THREAD SMART

THREAD MILLING SOLUTIONS

SECO

EVEN IN DIFFICULT TO MACHINE MATERIALS

Thread milling is a versatile and cost-effective tooling solution, especially if you're machining a variety of parts, threads and materials on the same machine. Seco offers all the functionality you need, from our multi-tooth indexable insert line to the solid carbide Threadmaster™ for smaller holes. One tool can machine, regardless of diameter, threads of the same pitch. They can be internal or external, and depending on the threadform can be either right-hand or left-hand. Plus, milled threads can be cut to full depth with excellent form, finish and dimensional accuracy even in difficult materials.

Seco multi-tooth indexable threadmills are designed for hole diameters .650" and larger and are available in various profiles and pitches.

Easy-to-load inserts are double-sided and at 1.575" (40mm) long, offer increased thread length capability for most pitches. Our entire insert line is available in Grade F30M for extra toughness and wear-resistance in all materials.

THREADMASTER™

- High helix reduces to reduce cutting forces and eliminates chatter
- Precision ground form
- Large diameter shank for rigidity
- Excellent carbide substrate with TiCN-coating works ideal for steel, stainless steel, cast iron and high temperature alloys.
- 2x reach diameter

Threadmaster-H, designed for hardened materials up to 60 HRc.

Threadmaster -900 designed for materials with a tensile strength over 900 N/mm2 - available in thread dimensions between M4 and M16.

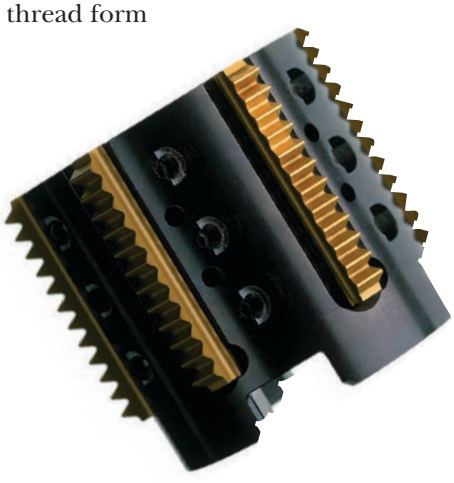
Threadmaster Mini is a new thread milling tool for small dimensions in hard materials from 45 to 60 HRc - available in thread dimensions from M1 x 0.25 to M2.5 x 0.45.

Drilling Threadmaster for drilling, threading and chamfering – primarily for cast iron and aluminum, covering a range from M4 up to M16, UNC/UNF and Whitworth profiles.

INSERT CUTTERS

The design of our indexable thread mill cutters and inserts represent another step forward for thread making applications.

- Easy to load inserts with two cutting edges 1.575" (40mm) length
- Wear resistant grade F30M a universal choice for all materials
- Cutter body accommodates both O.D and I.D threads
- Multi tooth cutter holds up to six inserts for faster running parameters
- Threads forms made for 100% thread depth if needed
- Long reach cutter and shell mills available if long threads needed
- Inserts are precision ground for highly accurate thread form

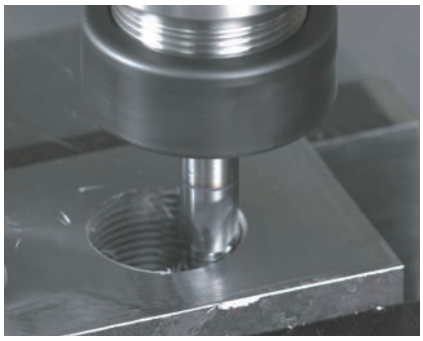


AND WE'VE MADE IT EASIER

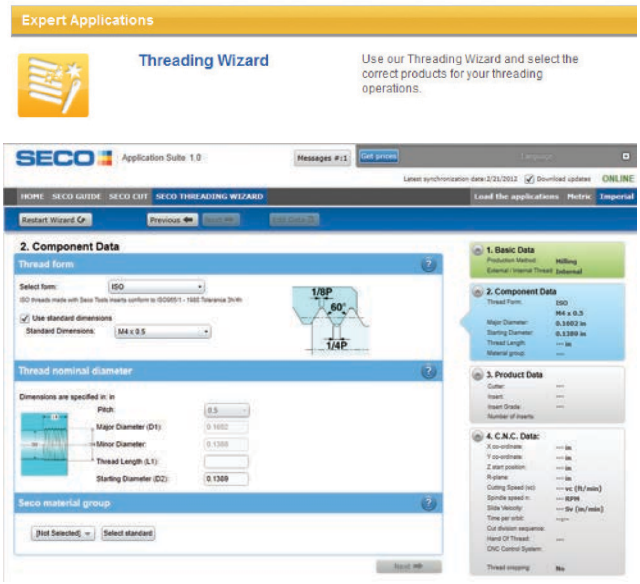
THREAD MILLING VS. TAPPING

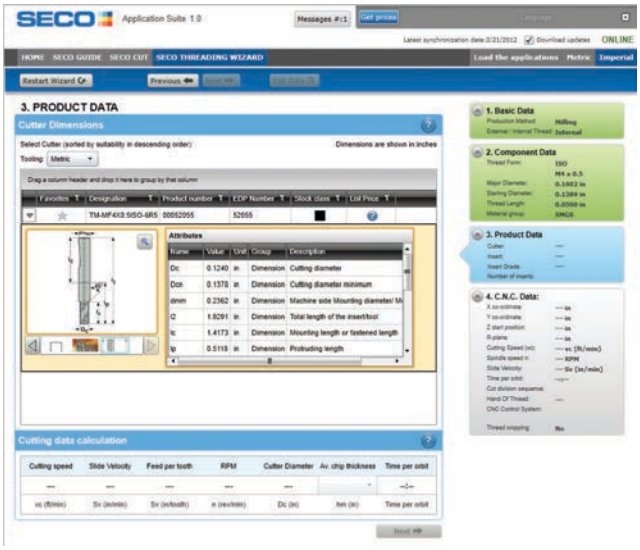
The debate is over. On today's CNC machining centers, Seco thread milling is THE solution.

Superior threads, better chip control, precise thread depth control, a simpler milling process, minimum power requirements and no more down time due to broken taps.



The only problem with threadmilling has been the more difficult programming process. Now Seco can take the guesswork out of your threadmilling operations by eliminating calculations and simplfying programming!





ELIMINATE CALCULATIONS... SIMPLIFY PROGRAMMING

Take the guesswork out of your threadmilling operations. Seco's user-friendly Threading Wizard software eliminates complicated programs and calculations. With minimal input, the Wizard selects your optimum cutter, identifies the best operating parameters, then downloads the information to your CNC. The program maximizes tool life, improves chip control, reduces production time and produces a perfect thread from the very first cut.

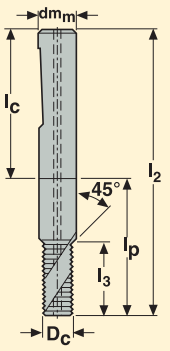
Other unique Wizard advantages include built-in logic that can program a 180° or 90° arc into your cut when needed to eliminate vibrations, 3 radial cut division options and 5 axial cut division options. All this is free and accessable in the Customer Zone at www.secotools.com/customerzoneus

THREAD MILLING SOLID CARBIDE CUTTERS

Threadmaster™

- For cutting data recommendations, see MN Milling or Threading Wizard in the Customer Zone.

Solid carbide thread milling cutters for smaller threads



Thread profile	EDP	Part No.	Thread	Through coolant	Dimensions in inch (mm) p	tpi	D_c	dm_m	l_c	l_p	l_2	l_3	No. of flutes
Metric coarse													
	26982	TM-M4X0.7ISO-6R5	M4		0.7	–	0.124	0.236 (6)	1.417	0.512	1.929	0.315	3
	75582	TM-M4X0.7ISO-6R5-900	M4		0.7	–	0.124	0.236 (6)	1.417	0.512	1.929	0.315	3
	75589	TM-M4X0.7ISO-6R5-H	M4		0.7	–	0.124	0.236 (6)	1.417	0.394	1.811	0.248	4
	26983	TM-M5X0.8ISO-6R5	M5		0.8	–	0.156	0.236 (6)	1.417	0.512	1.929	0.394	3
	75583	TM-M5X0.8ISO-6R5-900	M5		0.8	–	0.156	0.236 (6)	1.417	0.512	1.929	0.394	3
	75590	TM-M5X0.8ISO-6R5-H	M5		0.8	–	0.156	0.236 (6)	1.417	0.433	1.850	0.283	4
	26984	TM-M6X1.0ISO-6R5	M6		1.0	–	0.185	0.236 (6)	1.417	0.748	2.165	0.492	3
	75584	TM-M6X1.0ISO-6R5-900	M6		1.0	–	0.185	0.236 (6)	1.417	0.748	2.165	0.492	3
	75591	TM-M6X1.0ISO-6R5-H	M6		1.0	–	0.185	0.236 (6)	1.417	0.630	2.047	0.335	4
	26985	TM-M8X1.25ISO-8R5	M8	■	1.25	–	0.244	0.315 (8)	1.417	1.024	2.441	0.665	3
	75585	TM-M8X1.25ISO-8R5-900	M8	■	1.25	–	0.244	0.315 (8)	1.417	1.024	2.441	0.665	3
	75592	TM-M8X1.25ISO-8R5-H	M8		1.25	–	0.244	0.315 (8)	1.417	0.827	2.244	0.492	4
	26986	TM-M10X1.5ISO-10R5	M10	■	1.5	–	0.307	0.394 (10)	1.575	1.339	2.913	0.799	3
	75586	TM-M10X1.5ISO-10R5-900	M10	■	1.5	–	0.307	0.394 (10)	1.575	1.339	2.913	0.799	3
	75593	TM-M10X1.5ISO-10R5-H	M10		1.5	–	0.307	0.394 (10)	1.575	1.024	2.598	0.591	5
	26987	TM-M12X1.75ISO-12R5	M12	■	1.75	–	0.370	0.472 (12)	1.772	1.339	3.110	1.000	3
	75587	TM-M12X1.75ISO-12R5-900	M12	■	1.75	–	0.370	0.472 (12)	1.772	1.339	3.110	1.000	3
	75594	TM-M12X1.75ISO-12R5-H	M12		1.75	–	0.370	0.472 (12)	1.772	1.220	2.992	0.689	5
	26989	TM-M14X2.0ISO-14R5	M14	■	2.0	–	0.429	0.551 (14)	1.772	1.732	3.504	1.142	4
	75588	TM-M14X2.0ISO-14R5-900	M14	■	2.0	–	0.429	0.551 (14)	1.772	1.732	3.504	1.142	4
	76053	TM-M20X2.5ISO-20R5	M20	■	2.5	–	0.623	0.787 (20)	1.969	2.283	4.252	1.575	4
Metric fine													
	52055	TM-MF4X0.5ISO-6R5	M4		0.5	–	0.124	0.236 (6)	1.417	0.512	1.929	0.327	3
	52056	TM-MF5X0.5ISO-6R5	M5		0.5	–	0.156	0.236 (6)	1.417	0.512	1.929	0.406	3
	35817	TM-MF6X0.75ISO-6R5	M6		0.75	–	0.185	0.236 (6)	1.417	0.748	2.165	0.488	3
	26990	TM-MF10X1.0ISO-10R5	M10	■	1.0	–	0.307	0.394 (10)	1.575	1.339	2.913	0.807	3
	26991	TM-MF12X1.5ISO-12R5	M12	■	1.5	–	0.370	0.472 (12)	1.772	1.339	3.110	0.976	3
	75556	TM-MF12X1.5ISO-12R5-900	M12	■	1.5	–	0.370	0.472 (12)	1.772	1.339	3.110	0.976	3
	75595	TM-MF12X1.5ISO-12R5-H	M12		1.5	–	0.370	0.472 (12)	1.772	1.220	2.992	0.705	5
	75596	TM-MF14X1.5ISO-14R5-H	M14		1.5	–	0.430	0.551 (14)	1.772	1.457	3.228	0.843	5
	75597	TM-MF16X1.5ISO-16R5-H	M16		1.5	–	0.505	0.630 (16)	1.890	1.811	3.701	0.941	5
UNC													
	52062	TM-NR.10X24UNC-6R5	No.10		–	24	0.146	0.236 (6)	1.417	0.512	1.929	0.398	3
	26992	TM-1/4X20UNC-6R5	1/4		–	20	0.185	0.236 (6)	1.417	0.748	2.165	0.575	3
	26993	TM-5/16X18UNC-8R5	5/16	■	–	18	0.244	0.315 (8)	1.417	1.024	2.441	0.638	3
	26994	TM-3/8X16UNC-10R5	3/8	■	–	16	0.289	0.394 (10)	1.575	1.339	2.913	0.780	3
	26995	TM-7/16X14UNC-12R5	7/16	■	–	14	0.337	0.472 (12)	1.772	1.339	3.110	0.894	3
	52058	TM-1/2X13UNC-12R5	1/2	■	–	13	0.370	0.472 (12)	1.772	1.339	3.110	1.039	3
	52059	TM-9/16X12UNC-14R5	9/16	■	–	12	0.429	0.551 (14)	1.772	1.732	3.504	1.209	4

Drilling Threadmaster™

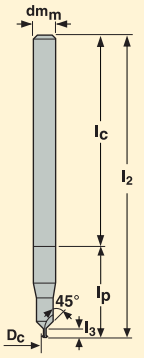
Solid carbide thread milling cutters for smaller threads

Thread profile	EDP	Part No.	Thread	Through coolant	Dimensions in inch (mm) p	tpi	D_c	dm_m	l_c	l_p	l_2	l_3	No. of flutes
UNF													
	26996	TM-NR.10X32UNF-6R5	No.10		–	32	0.156	0.236 (6)	1.417	0.512	1.929	0.390	3
	26997	TM-1/4X28UNF-6R5	1/4		–	28	0.185	0.236 (6)	1.417	0.748	2.165	0.555	3
	26998	TM-5/16X24UNF-8R5	5/16	■	–	24	0.244	0.315 (8)	1.417	1.024	2.441	0.646	3
	26999	TM-3/8X24UNF-10R5	3/8	■	–	24	0.307	0.394 (10)	1.575	1.339	2.913	0.772	3
	27000	TM-7/16X20UNF-12R5	7/16	■	–	20	0.366	0.472 (12)	1.772	1.339	3.110	0.874	3
	27001	TM-1/2X20UNF-12R5	1/2	■	–	20	0.370	0.472 (12)	1.772	1.339	3.110	1.024	3
	52060	TM-9/16X18UNF-14R5	9/16	■	–	18	0.429	0.551 (14)	1.772	1.732	3.504	1.138	4
NPT													
	27002	TM-1/8X27NPT-12R5	1/8	■	–	27	0.307	0.472 (12)	1.772	0.984	2.756	0.350	3
	27003	TM-1/4X18NPT-16R5	1/4	■	–	18	0.396	0.630 (16)	1.890	1.299	3.189	0.528	4
	27004	TM-3/8X18NPT-18R5	3/8	■	–	18	0.530	0.709 (18)	1.890	1.299	3.189	0.528	4
NPTF													
	27005	TM-1/8X27NPTF-12R5	1/8	■	–	27	0.303	0.472 (12)	1.772	0.984	2.756	0.350	3
	27006	TM-1/4X18NPTF-16R5	1/4	■	–	18	0.394	0.630 (16)	1.890	1.299	3.189	0.528	4
	52061	TM-3/8X18NPTF-18R5	3/8	■	–	18	0.528	0.709 (18)	1.890	1.299	3.189	0.528	4
BSP													
	27007	TM-1/8X28W-10R5	1/8	■	–	28	0.307	0.394 (12)	1.575	1.339	2.913	0.803	3
	27009	TM-1/4X19W-14R5	1/4	■	–	19	0.429	0.551 (16)	1.772	1.732	3.504	1.079	3
	27010	TM-3/8X19W-18R5	3/8	■	–	19	0.547	0.709 (18)	1.890	2.126	4.016	1.394	3

Threadmaster™ MINI

- Left hand cutter
- For cutting data recommendations, see MN milling or Threading Wizard in the Customer Zone.

Solid carbide thread milling cutters for smaller threads



Thread profile	EDP	Part No.	Thread	Through coolant	Dimensions in inch (mm) p	tpi	D_c	dm_m	l_c	l_p	l_2	l_3	No. of flutes
Metric coarse													
	75476	**TM-M1.0X0.25ISO-3R1-H**	M1.0	–	0.25	–	0.028	0.118 (3)	1.102	0.472	1.575	0.081	2
	75579	**TM-M1.4X0.30ISO-3R1-H**	M1.4	–	0.3	–	0.038	0.118 (3)	1.102	0.472	1.575	0.104	2
	75477	**TM-M1.6X0.35ISO-3R1-H**	M1.6	–	0.35	–	0.045	0.118 (3)	1.102	0.472	1.575	0.121	2
	75475	**TM-M2.0X0.40ISO-3R1-H**	M2.0	–	0.4	–	0.061	0.118 (3)	1.102	0.472	1.575	0.147	2
	75580	**TM-M2.2X0.45ISO-3R1-H**	M2.2	–	0.45	–	0.067	0.118 (3)	1.102	0.472	1.575	0.154	2
	75581	**TM-M2.5X0.45ISO-3R1-H**	M2.5	–	0.45	–	0.079	0.118 (3)	1.102	0.472	1.575	0.175	3

THREAD MILLING SOLID CARBIDE CUTTERS

Drilling Threadmaster™

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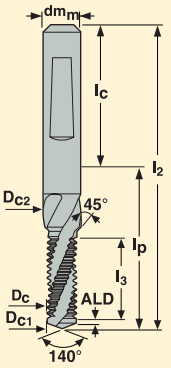
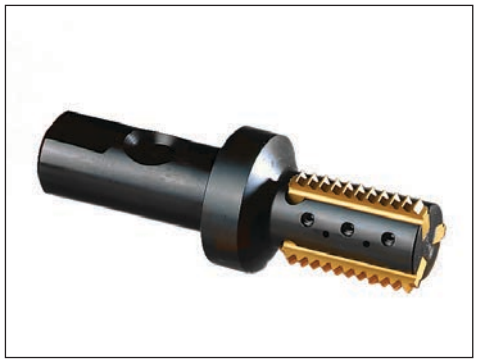
Solid carbide thread milling cutters for smaller threads



Thread profile	EDP	Part No.	Thread	Through coolant	Dimensions in inch (mm)											No. of flutes
					p	tpi	ALD	D_c	D_{c1}	D_{c2}	dm_m	l_c	l_p	l_2	l_3	
Metric coarse																
	75557	DTM-M4X0.7ISO-6R5	M4	■	0.7	–	0.028	0.128	0.130	0.169	0.236 (6)	1.417	0.512	1.929	0.371	2
	75558	DTM-M5X0.8ISO-6R5	M5	■	0.8	–	0.031	0.161	0.165	0.209	0.236 (6)	1.417	0.748	2.165	0.459	2
	75559	DTM-M6X1.0ISO-8R5	M6	■	1.0	–	0.039	0.191	0.197	0.248	0.315 (8)	1.417	1.024	2.441	0.570	2
	75560	DTM-M8X1.25ISO-10R5	M8	■	1.25	–	0.047	0.254	0.266	0.327	0.394 (10)	1.575	1.339	2.913	0.715	2
	75561	DTM-M10X1.5ISO-12R5	M10	■	1.5	–	0.059	0.318	0.335	0.406	0.472 (12)	1.772	1.339	3.110	0.920	2
	75562	DTM-M12X1.75ISO-14R5	M12	■	1.75	–	0.059	0.383	0.404	0.484	0.551 (14)	1.772	1.732	3.504	1.065	2
	75563	DTM-M14X2.0ISO-16R5	M14	■	2.0	–	0.059	0.447	0.472	0.563	0.630 (16)	1.890	2.126	4.016	1.290	2
	75564	DTM-M16X2.0ISO-18R5	M16	■	2.0	–	0.059	0.523	0.551	0.642	0.709 (18)	1.890	2.126	4.016	1.461	2
Metric fine																
	75565	DTM-MF8X1.0ISO-10R5	M8	■	1.0	–	0.039	0.267	0.276	0.327	0.394 (10)	1.575	1.339	2.913	0.740	2
	75566	DTM-MF10X1.0ISO-12R5	M10	■	1.0	–	0.059	0.344	0.354	0.406	0.472 (12)	1.772	1.339	3.110	0.913	2
	75567	DTM-MF12X1.5ISO-14R5	M12	■	1.5	–	0.059	0.396	0.413	0.484	0.551 (14)	1.772	1.732	3.504	1.110	2
UNC																
	75568	DTM-1/4X20UNC-8R5	1/4	■	–	20	0.047	0.185	0.200	0.262	0.315 (8)	1.417	1.024	2.441	0.619	2
	75569	DTM-5/16X18UNC-10R5	5/16	■	–	18	0.055	0.237	0.257	0.324	0.394 (10)	1.575	1.339	2.913	0.748	2
	75570	DTM-3/8X16UNC-12R5	3/8	■	–	16	0.059	0.290	0.313	0.387	0.472 (12)	1.772	1.339	3.110	0.904	2
	75571	DTM-1/2X13UNC-14R5	1/2	■	–	13	0.059	0.389	0.423	0.512	0.551 (14)	1.772	1.732	3.504	1.209	2
UNF																
	75572	DTM-1/4X28UNF-8R5	1/4	■	–	28	0.035	0.204	0.214	0.262	0.315 (8)	1.417	1.024	2.441	0.597	2
	75573	DTM-5/16X24UNF-10R5	5/16	■	–	24	0.043	0.256	0.271	0.324	0.394 (10)	1.575	1.339	2.913	0.741	2
	75574	DTM-3/8X16UNF-12R5	3/8	■	–	16	0.043	0.318	0.333	0.387	0.472 (12)	1.772	1.339	3.110	0.835	2
	75575	DTM-1/2X20UNF-14R5	1/2	■	–	20	0.051	0.428	0.450	0.512	0.551 (14)	1.772	1.732	3.504	1.110	2
BSP																
	75576	DTM-1/8X28W-12R5	1/8	■	–	28	0.075	0.331	0.343	0.395	0.472 (12)	1.772	1.339	3.110	0.867	2
	75577	DTM-1/4X19W-16R5	1/4	■	–	19	0.051	0.450	0.459	0.530	0.630 (16)	1.890	2.126	4.016	1.159	2

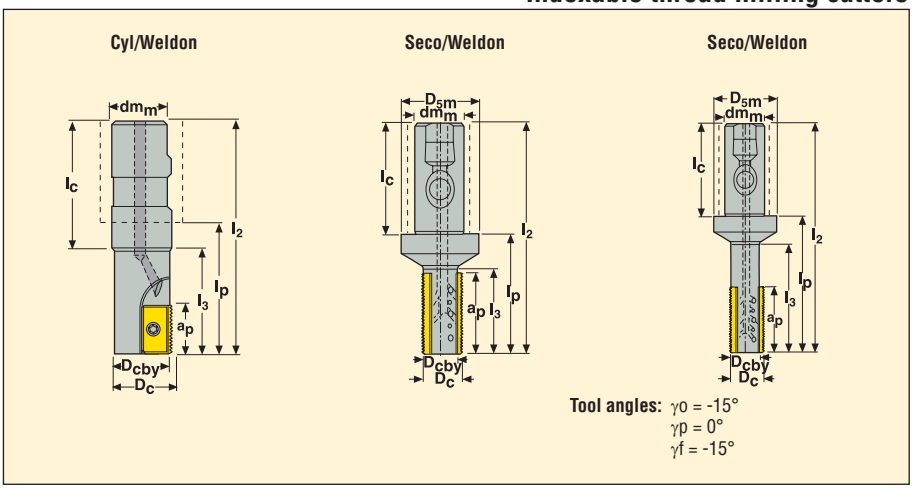
THREAD MILLING INSERT CUTTERS

R396.18/R396.19



- For cutting data recommendations, see MN milling or Threading Wizard in the Customer Zone.

Indexable thread milling cutters



EDP	Part No.	Dimensions in inch											lbs	Type of mounting	
		D_c	D_{cby}	dm_m	D_{5m}	l_2	l_p	l_3	l_c	a_p					
87568	R396.18 -00.39-3-13AT	.39	.31	.75	–	4.14	–	.53	3.61	.51	1	30000	.50	Cyl/Weldon	13..
54862	-00.50-3-13AT	.47	.39	.75	–	4.14	–	.78	3.36	.51	1	30000	.50	Cyl/Weldon	13..
74293	-00.50-3-13	.47	.39	.75	–	4.14	–	.78	3.36	.51	1	30000	.50	Cyl/Weldon	13..
36662	-00.50-3-13A	.47	.39	.75	–	4.14	–	.78	3.36	.51	1	30000	.50	Cyl/Weldon	13..
29536	R396.19 -00.67-3S-4003-2AM	.67	.51	1.00	1.575	4.55	2.36	1.02	2.19	.98	2	22000	.60	Seco/Weldon	396.19-4003
29537	-00.87-3S-4003-3AM	.87	.71	1.00	1.575	4.55	2.36	1.69	2.19	1.57	3	20000	.60	Seco/Weldon	396.19-4003
29538	-01.25-3S-4003-6AM	1.26	1.10	1.25	1.969	4.55	2.36	1.69	2.34	1.57	6	16800	1.3	Seco/Weldon	396.19-4003
29539	R396.19 -01.00-3S-4005-2AM	.98	.75	1.00	1.575	4.55	2.36	1.71	2.19	1.57	2	13600	.60	Seco/Weldon	396.19-4005
29540	-01.18-3S-4005-3AM	1.18	.91	1.00	1.575	4.55	2.36	1.71	2.19	1.57	3	12000	.60	Seco/Weldon	396.19-4005
29542	-01.42-3S-4005-6AM	1.42	1.14	1.25	1.969	4.70	2.36	1.65	2.34	1.57	6	11200	1.3	Seco/Weldon	396.19-4005
	Long reach														
29543	R396.19 -00.87-3S-4003-LAM	.87	.71	1.00	1.575	5.49	3.31	2.56	2.19	1.57	3	20000	1.2	Seco/Weldon	396.19-4003
29544	-01.18-3S-4005-LAM	1.18	.91	1.00	1.575	6.04	3.86	3.15	2.19	1.57	3	12000	1.3	Seco/Weldon	396.19-4005

Spare parts

For cutter	Locking screw	Key	Torque value in/lbs
R396.18	C02506-T07P	T07P-3	8
R396.19	P6554x4-T09P-3	T09P3	10.6

Min thread diameter (major dia), for different pitch and cutter combinations

For cutter	Pitch, mm										
	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
	TPI inch										
	24	16	12	10	8	7	6		5		4
R396.18-00.50.3-13	.551	.590	.630	–	–	–	–	–	–	–	–
-00.50.3-13A	.551	.590	.630	–	–	–	–	–	–	–	–
R396.19-00.67.3S-4003-2AM	.748	.787	.827	.866	.945	–	–	–	–	–	–
-00.87.3S-4003-3AM	.945	.984	1.024	1.063	1.063	–	–	–	–	–	–
-00.87.3S-4003-3-LAM	.945	.984	1.024	1.063	1.063	–	–	–	–	–	–
-01.25.3S-4003-6AM	1.339	1.378	1.417	1.535	1.575	–	–	–	–	–	–
-01.00-3S-4005-2AM	–	–	–	–	–	1.299	1.378	1.457	1.496	1.575	1.654
-01.18.3S-4005-3AM	–	–	–	–	–	1.575	1.654	1.732	1.772	1.850	1.890
-01.18.3S-4005-3-LAM	–	–	–	–	–	1.575	1.654	1.732	1.772	1.850	1.890
-01.42.3S-4005-6AM	–	–	–	–	–	1.772	1.850	1.850	1.890	1.969	2.087

Note! When milling threads to smaller diameters than indicated for a certain pitch/cutter combination, an incorrect thread form will result.

Dynamomentic keys are available.

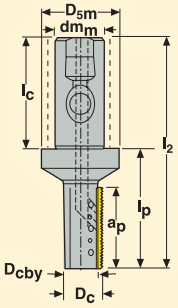
THREAD MILLING INSERT CUTTERS

R396.19

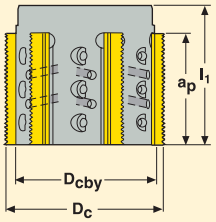
Indexable thread milling cutters

- For cutting data recommendations, see MN milling or Threading Wizard in the Customer Zone.

Seco/Weldon



Shellmill



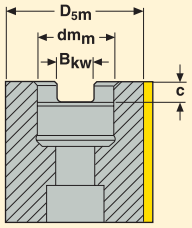
Tool angles: γo = -15°
γp = 0°
γf = -15°

EDP	Part No.	Dimensions in inch												
		D_c	dm_m	l_p	a_p	d_{5m}	d_{mm}	l_2	l_c	l_1			lbs	
	Shell Mill													
29545	**R396.19-02.28-4003-6AM**	2.283	1.968	1.968	1.500	–	–	–	–	–	6	8600	1.1	396.19-4003
29546	**R396.19-02.28-4005-6AM**	2.283	1.968	1.968	1.500	–	–	–	–	–	6	8600	1.1	396.19-4005
	Seco Weldon													
29547	**R396.19-00.58-3S-1AM**	.580	.450	–	1.10	1.57	1.00	4.78	2.42	2.36	1	22400	2.0	396.19-4003

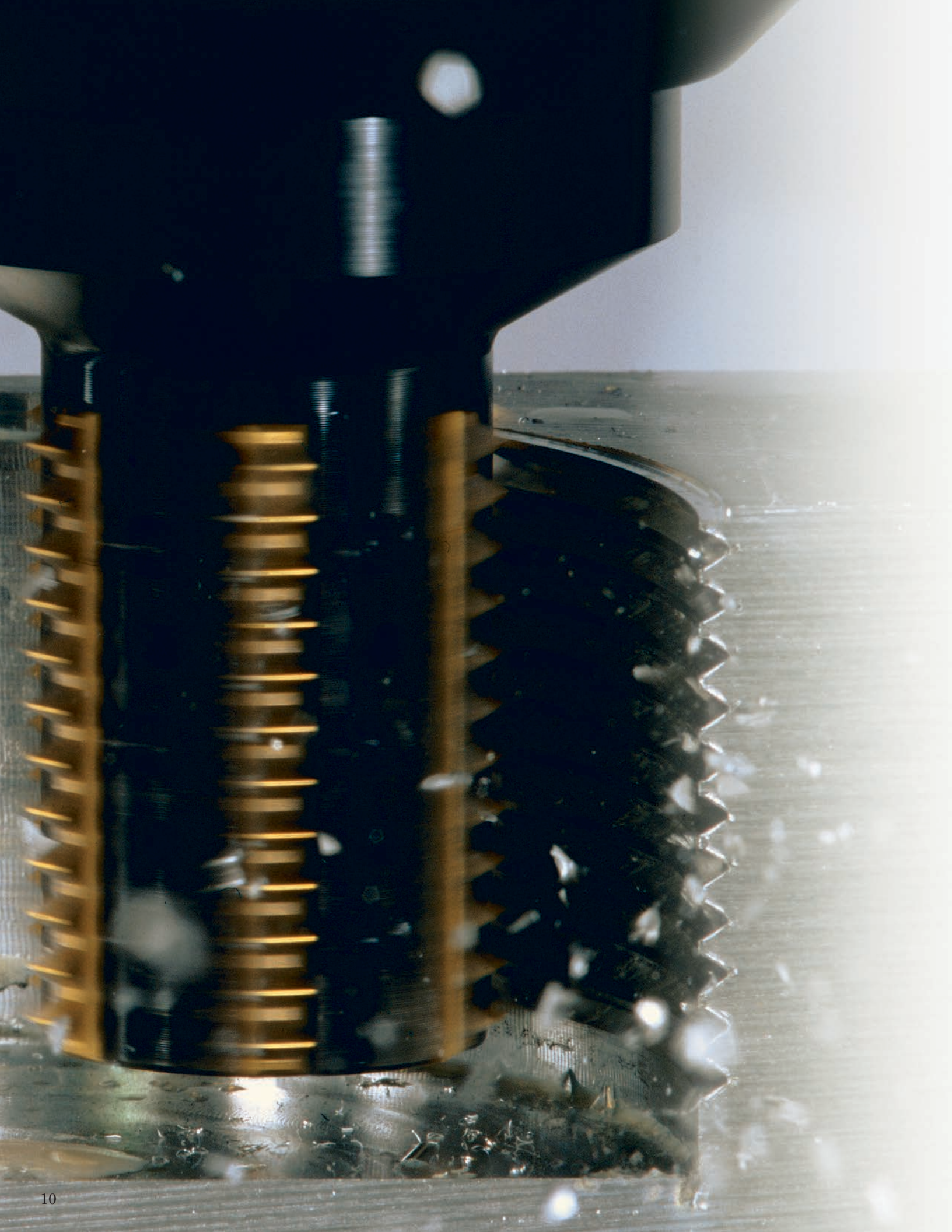
Spare parts

For cutter	Screw	Allen Key	Arbor screw
R396.19-02.28	P6554x4-T09P	T09P3	UC6S 1/2 UNF x 2
R396.19-00.58	19A71000	2SMS795	–

Dimensions of mounting

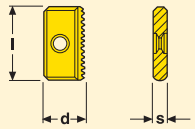


For cutter	Dimensions in inch			For arbor
	d_{mm}	B_{kw}	c	
R396.19-02.28	1.00	.380	.230	1.00



THREAD MILLING INSERTS

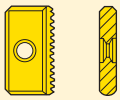
13NMS/XMS



Tolerances: (± in)

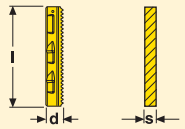
	d	l	s
13..	.0005	.0005	.001

For cutter	Dimensions in inch l	d	s
13..	.512	.276	.098

For cutter	Part No.	Grades Coated CP500	Uncoated
 Single sided insert			
	For internal threading		
	13NMS 1.0ISO	17495	
	1.5ISO	17496	
	2.0ISO	17497	
	16UN	17499	
	20UN	17501	
	24UN	19898	
	For ext. and int. threading		
	13XM 18NPT	24218	
	13XMS 14NPT	28896	
	13XMS 14W	17502	
	19W	17503	

THREAD MILLING INSERTS

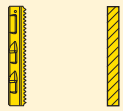
396.19-4003



Tolerances: (± in.)

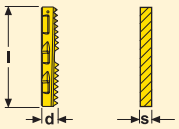
	d	l	s
4003..	.0005	.0003	.002

For cutter	Dimensions in inch l	d	s
4003	1.575	–	.138

For cutter	Part No.	Grades Coated F30M	Uncoated H15	
				
	For external threading			
	396.19-4003.0E1.0ISO	96509		
	396.19-4003.0E1.5ISO	96579		
	396.19-4003.0E12UN	96751		
	396.19-4003.0E14UN	96730		
	396.19-4003.0E16UN	96710		
	396.19-4003.0E18UN	96690		
	396.19-4003.0E2.0ISO	96610		
	For internal threading			
	396.19 -4003.0N1.0ISO	96100	96408	
	-4003.0N1.5ISO	96510	96544	
	-4003.0N2.0ISO	96588	96601	
	-4003.0N2.5ISO	96640		
	-4003.0N3.0ISO	96650		
	-4003.0N10UN	96252		
	-4003.0N12UN	96740	96750	
	-4003.0N14UN	96720	96721	
	-4003.0N16UN	96700	96702	
	-4003.0N18UN	96680		
	-4003.0N20UN	01486		
	-4003.0N8UN	96254		
	-4003.0N9UN	96253		
	For ext. and int. threading			
	396.19 -4003.0X11W	96810		
	-4003.0X14W	96830		

THREAD MILLING INSERTS

396.19-4003/4005



Tolerances: (± in.)

	d	l	s
4003..	.0005	.0003	.002
4005..	.0005	.0006	.002

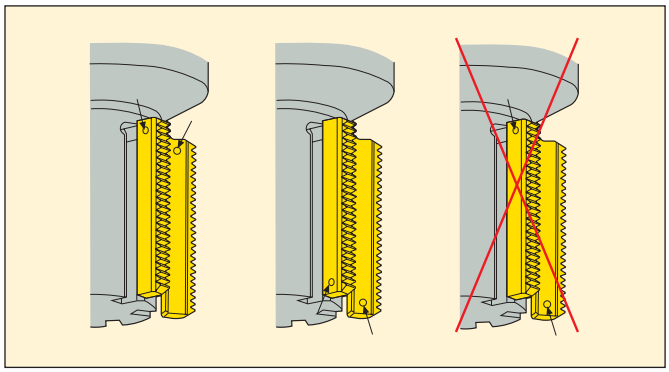
For cutter	Dimensions in inch		
	l	d	s
4003	1.575	–	.138
4005	1.575	–	.197

For cutter	Part No.	Grades	
		Coated	Uncoated
		F30M	H15
	For internal threading		
	396.19 -4005.0N3.5ISO	96660	
	-4005.0N4.0ISO	96670	
	-4005.0N4.5ISO	96237	
	-4005.0N5.0ISO	96671	
	-4005.0N5.5ISO	96672	
	-4005.0N6.0ISO	96674	
	-4005.0N4.5UN	96760	
	-4005.0N4UN	96770	
	-4005.0N5UN	96257	
	-4005.0N6UN	96256	
	-4005.0N7UN	96255	
	For ext. and int. threading		
	396.19 -4005.0X8W	96800	
	R396.19 -4005.0X8NPT	96780	
	-4003.0X11.5NPT	96268	
	-4003.0X11.5NPTF	01488	
	-4003.0X11BSPT	01490	
	-4003.0X14NPT	96790	
	-4003.0X14NPTF	96269	
	-4003.0X14BSPT	96771	
	Non-cutting blank		
	396.19 -4003XX		14900
	-4005XX		14901

Threading Wizard

In order to simplify the selection of tools and cutting parameters Seco has introduced the Threading Wizard, which eliminates complicated programming and calculations. The Threading Wizard selects the optimum holder and insert, identifies the best operating parameters and then downloads the information to the CNC machine.

The Threading Wizard is free and accessible at www.secotools.com/customerzoneus



As all 396.19 inserts are double sided, it is important that all inserts are mounted in the same position to achieve best possible tolerance. It must be done by indexing the identification dots in the same position. See the picture opposite.

Quick reference – NPT thread forms only

NPT SIZE Standard Sizes (inch)	Solid Carbide Threadmaster	Indexable Threadmill Holder	Indexable Threadmill Insert
1/8 - 27 TPI	TM 1/8 x 27NPT		
1/4 - 18 TPI	TM 1/4 x 18NPT	R396.18-00.39.13AT	13XM 18NPT
3/8 - 18 TPI	TM 3/8 x 18NPT	R396.18-00.50.13AT	13XM 18NPT
1/2 - 14 TPI	–	R396.18-00.50.13AT	13XM 14NPT
	–	R396.19-00.67.3S-4003-2AM	R396.19 – 4003.0X14NPT
3/4 -14 TPI	–	R396.19-00.67.35-4003-2AM	R396.19 – 4003.0X11.5NPT
	–	R396.19-00.87.3S-4003-3AM	
1 - 11.5 TPI	–	R396.19-00.67.3S-4003-2AM	R396.19 – 4003.0X11.5NPT
	–	R396.19-00.87.3S-4003-3AM	
	–	R396.19-00.87.3S-4003-3LAM	
1-1/4 - 11.5 TPI	–	R396.19-00.67.3S-4003-2AM	R396.19 – 4003.0X11.5NPT
	–	R396.19-00.87.3S-4003-3AM	
	–	R396.19-00.87.3S-4003-3LAM	
	–	R396.19-01.25.3S-4003-6AM	
1-1/2 - 11.5 TPI	–	R396.19-00.67.3S-4003-2AM	R396.19 – 4003.0X11.5NPT
	–	R396.19-00.87.3S-4003-3AM	
	–	R396.19-00.87.3S-4003-3LAM	
	–	R396.19-01.25.3S-4003-6AM	
2- 11.5 TPI	–	R396.19-00.67.3S-4003-2AM	R396.19 – 4003.0X11.5NPT
	–	R396.19-00.87.3S-4003-3AM	
	–	R396.19-00.87.3S-4003-3LAM	
	–	R396.19-01.25.3S-4003-6AM	
2-1/2 - 8 TPI	–	R396.19-01.003S-4005-2AM	R396.19 – 4005.0X8NPT
	–	R396.19-01.18.3S-4005-3AM	
	–	R396.19-01.18.3S-4005-3LAM	
	–	R396.19-01.42.3S-4005-6AM	
3 - 8 NPT	–	R396.19-01.003S-4005-2AM	R396.19 – 4005.0X8NPT
	–	R396.19-01.18.3S-4005-3AM	
	–	R396.19-01.18.3S-4005-3LAM	
	–	R396.19-01.42.3S-4005-6AM	
3-1/2 - 8 NPT	–	R396.19-01.003S-4005-2AM	R396.19 – 4005.0X8NPT
	–	R396.19-01.18.3S-4005-3AM	
	–	R396.19-01.18.3S-4005-3LAM	
	–	R396.19-01.42.3S-4005-6AM	
4 – 8 NPT	–	R396.19-01.003S-4005-2AM	R396.19 – 4005.0X8NPT
	–	R396.19-01.18.3S-4005-3AM	
	–	R396.19-01.18.3S-4005-3LAM	
	–	R396.19-01.42.3S-4005-6AM	

WORKPIECE MATERIALS - SECO MATERIAL GROUPS

Steel, ferritic and martensitic stainless steel

ISO	SMG No.	Representative material	Description	BHN	kc1.1 x 1000 lbf/in2	m_c
P	1	1010	Very soft carbon steels Purely ferritic steels	<135	196	0.21
	2	1140	Free-cutting steels	120 <210	218	0.22
	3	1045	Structural steels. Ordinary carbon steels with low to medium carbon content (<0,5%C)	135 <165	218	0.25
	4	4140	Carbon steels with high carbon content (>0,5%C) Medium hard steels for toughening. Ordinary low-alloy steels Ferritic and martensitic stainless steels	165 <210	247	0.24
	5	4340	Normal tool steels Harder steels for toughening Martensitic stainless steels	210 <270	276	0.24
	6	D2	Difficult tool steels High-alloy steels with high hardness Martensitic stainless steels	270 <360	290	0.24
H	7	A128 Grade A	Difficult high-strength steels with 42 to 56 HRC hardness Hardened steels from material group 3-6 Martensitic stainless steels	>360	421	0.22

Free-cutting, austenitic and duplex stainless steel

M	8	304	Easy-cutting stainless steels Free-cutting stainless steels Calcium-treated stainless steels		254	0.22
	9	316	Moderately difficult stainless steels Austenitic and duplex stainless steels		276	0.2
	10	310	Difficult stainless steels Austenitic and duplex stainless steels		297	0.2
	11	330	Very difficult stainless steels Austenitic and duplex stainless steels		312	0.2

Cast iron

K	12	60-40-18	Medium hard cast iron Grey cast iron		167	0.22
	13	A536 80-55-06	Low-alloy cast iron Malleable cast iron Nodular cast iron		178	0.25
	14	A536 100-70-03	Moderately difficult alloy cast iron Moderately difficult malleable cast iron Nodular cast iron		196	0.28
	15	A536 120-90-02	Difficult high-alloy cast iron Difficult malleable cast iron Nodular cast iron		213	0.3

Other materials

N	16	A380	Aluminum alloys: Low Si		101	0.25
	17	B390.0	Aluminum alloys: High Si		101	0.27
	18	CA937	Copper alloys			
S	19	Discalloy	Fe-based superalloys			
	20	Stellite 21	Co-based superalloys		377	0.24
	21	Inconel 718 (bar, forge, ring)	Ni-based superalloys		479	0.24
	22	Ti 6Al-4V (annealed)	Titanium alloys		210	0.23

k_c1.1-values with 0 degree effective cutting rake angle. For other rake angles, reduce the k_c1.1-value by 1% for every degree increase in the cutting rake angle and vice versa. Keep in mind that the BHN-value is only an aid in the selection of the material group when the material has been worked by rolling, drawing, heat treatment or other methods that increase the strength of the material.

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THREAD MILLING

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