



TMSD





Thread Milling for Deep Holes

Inserts | Toolholders

VarDEX Ordering Code System

TMSD Inserts

2	U	I	DB	60	TM	VBX
1	2	3	4	5	6	7

1 - Insert Size	2 - Insert Style	3 - Type of Insert	4 - Pitch	5 - Standard																																																																																																												
5 - IC5.0 mm 2 - IC1/4" 3 - IC3/8" 4 - IC1/2" 5 - IC5/8" 7 - IC6.8 mm 9 - IC8.5 mm 11 - IC10.7 mm	U -  A -  L -  V - Vertical Style 7, 9, 11  V - V Style 5/8"	I - Internal EI - External + Internal	<table><tr><th colspan="6">Full Profile - Pitch Range</th></tr><tr><td></td><td colspan="2">mm</td><td colspan="3">tpi</td></tr><tr><td></td><td colspan="2">1.0-8.0</td><td colspan="3">18-2.5</td></tr><tr><th colspan="3">Partial Profile - U, A, L Styles</th><th colspan="3">Partial Profile - Vertical Style</th></tr><tr><td></td><td>mm</td><td>tpi</td><td></td><td>mm</td><td>tpi</td></tr><tr><td>DA</td><td>0.5-1.5</td><td>48-16</td><td>VA</td><td>0.5-1.0</td><td>28-27</td></tr><tr><td>DB</td><td>1.5-2.0</td><td>16-12</td><td>VB</td><td>-</td><td>11-9</td></tr><tr><td>DC</td><td>2.5-4.0</td><td>10-6</td><td>VC</td><td>-</td><td>16-10</td></tr><tr><td>DD</td><td>2.0-2.5</td><td>9-12</td><td>VD</td><td>1.0-2.0</td><td>24-12</td></tr><tr><td>DE</td><td>2.5-3.5</td><td>10-7</td><td>VE</td><td>2.0-3.0</td><td>12-8</td></tr><tr><td>DH</td><td>4.0-6.0</td><td>6-4</td><td>VF</td><td>1.0-1.5</td><td>24-16</td></tr><tr><td>DK</td><td>6.0-8.0</td><td>4-3</td><td>VG</td><td>1.5-2.0</td><td>16-12</td></tr><tr><td>DL</td><td>-</td><td>11-7</td><td>VH</td><td>-</td><td>16-14</td></tr><tr><td>DM</td><td>2.5</td><td>10</td><td>VK</td><td>2.0-2.5</td><td>12-10</td></tr><tr><td>DN</td><td>1.0-2.0</td><td>24-11</td><td>VJ</td><td>-</td><td>26-19</td></tr><tr><td>DP</td><td>1.5-3.0</td><td>16-8</td><td>VM</td><td>-</td><td>8-7</td></tr><tr><td>DR</td><td>-</td><td>26-14</td><td>VN</td><td>1.5-2.5</td><td>16-11</td></tr><tr><td>DT</td><td>2.0-4.0</td><td>12-6</td><td></td><td></td><td></td></tr></table>	Full Profile - Pitch Range							mm		tpi				1.0-8.0		18-2.5			Partial Profile - U, A, L Styles			Partial Profile - Vertical Style				mm	tpi		mm	tpi	DA	0.5-1.5	48-16	VA	0.5-1.0	28-27	DB	1.5-2.0	16-12	VB	-	11-9	DC	2.5-4.0	10-6	VC	-	16-10	DD	2.0-2.5	9-12	VD	1.0-2.0	24-12	DE	2.5-3.5	10-7	VE	2.0-3.0	12-8	DH	4.0-6.0	6-4	VF	1.0-1.5	24-16	DK	6.0-8.0	4-3	VG	1.5-2.0	16-12	DL	-	11-7	VH	-	16-14	DM	2.5	10	VK	2.0-2.5	12-10	DN	1.0-2.0	24-11	VJ	-	26-19	DP	1.5-3.0	16-8	VM	-	8-7	DR	-	26-14	VN	1.5-2.5	16-11	DT	2.0-4.0	12-6				60 - Partial Profile 60° 55 - Partial Profile 55° ISO - ISO Metric UN - American UN NPT - NPT TR - Trapez DIN 103 ACME - ACME STACME - Stub ACME ABUT - American Buttress APIRD - API Round Casing & Tubing
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TMSD Toolholders (U, A, L Styles)

C	TM	2	S	C	14	C	17	-	65	-	2	U
1	2	3	4	5	6	7	8		9		10	11
1 - Shank Style None - Steel C - Carbide Shank	2 - System TM	3 - No. of Flutes 1- 4	4 - Insert Type S - Single Point	5 - Cooling C - Coolant	6 - Shank Dia. 8 - 40	7 - Shank Type W - Weldon C - Cylindrical	8 - Cutting Dia. 13 - 42					
9 - Max. Tool Overhang 144	10 - Insert Size 5 - IC5.0 mm 2 - IC1/4" 3 - IC3/8" 4 - IC1/2"	11 - Insert Style U A L	12 - Tool Application ABUT - For American Buttress									

TMSD Toolholders (Vertical Style)

C	GM	C	9	C	13	-	45	-	7	-	3
1	2	3	4	5	6		7		8		9
1 - Holder Type None - Steel Shank C - Carbide Shank	2 - System GM- Groove Milling and Thread Milling	3 - Cooling C - Coolant	4 - Shank Dia. 8, 9, 11.5, 12, 14, 15, 20, 25	5 - Shank Style C - Cylindrical W - Weldon	6 - Cutting Dia. 10.5-22.0	7 - Tool Overhang 25-65	8 - Insert Size 7 - IC6.8 mm 9 - IC8.5 mm 11 - IC10.7 mm				
9 - Number of Flutes 3											

TMSD Shell Mill (U, L, V Styles)

TM	4	S	C		D42	-	16	-	3	U	
1	2	3	4		5		6		7	8	9
1 - System TM	2 - No. of Flutes 4-7	3 - Insert Type S - Single Point	4 - Cooling C - Coolant	5 - Cutting Dia. 42 - 98	6 - Drive Hole Dia. 16, 22, 27, 32	7 - Insert Size 3 - IC3/8" 4 - IC1/2" 5 - IC5/8"	8 - Insert Style U, L, V				
9 - Tool Application ABUT - American Buttress											

Full Profile Inserts



ISO, American UN, NPT, API RD

American Buttress

U Style For Large Pitches

Weldon Shank



Tool Overhang (L1) 40-145
Cutting Dia. (D2) 14.75-42
No. of Flutes (Z) 1-4

Carbide Cylindrical Shank



Tool Overhang (L1) max 135
Cutting Dia. (D2) 14.75-31.0
No. of Flutes (Z) 1-4

Steel Cylindrical Shank



Tool Overhang (L1) max 144
Cutting Dia. (D2) 23.3-36.5
No. of Flutes (Z) 2-4

Shell Mill



Tool Overhang (L1) max 200
Cutting Dia. (D2) 42-98
No. of Flutes (Z) 4-7

TMSD

L Style (Mini L) For Small Bores

Weldon Shank



Tool Overhang (L1) 29-42
Cutting Dia. (D2) 13-17.7
No. of Flutes (Z) 1-3

Carbide Cylindrical Shank



Tool Overhang (L1) max 65
Cutting Dia. (D2) 13-17.7
No. of Flutes (Z) 1-3

Vertical Style (7V, 9V, 11V)

Weldon Shank



Tool Overhang (L1) 25-45
Cutting Dia. (D2) 10.5-20.8
No. of Flutes (Z) 3

Carbide Cylindrical Shank



Tool Overhang (L1) max 65
Cutting Dia. (D2) 10.5-20.8
No. of Flutes (Z) 3

L Style (3/8" L) For Large Trapezoid Profiles and ABUT

Weldon Shank



Tool Overhang (L1) 50-105
Cutting Dia. (D2) 21.6-35.5
No. of Flutes (Z) 1-3

Carbide Cylindrical Shank



Tool Overhang (L1) max 120
Cutting Dia. (D2) 21.6-33.5
No. of Flutes (Z) 1-3

Shell Mill



Tool Overhang (L1) max 200
Cutting Dia. (D2) 48-80
No. of Flutes (Z) 5-7

A Style For Shorter L2

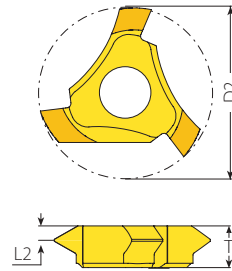
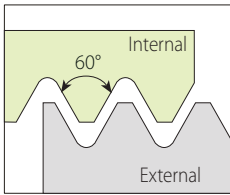
Steel Cylindrical Shank



Tool Overhang (L1) max 144
Cutting Dia. (D2) 26-35.3
No. of Flutes (Z) 3

Partial Profile 60°

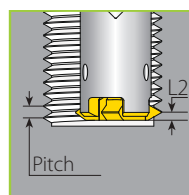
Internal



Vertical Style

Vertical Style

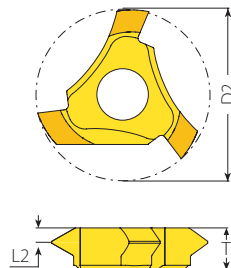
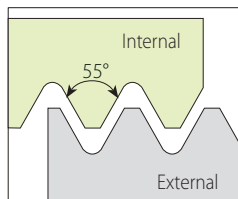
Insert Style	Pitch	Ordering Code	Dimensions mm				Application (Min. Thread Size)					Toolholder
IC	mm	tpi	Internal	D2	T	L2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS		
7V	0.5-1.0	28-27	7VIVA60TM3...	10.5	2.9	0.6	-	M11.5x0.5; M11.5x0.75; M12x1.0	-	½-28UNEF; ½-27UNS		CGMC8C13-40-7-3 CGMC9C13-45-7-3 GMC20W13-25-7-3
	1.0-1.5	24-16	7VIVF60TM3...	11.1		0.8	-	M12.5x1; M13x1.5	-	½-24UNS; ½-20UNF; ⅝-18UNF; ⅝-16UN		
	1.5-2.0	16-12	7VIVG60TM3...	11.8		1.0	M14x2.0	M14x1.5	-	⅝-16UN; ⅝-14UNS; ⅝-12UN		
	1.5-2.5	16-11	7VIVN60TM3...	12.4		1.1	-	M15x1.5 M16x2	⅝-11; ⅝-12	⅝-14UNS; ⅝-16UN		
9V	0.5-1.0	28-27	9VIVA60TM3...	13.1	4.2	0.6	-	M14x0.5; M14x0.75; M15x1	-	⅝-28UN; ⅝-27UNS		CGMC11.5C17-50-9-3 CGMC12C17-50-9-3 GMC20W17-30-9-3
	1.0-1.5	24-16	9VIVF60TM3...	13.7		0.8	-	M15x1; M15.5x1.5	-	⅝-24UNEF; ⅝-20UN; ⅝-18UNF; ⅝-16UN		
	1.5-2.0	16-12	9VIVG60TM3...	14.4		1.0	-	M16.5x1.5; M17x2	-	⅝-16UN; ⅝-14UNS; ⅝-12UN		
	2.0-2.5	12-10	9VIVK60TM3...	15.1		1.4	-	M17.5x2; M18x2.5	⅝-10	⅝-12UN;		
11V	1.0-2.0	24-12	11VVD60TM3...	17.9	5.5	1.0	-	M19x1, M19.5x1.25; M19.5x1.5; M20x1.75; M20x2	-	⅝-24UNS; ⅝-20UNEF; ⅝-18UNS; ⅝-16UN; ⅝-14UNF; ⅝-12UN		CGMC14C22-60-11-3 CGMC15C22-65-11-3 GMC25W22-45-11-3
	2.0-3.0	12-8	11VIVE60TM3...	19.5		1.5	M22x2.5 M24x3	M23x2	1-8	⅝-10UNS; ⅝-12UN		



Vertical Style

Partial Profile 55°

Internal

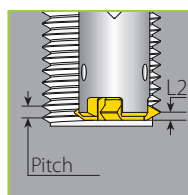


Vertical Style

Vertical Style



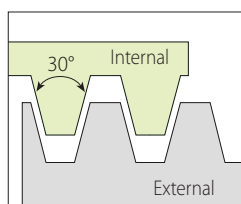
Insert Style		Ordering Code	Dimensions mm				Application (Min. Thread Size)		
IC	tpi	Internal	D2	T	L2	r	BSP (G)	Partial 55°	Toolholder
7V	26-19	7VIVJ55TM3...	11.35	2.9	0.8	0.07	¼-19 ; ⅜-19	-	CGMC8C13-40-7-3 CCGMC9C13-45-7-3 GMC20W13-25-7-3
	16-14	7VIVH55TM3...	12.0		1.0	0.13	½-14 ; ⅝-14; ¾-14 ; 7/8-14;	⅝-16 ; ⅝-14	
9V	26-19	9VIVJ55TM3...	13.35	4.2	0.8	0.09	⅜-19	⅝-26 ; ⅝-16	CGMC11.5C17-50-9-3 CGMC12C17-50-9-3 GMC20W17-30-9-3
	16-10	9VIVC55TM3...	15.4		1.2	0.15	½-14	¾-16 ; 11/16-14; ¾-10 ; ¾-12; 7/8-11;	
11V	16-12	11VIVG55TM3...	17.8	5.5	0.9	0.16	½-14	13/16-16 ; 15/16-12	
	11-9	11VIVB55TM3...	19.1		1.3	0.21	1-11	7/8-11; 1-10; 1 1/8-9	CGMC14C22-60-11-3 CGMC15C22-65-11-3 GMC25W22-45-11-3
	8-7	11VIVM55TM3...	19.6		1.5	0.36	-	1-8; 1 1/8-7;	



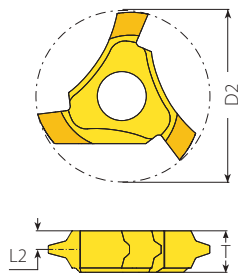
Vertical Style

Trapez

Internal



Defined by: DIN 103
Tolerance class: 7e/7H



Vertical Style

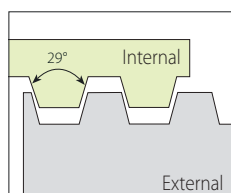
Vertical Style



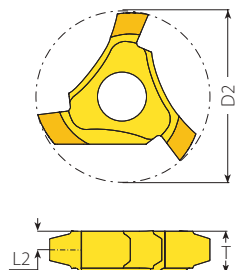
Insert Style		Ordering Code		Dimensions mm			Application	
IC	mm	Internal	D2	T	L2	Trapez	Toolholder	
7V	2.0	7VI2.0TR-1TM3...	12.3	2.9	1.3	TR16x2	CGMC8C13-40-7-3 CGMC9C13-45-7-3 GMC20W13-25-7-3	
		7VI2.0TR-2TM3...				TR18x2		
		7VI2.0TR-3TM3...				TR20x2		
9V	3.0	9VI3.0TR-1TM3...	15.4	4.2	1.95	TR22x3	CGMC11.5C17-50-9-3 CGMC12C17-50-9-3 GMC20W17-30-9-3	
		9VI3.0TR-2TM3...				TR24x3		

Stub ACME

Internal



Defined by: ANSI B1.8: 1988
Tolerance class: 2G



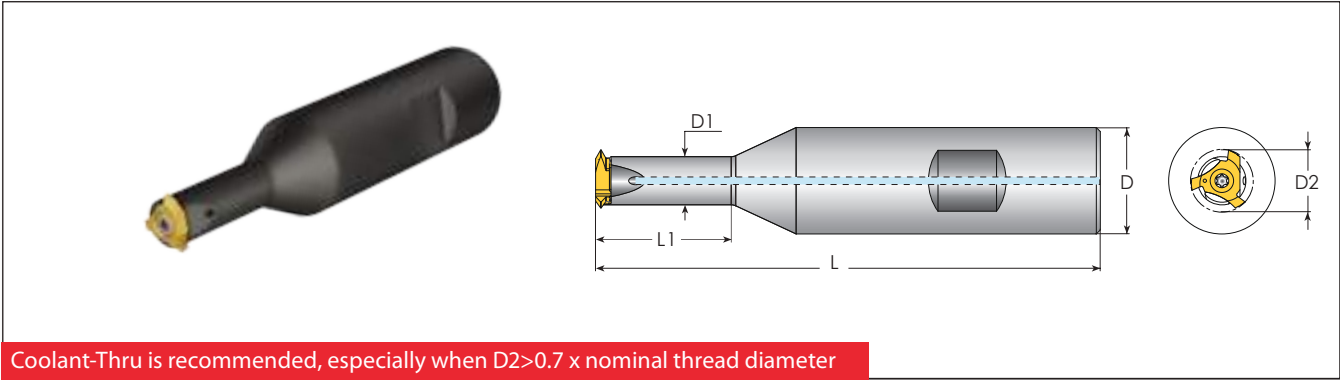
Vertical Style





Vertical Style



Insert Style		Ordering Code		Dimensions mm			Application	
IC	tpi	Internal	D2	T	L2	Stub ACME	Toolholder	
7V	8	7VI8STACMETM3...	12.3	2.9	1.3	5/8-8	CGMC8C13-40-7-3 CGMC9C13-45-7-3 GMC20W13-25-7-3	
	6	7VI6STACME-1TM3...	12.7	2.9	1.3	3/4-6		
		7VI6STACME-2TM3...				7/8-6		
9V	5	9VI5STACME-1TM3...	16.7	4.2	1.95	1-5	CGMC11.5C17-50-9-3 CGMC12C17-50-9-3 GMC20W17-30-9-3	
		9VI5STACME-2TM3...				1 1/8-5		
		9VI5STACME-3TM3...				1 1/4-5		
11V	4	11VI4STACME-1TM3...	20.8	5.5	2.6	1 3/8-4	CGMC14C22-60-11-3 CGMC15C22-65-11-3 GMC25W22-45-11-3	
		11VI4STACME-2TM3...				1 1/2-4		
		11VI4STACME-3TM3...				1 3/4-4		
		11VI4STACME-4TM3...				2-4		

Vertical Toolholders - Weldon Shank

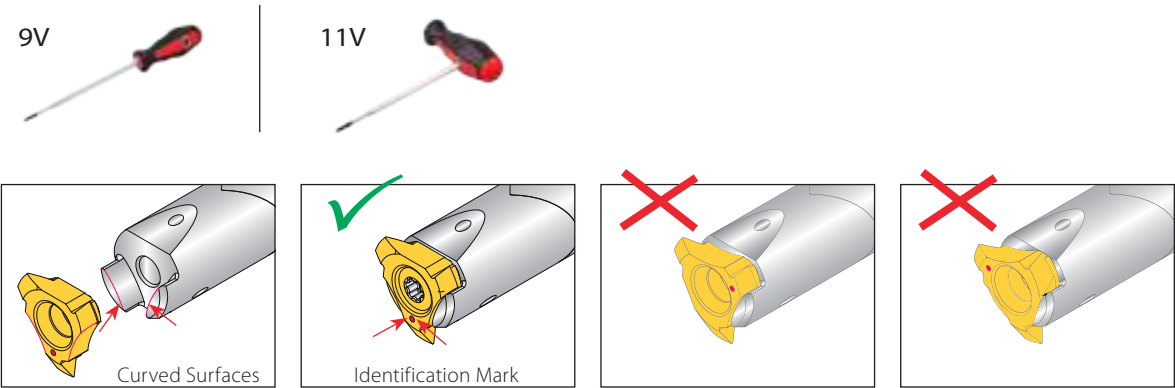


							Spare Parts			
Insert Style	Ordering Code	Dimensions mm								
	Toolholder	L	L1	D	D1	D2*	Insert Screw	Torx Key	Blade	Handle
7V	GMC20W13-25-7-3	95	25	20	9	10.5-12.7	SN2T8-M1 (M3.0x0.5x9)	K2T	-	-
9V	GMC20W17-30-9-3	105	30	20	11.5	13.1-16.7	SN3T15-M2 (M4x0.7x13.5)	-	Blade T15-1/4	Smart Handle 1/4x2
11V	GMC25W22-45-11-3	115	45	25	15	17.8-20.8	SN4T20-M3 (M5x0.8x15.5)	-	Blade T20-1/4	Smart Handle 1/4X2

* The tool cutting diameter (D2) is defined by the insert (See pages 298-300).

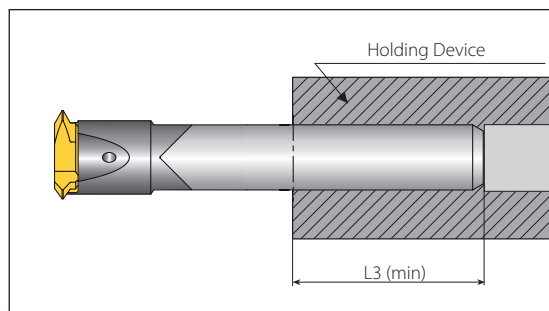
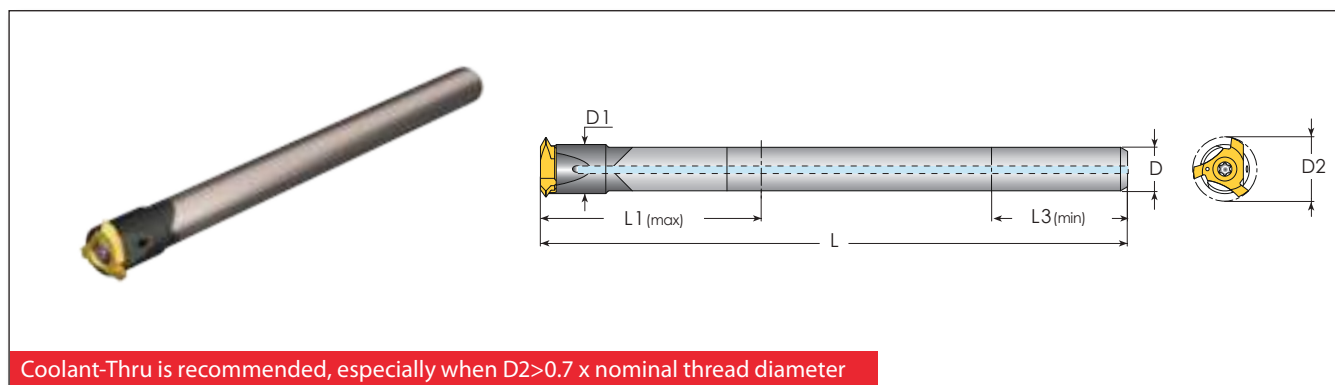
TMSD

For Correct Clamping:



Always mount insert with the identification mark between the two curved surfaces on the toolholder.

Vertical Toolholders - Carbide Cylindrical Shank



Spare Parts

Insert Style	Ordering Code	Dimensions mm									
Toolholder		L	L1	L3 (min)	D	D1	D2*	Insert Screw	Torx Key	Blade	Handle
7V	CGMC8C13-40-7-3	115	40	18	8	9	10.5-12.7	SN2T8-M1 (M3.0x0.5x9)	K2T	-	-
	CGMC9C13-45-7-3		45	20	9						
9V	CGMC11.5C17-50-9-3	125	50	25	11.5	11.5	13.1-16.7	SN3T15-M2 (M4x0.7x13.5)	-	Blade T15-1/4	Smart Handle 1/4x2
	CGMC12C17-50-9-3		50	26	12						
11V	CGMC14C22-60-11-3	135	60	30	14	15	17.8-20.8	SN4T20-M3 (M5x0.8x15.5)	-	Blade T20-1/4	Smart Handle 1/4x2
	CGMC15C22-65-11-3		65	32	15						

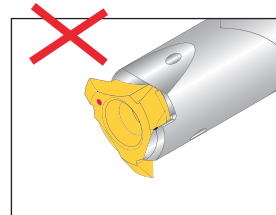
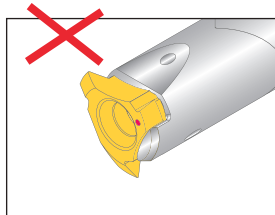
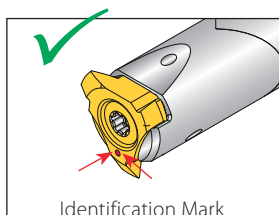
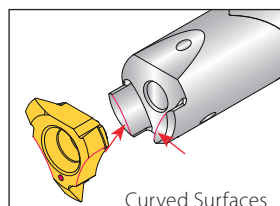
* The tool cutting diameter (D2) is defined by the insert (See pages 298-300).

For Correct Clamping:

9V



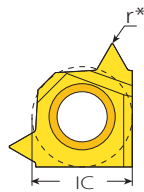
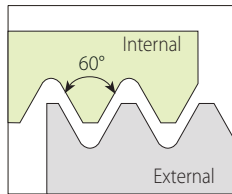
11V



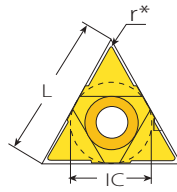
Always mount insert with the identification mark between the two curved surfaces on the toolholder.

Partial Profile 60°

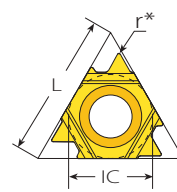
Internal



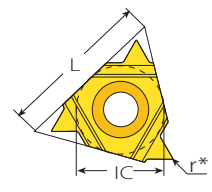
Mini L Style



U Style



U Style
2UIDM60 TM...
2UIDD60 TM...



A Style

L Style



Insert Size		Pitch		Ordering Code	Dimensions mm	
IC	L mm	mm	tpi	Internal	r *	Toolholder
5.0L (Mini L)	-	0.5-1.5	48-16	5LIDA60TM...	0.04	TM.SC...5L
		1.0-2.0	24-11	5LIDN60TM...	0.06	CTM. SC...5L

U Style



2UIDM60 TM...
2UIDD60 TM...

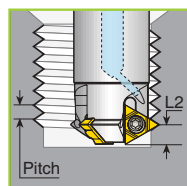


Insert Size		Pitch		Ordering Code	Dimensions mm	
IC	L mm	mm	tpi	Internal	r *	Toolholder
1/4"U	11	0.5-1.5	48-16	2UIDA60TM...	0.05	TM.SC...2U
		1.5-2.0	16-12	2UIDB60TM...	0.06	CTM. SC...2U
		2.0-2.5	9-12	2UIDD60TM...	0.11	CTM2SC 14C17-65-2U
		2.5	10	2UIDM60TM...	0.11	
		2.5-4.0	10-6	2UIDC60TM...	0.14	TM.SC...2U CTM. SC...2U
3/8"U	16	1.5-2.0	16-12	3UIDB60TM...	0.06	TM.SC...3U
		2.5-3.5	10-7	3UIDE60TM...	0.14	
		4.0-6.0	6-4	3UIDH60TM...	0.25	
1/2"U	22	6.0-8.0	4-3	4UIDK60TM...	0.30	TM.SC D...4U

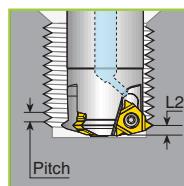
A Style



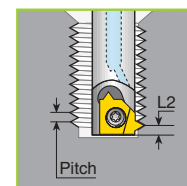
Insert Size		Pitch		Ordering Code	Dimensions mm	
IC	L mm	mm	tpi	Internal	r *	Toolholder
1/4"A	11	1.5-3.0	16-8	2AIDP60TM...	0.06	TM.SC...2A
3/8"A	16	2.0-4.0	12-6	3AIDT60TM...	0.08	TM.SC...3A



U Style
For Large Pitches



A Style
For Shorter L2



Mini-L Style
For Small Bores and Short L2

* The indicated radius (r) refers to the insert nose radius only.

Partial Profile 55°

Internal

Mini L Style

U Style

L Style

Insert Size		Pitch	Ordering Code	Dimensions mm	
IC		tpi	Internal	*r	Toolholder
5.0L (Mini L)		26-14	5LIDR55TM...	0.10	TM.SC...5L CTM. SC...5L

U Style

Insert Size		Pitch	Ordering Code	Dimensions mm	
IC	L mm	tpi	Internal	*r	Toolholder
1/4"U	11	48-16	2UIDA55TM...	0.11	TM.SC...2U CTM. SC...2U
		16-12	2UIDB55TM...	0.08	
		11-7	2UIDL55TM...	0.24	
3/8"U	16	16-12	3UIDB55TM...	0.08	TM.SC...3U
		11-7	3UIDL55TM...	0.24	
		6-4	3UIDH55TM...	0.27	
1/2"U	22	4-3	4UIDK55TM...	0.50	TM.SC D...4U

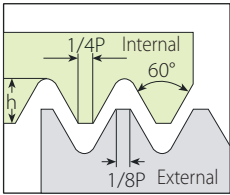
U Style
For Large Pitches

Mini-L Style
For Small Bores and Short L2

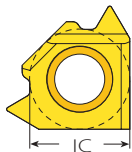
* The indicated radius (r) refers to the insert nose radius only.

ISO Metric

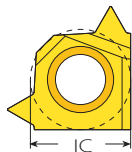
Internal



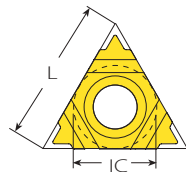
Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



Mini L Style
5LI2.0ISOTM...



Mini L Style



U Style

L Style



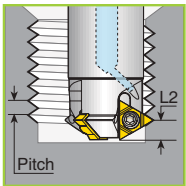
Insert Size	Pitch	Ordering Code	Toolholder	Toolholder Cutting Diameter D2 (mm)
IC	mm	Internal		Adjusted D2
5.0L (Mini L)	1.0	5LI1.0ISOTM...	TM.SC...5L CTM.SC...5L	-
	1.5	5LI1.5ISOTM...		-
	2.0	5LI2.0ISOTM...		-

U Style

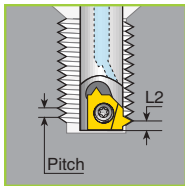


Insert Size	Pitch	Ordering Code	Toolholder	Toolholder Cutting Diameter D2 (mm)
IC	L mm	mm	Internal	* Adjusted D2
1/4"U	11	1.5	2UI1.5ISOTM...	For 1.5ISO change D2 to D2-1.0
		2.0	2UI2.0ISOTM...	For 2.0ISO change D2 to D2-1.15

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.



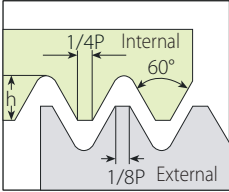
U Style
For Large Pitches



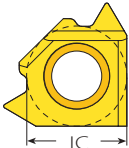
Mini-L Style
For Small Bores and Short L2

American UN - UNC; UNF; UNEF; UNS

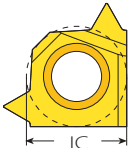
Internal



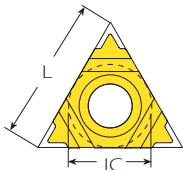
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Mini L Style
5LI14UNTM...
5LI12UNTM...




Mini L Style



U Style


L Style



5LI14UNTM...
5LI12UNTM...

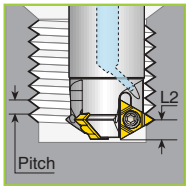
Insert Size		Pitch	Ordering Code		Toolholder Cutting Diameter D2 (mm)	
IC		tpi	Internal	Toolholder	Adjusted D2	
5.0L (Mini L)		18	5LI18UNTM...	TM.SC...5L CTM.SC...5L		
		16	5LI16UNTM...			
		14	5LI14UNTM...			
		12	5LI12UNTM...			

U Style

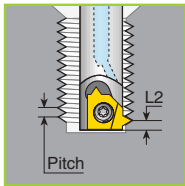


Insert Size		Pitch	Ordering Code		Toolholder Cutting Diameter D2 (mm)	
IC	L mm	tpi	Internal	Toolholder	* Adjusted D2	
1/4"U	11	14	2UI14UNTM...	TM2SC25W23-70-2U; TM3SC25W26-80-2U; TM4SC32W31-95-2U; TM2SC18C23-86-2U; TM3SC20C26-105-2U; TM4SC25C31-115-2U; CTM3SC20C26-110-2U; CTM4SC25C31-135-2U	For 14UN change D2 to D2-1.06	
		12	2UI12UNTM...		For 12UN change D2 to D2-1.15	

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.



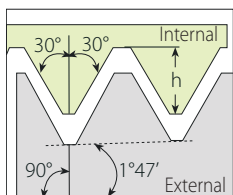
U Style
For Large Pitches



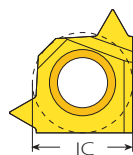
Mini-L Style
For Small Bores and Short L2

NPT

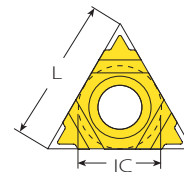
External / Internal



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



Mini L Style



U Style

L Style



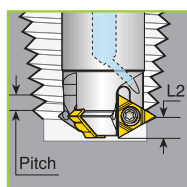
Insert Size	Pitch	Ordering Code	Toolholder	Toolholder Cutting Diameter D2 (mm)
IC	tpi	External/Internal		Adjusted D2
5.0L (Mini L)	18	5LEI18NPT-TM...	TM.SC...5L CTM.SC...5L	-

U Style

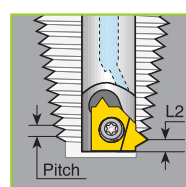


Insert Size	Pitch	Ordering Code	Toolholder	Toolholder Cutting Diameter D2 (mm)
IC	L mm	tpi	Internal/External	* Adjusted D2
1/4"U	11	14	2UEI14NPT-TM...	TM1SC16W15-40-2U; CTM1SC08C15-40-2U; CTM1SC11C15-60-2U
				TM2SC25W21-60-2U; CTM2SC14C21-65-2U; CTM2SC16C21-80-2U
	11	11.5	2UEI11.5NPT-TM...	TM2SC25W23-70-2U; TM2SC18C23-86-2U
				TM3SC25W26-80-2U; TM3SC20C26-105-2U; CTM3SC20C26-110-2U
3/8"U	16	11.5	3UEI11.5NPT-TM...	TM4SC32W31-95-2U; TM4SC25C31-115-2U; CTM4SC25C31-135-2U
				TM3SC32W36-95-3U; TM3SC32W36-145-3U; TM3SC25C36-125-3U; TM3SC28C36-144-3U
	16	8	3UEI8NPT-TM...	TM4SC40W42-120-3U; TM4SCD42-16-3U
				TM5SCD48-22-3U
1/2"U	22	8	4UEI8NPT-TM...	TM3SC32W36-95-3U; TM3SC32W36-145-3U; TM3SC25C36-125-3U; TM3SC28C36-144-3U
				TM4SC40W42-120-3U; TM4SCD42-16-3U
	22	8	4UEI8NPT-TM...	TM5SC-D48-22-3U
				TM6SC-D56-22-3U
1/2"U	22	8	4UEI8NPT-TM...	TM6SC-D88-27-4U
				TM7SC-D98-32-4U

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.



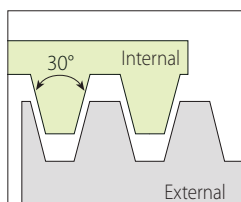
U Style
For Large Pitches



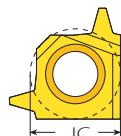
Mini-L Style
For Small Bores and Short L2

Trapez

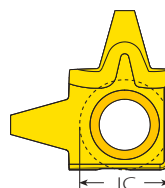
Internal



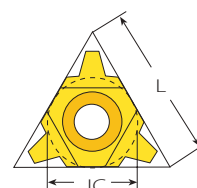
Defined by: DIN 103
Tolerance class: 7e/7H



Mini L Style



3/8" L



U Style

L Style



Insert Size

Pitch

Ordering Code

Application

IC

mm

Internal

Internal

Toolholder

5.0L
(Mini L)

2.0

5LI2.0TR-1TM...

TR16x2, TR20x2

TM.SC...5L
CTM.SC...5L

2.0

5LI2.0TR-2TM...

TR18x2

6.0

3LI6.0TR-1TM...

(TR30-36)x6

TM1SC25W21-50-3L;
CTM1SC1/2"C21-75-3L

6.0

3LI6.0TR-2TM...

(TR115-130)x6

TM7SCD80-32-3L

3/8"L

7.0

3LI7.0TRTM...

(TR38-44)x7

TM2SC25W28-75-3L;
CTM2SC18C28-100-3L

8.0

3LI8.0TR-1TM...

(TR46-52)x8

TM3SC32W33-90-3L;
CTM3SC20C33-120-3L

8.0

3LI8.0TR-2TM...

(TR175-240)x8

TM7SCD80-32-3L

U Style



Insert Size

Pitch

Ordering Code

Application

IC

L mm

mm

Internal

Internal

Toolholder

1/4"U

11

3.0

2UI3.0TR-1TM...

(TR22-TR30)x3

2UI3.0TR-2TM...

(TR32-TR60)x3

4.0

2UI4.0TR-1TM...

(TR20-TR28)x4

2UI4.0TR-2TM...

(TR65-TR110)x4

5.0

2UI5.0TR-1TM...

TR22x5; TR28x5

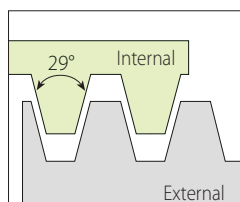
2UI5.0TR-2TM...

TR24x5; TR26x5

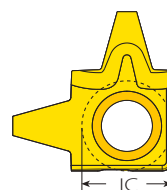
See pages 312-319

American ACME

Internal



Defined by: ANSI B1.5: 1988
Tolerance class: 3G



3/8" L

L Style

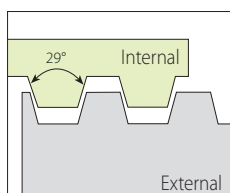


3/8" L

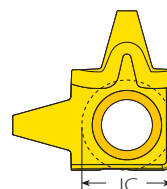
Insert Size	Pitch	Ordering Code	Application	
IC	tpi	Internal	Internal	Toolholder
	5	3LI5ACMETM...	1¼-5ACME	TM1SC25W21-50-3L; CTM1SC ½"C21-75-3L
	4	3LI4ACME-1TM...	1⅝-4ACME	
		3LI4ACME-2TM...	1½-4ACME	
		3LI4ACME-3TM...	1¾-4ACME	TM2SC25W28-75-3L; CTM2SC18C28-100-3L
		3LI4ACME-4TM...	2-4ACME	
	3	3LI3ACME-1TM...	2¼-3ACME	TM3SC32W33-90-3L; CTM3SC20C33-120-3L
		3LI3ACME-2TM...	2½-3ACME	
		3LI3ACME-3TM...	2¾-3ACME	

Stub ACME

Internal



Defined by: ANSI B1.8: 1988
Tolerance class: 2G



3/8" L

L Style



3/8" L

Insert Size	Pitch	Ordering Code	Application	
IC	tpi	Internal	Internal	Toolholder
	5	3LI5STACMETM...	1¼-5STACME	TM1SC25W21-50-3L; CTM1SC ½"C21-75-3L
	4	3LI4STACME-1TM...	1⅝-4STACME	
		3LI4STACME-2TM...	1½-4STACME	
		3LI4STACME-3TM...	2-4STACME	TM3SC32W33-90-3L; CTM3SC20C33-120-3L
	3	3LI3STACME-1TM...	2¼-3STACME	
		3LI3STACME-2TM...	2½-3STACME	
		3LI3STACME-3TM...	2¾-3STACME	



American Buttress

Internal


Defined by: ANSI B1.9.1973
Tolerance class: Class 2

Mini L Style 3/8" L 5/8 V

L Style

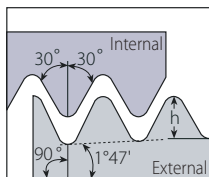
Insert Size		Pitch	Ordering Code	Application	
IC		tpi	Internal	Internal	Toolholder
	5.0L (Mini L)	16	5LI16ABUT-TM...	0.875"-4.0" ABUT	TM2SC16W14-35-5L-ABUT CTM2SC10C14-50-5L-ABUT
				1.25"-4.0" ABUT	TM3SC20W18-45-5L-ABUT CTM3SC14C18-65-5L-ABUT
		12	5LI12ABUT-TM...	0.875"-6.0" ABUT	TM2SC16W14-35-5L-ABUT CTM2SC10C14-50-5L-ABUT
				1.25"-6.0" ABUT	TM3SC20W18-45-5L-ABUT CTM3SC14C18-65-5L-ABUT
		10	5LI10ABUT-TM...	0.875"-16.0" ABUT	TM2SC16W14-35-5L-ABUT CTM2SC10C14-50-5L-ABUT
				1.25"-16.0" ABUT	TM3SC20W18-45-5L-ABUT CTM3SC14C18-65-5L-ABUT
		16	3LI16ABUT-TM...	1.75"-4.0" ABUT	TM2SC25W26-80-3L-ABUT CTM2SC20C26-105-3L-ABUT
				2.5"-4.0" ABUT	TM3SC32W35-105-3L-ABUT
	3/8" L	12	3LI12ABUT-TM...	1.75"-6.0" ABUT	TM2SC25W26-80-3L-ABUT CTM2SC20C26-105-3L-ABUT
				2.5"-6.0" ABUT	TM3SC32W35-105-3L-ABUT
				3.0"-6.0" ABUT	TM5SCD48-22-3L-ABUT
				4.0"-6.0" ABUT	TM6SCD58-27-3L-ABUT
		10	3LI10ABUT-TM...	1.75"-6.0" ABUT	TM2SC25W26-80-3L-ABUT CTM2SC20C26-105-3L-ABUT
				2.5"-6.0" ABUT	TM3SC32W35-105-3L-ABUT
				3.0"-6.0" ABUT	TM5SCD48-22-3L-ABUT
				4.0"-6.0" ABUT	TM6SCD58-27-3L-ABUT
		8	3LI8ABUT-TM...	1.75"-6.0" ABUT	TM2SC25W26-80-3L-ABUT CTM2SC20C26-105-3L-ABUT
				2.5"-6.0" ABUT	TM3SC32W35-105-3L-ABUT
				3.0"-6.0" ABUT	TM5SCD48-22-3L-ABUT
				4.0"-6.0" ABUT	TM6SCD58-27-3L-ABUT
		6	3LI6ABUT-TM...	1.75"-6.0" ABUT	TM2SC25W26-80-3L-ABUT CTM2SC20C26-105-3L-ABUT
				2.5"-6.0" ABUT	TM3SC32W35-105-3L-ABUT
				3.0"-6.0" ABUT	TM5SCD48-22-3L-ABUT
				4.0"-6.0" ABUT	TM6SCD58-27-3L-ABUT

V Style

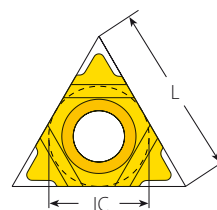
Insert Size		Pitch	Ordering Code	Application	
IC		tpi	Internal	T	Toolholder
	5/8" V	4	5VI4ABUT-TM...	6	5.5"-24.0" ABUT
		3	5VI3ABUT-TM...	8	6.0"-24.0" ABUT
		2.5	5VI2.5ABUT-TM...	10	7.0"-24.0" ABUT

API Round Casing & Tubing

Internal



Defined by: API STD. 5B:1979
Tolerance class: Standard API RD



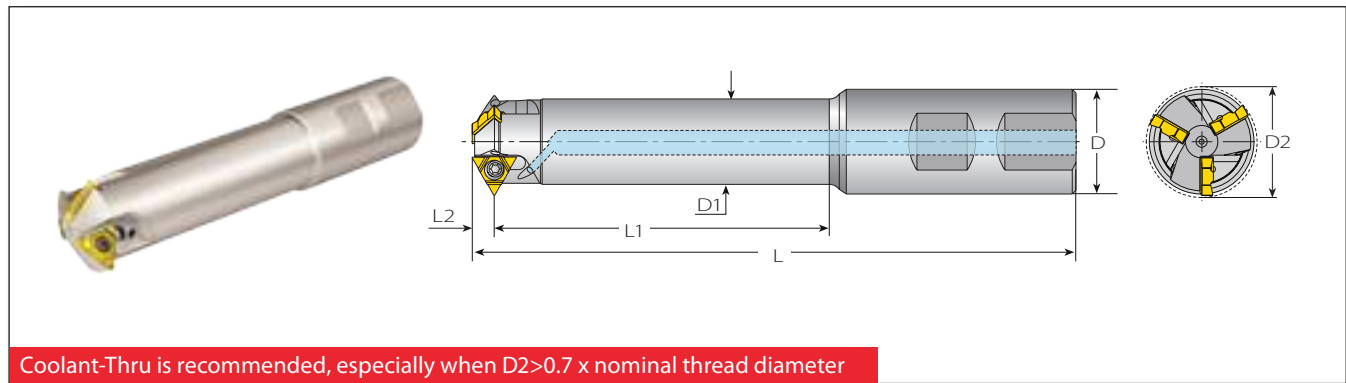
U Style



Insert Size		Pitch	Ordering Code		Toolholder Cutting Diameter D2 (mm)
IC	L mm	tpi	Internal	Toolholder	* Adjusted D2
1/4"U	11	10	2UI10APIRDTM...	TM2SC25W23-70-2U	21.44
				TM2SC18C23-86-2U	21.74
				TM3SC25W26-80-2U	24.44
				TM3SC20C26-105-2U	24.44
3/8"U	16	8	3UI8APIRDTM...	TM4SC32W31-95-2U	29.44
				TM4SC25C31-115-2U	29.44
				TM3SC32W36-95-3U	34.7
				TM3SC32W36-145-3U	34.7
				TM3SC25C36-125-3U	34.7
				TM3SC25C36-125-3U	34.7
				TM4SC40W42-120-3U	40.2
				TM4SCD42-16-3U	40.2
				TM5SCD48-22-3U	46.2
				TM6SCD56-22-3U	54.2

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.

Standard Toolholders - Weldon Shank (U Style)



Weldon Shank for U Style Inserts

Weldon Shank for U Style Inserts									Spare Parts	
Insert Size	Ordering Code	Dimensions mm							No. of Flutes	
IC		L	L1	L2	D	D1	D2	Z		
1/4"U	TM1SC16W15-40-2U	95	40	5.4	16	11.0	14.75*	1	SN2T	HK2T
	TM2SC25W21-60-2U	123	60		25	16.0	20.65*	2		
	TM2SC25W23-70-2U	135	70		25	17.7	23.0	2		
	TM3SC25W26-80-2U	147	80		25	20.4	26.0	3		
	TM4SC32W31-95-2U	164	95		32	25.7	31.0	4		
3/8"U	TM3SC32W36-95-3U	166	95	8.0	32	29.0	36.5	3	SA3T	HK3T
	TM3SC32W36-145-3U	225	145		32	28.0	36.5	3		
	TM4SC40W42-120-3U	201	120		40	34.2	42.0	4	SN3T	

Weldon Shank (U Style) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.						
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)	Partial 55°	Trapez
TM1SC16W15-40-2U	14.75*	M18x2.5; M24x3.0	M16x0.5; M16x0.75; M16x1.0; M17x1.25; M17x1.5; M17x2.0	3/4-10	5/8-32UN; 5/8-28UN; 5/8-27UNS; 11/16-24UN; 11/16-20UN; 11/16-16UN; 3/4-14UNS; 3/4-12UN	3/8-19; 1/2-14; 1-11	11/16-14; 3/4-12; 5/8-11; 3/4-10; 5/8-9; 1-8; 1 1/8-7	TR22x3; TR24x3
TM2SC25W21-60-2U	20.65*	M24x3.0; M30x3.5	M22x0.5; M22x0.75; M22x1.0; M23x1.25; M23x1.5; M23x2.0	1-8; 1 1/8-7; 1 3/8-6	5/8-32UN; 5/8-28UN; 5/8-27UNS; 5/8-24UNS; 5/8-20UNEF; 1-18UNS; 1 1/16-16UN; 1-14UNS; 1 1/16-12UN; 1-10UNS	3/4-14; 1-11	1-26; 1-20; 1-16; 1-12; 1-10; 1 1/8-9; 1-8; 1 1/8-7	(TR26- TR60)x3
TM2SC25W23-70-2U	23.0	M27x3.0; M30x3.5; M36x4.0	M24x0.5; M24x0.75; M25x1.0; M25x1.25; M26x1.5; M26x2.0; M27x2.5	1 1/8-7	1-32UN; 1-28UN; 1-27UNS; 1-24UNS; 1-20UNEF; 1-18UNS; 1-16UN; 1-14UNS; 1-12UNF; 1 1/8-10UNS; 1 1/8-8UN	3/4-14; 1-11	1-26; 1-20; 1-16; 1 1/16-12; 1 1/8-9; 1 1/8-7	-
TM3SC25W26-80-2U	26.0	M30x3.5; M36x4.0	M27x0.5; M27x0.75; M28x1.0; M28x1.25; M28x1.5; M29x2.0; M30x2.5; M30x3.0	1 1/4-7; 1 3/8-6	1 1/8-28UN; 1 1/8-24UNS; 1 1/8-20UN; 1 1/8-18UNEF; 1 1/8-16UN; 1 1/8-14UNS; 1 1/8-12UNF; 1 1/4-10UNS; 1 3/8-8UN	7/8-14; 1-11	1 1/8-26; 1 1/8-20; 1 3/8-16; 1 3/8-12; 1 1/16-8; 1 1/4-7	-
TM4SC32W31-95-2U	31.0	M36x4.0	M32x0.5; M32x0.75; M33x1.0; M33x1.25; M33x1.5; M34x2.0; M34x2.5; M35x3.0; M36x3.5	1 1/2-6	1 1/16-28UN; 1 3/8-24UNS; 1 1/16-20UN; 1 1/16-18UNEF; 1 3/8-16UN; 1 3/8-14UNS; 1 3/8-12UNF; 1 3/8-10UNS; 1 3/8-8UN	1 1/8-11	1 3/8-26; 1 3/8-20; 1 3/8-16; 1 3/8-12; 1 1/16-8	-
TM3SC32W36-95-3U TM3SC32W36-145-3U	36.5	M42x4.5; M48x5.0; M56x5.5; M64x6.0	M39x1.5; M39x2.0; M40x2.5; M41x3.0; M42x3.5; M42x4.0	1 3/4-5; 2-4.5; 2 1/2-4	1 1/16-16UN; 1 1/8-14UNS; 1 1/16-12UN; 1 1/8-10UNS; 1 1/8-8UN; 1 1/8-6UN	1 1/4-11	1 1/8-16; 1 1/8-12; 1 1/8-8; 1 1/8-6; 1 1/4-5	-
TM4SC40W42-120-3U	42.0	M48x5.0; M56x5.5; M64x6.0	M45x1.5; M45x2.0; M46x2.5; M48x3.0; M48x3.5; M48x4.0	2-4.5; 2 1/2-4	1 3/4-16UN; 1 3/4-14UNS; 1 13/16-12UN; 1 13/16-8UN; 1 13/16-6UN	1 1/2-11	1 1/8-16; 1 1/8-12; 1 1/8-8; 2 1/4-6; 2-4.5	-

* For TR inserts use the CNC program (D2+0.25mm).

Weldon Shank (U Style) Applications (con't)

Thread Applications for Full Profile Inserts (ISO & UN)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch		Min. Thread Dia.	
	* Adjusted D2	mm	tpi	ISO Fine	UN/UNF/UNEF/UNS
TM2SC25W23-70-2U	22.0	1.5	-	M26x1.5	-
	21.85	2.0	-	M26x2.0	-
	21.94	-	14	-	1-14UNS
	21.85	-	12	-	1-12UNF
TM3SC25W26-80-2U	25.0	1.5	-	M28x1.5	-
	24.85	2.0	-	M29x2.0	-
	24.94	-	14	-	1 1/8-14UNF
	24.85	-	12	-	1 1/8-12UNF
TM4SC32W31-95-2U	30.0	1.5	-	M33x1.5	-
	29.85	2.0	-	M34x2.0	-
	29.94	-	14	-	1 3/8-14UNS
	29.85	-	12	-	1 3/8-12UNF

Thread Applications for Full Profile Inserts (NPT)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole	Cylindrical Pre-Drilled Hole
	* Adjusted D2	tpi	NPT Threading by 1 Radial Pass	**NPT Threading by 2 Radial Passes (50% / 50%)
TM1SC16W15-40-2U	14.59	14	1/2-14NPT; 3/4-14NPT	-
TM2SC25W21-60-2U	20.49	14	3/4-14NPT	-
TM2SC25W23-70-2U	22.63	11.5	1-11.5NPT; 1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM3SC25W26-80-2U	25.63	11.5	1-11.5NPT; 1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM4SC32W31-95-2U	30.63	11.5	1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM3SC32W36-95-3U	35.65	11.5	1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM3SC32W36-145-3U				
TM3SC32W36-95-3U	35.65	8	-	2 1/2...10-8NPT
TM3SC32W36-145-3U				
TM4SC40W42-120-3U	41.15	11.5	1 1/2-11.5NPT; 2-11.5NPT	-
TM4SC40W42-120-3U	41.15	8	-	2 1/2...10-8NPT

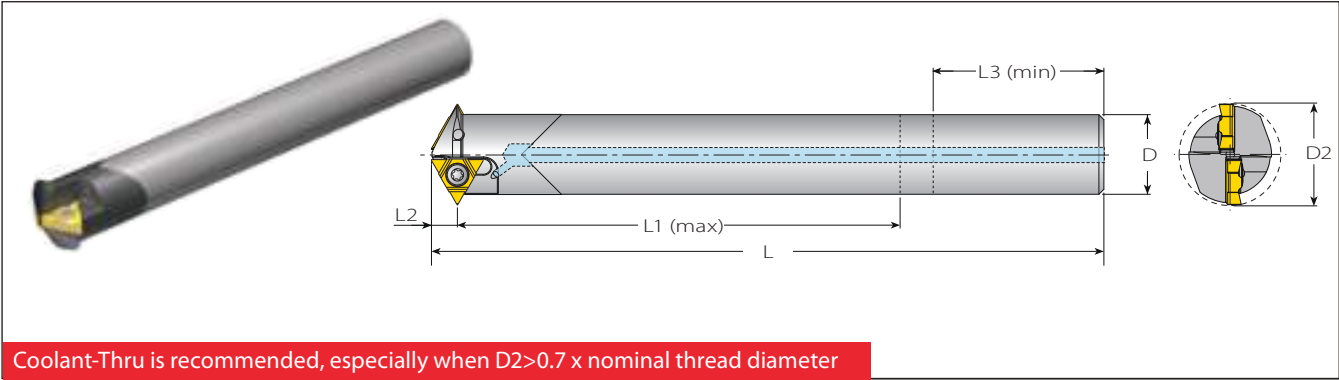
** When the pre-drilled hole for 8NPT is conical, the thread can be machined in one pass.

Thread Applications for Full Profile Inserts (API Round)



Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole (for cylindrical 2 radial passes 50%/50%; for conical one radial pass)	Conical Pre-Drilled Hole only (one pass)
	* Adjusted D2	tpi	Thread Dia.	
TM2SC 25W23-70-2U	21.44	10	1.05x10APIRD (for UP TBG; UP TBG Long); 1.315...1.66x10APIRD (for TBG; UP TBG; UP TBG Long; Integral-Joint TBG)	-
TM3SC 25W26-80-2U	24.44		1.66...2.875x10APIRD (for TBG; UP TBG; UP TBG Long; Integral-Joint TBG)	
TM4SC 32W31-95-2U	29.44		1.66...3.5x10APIRD (for TBG; UP TBG; UP TBG Long; Integral-Joint TBG)	
TM3SC 32W36-95-3U	34.7	8	2.375...13.375x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...5.5x8APIRD (for LCSG)	-
TM3SC 32W36-145-3U			2.375...20x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...7.625x8APIRD (for LCSG)	
TM4SC 40W42-120-3U	40.2		2.875...20x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...7.625x8APIRD (for LCSG)	

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.

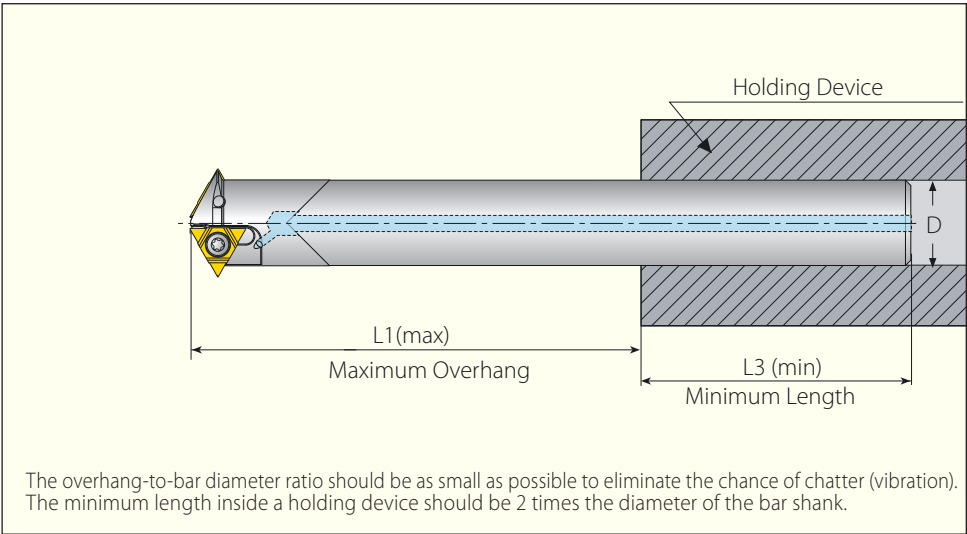
Standard Toolholders - Carbide Cylindrical Shank (U Style)



Carbide Cylindrical Shank for U Style Inserts

Carbide Cylindrical Shank for U Style Inserts									Spare Parts	
Insert Size	Ordering Code	Dimensions mm								
IC		L	L1 (max)	L2	L3 (min)	D	D2	Z	Insert Screw	Torx Key
1/4"U	CTM1SC08C15-40-2U	109	40	5.4	18	8	14.75*	1	SN2T	HK2T
	CTM1SC11C15-60-2U	120	60		25	10.7	14.75*	1		
	CTM2SC14C17-65-2U**	132	65	3.4	30	14	17.9**	2		
	CTM2SC14C21-65-2U	136	65	5.4	30	14	20.65*	2		
	CTM2SC16C21-80-2U	135	80		34	16	20.65*	2		
	CTM3SC20C26-110-2U	165	110		40	20	26.0*	3		
	CTM4SC25C31-135-2U	186	135		46	25	31.0*	4		

* For TR inserts use the CNC program (D2+0.25mm).
** To be used only with inserts 2UIDD60TM... or 2UIDM60TM...
For insert 2UIDD60 TM... use the CNC program (D2+0.7mm).



Carbide Cylindrical Shank (U Style) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.						
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)	Partial 55°	Trapez
CTM1SC08C15-40-2U	14.75*	M18x2.5; M24x3.0; M30x3.5; M36x4.0	M16x0.5; M16x0.75; M16x1.0; M17x1.25; M17x1.5; M17x2.0	3/4-10; 7/8-9; 1-8; 1 1/8-7; 1 3/8-6	5/8-32UN; 5/8-28UN; 5/8-27UNS; 1 1/16-24UNEF; 1 1/16-20UN; 1 1/16-16UN; 3/4-14UNS; 1 1/16-12UN	1/2-14; 1-11	1 1/16-26; 1 1/16-20; 1 1/16-16; 1 1/16-14; 3/4-12; 7/8-11; 3/4-10; 7/8-9; 1-8; 1 1/8-7	TR22x3; TR24x3; TR20x5; TR22x5; TR24x5; TR26x5; TR28x5
CTM1SC11C15-60-2U	14.75*	M18x2.5; M24x3.0	M16x0.5; M16x0.75; M16x1.0; M17x1.25; M17x1.5; M17x2.0	3/4-10; 7/8-9; 1-8	5/8-32UN; 5/8-28UN; 5/8-27UNS; 1 1/16-24UNEF; 1 1/16-20UN; 1 1/16-16UN; 3/4-14UNS; 1 1/16-12UN	1/2-14; 1-11	1 1/16-26; 1 1/16-20; 1 1/16-16; 1 1/16-14; 3/4-12; 7/8-11; 3/4-10; 7/8-9	TR22x3; TR24x3
CTM2SC14C17-65-2U	17.2**	M20x2.5; M22x2.5	M21x2.0	7/8-9	7/8-10UNS; 1 3/16-12UN	-	-	-
CTM2SC14C21-65-2U	20.65*	M24x3.0; M30x3.5; M36x4.0	M22x0.5; M22x0.75; M22x1.0; M23x1.25; M23x1.5; M23x2.0	1-8; 1 1/8-7; 1 3/8-6	7/8-32UN; 7/8-28UN; 7/8-27UNS; 7/8-24UNS; 7/8-20UNEF; 1-18UNS; 1 5/16-16UN; 1-14UNS; 1 5/16-12UN; 1-10UNS	3/4-14; 1-11	1-26; 1-20; 1-16; 1-12; 1-10; 1 1/8-9; 1-8; 1 1/8-7	(TR26-TR60)x3; TR28x4; (TR65-TR110)x4; TR28x5
CTM2SC16C21-80-2U	20.65*	M24x3.0; M30x3.5	M22x0.5; M22x0.75; M22x1.0; M23x1.25; M23x1.5; M23x2.0	1-8; 1 1/8-7; 1 3/8-6	7/8-32UN; 7/8-28UN; 7/8-27UNS; 7/8-24UNS; 7/8-20UNEF; 1-18UNS; 1 5/16-16UN; 1-14UNS; 1 5/16-12UN; 1-10UNS	3/4-14; 1-11	1-26; 1-20; 1-16; 1-12; 1-10; 1 1/8-9; 1-8; 1 1/8-7	(TR26-TR60)x3
CTM3SC20C26-110-2U	26	M30x3.5; M36x4.0	M27x0.5; M27x0.75; M28x1.0; M28x1.25; M28x1.5; M29x2.0; M30x2.5; M30x3.0	1 1/4-7; 1 3/8-6	1 1/8-28UN; 1 1/8-24UNS; 1 1/8-20UN; 1 1/8-18UNEF; 1 1/8-16UN; 1 1/8-14UNS; 1 1/8-12UNF; 1 3/8-10UNS; 1 7/8-8UN	7/8-14; 1-11	1 1/8-26; 1 1/8-20; 1 1/8-16; 1 3/16-12; 1 3/16-8; 1 1/4-7	(TR40-TR60)x3 (TR65-TR110)x4
CTM4SC25C31-135-2U	31	M36x4.0	M32x0.5; M32x0.75; M33x1.0; M33x1.25; M33x1.5; M34x2.0; M34x2.5; M35x3.0; M36x3.5	1 1/2-6	1 5/16-28UN; 1 1/2-24UNS; 1 1/2-20UN; 1 1/2-18UNEF; 1 3/8-16UN; 1 3/8-14UNS; 1 3/8-12UNF; 1 3/8-10UNS; 1 7/8-8UN	1 1/8-11	1 5/16-26; 1 5/16-20; 1 3/8-16; 1 3/8-12; 1 1/8-8	(TR50-TR60)x3 (TR65-TR110)x4

* For TR inserts use the CNC program (D2+0.25mm).

** To be used only with inserts 2UIDD60TM... or 2UIDM60TM...

For insert 2UIDD60 TM... use the CNC program (D2+0.7mm).

Thread Applications for Full Profile Inserts (ISO & UN)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch		Min. Thread Dia.	
		* Adjusted D2	mm	tpi	ISO Fine
CTM3SC20C26-110-2U		25.0	1.5	-	M28x1.5
		24.85	2.0	-	M29x2.0
		24.94	-	14	-
		24.85	-	12	-
CTM4SC25C31-135-2U		30.0	1.5	-	M33x1.5
		29.85	2.0	-	M34x2.0
		29.94	-	14	-
		29.85	-	12	-

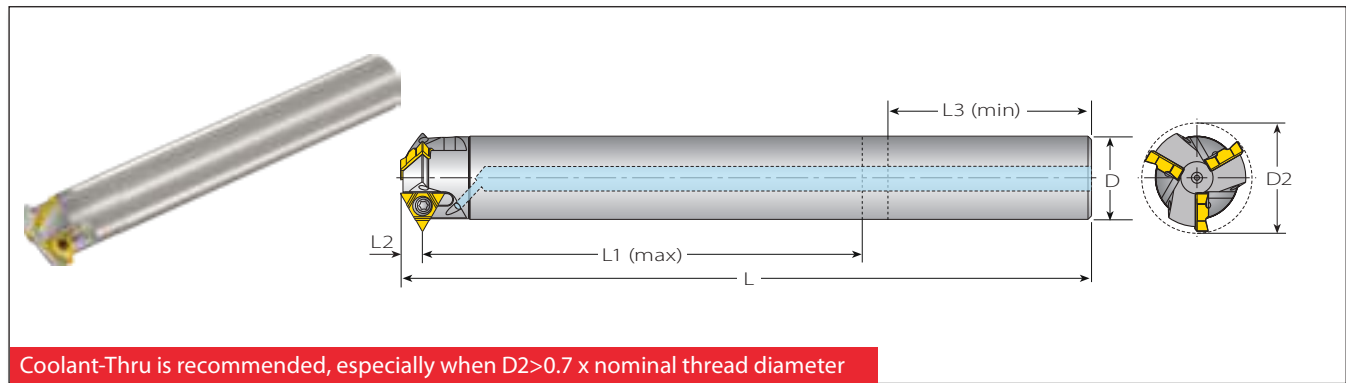
* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.

Thread Applications for Full Profile Inserts (NPT)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole		Cylindrical Pre-Drilled Hole
			* Adjusted D2	tpi	
CTM1SC08C15-40-2U					
CTM1SC11C15-60-2U	14.59	14			
CTM2SC14C21-65-2U					
CTM2SC16C21-80-2U	20.49	14			
CTM3SC20C26-110-2U	25.63	11.5			
CTM4SC25C31-135-2U	30.63	11.5			

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.

Standard Toolholders - Steel Cylindrical Shank (U Style)



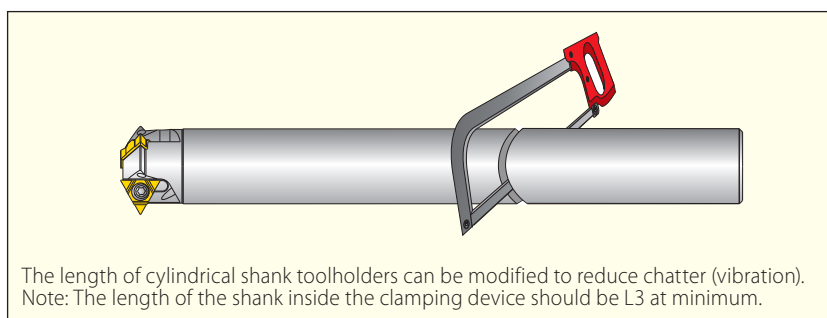
Steel Cylindrical Shank for U Style Inserts

Steel Cylindrical Shank for U Style Inserts									Spare Parts	
Insert Size	Ordering Code	Dimensions mm							No. of Flutes	
IC		L	L1 (max)	L2	L3 (min)	D	D2	Z		
1/4"U	TM2SC18C23-86-2U	166	86	5.4	40	18	23.3	2	SN2T	HK2T
	TM3SC20C26-105-2U	186	105		40	20	26	3		
	TM4SC25C31-115-2U	196	115		46	25	31	4		
3/8"U	TM3SC25C36-125-3U	193	125	8.0	46	25	36.5	3	SA3T	HK3T
	TM3SC28C36-144-3U	222	144		60	28	36.5	3		

Steel Cylindrical Shank (U Style) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.					
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)	Partial 55°
TM2SC18C23-86-2U	23.3	M27x3.0; M30x3.5; M36x4.0	M24x0.5; M25x0.75; M25x1.0; M25x1.25; M26x1.5; M26x2.0; M27x2.5	1 $\frac{1}{8}$ -7	1-32UN; 1-28UN; 1-27UN; 1-24UNS; 1-20UNEF; 1-18UNS; 1-16UN; 1-14UNS; 1 $\frac{1}{16}$ -12UN; 1 $\frac{1}{8}$ -10UNS; 1 $\frac{1}{8}$ -8UN	$\frac{3}{4}$ -14; 1-11	1-26; 1-20; 1 $\frac{1}{8}$ -16; 1 $\frac{1}{8}$ -12; 1 $\frac{1}{8}$ -9; 1 $\frac{1}{8}$ -7
TM3SC20C26-105-2U	26	M30x3.5; M36x4.0	M27x0.5; M27x0.75; M28x1.0; M28x1.25; M28x1.5; M29x2.0; M30x2.5; M30x3.0	1 $\frac{1}{4}$ -7; 1 $\frac{3}{8}$ -6	1 $\frac{1}{8}$ -28UN; 1 $\frac{1}{8}$ -24UNS; 1 $\frac{1}{8}$ -20UN; 1 $\frac{1}{8}$ -18UNEF; 1 $\frac{1}{8}$ -16UN; 1 $\frac{1}{8}$ -14UNS; 1 $\frac{1}{8}$ -12UNF; 1 $\frac{1}{8}$ -10UNS; 1 $\frac{1}{8}$ -8UN	$\frac{7}{8}$ -14; 1-11	1 $\frac{1}{8}$ -26; 1 $\frac{1}{8}$ -20; 1 $\frac{3}{16}$ -16; 1 $\frac{3}{16}$ -12; 1 $\frac{3}{16}$ -8; 1 $\frac{1}{4}$ -7
TM4SC25C31-115-2U	31	M36x4.0	M32x0.5; M32x0.75; M33x1.0; M33x1.25; M33x1.5; M34x2.0; M34x2.5; M35x3.0; M36x3.5	1 $\frac{1}{2}$ -6	1 $\frac{1}{8}$ -28UN; 1 $\frac{1}{8}$ -24UNS; 1 $\frac{1}{2}$ -20UN; 1 $\frac{1}{2}$ -18UNEF; 1 $\frac{1}{8}$ -16UN; 1 $\frac{1}{8}$ -14UNS; 1 $\frac{1}{8}$ -12UNF; 1 $\frac{1}{8}$ -10UNS; 1 $\frac{1}{8}$ -8UN	1 $\frac{1}{8}$ -11	1 $\frac{1}{8}$ -26; 1 $\frac{1}{8}$ -20; 1 $\frac{1}{8}$ -16; 1 $\frac{1}{8}$ -12; 1 $\frac{1}{8}$ -8
TM3SC25C36-125-3U TM3SC28C36-144-3U	36.5	M42.5x4.5; M48x5.0; M56x5.5; M64x6.0	M39x1.5; M40x2.5; M41x3.0; M42x3.5; M42x4.0	1 $\frac{3}{4}$ -5; 2-4.5; 2 $\frac{1}{2}$ -4	1 $\frac{1}{8}$ -16UN; 1 $\frac{1}{8}$ -14UNS; 1 $\frac{1}{8}$ -12UN; 1 $\frac{1}{8}$ -10UNS; 1 $\frac{1}{8}$ -8UN; 1 $\frac{1}{8}$ -6UN	1 $\frac{1}{4}$ -11	1 $\frac{1}{8}$ -16; 1 $\frac{1}{8}$ -12; 1 $\frac{1}{8}$ -8; 1 $\frac{1}{8}$ -6; 1 $\frac{1}{4}$ -5



Steel Cylindrical Shank (U Style) Applications (con't)

Thread Applications for Full Profile Inserts (ISO & UN)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch		Min. Thread Dia.	
	* Adjusted D2	mm	tpi	ISO Fine	UN/UNF/UNEF/UNS
TM2SC18C23-86-2U	22.00	1.5	-	M26x1.5	-
	21.85	2.0	-	M26x2.0	-
	21.94	-	14	-	1-14UNS
	21.85	-	12	-	1-12UNF
TM3SC20C26-105-2U	25.00	1.5	-	M28x1.5	-
	24.85	2.0	-	M29x2.0	-
	24.94	-	14	-	1 1/8-14UNS
	24.85	-	12	-	1 1/8-12UNF
TM4SC25C31-115-2U	30.00	1.5	-	M33x1.5	-
	29.85	2.0	-	M34x2.0	-
	29.94	-	14	-	1 3/8-14UNS
	29.85	-	12	-	1 3/8-12UNF

Thread Applications for Full Profile Inserts (NPT)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole	Cylindrical Pre-Drilled Hole
	* Adjusted D2	tpi	NPT Threading by 1 Radial Pass	**NPT Threading by 2 Radial Passes (50% / 50%)
TM2SC18C23-86-2U	22.63	11.5	1-11.5NPT; 1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM3SC20C26-105-2U	25.63	11.5	1-11.5NPT; 1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM4SC25C31-115-2U	30.63	11.5	1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM3SC25C36-125-3U	35.65	11.5	1 1/4-11.5NPT; 1 1/2-11.5NPT; 2-11.5NPT	-
TM3SC28C36-144-3U				
TM3SC25C36-125-3U	35.65	8	-	2 1/2...10-8NPT
TM3SC28C36-144-3U				

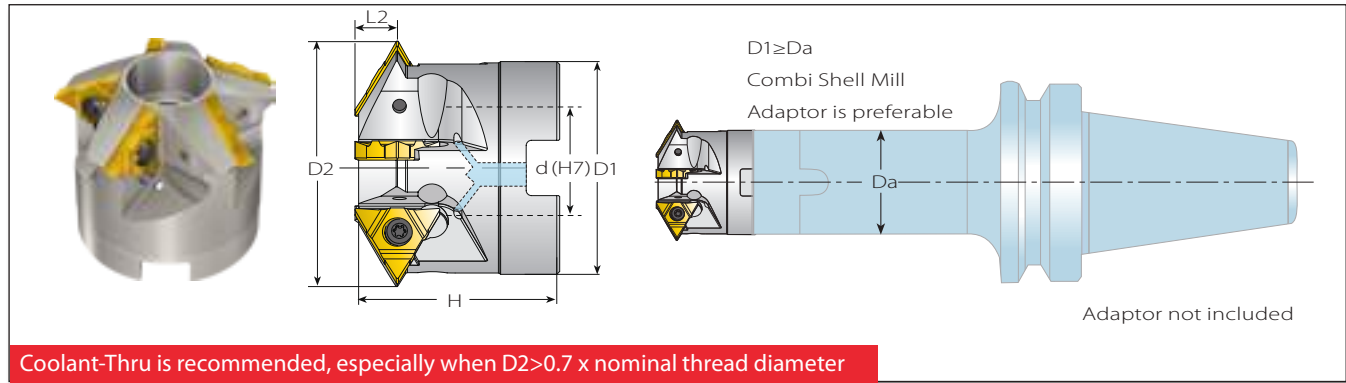
** When the pre-drilled hole for 8NPT is conical, the thread can be machined in one pass.

Thread Applications for Full Profile Inserts (API Round)





Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole (for cylindrical 2 radial passes 50%/50%; for conical one radial pass)	Conical Pre-Drilled Hole only (one pass)
	* Adjusted D2	tpi	Thread Dia.	
TM2SC 18C23-86-2U	21.74	10	1.05x10APIRD (for UP TBG; UP TBG Long); 1.315...1.66x10APIRD (for TBG; UP TBG; UP TBG Long; Integral-Joint TBG)	-
TM3SC 20C26-105-2U	24.44		1.66...2.875x10APIRD (for TBG; UP TBG; UP TBG Long; Integral-Joint TBG)	
TM4SC 25C31-115-2U	29.44		1.66...3.5x10APIRD (for TBG; UP TBG; UP TBG Long; Integral-Joint TBG)	
TM3SC 25C36-125-3U	34.7	8	2.375...20x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...7.625x8APIRD (for LCSG)	8.625...9.625x8APIRD (for LCSG)
TM3SC 28C36-144-3U				8.625...20x8APIRD (for LCSG)

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.

Shell Mill (U Style)



Shell Mill for U Style Inserts

								Spare Parts			
Insert Size	Ordering Code	Dimensions mm					No. of Flutes				
IC		D1	D2	d(H7)	H	L2	Z	Insert Screw	Torx Key	Holder Screw	Holder Screwdriver
3/8"U	TM4SC-D42-16-3U	34	42	16	40	8.0	4	SN3T	HK3T	SA5T-C5 (M8x1.25x28)	TK5T
	TM5SC-D48-22-3U	40	48	22	40	8.0	5			M10x1.50x35	-
	TM6SC-D56-22-3U	48	56	22	40	8.0	6				
1/2"U	TM6SC-D88-27-4U	76	88	27	50	10.8	6	SA4T	HK4T	M12x1.75x40	-
	TM7SC-D98-32-4U	85	98	32	55	10.8	7			M16x2.0x40	

Shell Mill (U Style) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.						
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)	Partial 55°	
TM4SC-D42-16-3U	42	M48x5.0; M56x5.5; M64x6.0;	M45x1.5; M45x2.0; M46x2.5; M48x3.0; M48x3.5; M48x4.0	2-4.5; 2½ - 4	1¾-16UN; 1¾-14UNS; 1⅜-12UN; 1⅜-8UN; 1⅝-6UN	1½ - 11	1⅞-16; 1⅞-12; 1⅞-8; 1⅞-6; 2-4.5	
TM5SC-D48-22-3U	48	M56x5.5; M64x6.0	M52x1.5; M52x2.0; M52x2.5; M52x3.0; M55x4.0	2¼ - 4.5; 2½ - 4	2-16UN; 2-14UN; 2-12UN; 2¼-10UNS; 2⅜-8UN; 2⅝-6UN	1¾ - 11	2-16; 2¼-12; 2¼-8; 2¼-6; 3-5; 3½-4.5; 2¼-4	
TM6SC-D56-22-3U	56	M64x6.0	M60x1.5; M60x2.0; M60x2.5; M60x3.0; M64x4.0	2½ - 4	2⅝-16UN; 2⅝-14UN; 2⅝-12UN; 2½-10UNS; 2⅝-8UN; 2½-6UN	2 - 11	2½-16; 2½-12; 2½-8; 2¾-6; 3-5; 3½-4.5; 4¼-4	
TM6SC-D88-27-4U	88	-	M95x6.0; M125x8	4- 4	4¼-4UN	-	4-3; 4¼-4	
TM7SC-D98-32-4U	98	-	M105x6.0; M125x8	-	4¼-4UN	-	4¼-4	

Shell Mill (U Style) Applications (con't)

Thread Applications for Full Profile Inserts (NPT)

Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole	Cylindrical Pre-Drilled Hole
* Adjusted D2		tpi	NPT Threading by 1 Radial Pass	**NPT Threading by 2 Radial Passes (50% / 50%)
TM4SC-D42-16-3U	41.15	11.5	1 1/2-11.5NPT; 2-11.5NPT	-
TM4SC-D42-16-3U	41.15	8	-	2 1/2...10-8NPT
TM5SC-D48-22-3U	47.15	11.5	2-11.5NPT	-
TM5SC-D48-22-3U	47.15	8	-	2 1/2...10-8NPT
TM6SC-D56-22-3U	55.15	8	-	2 1/2...10-8NPT
TM6SC-D88-27-4U	88.06	8	3 1/2"...160D-8NPT	160D...240D-8NPT
TM7SC-D98-32-4U	98.06	8	4"...160D-8NPT	160D...240D-8NPT

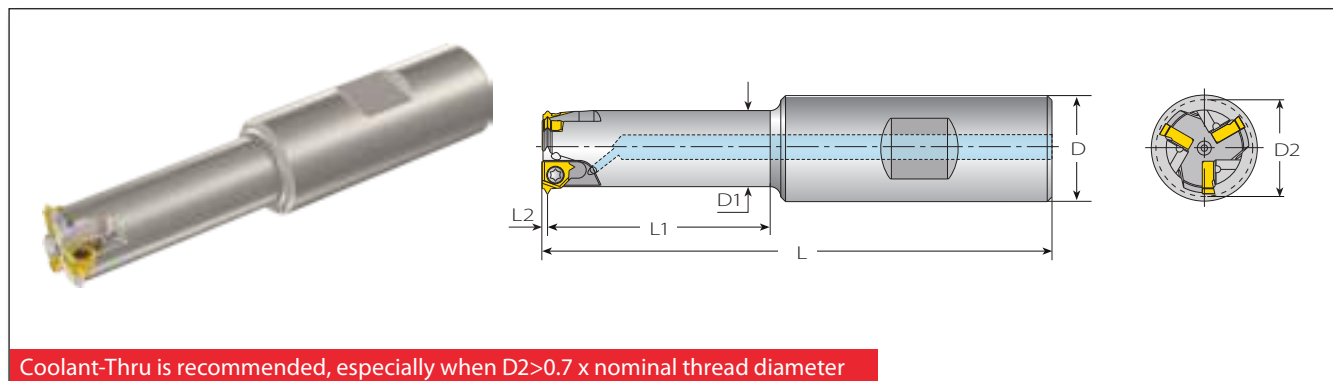
** When the pre-drilled hole for 8NPT is conical, the thread can be machined in one pass.

Thread Applications for Full Profile Inserts (API Round)



Toolholder	Toolholder Cutting Diameter D2 (mm)	Pitch	Cylindrical or Conical Pre-Drilled Hole (for cylindrical 2 radial passes 50%/50%; for conical one radial pass)	Conical Pre-Drilled Hole only (one pass)
* Adjusted D2		tpi	Thread Dia.	
TM4SC-D42-16-3U	40.2	8	2.875...20x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...7.625x8APIRD (for LCSG)	8.625...20x8APIRD (for LCSG)
TM5SC-D48-22-3U	46.2		3.5...20x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...7.625x8APIRD (for LCSG)	
TM6SC-D56-22-3U	54.2		4...20x8APIRD (for CSG; TBG; UP TBG; UP TBG Long); 4.5...7.625x8APIRD (for LCSG)	

* Correct the toolholder cutting diameter D2 according to adjustment, as indicated in the above table.

Standard Toolholders - Weldon Shank (L Style - Mini L)



Weldon Shank for Mini-L Style Inserts

Weldon Shank for Mini-L Style Inserts									Spare Parts	
Insert Size	Ordering Code	Dimensions mm								
IC		L	L1	L2	D	D1	D2	Z	Insert Screw	Torx Key
5.0L (Mini L)	TM1SC16W13-29-5L	81	29	1.1	16	9.8	13.0	1	SN5LTR	K7T
	TM2SC16W14-33-5L	85	33		16	10.3	13.5	2		
	TM3SC20W18-42-5L	96	42		20	14.3	17.7	3		
	TM2SC16W14-35-5L-ABUT	88	35	1.87	16	10.3	14.0	2		
	TM3SC20W18-45-5L-ABUT	100	45		20	14.3	18.2	3		

Weldon Shank (L Style - Mini L) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.						
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)	Partial 55°	Trapez
TM1SC16W13-29-5L	13	M16x2	M14x0.5; M14x0.75; M14.5x1.0; M15x1.5; M17x2.0	$\frac{5}{8}$ -11	$\frac{5}{16}$ -32UN; $\frac{5}{16}$ -28UN; $\frac{5}{16}$ -27UNS; $\frac{5}{16}$ -24UNEF; $\frac{5}{8}$ -20UN; $\frac{5}{8}$ -18UNF; $\frac{5}{8}$ -16UN; $\frac{5}{8}$ -14UNS; $\frac{5}{8}$ -12UN	$\frac{3}{8}$ -19	$\frac{5}{8}$ -14	TR16X2; TR18X2
TM2SC16W14-33-5L	13.5	M16x2	M15x0.5; M15x0.75; M15x1.0; M16x1.5; M17x2.0	-	$\frac{5}{8}$ -32UN; $\frac{5}{8}$ -28UN; $\frac{5}{8}$ -27UNS; $\frac{5}{8}$ -24UNEF; $\frac{5}{8}$ -20UN; $\frac{5}{8}$ -18UNF; $\frac{5}{8}$ -16UN; $\frac{5}{8}$ -14UNS; $\frac{11}{16}$ -12UN	$\frac{3}{8}$ -19	$\frac{11}{16}$ -14	TR16X2; TR18X2
TM3SC20W18-42-5L	17.7	-	M19x0.5; M19x0.75; M19x1.0; M20x1.5; M20x2.0	-	$\frac{3}{4}$ -32UN; $\frac{3}{4}$ -28UN; $\frac{7}{8}$ -27UNS; $\frac{3}{4}$ -24UNS; $\frac{13}{16}$ -20UNEF; $\frac{7}{8}$ -18UNS; $\frac{13}{16}$ -16UN; $\frac{7}{8}$ -14UNF; $\frac{13}{16}$ -12UN	$\frac{1}{2}$ -14	-	TR20X2

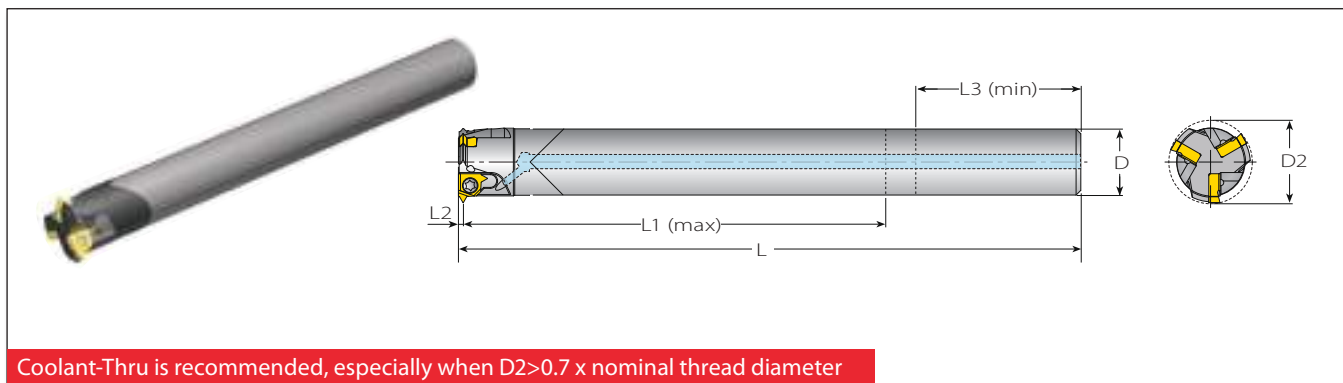
Thread Applications for Full Profile Inserts (ISO, UN, NPT)

Toolholder		Min. Thread Dia.		
	D2	ISO Fine	UN/UNF/UNEF/UNS	NPT
TM1SC16W13-29-5L	13	M14.5x1.0; M15x1.5; M17x2.0	$\frac{5}{8}$ -18UNF; $\frac{5}{8}$ -16UN; $\frac{5}{8}$ -14UNS; $\frac{5}{8}$ -12UN	$\frac{3}{8}$ -18NPT
TM2SC16W14-33-5L	13.5	M15x1.0; M16x1.5; M17x2.0	$\frac{5}{8}$ -18UNF; $\frac{5}{8}$ -16UN; $\frac{5}{8}$ -14UNS; $\frac{11}{16}$ -12UN	$\frac{3}{8}$ -18NPT
TM3SC20W18-42-5L	17.7	M19x1.0; M20x1.5; M20x2.0	$\frac{7}{8}$ -18UNS; $\frac{13}{16}$ -16UN; $\frac{7}{8}$ -14UNF; $\frac{13}{16}$ -12UN	-



Thread Applications for Full Profile American Buttress Inserts

Toolholder		Thread Dia.
	D2	American Buttress
TM2SC16W14-35-5L-ABUT	14.0	(0.875"-4")-16; (0.875"-6")-12; (0.875"-16")-10
TM3SC20W18-45-5L-ABUT	18.2	(1.25"-4")-16; (1.25"-6")-12; (1.25"-16")-10

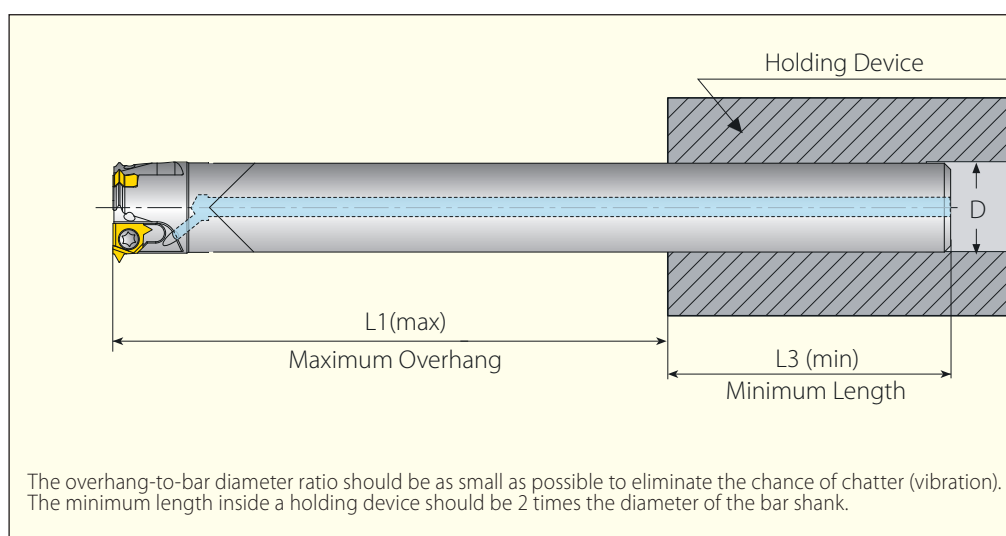
Standard Toolholders - Carbide Cylindrical Shank (L Style - Mini L)



Carbide Cylindrical Shank for Mini-L Style Inserts

Carbide Cylindrical Shank for Mini-L Style Inserts									Spare Parts	
Insert Size		Ordering Code		Dimensions mm			No. of Flutes			
IC		L	L1 (max)	L2	L3 (min)	D	D2	Z	Insert Screw	Torx Key
5.0L (Mini L)	CTM1SC09C13-43-5L	109	43	1.1	20	9.5	13.0	1	SN5LTR	K7T
	CTM2SC10C14-50-5L	116	50		22	10	13.5	2		
	CTM3SC14C18-65-5L	132	65		30	14	17.7	3		
	CTM2SC10C14-50-5L-ABUT	116	50	1.87	22	10	14.0	2		
	CTM3SC14C18-65-5L-ABUT	132	65		30	14	18.2	3		

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Carbide Cylindrical Shank (L Style - Mini L) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.						
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)	Partial 55°	Trapez
CTM1SC09C13-43-5L	13	M16x2	M14x0.5; M14x0.75; M14.5x1.0; M15x1.5; M17x2.0	5/8-11	5/16-32UN; 5/16-28UN; 5/16-27UNS; 5/16-24UNEF; 5/16-20UN; 5/16-18UNF; 5/16-16UN; 5/16-14UNS; 5/16-12UN	3/8-19	5/8-14	TR16X2; TR18X2
CTM2SC10C14-50-5L	13.5	M16x2	M15x0.5; M15x0.75; M15x1.0; M16x1.5; M17x2.0	-	5/8-32UN; 5/8-28UN; 5/8-27UNS; 5/8-24UNEF; 5/8-20UN; 5/8-18UNF; 5/8-16UN; 5/8-14UNS; 11/16-12UN	3/8-19	11/16-14	TR16X2; TR18X2
CTM3SC14C18-65-5L	17.7	-	M19x0.5; M19x0.75; M19x1.0; M20x1.5; M20x2.0	-	3/4-32UN; 3/4-28UN; 7/8-27UNS; 3/4-24UNS; 13/16-20UNEF; 7/8-18UNS; 13/16-16UN; 7/8-14UNF; 13/16-12UN	1/2-14	-	TR20X2

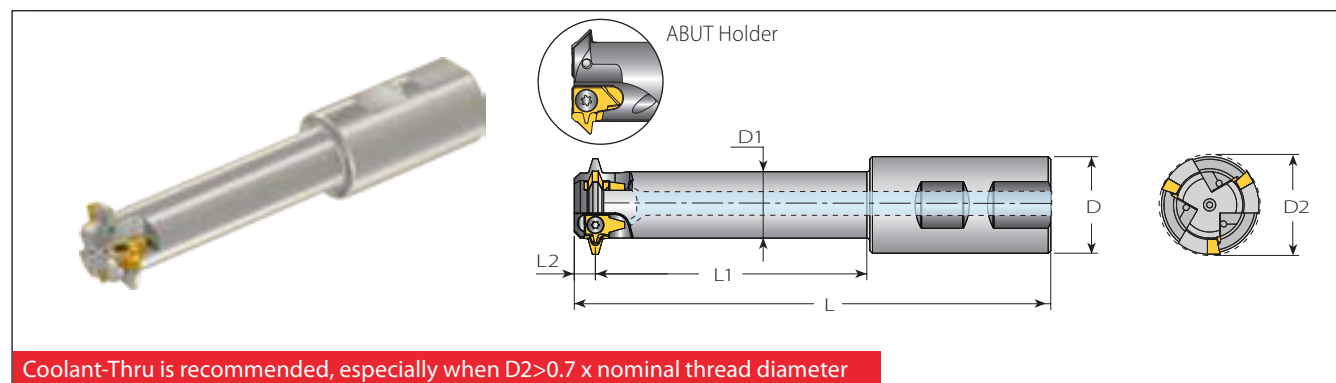
Thread Applications for Full Profile Inserts (ISO, UN, NPT)

Toolholder		Min. Thread Dia.		
	D2	ISO Fine	UN/UNF/UNEF/UNS	NPT
CTM1SC09C13-43-5L	13	M14.5x1.0; M15x1.5; M17x2.0	5/8-18UNF; 5/8-16UN; 5/8-14UNS; 5/8-12UN	3/8-18NPT
CTM2SC10C14-50-5L	13.5	M15x1.0; M16x1.5; M17x2.0	5/8-18UNF; 5/8-16UN; 5/8-14UNS; 11/16-12UN	3/8-18NPT
CTM3SC14C18-65-5L	17.7	M19x1.0; M20x1.5; M20x2.0	7/8-18UNS; 13/16-16UN; 7/8-14UNF; 13/16-12UN	-



Thread Applications for Full Profile American Buttress Inserts

Toolholder		Thread Dia.	
	D2	American Buttress	
CTM2SC10C14-50-5L-ABUT	14.0	(0.875"-4")-16; (0.875"-6")-12; (0.875"-16")-10	
CTM3SC14C18-65-5L-ABUT	18.2	(1.25"-4")-16; (1.25"-6")-12; (1.25"-16")-10	

Standard Toolholders - Weldon Shank (L Style - 3/8" L)



Weldon Shank for 3/8" L Style Inserts

Weldon Shank for 3/8" L Style Inserts									Spare Parts		
Insert Size	Ordering Code	Dimensions mm							No. of Flutes		
IC	Toolholder	L	L1	L2	D	D1	D2	Z	Insert Screw	Torx Key	
3/8"L	TM1SC25W21-50-3L	115	50	7.0	25	12.7	21.6	1	SN3T	HK3T	
	TM2SC25W28-70-3L	135	70		25	18.1	28.5	2	SA3T		
	TM3SC32W33-90-3L	158	90		32	22.0	33.5	3	SN3T		
	TM2SC25W26-80-3L-ABUT	143	80	4.7	25	20.1	26.4	2	SA3T		
	TM3SC32W35-105-3L-ABUT	172	105		32	28.0	35.5	3			

Weldon Shank (L Style - 3/8" L) Applications

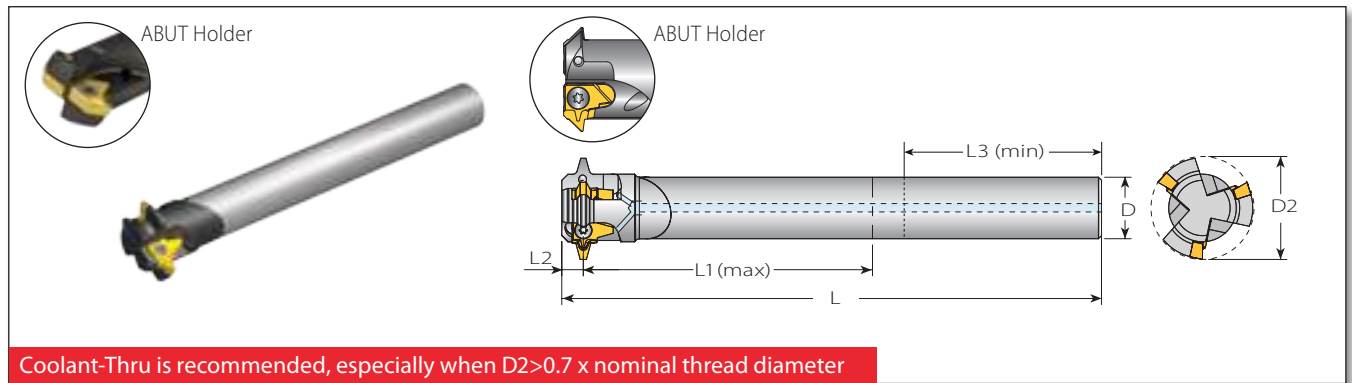
Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.		
	D2	Trapez	American ACME	Stub ACME
TM1SC25W21-50-3L	21.6	(TR30-36)x6	1¼-5; 1⅜-4; 1½-4	1¼-5; 1⅜-4; 1½-4
TM2SC25W28-70-3L	28.5	(TR38-44)x7	1¾-4	-
TM3SC32W33-90-3L	33.5	(TR46-52)x8	2-4; 2¼-3; 2½-3; 2¾-3	2-4; 2¼-3; 2½-3; 2¾-3

Thread Applications for Full Profile American Buttress Inserts

Toolholder		Thread Dia.	
	D2	American Buttress	
TM2SC25W26-80-3L-ABUT	26.4	(1.75"-4")-16; (1.75"-6")-12; (1.75"-6")-10; (1.75"-6")-8; (1.75"-6")-6	
TM3SC32W35-105-3L-ABUT	35.5	(2.5"-4")-16; (2.5"-6")-12; (2.5"-6")-10; (2.5"-6")-8; (2.5"-6")-6	

Standard Toolholders - Carbide Cylindrical Shank (L Style - 3/8" L)



Carbide Cylindrical Shank for 3/8" L Style Inserts

Carbide Cylindrical Shank for 3/8" L Style Inserts									Spare Parts	
Insert Size	Ordering Code	Dimensions mm								
IC	Toolholder	L	L1(max)	L2	L3(min)	D	D2	Z	Insert Screw	Torx Key
3/8" L	CTM1SC1/2"C21-75-3L	115	75	7.0	40	12.7	21.6	1	SN3T	HK3T
	CTM2SC18C28-100-3L	155	100		46	18	28.5	2	SA3T	
	CTM3SC20C33-120-3L	176	120		46	20	33.5	3	SN3T	
	CTM2SC20C26-105-3L-ABUT	172.5	105		40	20	26.4	2	SA3T	

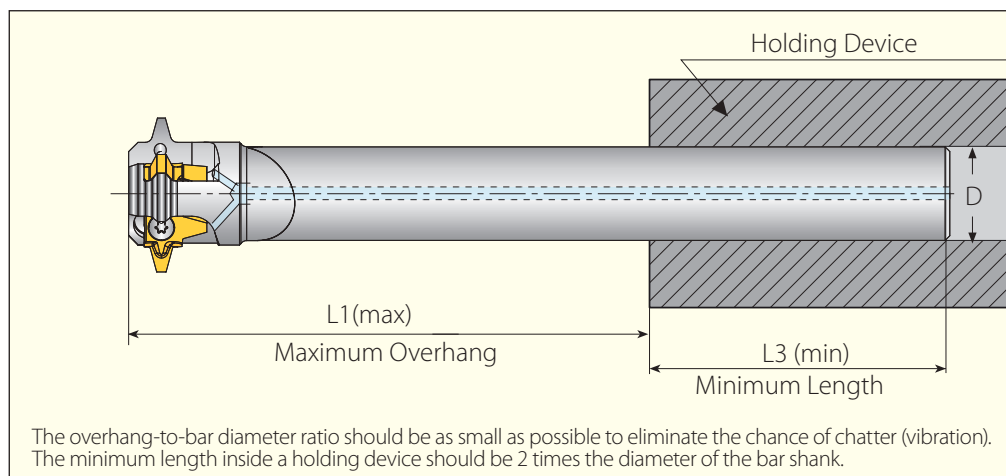
Carbide Cylindrical Shank (L Style - 3/8" L) Applications

Thread Applications for Partial Profile Inserts

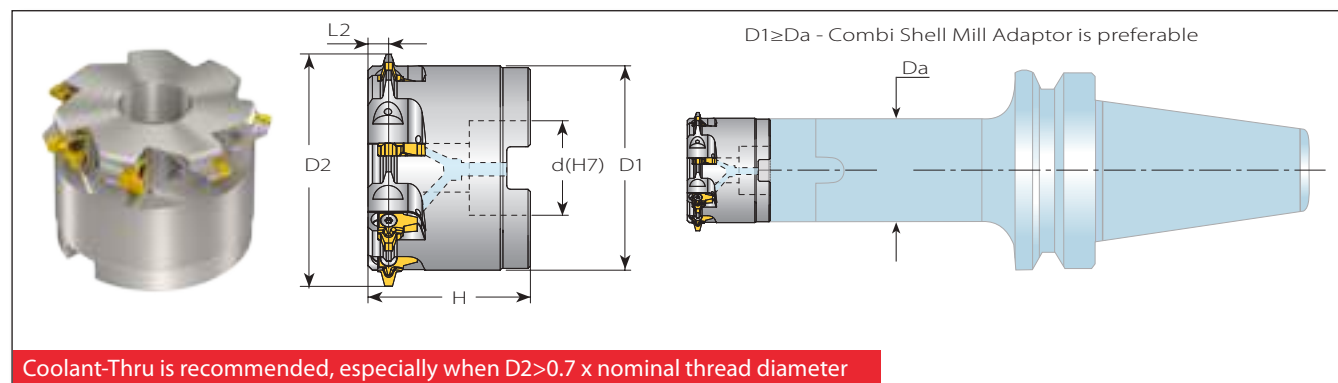
Toolholder		Min. Thread Dia.			
	D2	Trapez	American ACME		Stub ACME
CTM1SC1/2"C21-75-3L	21.6	(TR30-36)x6	1 1/4-5; 1 3/8-4; 1 1/2-4		1 1/4-5; 1 3/8-4; 1 1/2-4
CTM2SC18C28-100-3L	28.5	(TR38-44)x7	1 3/4-4		-
CTM3SC20C33-120-3L	33.5	(TR46-52)x8	2-4; 2 1/4-3; 2 1/2-3; 2 3/4-3		2-4; 2 1/4-3; 2 1/2-3; 2 3/4-3

Thread Applications for Full Profile American Buttress Inserts




Toolholder		Thread Dia.	
	D2	American Buttress	
CTM2SC20C26-105-3L-ABUT	26.4	(1.75"-4")-16; (1.75"-6")-12; (1.75"-6")-10; (1.75"-6")-8; (1.75"-6")-6	



Shell Mill (L Style - 3/8" L)



Shell Mill for 3/8" L Style Inserts

								Spare Parts		
Insert Size	Ordering Code	Dimensions mm								
IC	Toolholder	D1	D2	d(H7)	H	L2	Z	Insert Screw	Torx Key	Holder Screw
3/8" L	TM7SC-D80-32-3L	69.2	80	32	55	7.0	7	SA3T	HK3T	M16x2.0x40
	TM5SC-D48-22-3L-ABUT	41.0	48	22	40	4.7	5			M10x1.50x35
	TM6SC-D58-27-3L-ABUT	51.0	58	27			6			M12x1.75x40

Shell Mill (L Style - 3/8" L) Applications

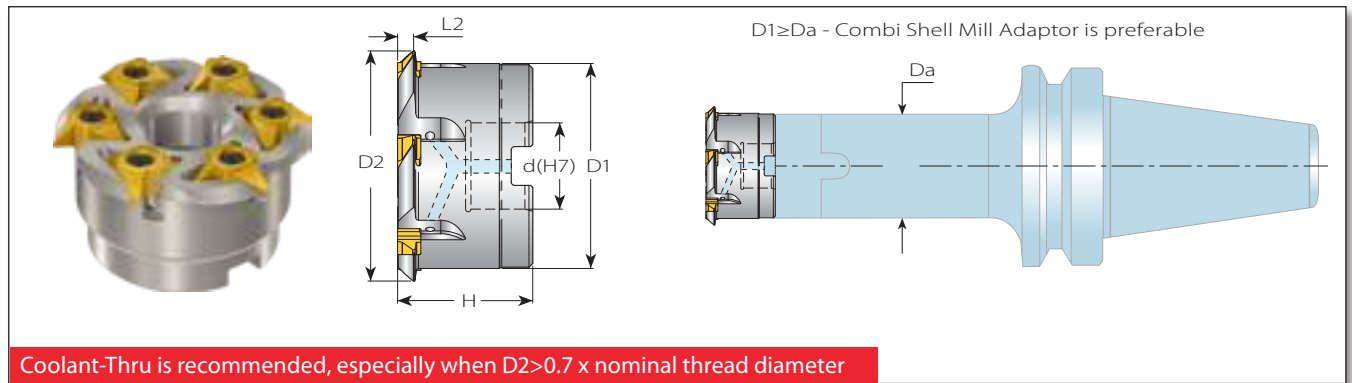
Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.		
	D2	Trapez	American ACME	Stub ACME
TM7SC-D80-32-3L	80	(TR115-130)x6; (TR175-240)x8	-	-




Thread Applications for Full Profile American Buttress Inserts

Toolholder		Thread Dia.
	D2	American Buttress
TM5SC-D48-22-3L-ABUT	48	(3.0"-6")-12; (3.0"-6")-10; (3.0"-6")-8; (3.0"-6")-6
TM6SC-D58-27-3L-ABUT	58	(4.0"-6")-12; (4.0"-6")-10; (4.0"-6")-8; (4.0"-6")-6

Shell Mill (5/8" V Style)



Shell Mill for 5/8" V Style Inserts

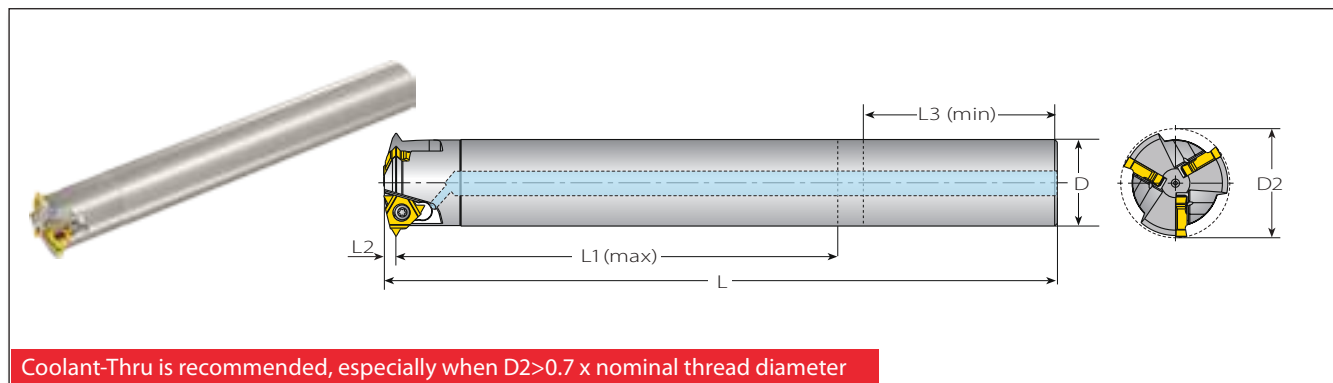
									Spare Parts		
Insert Size	Ordering Code	Dimensions mm					No. of Flutes				
IC	Toolholder	D1	D2	d(H7)	H	L2	Z	Insert	Insert Screw	Torx Key	Holder Screw
5/8"V	TM6SC-D88-32-5V6-ABUT	72.5	88	32	47.9	5.35	6	5VI4ABUT-TM...	SA5T	HK5T	M16x2.0x40
	TM6SC-D88-32-5V8-ABUT	72.5	88	32	51.7	8.50		5VI2.5ABUT-TM...			
					50.0	7.10	6	5VI3ABUT-TM...			

Shell Mill (5/8" V Style) Applications



Thread Applications for Full Profile American Buttress Inserts

Toolholder		Thread Dia.
	D2	American Buttress
TM6SC-D88-32-5V6-ABUT	88	(5.0"-24")-4
TM6SC-D88-32-5V8-ABUT	88	(6.0"-24")-3; (7.0"-24")-2.5

Standard Toolholders - Steel Cylindrical Shank (A Style)



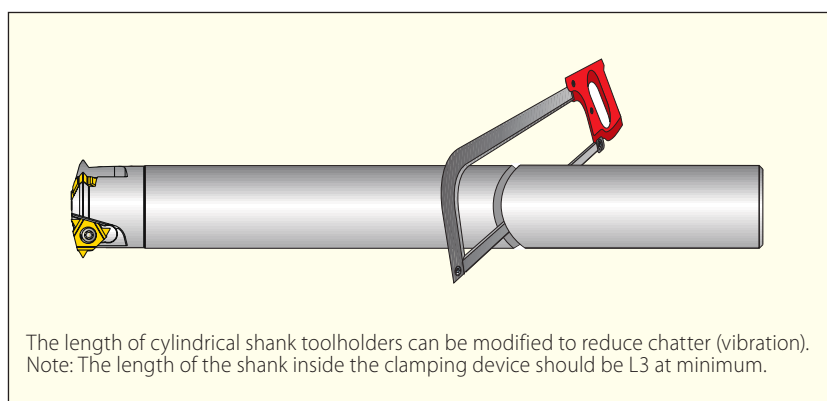
Steel Cylindrical Shank for A-Style Inserts

									Spare Parts	
Insert Size	Ordering Code	Dimensions mm								
IC		L	L1 (max)	L2	L3 (min)	D	D2	Z	Insert Screw	Torx Key
1/4"A	TM3SC20C26-105-2A	184	105	3.0	40	20	26.0	3	SN2T	HK2T
3/8"A	TM3SC28C35-144-3A	218	144	4.0	46	28	35.3	3	SA3T	HK3T

Steel Cylindrical Shank (A Style) Applications

Thread Applications for Partial Profile Inserts

Toolholder		Min. Thread Dia.				
	D2	ISO Coarse	ISO Fine	UNC	UN/UNF/UNEF/UNS	BSP (G)
TM3SC20C26-105-2A	26	-	M28x1.5; M29x2.0; M30x2.5; M30x3.0	-	1 1/8-16UN; 1 1/8-14UNS; 1 3/16-12UN; 1 1/4-10UNS; 1 3/16-8UN	-
TM3SC28C35-144-3A	35.3	-	M38x2.0; M39x2.5; M39x3.0; M40x4.0	-	1 9/16-12UN; 1 5/8-10UNS; 1 5/8-8UN; 1 5/8-6UN	-



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] by Cutting Dia. (D2)		
					VBX	VTX	13-23	24-42	Shell Mill
P Steel	1	Unalloyed Steel	Low Carbon (C=0.1-0.25%)	125	100-210	90-180	0.20-0.32	0.30-0.50	0.30-0.75
	2		Medium Carbon (C=0.25-0.55%)	150	100-180	90-170	0.20-0.32	0.30-0.50	0.30-0.75
	3		High Carbon (C=0.55-0.85%)	170	100-170	90-160	0.15-0.23	0.25-0.35	0.25-0.52
	4	Low Alloy Steel (alloying elements ≤5%)	Non Hardened	180	60-90	90-155	0.17-0.28	0.28-0.45	0.28-0.67
	5		Hardened	275	80-150	80-160	0.15-0.28	0.25-0.45	0.25-0.67
	6		Hardened	350	70-140	70-150	0.15-0.25	0.25-0.40	0.25-0.60
	7	High Alloy Steel (alloying elements >5%)	Annealed	200	60-130	70-115	0.15-0.22	0.20-0.30	0.20-0.45
	8		Hardened	325	70-110	60-100	0.13-0.21	0.18-0.30	0.18-0.45
	9	Cast Steel	Low Alloy (alloying elements <5%)	200	100-170	100-170	0.15-0.22	0.20-0.30	0.20-0.45
	10		High Alloy (alloying elements >5%)	225	70-120	70-130	0.12-0.22	0.17-0.30	0.17-0.45
M Stainless Steel	11	Stainless Steel Ferritic	Non Hardened	200	100-170	120-180	0.15-0.22	0.22-0.34	0.22-0.50
	12		Hardened	330	100-170	120-180	0.16-0.23	0.21-0.32	0.21-0.48
	13	Stainless Steel Austenitic	Austenitic	180	70-140	100-140	0.15-0.25	0.25-0.40	0.25-0.60
	14		Super Austenitic	200	70-140	100-140	0.12-0.20	0.17-0.26	0.17-0.39
	15	Stainless Steel Cast Ferritic	Non Hardened	200	70-140	100-140	0.16-0.24	0.25-0.37	0.25-0.55
	16		Hardened	330	70-140	100-140	0.12-0.20	0.17-0.26	0.17-0.39
	17	Stainless Steel Cast Austenitic	Austenitic	200	70-120	100-120	0.15-0.22	0.20-0.30	0.20-0.45
	18		Hardened	330	70-120	100-120	0.12-0.20	0.17-0.26	0.17-0.39
K Cast Iron	28	Malleable Cast Iron	Ferritic (short chips)	130	60-130	100-120	0.16-0.24	0.25-0.37	0.25-0.55
	29		Pearlitic (long chips)	230	60-120	80-100	0.15-0.22	0.20-0.30	0.20-0.45
	30	Grey Cast Iron	Low Tensile Strength	180	60-130	80-100	0.15-0.22	0.22-0.34	0.22-0.50
	31		High Tensile Strength	260	60-100	80-100	0.15-0.22	0.20-0.30	0.20-0.45
	32	Nodular Sg Iron	Ferritic	160	60-125	80-100	0.10-0.20	0.15-0.25	0.15-0.37
	33		Pearlitic	260	50-90	60-90	0.15-0.22	0.20-0.30	0.20-0.45
N Non-Ferrous Metals	34	Aluminium Alloys Wrought	Non Aging	60	100-250		0.30-0.50	0.60-1.00	0.60-1.50
	35		Aged	100	100-180		0.28-0.50	0.50-0.90	0.50-1.20
	36	Aluminium Alloys	Cast	75	150-400		0.28-0.50	0.50-0.90	0.50-1.20
	37		Cast & Aged	90	150-280		0.25-0.40	0.40-0.60	0.40-0.90
	38	Aluminium Alloys	Cast Si 13-22%	130	80-150		0.28-0.50	0.50-0.90	0.50-1.20
	39	Copper and Copper Alloys	Brass	90	120-210	100-200	0.30-0.50	0.60-1.00	0.60-1.50
	40		Bronze and Non Leaded Copper	100	120-210	100-200	0.28-0.50	0.50-0.90	0.50-1.20
S Heat Resistant Material	19	High Temperature Alloys	Annealed (iron based)	200	20-45	20-40	0.09-0.15	0.12-0.22	0.12-0.33
	20		Aged (iron based)	280	20-30	20-30	0.07-0.13	0.10-0.20	0.10-0.30
	21		Annealed (nickel or cobalt based)	250	15-20	15-20	0.08-0.15	0.08-0.20	0.08-0.30
	22		Aged (nickel or cobalt based)	350	10-15	10-15	0.08-0.15	0.08-0.20	0.08-0.30
	23	Titanium Alloys	Pure 99.5 Ti	400Rm	70-140	70-120	0.07-0.13	0.10-0.20	0.10-0.30
	24		α+β alloys	1050Rm	20-50	20-50	0.07-0.13	0.10-0.20	0.10-0.30
H Hardened Material	25	Extra Hard Steel	Hardened & Tempered	45-50HRC	15-45	15-45	0.05-0.12	0.05-0.18	0.05-0.27
	26			51-55HRC	15-40	15-40	0.05-0.12	0.05-0.18	0.05-0.27

* When using a Shell Mill toolholder, the feed can be increased by 50%.

* For 3/8"L it is recommended to machine in two passes and decrease the feed by 40%.

Grades

Grade	Application
VBX	TiCN coated carbide grade. Excellent grade for Steels and General Use .
VTX	TiAlN coated carbide grade. Ideal for Stainless Steels .

