Defined by: USAS B2.1:1968
Tolerance class: Standard NPT



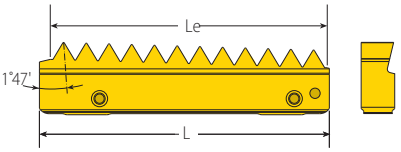
MiTM 24



MiTM 40



MiTM 25



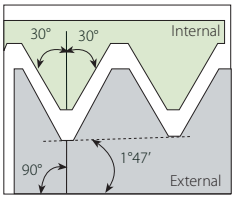
MiTM 41

Standard MiTM

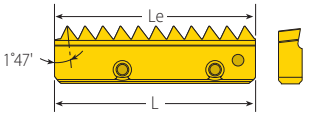
L	Pitch	Ordering Code	Cutting Edge		Teeth	Toolholder
mm	tpi	External+ Internal		Le	Zt	
24	18	R24EI18NPTTM…	1	23.99	17	RTMNC....M
25	14	R25EI14NPTTM...	1	23.58	13	RTMNC....S
	11.5	R25EI11.5NPTTM...	1	24.30	11	
	8	R25EI8NPTTM...	1	22.22	7	RTMNC-D36-16-25S5
40	11.5	R40EI11.5NPTTM...	1	37.55	17	RTMNC-D45-22-40L6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

NPTF

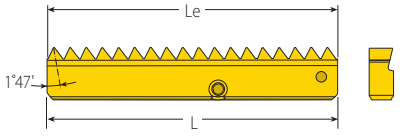
External / Internal



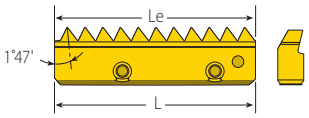
Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF



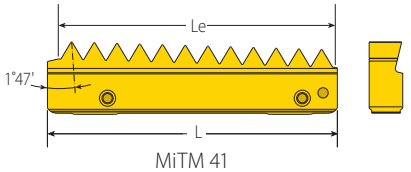
MiTM 24



MiTM 40



MiTM 25



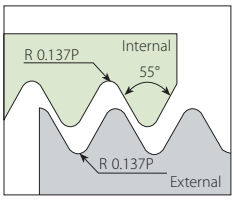
MiTM 41

Standard MiTM

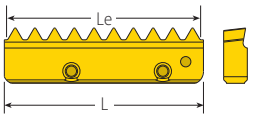
L	Pitch	Ordering Code	Cutting Edge		Teeth	Toolholder
mm	tpi	External+ Internal		Le	Zt	
24	18	R24EI18NPTFTM…	1	23.99	17	RTMNC....M
25	14	R25EI14NPTFTM...	1	23.58	13	RTMNC....S
	11.5	R25EI11.5NPTFTM...	1	24.30	11	
	8	R25EI8NPTFTM...	1	22.22	7	RTMNC-D36-16-25S5
40	11.5	R40EI11.5NPTFTM...	1	37.55	17	RTMNC-D45-22-40L6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

Whitworth for BSF, BSP

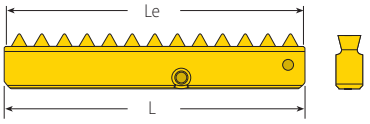
External / Internal



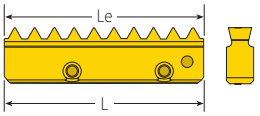
Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium Class A



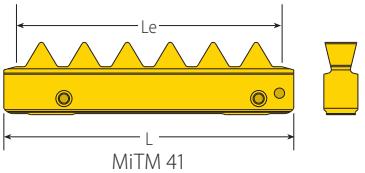
MiTM 24



MiTM 40



MiTM 25



MiTM 41

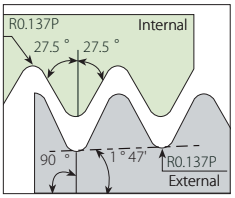
Standard MiTM

L	Pitch	Ordering Code		Cutting Edge		Teeth	Toolholder
mm	tpi	External+ Internal	Internal		Le	Zt	
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	

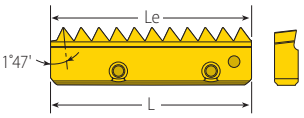
MiTM inserts 25, 40 and 41 are offered with 2 cutting edges. In case of chip flow difficulty, inserts with a single cutting edge can be ordered by request. Example: R25EI16WTM(S)…

BSPT

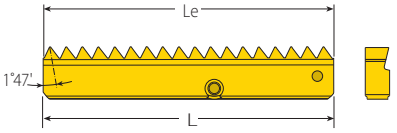
External / Internal



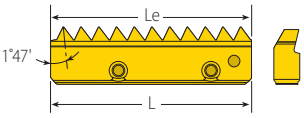
Defined by: B.S. 21:1985
Tolerance class: Standard BSPT



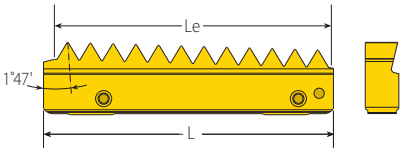
MiTM 24



MiTM 40



MiTM 25



MiTM 41

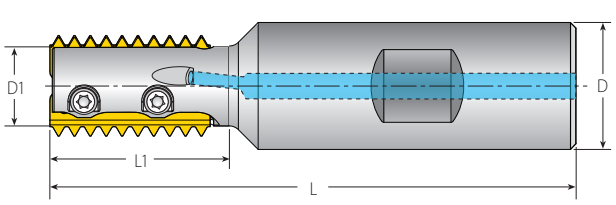
Standard MiTM

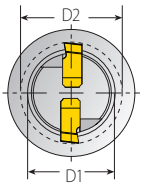
L	Pitch	Ordering Code	Cutting Edge	Teeth		Toolholder
mm	tpi	External+ Internal		Le	Zt	
24	19	R24EI19BSPTTM…	1	24.06	18	RTMNC 2014-26M1
25	14	R25EI14BSPTTM...	1	23.58	13	RTMNC....S
	11	R25EI11BSPTTM...	1	23.09	10	
40	11	R40EI11NPTTM...	1	39.25	17	RTMNC-D45-22-40L6

Plug Insert

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

Standard Toolholders (MiTM 24)





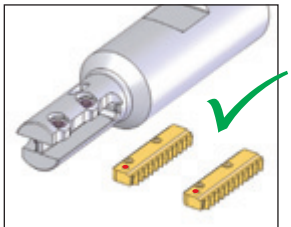
Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

RTMC - for Standard Threads

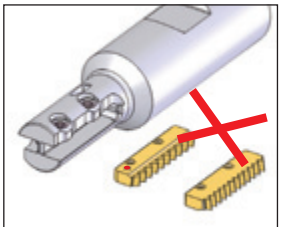
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes	Spare Parts	
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
24	RTMC 2013-26M1	82	26	20	10.7	13.6	1	SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM
	RTMC 2015-30M1	85	30	20	11.9	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

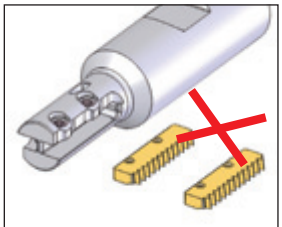
Toolholder	Min. Thread Ø						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC 2013-26M1	13.6	M16x2	M14.5x0.5; M15X0.75; M15x1; M15x1.25; M16x1.5; M16x1.75	-	11/16-12UN; 5/8-14UNS; 5/8-16UN; 5/8-18UNF; 5/8-20UN; 5/8-24UNEF; 5/8-28UN; 5/8-32UN	11/16-14; 3/4-12	3/8-19
RTMC 2015-30M1	15.1	M18x2.5	M16x0.5; M17X0.75; M17x1; M17x1.25; M17x1.5; M18x1.75; M18x2	3/4-10	3/4-12UN; 3/4-14UNS; 11/16-16UN; 11/16-20UN; 11/16-24UNEF; 11/16-28UN; 11/16-32UN	3/4-12	-
RTMC 2016-28M2	16	M20x2.5	M17x0.5; M17x0.75; M18x1; M18x1.25; M18x1.5; M18x1.75; M19x2	3/4-10	3/4-12UN; 3/4-14UNS; 3/4-16UN; 3/4-18UNS; 3/4-20UNEF; 11/16-24UNEF; 11/16-28UN; 11/16-32UN	3/4-12	-
RTMC 2016-36M1	16	M20x2.5	M17x0.5; M17x0.75; M18x1; M18x1.25; M18x1.5; M18x1.75; M19x2	3/4-10	3/4-12UN; 3/4-14UNS; 3/4-16UN; 3/4-18UNS; 3/4-20UNEF; 11/16-24UNEF; 11/16-28UN; 11/16-32UN	3/4-12	-



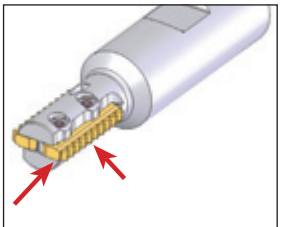
Side with identification marks



Always mount all inserts with identification marks face up

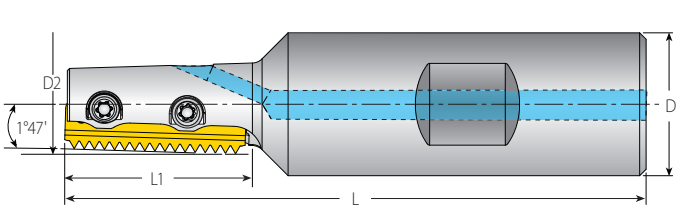


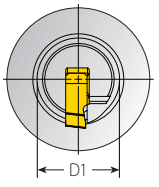
Side without identification marks



To mount insert correctly, push the insert toward the pocket walls.

Conical Toolholders (MiTM 24)





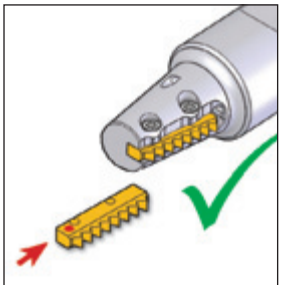
Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

RTMC - for Standard Threads

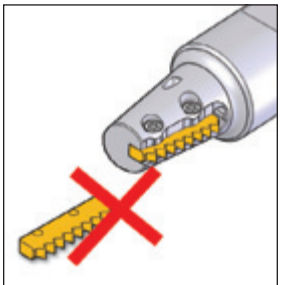
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes	Spare Parts	
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
24	RTMNC 2014-26M1	81	26	20	11.5	13.9	1	SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM

Standard Thread Application by Toolholder

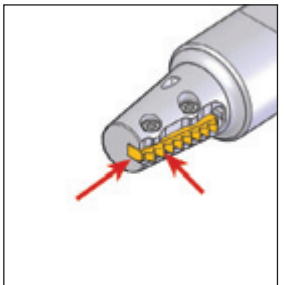
Toolholder				
	D2 (mm)	NPT	NPTF	BSPT
RTMNC 2014-26M1	13.9	⅜-18	⅜-18	⅜-19



On Conical inserts, the identification mark must face up

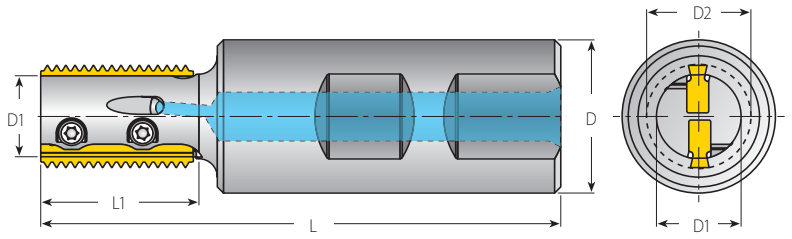


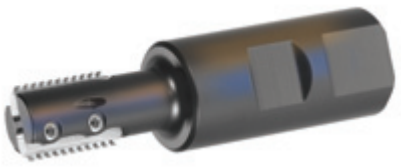
Side without identification marks



To mount insert correctly, push the insert toward the pocket walls

Standard Toolholders (MiTM 25)





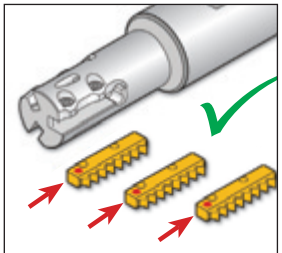
Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

RTMC - for Standard Threads

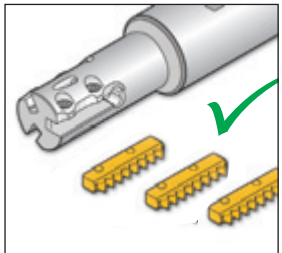
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes	Spare Parts	
									
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
25	RTMC 2517-26S2	85	26	25	14	17	2	SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM
	RTMC 2517-36S2	95	36		14	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

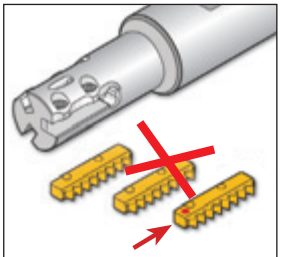
Toolholder	Min.Thread Ø						
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC 2517-26S2 RTMC 2517-36S2	17	M20x2.5	M19x1; M19x1.5; M20x2	-	⅞-10UNS; 13⁄16-12UN; ⅞-14UNF; ¾-16UNF; ¾-18UNS; ¾-20UNEF	⅞-11; ⅞-12; ⅞-14; ⅞-16	½-14
RTMC 2519-32S2 RTMC 2519-44S2	19	M22x2.5 M24x3	M21x1; M21x1.5; M22x2	⅞-9; 1-8	⅞-20UNEF; ⅞-18UNS; ⅞-16UN; ⅞-14UNF; ⅞-12UN; ⅞-10UNS	⅞-16; ⅞-14; 15⁄16-12; 15⁄16-11	⅝-14
RTMC 2520-37S3 RTMC 2520-44S3	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; ⅞-18UNS; ⅞-20UNEF	1-11; 1-12; 1-14; 1-16	⅝-14
RTMC 2522-43S3 RTMC 2522-55S3	22	M27x3	M24x1; M24x1.5; M25x2; M25x2.5	-	1 11⁄16-8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 15⁄16-20UNEF	1-11; 1-12; 1-14; 1-16	¾-14
RTMC 2530-55S5 BRTMC 2530-80S4	30	-	M32x1; M32x1.5; M33x2; M33x2.5; M34x3	-	1⅜-8UN; 1⅜-9UN; 1⅜-10UN; 1 5⁄16-12UN; 1⅜-14UNS; 1 5⁄16-16UN; 1 5⁄16-18UNEF; 1 5⁄16-20UN	1⅜-11; 1⅜-12; 1⅜-14; 1⅜-16	1-11



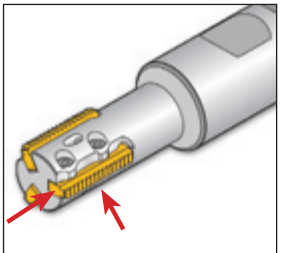
Side with identification marks



Side without identification marks

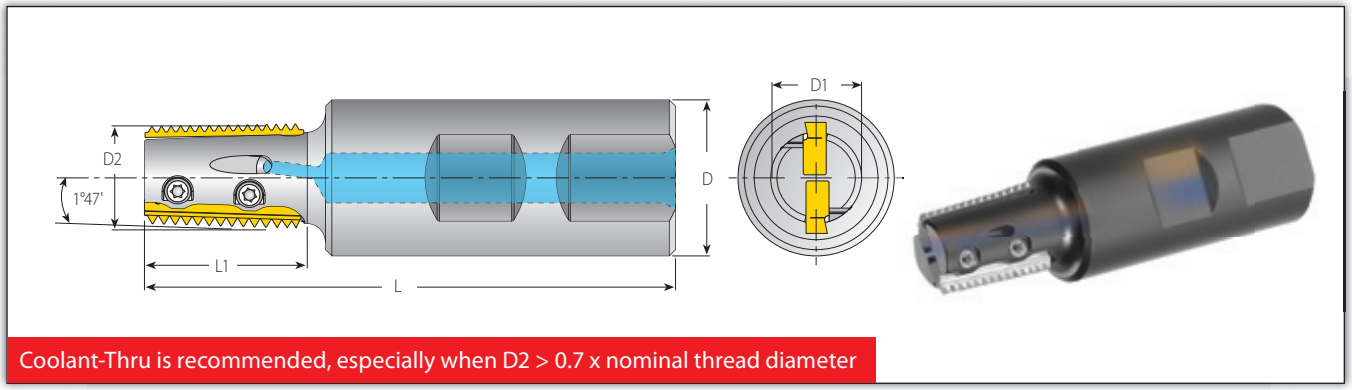


Always mount all inserts with identification marks on the same side



To mount insert correctly, push the insert toward the pocket walls.

Conical Toolholders (MiTM 25)



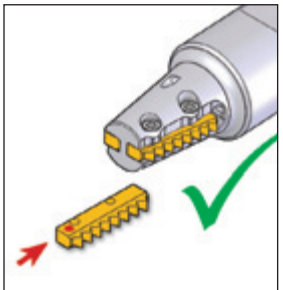
Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

RTMNC - for Conical Threads

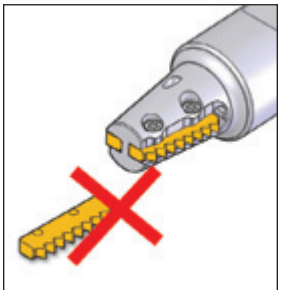
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes	Spare Parts	
									
mm		L	L1	D	D1	D2	Z	Location Screw x2	Torx+ Screwdriver
25	RTMNC 2517-26S2	85	26	25	14	17	2	SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM
	RTMNC 2522-43S3	102	43	25	18	22	3		
	RTMNC 2528-43S4	103	43	25	26	28	4		

Conical Thread Application by Toolholder

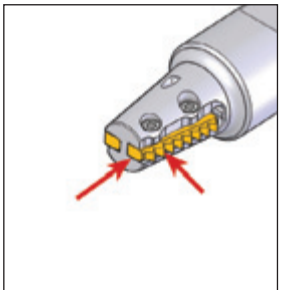
Toolholder		Thread Ø		
	D2(mm)	NPT	NPTF	BSPT
RTMNC 2517-26S2	17	½-14; ¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	½ -14; ¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	½ -14; ¾-14
RTMNC 2522-43S3	22	¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	¾-14; 1-11.5; 1¼-11.5; 1½-11.5; 2-11.5	¾-14; 1-11; 1¼-11; 1½-11; 2-11; 2½-11; 3-11; 4-11; 5-11; 6-11
RTMNC 2528-43S4	28	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



On Conical inserts, the identification mark must face up

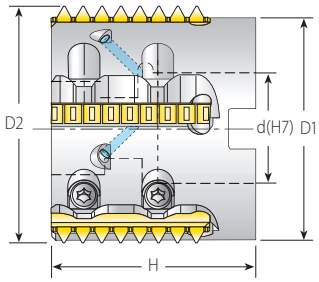


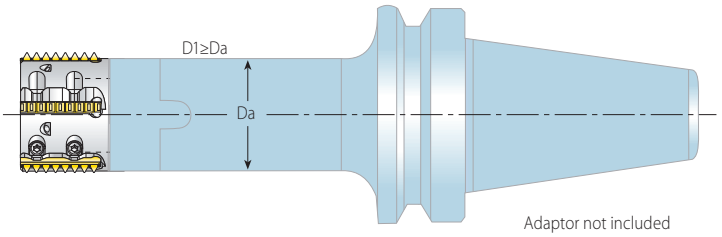
Side without identification marks



To mount insert correctly, push the insert toward the pocket walls

Shell Mill (MiTM 25)





Adaptor not included

Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

Conical and Standard Shell Mills

	Insert Style	Ordering Code	Dimensions (mm)				No. of Flutes
	mm		D1	D2	d(H7)	H	Z
Standard	25	RTMC D36-16-25S5	32	36	16	33.5	5
Standard	25	RTMC D44-22-25S6	40	44	22	38	6
Standard	25	RTMC D52-27-25S8	48	52	27	40	8
Conical	25	RTMNC D36-16-25S5	32	36*	16	33.5	5

Spare Parts

		
Location Screw x2	Torx+ Screwdriver	Holder Screw
SLD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM	M8x1.25x30
		M10x1.50x35
		M12x1.75x30
		M8x1.25x30

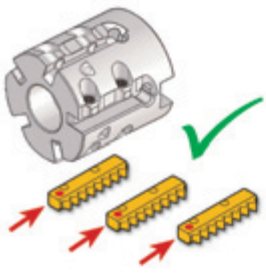
* For inserts 8NPT and 8NPTF use for CNC program (D2+0.6mm)

Standard Thread Applications by Toolholder

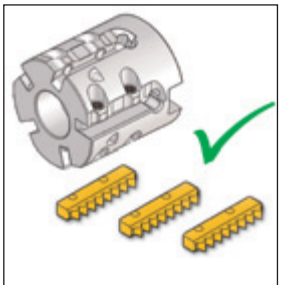
Toolholder			Min. Thread Ø			
		D2(mm)	ISO (fine)	UN/UNF/UNEF/UNS	BSW	BSP(G)
Standard	RTMC D36-16-25S5	36	M38x1; M39x1.5; M39x2; M40x3	1 9/16-12UN; 1 5/8-14UNS; 1 9/16-16UN; 1 1/2-18UNEF; 1 1/2-20UN	1 3/4-16 1 3/4-12	1 1/4-11
Standard	RTMC D44-22-25S6	44	M48x1; M48x1.5; M48x2; M48x3	1 7/8-12UN; 1 13/16-16UN; 1 13/16-20UN; 1 15/16-8UN; 1 7/8-10UNS; 1 7/8-14UNS	2-16 2-12	1 1/2-11
Standard	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

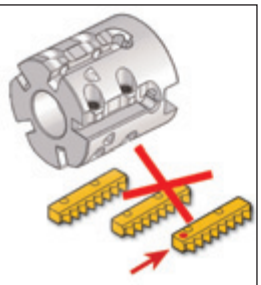
Toolholder			Thread Ø		
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC D36-16-25S5	36	1 1/4-11.5; 1 1/2-11.5; 2-11.5 2 1/2-8 (and up)	1 1/4-11.5; 1 1/2-11.5; 2-11.5 2 1/2-8; 3-8	1 1/2-6x11



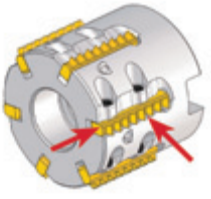
Side with identification marks



Side without identification marks

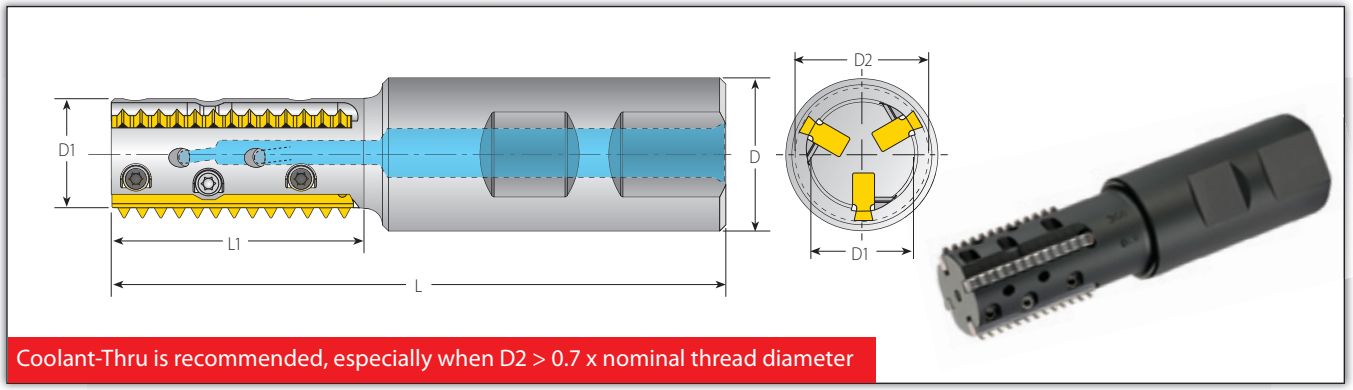


Always mount all inserts on the same side!



To mount insert correctly, push the insert toward the pocket walls.

Standard Toolholders (MiTM 40)



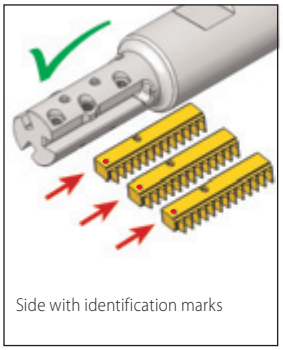
Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

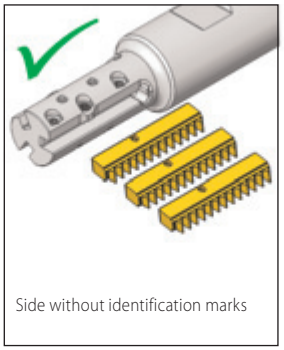
RTMC - for Standard Threads

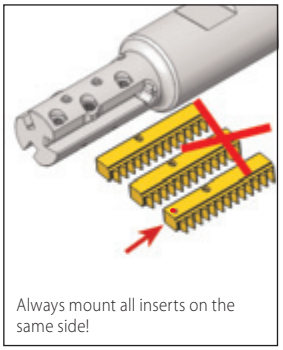
Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes	Spare Parts		
mm		L	L1	D	D1	D2	Z	Location Screw	Clamping Screw x2	Torx+ Screwdriver
40	RTMC 2522-43L3	102	43	25	18	22	3	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM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

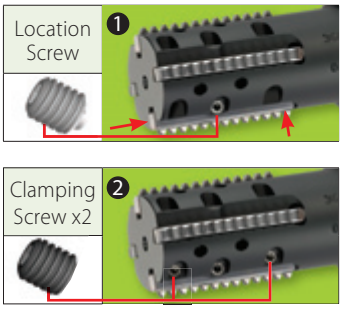
Toolholder		Min. Thread Ø					
	D2 (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	BSP(G)
RTMC 2522-43L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 11/16-8UN; 1-9UN; 1-10UNS; 1-12UNF; 1-14UNS; 1-16UN; 1-18UN; 1 5/16-20UNEF	1-11; 1-12; 1-14; 1-16;	¾-14
RTMC 2522-65L3	22	M27x3	M24x1; M24x1.5 M25x2; M25x2.5	-	1 11/16-8UN; 1-9UN; 1-10UNS; 1-12UNF 1-14UNS; 1-16UN; 1-18UN; 1 5/16-20UNEF	1-11; 1-12; 1-14; 1-16;	¾-14
RTMC 3230-55L4	30	-	M32x1; M32x1.5 M33x2; M33x2.5; M34x3	-	1 3/8-8UN; 1 3/8-9UN; 1 3/8-10UN; 1 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 3230-80L3	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 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


Side with identification marks

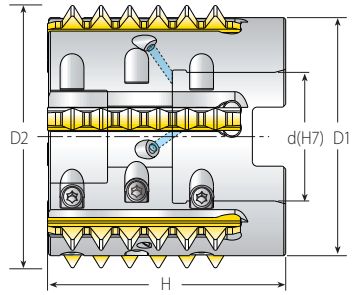

Side without identification marks

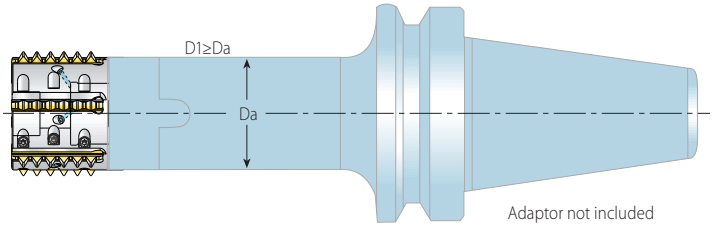

Always mount all inserts on the same side!

2 Step Clamping System!



Shell Mill (MiTM 40)





Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

Conical and Standard Shell Mills

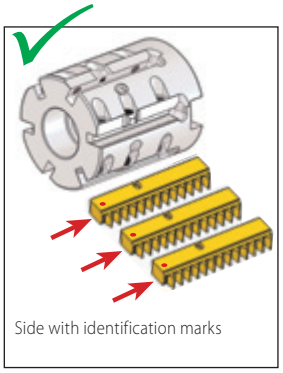
	Insert Style	Ordering Code	Dimensions (mm)				No. of Flutes	Spare Parts			
	mm		D1	D2	d(H7)	H	Z	Location Screw	Clamping Screw x2	Torx+ Screwdriver	Holder Screw
Standard	40	RTMC D44-22-40L6	40	44	22	48	6	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended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

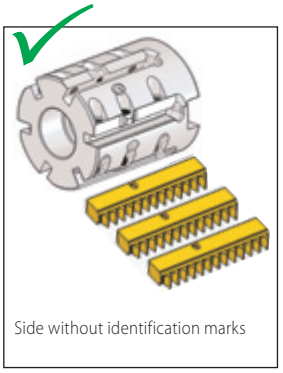
Standard Thread Application per Toolholder

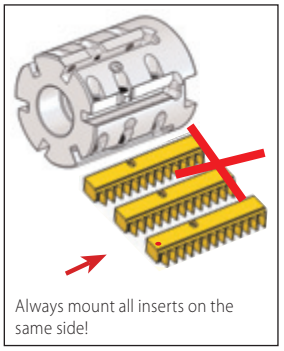
Toolholder			Min. Thread Ø			
		D2 (mm)	ISO (fine)	UN/UNF/UNEF/UNS	BSW	BSP(G)
Standard	RTMC D44-22-40L6	44	M48x1; M48x1.5; M48x2; M48x3	1⅞-12UN; 1 13/16-16UN; 1 13/16-20UN; 1 15/16-8UN; 1⅞-10UNS; 1⅞-14UNS	2-16 2-12	1½-11
Standard	RTMC D52-27-40L8	52	M55x1; M55x1.5; M55x2; M56x3	2¼-8UN; 2¼-10UN; 2¼-12UN; 2¼-14UN; 2¼-16UN; 2¼-18UN; 2¼-20UN	2¼-16 2¼-12	2-11

Conical Thread Application by Toolholder

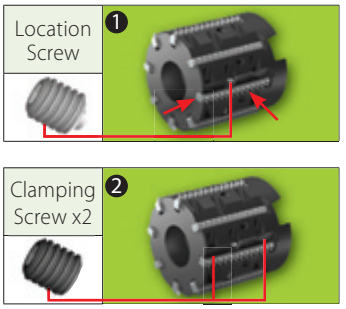
Toolholder			Min. Thread Ø		
		D2 (mm)	NPT	NPTF	BSPT
Conical	RTMNC D45-22-40L6	45	2-11.5; 2½-8 (and up)	2-11.5; 2½-8; 3-8	2-6x11


Side with identification marks

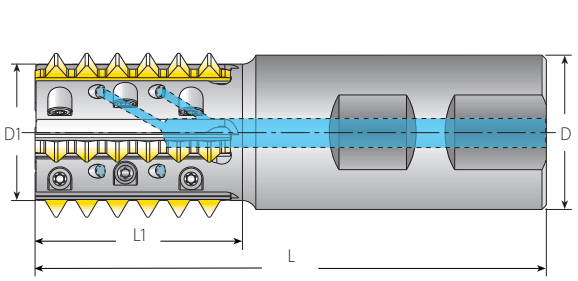

Side without identification marks

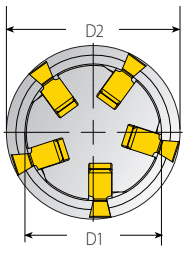

Always mount all inserts on the same side!

2 Step Clamping System!



Standard Toolholders (MiTM 41)





Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

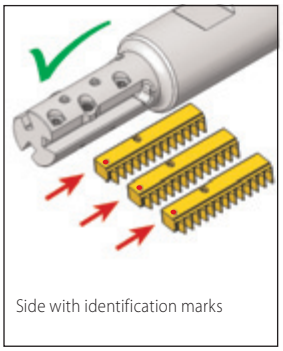
RTMC - for Standard Threads

Insert Style	Ordering Code	Dimensions (mm)					No. of Flutes	Spare Parts		
										
mm		L	L1	D	D1	D2*	Z	Location Screw x2	Clamping Screw	Torx+ Screwdriver
41	RTMC 2524-43B2	104	43	25	19.2	24.5	2	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM
	RTMC 3230-43B3	106.5	43	32	24.2	30	3			
	RTMC 3230-65B3	128.5	65	32	24.2	30	3			
	RTMC 3236-43B5	106	43	32	28.3	36	5			
	RTMC 3236-65B4	128	65	32	28.3	36	4			

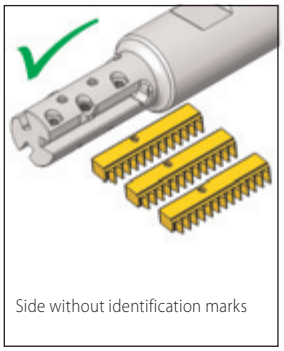
Standard Thread Application by Toolholder

Toolholder		Min. Thread Ø						
	D2* (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSW/BSF	NPT	NPTF
RTMC 2524-43B2	24.5	M30x3.5; M36x4	M28X3; M45x4	1⅛-7; 1⅜-6	1⅛-8UN; 1⁷⁄₁₆-6UN	1⅜-8BSF; 1¼-7BSW	-	-
RTMC 3230-43B3	30	M36x4; M42x4.5	M34X3; M34x3.5; M45x4	1⅜-6	1⅜-8UN; 1⁷⁄₁₆-6UN	1⅜-8BSF; 1¾-7BSF; 1½-6BSW	-	-
RTMC 3230-65B3	30	M36x4; M42x4.5	M34X3; M34x3.5; M45x4	1⅜-6	1⅜-8UN; 1⁷⁄₁₆-6UN	1⅜-8BSF; 1¾-7BSF; 1½-6BSW	-	-
RTMC 3236-43B5	36	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1¾-5; 2-4.5; 2½-4	1⅝-8UN; 1⅝-6UN	1⅝-8BSF; 1¾-7BSF; 1⅞-6BSF	2½-8	2½-8
RTMC 3236-65B4	36	M42x4.5; M48x5; M56x5.5; M64x6	M40x3; M40x3.5; M42x4; M70x6	1¾-5; 2-4.5; 2½-4	1⅝-8UN; 1⅝-6UN	1⅝-8BSF; 1¾-7BSF; 1⅞-6BSF	2½-8	2½-8

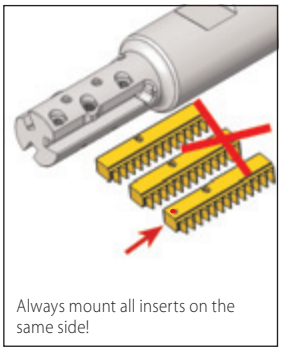
* For external applications, inserts R41E... use for CNC program (D2+0.6mm)



Side with identification marks

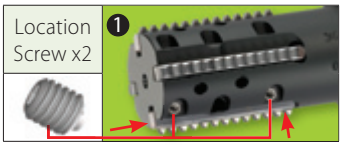


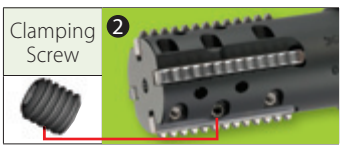
Side without identification marks



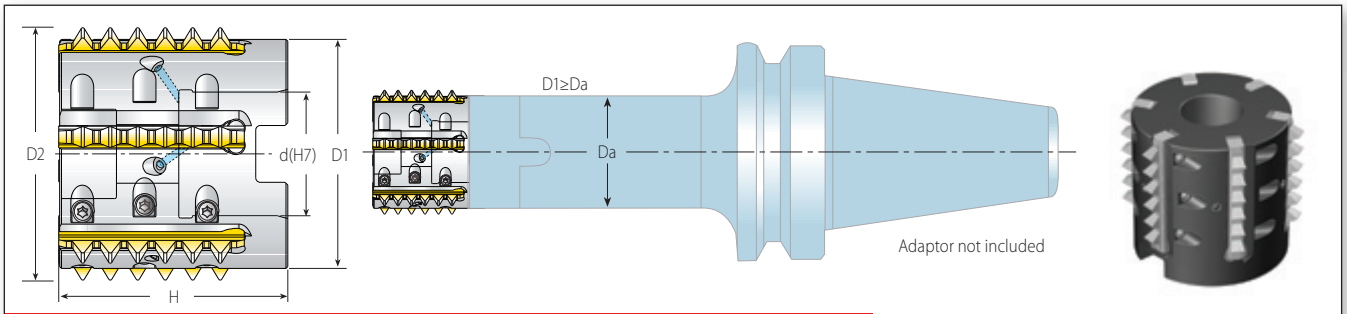
Always mount all inserts on the same side!

2 Step Clamping System!





Shell Mill (MiTM 41)



Coolant-Thru is recommended, especially when D2 > 0.7 x nominal thread diameter

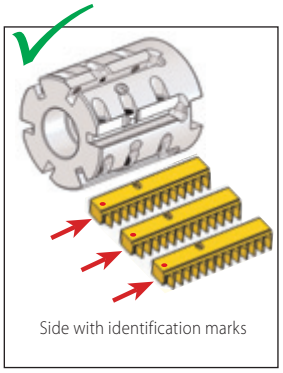
Standard Shell Mill

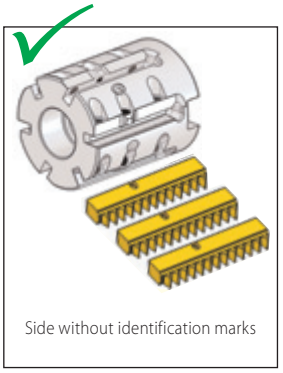
Insert Style	Ordering Code	Dimensions (mm)				No. of Flutes	Spare Parts			
										
mm		D1	D2*	d(H7)	H	Z	Location Screw x2	Clamping Screw	Torx+ Screwdriver	Holder Screw
41	RTMC D48-22-41B5	40	48	22	50	5	SLD4IP8A (M4x0.7)	SCD4IP8 (M4x0.7)	KIP8 •Use the included Vardex Torx+ screwdriver only •Recommended max. torque 1.2 NxM	M10x1.5x40
	RTMC D58-27-41B6	50	58	27	50	6				M12x1.75x40

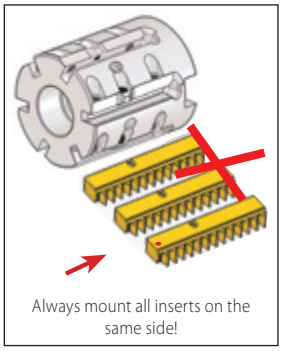
Standard Thread Application by Toolholder

Toolholder		Min. Thread Ø						
	D2* (mm)	ISO (coarse)	ISO (fine)	UNC	UN/UNF/UNEF/UNS	BSF	NPT	NPTF
RTMC D48-22-41B5	48	M56x5.5; M64X6	M55x4; M70x6;	2¼-4.5; 2½-4	2⅛-8UN; 2⅛-6UN	2¼-8; 2¼-6	2½-8	2½-8
RTMC D58-27-41B6	58	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)


Side with identification marks


Side without identification marks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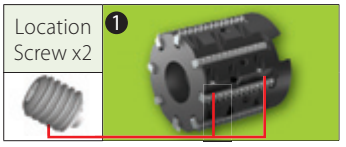
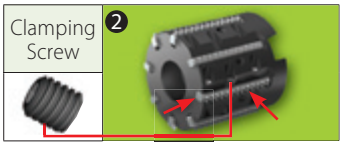
2 Step Clamping System!





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

Material Group	Vardex No.	Material		Hardness Brinell HB	Vc [mm/min]		Feed f[mm/tooth]
					VBX	VTX	f
P Steel	1	Unalloyed steel	Low carbon (C=0.1-0.25%)	125	100-210	90-180	0.1-0.35
	2		Medium carbon (C=0.25-0.55%)	150	100-180	90-170	0.1-0.4
	3		High Carbon (C=0.55-0.85%)	170	100-170	90-160	0.1-0.35
	4	Low alloy steel (alloying elements≤5%)	Non hardened	180	90-60	90-155	0.1-0.4
	5		Hardened	275	80-150	80-160	0.1-0.35
	6		Hardened	350	70-140	70-150	0.1-0.3
	7	High alloy steel (alloying elements>5%)	Annealed	200	60-130	70-115	0.1-0.35
	8		Hardened	325	70-110	60-100	0.1-0.2
	9	Cast steel	Low alloy (alloying elements <5%)	200	100-170	100-170	0.1-0.3
	10		High alloy (alloying elements >5%)	225	70-120	70-130	0.1-0.2
M Stainless Steel	11	Stainless steel Feritic	Non hardened	200	100-170	120-180	0.1-0.3
	12		Hardened	330	100-170	120-180	0.1-0.2
	13	Stainless steel Austenitic	Austenitic	180	70-140	100-140	0.1-0.3
	14		Super Austenitic	200	70-140	100-140	0.1-0.2
	15	Stainless steel Cast Feritic	Non hardened	200	70-140	100-140	0.1-0.3
	16		Hardened	330	70-140	100-140	0.1-0.2
	17	Stainless steel Cast austenitic	Austenitic	200	70-120	100-120	0.1-0.3
	18		Hardened	330	70-120	100-120	0.1-0.2
K Cast Iron	28	Malleable Cast iron	Ferritic (short chips)	130	60-130	100-120	0.05-0.16
	29		Pearlitic (long chips)	230	60-120	80-100	0.04-0.10
	30	Grey cast iron	Low tensile strength	180	60-130	80-100	0.1-0.3
	31		High tensile strength	260	60-100	80-100	0.1-0.2
	32	Nodular SG iron	Feritic	160	60-125	80-100	0.1-0.3
	33		Pearlitic	260	50-90	60-90	0.1-0.2
N(K) Non-Ferrous Metals	34	Aluminium alloys Wrought	Non aging	60	100-250		0.15-0.55
	35		Aged	100	100-180		0.15-0.5
	36	Aluminium alloys	Cast	75	150-400		0.15-0.5
	37		Cast & aged	90	150-280		0.1-0.4
	38	Aluminium alloys	Cast Si 13-22%	130	80-150		0.15-0.5
	39	Copper and copper alloys	Brass	90	120-210	100-200	0.15-0.5
	40		Bronze and non leaded copper	100	120-210	100-200	0.1-0.4
S(M) Heat Resistant Material	19	High temperature alloys	Annealed (Iron based)	200	20-45	20-40	0.1-0.2
	20		Aged (Iron based)	280	20-30	20-30	0.04-0.10
	21		Annealed (Nickel or Cobalt based)	250	15-20	15-20	0.04-0.10
	22		Aged (Nickel or Cobalt based)	350	10-15	10-15	0.04-0.10
	23	Titanium alloys	Pure 99.5 Ti	400Rm	70-140	70-120	0.04-0.10
	24		$\alpha+\beta$ alloys	1050Rm	20-50	20-50	0.04-0.10
H(K) Hardened Material	25	Extra hard steel	Hardened & tempered	45-50HRc	15-45	15-45	0.06-0.12
	26			51-55HRc	15-40	15-40	0.04-0.08

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.**	

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