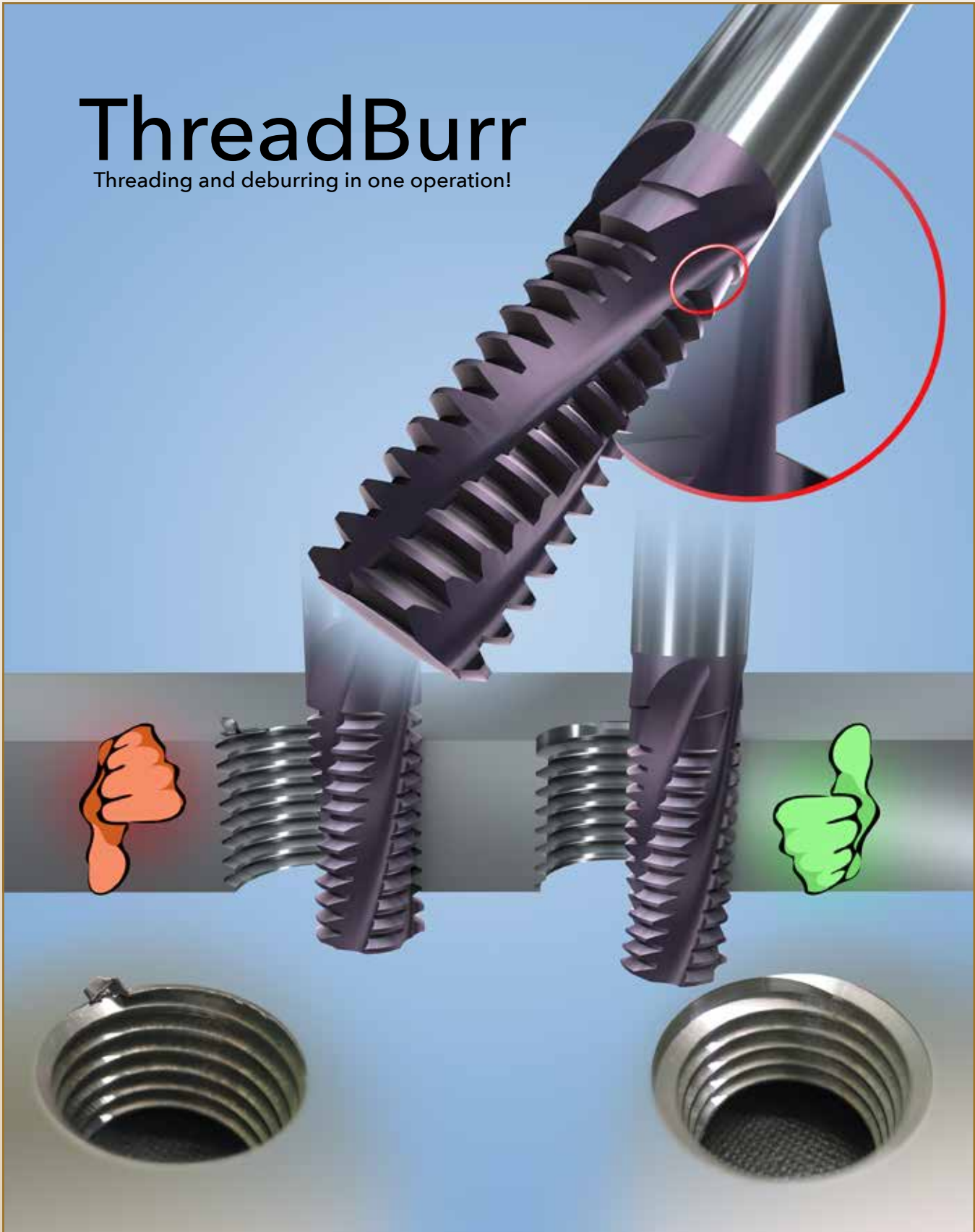


ThreadBurr

Threading and deburring in one operation!



THREAD MILLING

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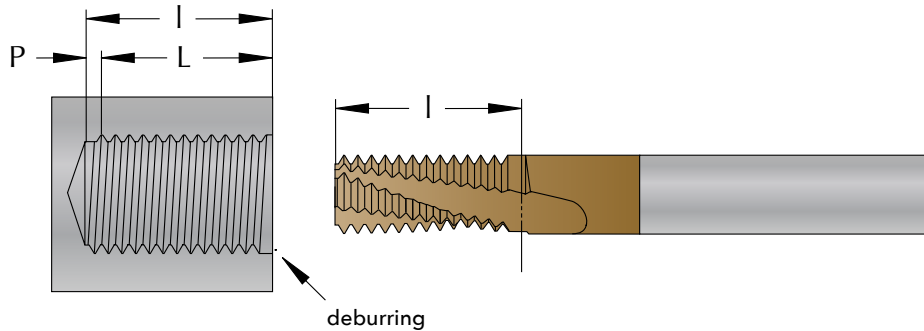


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ThreadBurr

The advantage with ThreadBurr is that you can thread and deburr in one operation. No additional time for deburring and countersink is needed. The deburring operation is made automatically when thread milling, which gives you the deburring without any extra costs.

There is no disadvantage to use the ThreadBurr, even if you don't use the deburring function. ThreadBurr is standard on all thread mills from SmiCut.

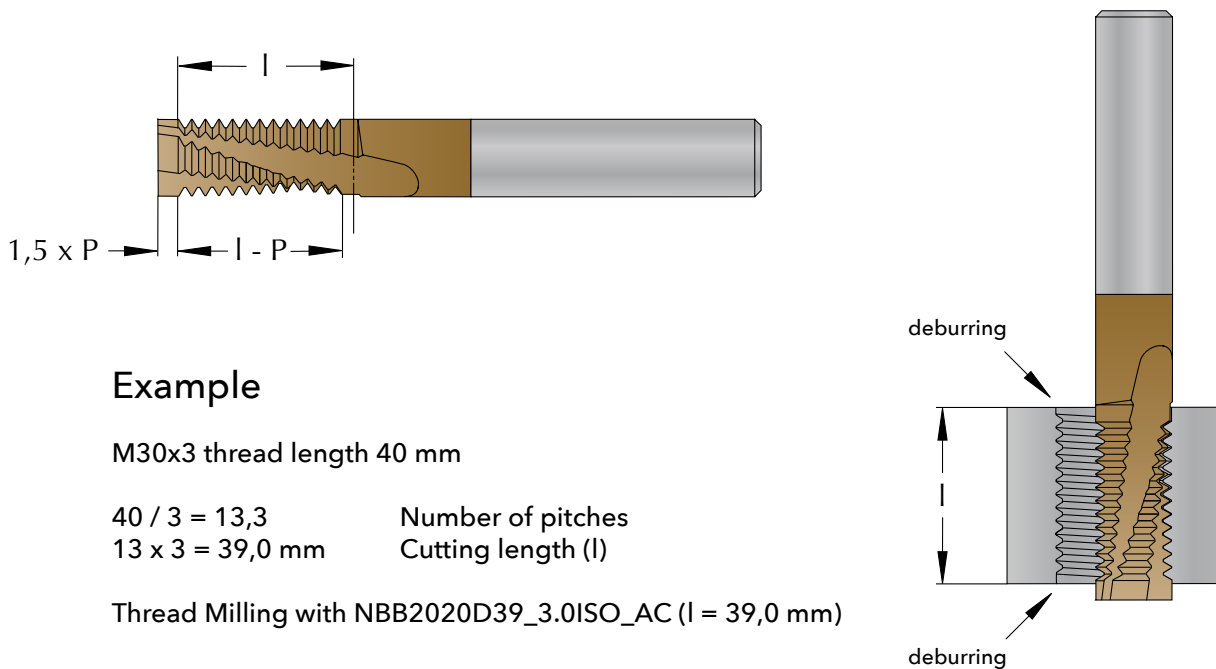


To get a nice entry and a burr free thread you need to start out with going to full depth (l) in to the hole before starting the threading operation. The thread length (L) will be the cutting length (l) minus one pitch (P).

Double ThreadBurr

It is possible to get the thread deburred on both sides. For this operation you need to use a special tool as thread length depends on the thickness of the material. Have in mind the following when you order a tool for deburring on both sides.

- The cutting length (l) should be equivalent to the thickness of the material.



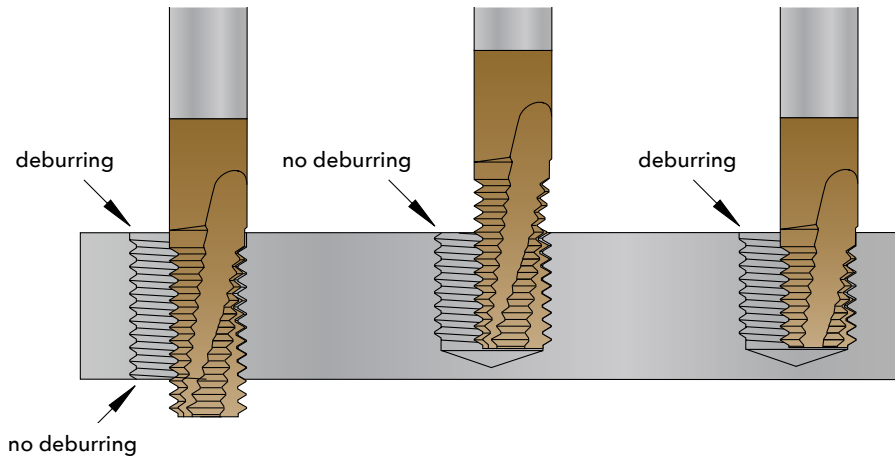
Example

M30x3 thread length 40 mm

$40 / 3 = 13,3$ Number of pitches
 $13 \times 3 = 39,0$ mm Cutting length (l)

Thread Milling with NBB2020D39_3.0ISO_AC (l = 39,0 mm)

ThreadBurr



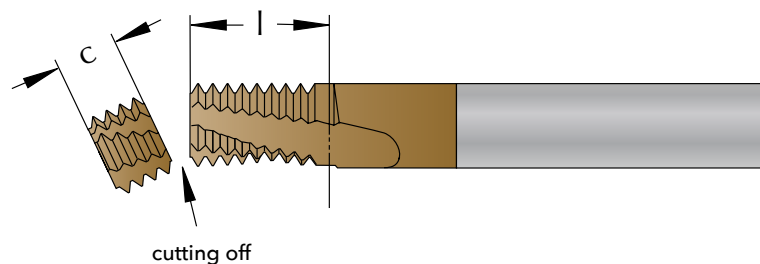
Through holes

You can always use a standard tool for through holes. Please take in mind you should use a tool as short as possible to get best stability and economy.

Blind Holes

With blind holes it is important to have the correct cutting length (l) on the tool to get the thread deburred. Normally you will find a suitable standard tool. If not, we will cut the tool to the correct length with extremely short delivery time and at a reasonable price. Have in mind the following when you order a tool for blind holes.

- The cutting length (l) should be required thread length (L) plus one pitch (P).
- The distance to cut off (c) has to be dividable by the pitch (P).



Example

M16x1,5 thread length 24 mm
Thread Milling with NB1212D29_1.5ISO_AC (L = 29,25 mm)

$24 + 1,5 = 25,5$ mm	Required cutting length (l)
$29,25 - 25,5 = 3,75$ mm	Maximum cutting off
$3,75 / 1,5 = 2,5$	Number of pitches to cut off
$2 \times 1,5 = 3,0$ mm	Distance to cut off (c)
$29,25 - 3,0 = 26,25$ mm	Cutting length (l) after cutting off
$26,25 - 1,5 = 24,75$ mm	Thread length (L) after cutting off

You only need to cut off the tool when you want to use the deburring function on blind holes and if there is no standard tool with suitable cutting length.

Advantages

■ 1) A secure machining operation

Minimal risk for machining stops as the cutting forces are low and the chips are short. Should there be an accident, the work piece will not be destroyed, as the tool will not be caught since the diameter of the thread mill is less than the thread.

■ 2) Threading in difficult machined materials

The excellent cutting conditions makes it possible to thread mill materials such as hardened steel up to HRC 65, Titanium and other difficult machined materials.

■ 3) Higher quality thread

The cutting conditions are extremely good when you are thread milling. The result of the thread is a higher quality of surface finish, tolerance, angle, etc. compared with other threading methods.

■ 4) Flexible tool

Same cutter can be used for right hand and left hand thread. Threads with different diameters can be made with the same tool as long as the pitch is the same. The same thread mill can be used for blind holes and through holes. W, BSPT, PG, NPT, NPTF and NPSF are thread profiles where you can use the same tool for external and internal thread.

■ 5) Threading in blind holes

When thread milling you will get a complete thread profile to the bottom of the hole. When tapping it's necessary to drill much deeper as it's not until the third thread the tap will make a complete thread profile. Sometimes you are able to change the construction as you don't have to take the deep hole into consideration.

■ 6) Less wear on the machine spindle

Thread milling will give you longer life to the machine spindle compared with tapping as the rotation on the spindle doesn't need to be stopped and reversed for every thread.

■ 7) Energy-saving production

Low energy consumption as the machine spindle doesn't need to be stopped and started after each thread.

■ 8) Thread Milling in a lathe with live tools

Reduced machining time compared with thread turning. Excellent chip control.

■ 9) Threading without burrs

The thread entrance will be burr free when using ThreadBurr. Threading and deburring in one operation. No additional time for deburring.

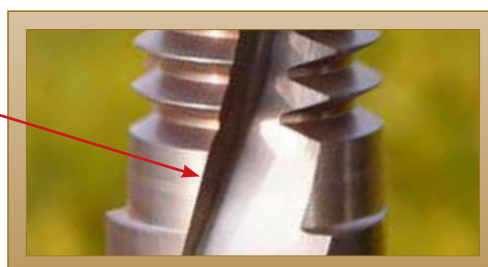
■ 10) Shorter machining time

The machining time will be short as you don't need to chamfer the thread while using ThreadBurr. Big diameters, fine pitches and long holes saves the most time compared with thread tapping.

■ 11) Correct Thread Diameter right away

The Pitch diameter has been optically measured on thread mills from SmiCut and the theoretical external diameter has been individually laser marked on each cutter so you will get a correct thread straight away. When the tool starts to wear it's possible to make adjustments in the CNC-program.

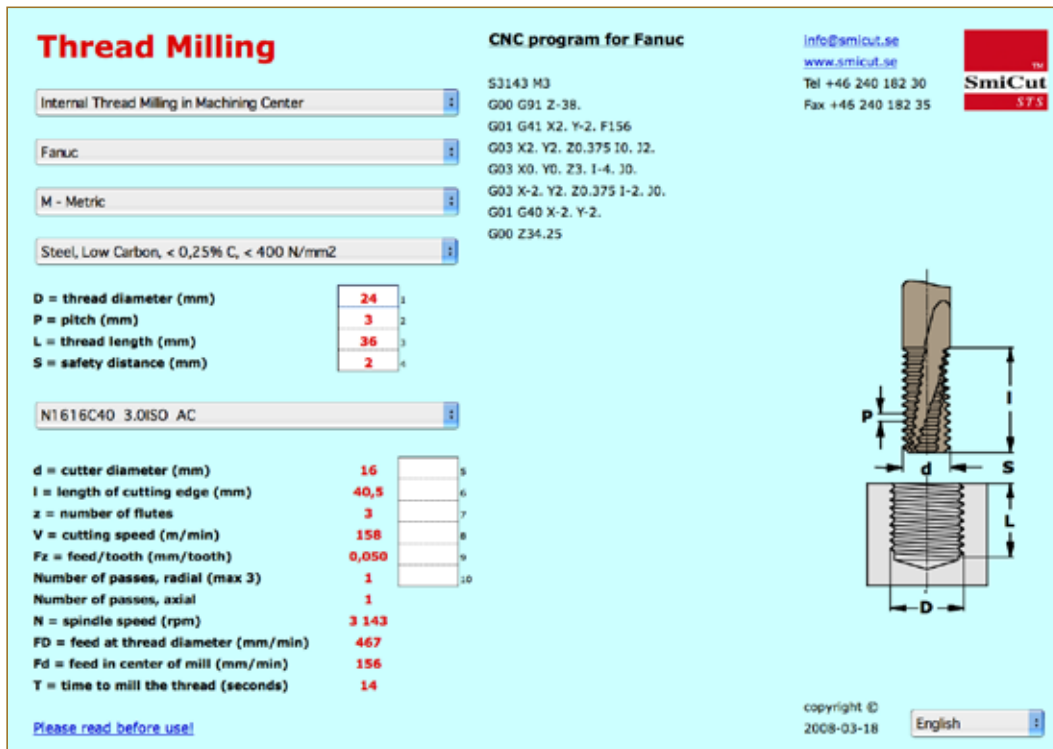
Deburring of the thread



Software for Thread Milling

SmiProg makes it easy to Thread Mill

Specify control system, material, thread diameter, pitch and thread length. The program will recommend suitable tools. Choose one and you will receive suggested cutting data, time to mill the thread and CNC programming code. The software is made in excel and is less than 500kb even though it includes 21 different languages. You can download SmiProg free of charge at www.smicut.se



Thread Milling

Internal Thread Milling in Machining Center

Fanuc

M - Metric

Steel, Low Carbon, < 0,25% C, < 400 N/mm2

D = thread diameter (mm) **24**

P = pitch (mm) **3**

L = thread length (mm) **36**

S = safety distance (mm) **2**

N1616C40 3.0ISO AC

d = cutter diameter (mm) **16**

l = length of cutting edge (mm) **40,5**

z = number of flutes **3**

V = cutting speed (m/min) **158**

Fz = feed/tooth (mm/tooth) **0,050**

Number of passes, radial (max 3) **1**

Number of passes, axial **1**

N = spindle speed (rpm) **3 143**

FD = feed at thread diameter (mm/min) **467**

Fd = feed in center of mill (mm/min) **156**

T = time to mill the thread (seconds) **14**

CNC program for Fanuc

```
S3143 M3
G00 G91 Z-38.
G01 G41 X2. Y-2. F156
G03 X2. Y2. Z0.375 I0. J2.
G03 X0. Y0. Z3. I-4. J0.
G03 X-2. Y2. Z0.375 I-2. J0.
G01 G40 X-2. Y-2.
G00 Z34.25
```

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- Korean
- Norwegian
- Polish
- Portuguese
- Romanian
- Russian
- Spanish
- Swedish

Code Key

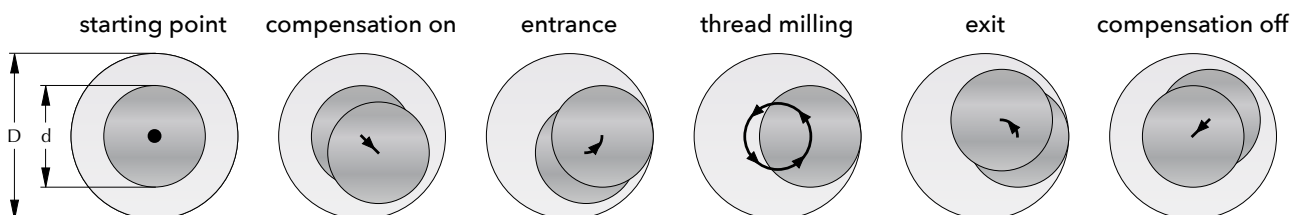
NB	10	10	D	23	1.5	ISO	AC
type of tool	shank dimension	cutter diameter	cutting edges	cutting length	pitch	thread profile	carbide grade
<ul style="list-style-type: none"> N = internal threading E = external threading X = in- and external threading B = burring BB = burring on both sides F = chamfering S = micro, one tooth M = micro, two teeth K = internal coolant T = internal radial coolant 		<ul style="list-style-type: none"> C = three flute D = four flute E = five flute F = six flute 					

Cutting Speed (V_c) and Material Factor (F_m)

MATERIAL		Hardness HB	Tensile Strength N/mm ²	Cutting Speed (V_c) m/min	Material Factor (F_m)
Steel	Low carbon, C < 0,25%	< 120	< 400	150 - 200	1,2
	Medium carbon, C < 0,55%	< 200	< 700	120 - 170	1,1
	High carbon, C < 0,85%	< 250	< 850	110 - 150	1,0
	Low alloy	< 250	< 850	100 - 140	1,0
	High alloy	< 350	< 1200	70 - 110	0,9
	Hardened, HRC < 45			60 - 100	0,8
	Hardened, HRC < 55			30 - 60	0,7
	Hardened, HRC < 65			20 - 40	0,6
Cast iron	Lamellar graphite	< 150	< 500	130 - 180	1,2
	Lamellar graphite	< 300	< 1000	100 - 150	1,1
	Nodular graphite, malleable	< 200	< 700	100 - 150	1,0
	Nodular graphite, malleable	< 300	< 1000	80 - 120	0,9
Stainless steel	Free machining	< 250	< 850	130 - 180	1,0
	Austenitic	< 250	< 850	90 - 140	0,9
	Ferritic and austenitic	< 300	< 1000	80 - 120	0,8
Titanium	Unalloyed	< 200	< 700	60 - 80	0,8
	Alloyed	< 270	< 900	50 - 70	0,7
	Alloyed	< 350	< 1250	30 - 50	0,6
Nickel	Unalloyed	< 150	< 500	80 - 120	0,8
	Alloyed	< 270	< 900	60 - 80	0,7
	Alloyed	< 350	< 1250	50 - 70	0,6
Copper	Unalloyed	< 100	< 350	150 - 250	1,0
	Brass, bronze	< 200	< 700	130 - 180	1,0
	High strength bronze	< 470	< 1500	60 - 80	0,8
Aluminium	Unalloyed	< 100	< 350	500 - 900	1,4
	Alloyed, Si < 0.5%	< 150	< 500	400 - 800	1,3
	Alloyed, Si < 10%	< 120	< 400	300 - 500	1,2
	Alloyed, Si > 10%	< 120	< 400	200 - 400	1,1
Inconel	718	< 370		50 - 70	0,6
Graphite				300 - 500	1,0

Engagement Factor (F_e)

	B/d = 0,05	B/d = 0,06	B/d = 0,07	B/d = 0,08	B/d = 0,09	B/d = 0,10	B/d = 0,12	B/d = 0,14	B/d = 0,16
L/d = 1,0	1,75	1,59	1,45	1,31	1,20	1,09	0,99	0,90	0,82
L/d = 1,25	1,52	1,38	1,25	1,14	1,04	0,94	0,86	0,78	0,70
L/d = 1,5	1,31	1,20	1,09	0,99	0,90	0,82	0,74	0,67	0,61
L/d = 1,75	1,20	1,09	0,99	0,90	0,82	0,74	0,67	0,61	0,56
L/d = 2,0	1,09	0,99	0,90	0,82	0,74	0,67	0,61	0,56	0,51
L/d = 2,25	0,99	0,90	0,82	0,74	0,67	0,61	0,56	0,51	0,46
L/d = 2,5	0,90	0,82	0,74	0,67	0,61	0,56	0,51	0,46	0,42
L/d = 3,0	0,78	0,70	0,64	0,58	0,53	0,48	0,44	0,40	0,36
L/d = 3,5	0,67	0,61	0,56	0,51	0,46	0,42	0,38	0,35	0,31
L/d = 4,0	0,61	0,56	0,51	0,46	0,42	0,38	0,35	0,31	0,29



Diameter Factor (F_d)

D	Diameter Factor (F_d)
1,5	0,010
2,0	0,011
3,0	0,015
4,0	0,019
5,0	0,024
6,0	0,028
8,0	0,036
10,0	0,044
12,0	0,052
14,0	0,060
16,0	0,067
18,0	0,075
20,0	0,082
25,0	0,101
32,0	0,126
40,0	0,156

Example

M24x3,0 thread length 36 mm

Carbon Steel, up to 400 N/mm²

Thread Milling with NB1616C40_3.0ISO_AC

$B = 0,54 \times 3 = 1,62$ mm

$B/d = 1,62/16 = 0,10$

$L/d = 36/16 = 2,25$

$F_z = 1,2 \times 0,61 \times 0,067 = 0,049$

$n = (160 \times 1000) / (\pi \times 16) = 3183$ rpm

$V_{fD} = 0,049 \times 3 \times 3183 = 468$ mm/min

$V_{fd} = 468 \times (24-16) / 24 = 156$ mm/min

$T = (278 \times 24) / 468 = 14$ seconds

$$B = 0,54 \times P$$

$$F_z = F_m \times F_e \times F_d$$

$$n = \frac{V_c \times 1000}{\pi \times d}$$

$$V_{fD} = F_z \times z \times n$$

$$V_{fd} = V_{fD} \times \frac{(D-d)}{D}$$

$$T = 278 \times \frac{D}{V_{fd}}$$

D = thread diameter (mm)

L = thread length (mm)

d = cutter diameter (mm)

B = depth of profile (mm)

P = pitch (mm)

z = cutting edges

F_z = feed / flute (mm/flute)

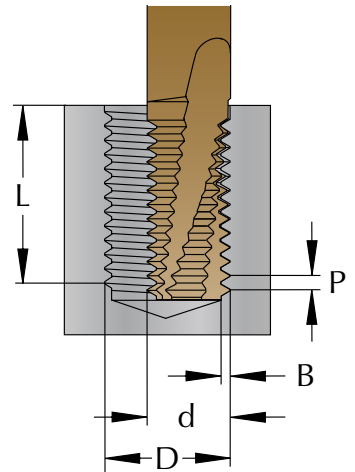
n = spindle speed (rpm)

V_c = cutting speed (m/min)

V_{fD} = feed at thread diameter (mm/min)

V_{fd} = feed at center of mill (mm/min)

T = time to mill the thread (seconds)



Carbide Grades

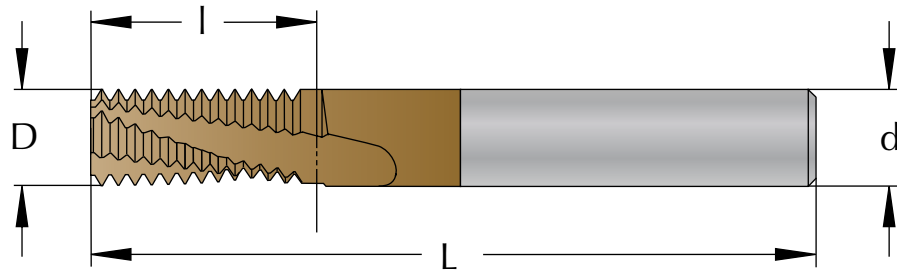
AC

Micrograin Carbide with TiAlCN coating.
Allround Grade with low friction.
Use cutting data according to the tables.

FC

Micrograin Carbide with TiAlN coating.
Allround Grade with high heat resistance.
Use cutting data according to the tables.

ThreadBurr



AC

TiAlCN coated
Micrograin Carbide

Tolerance

The theoretical external diameter of the cutter is lasermarked on the tool.

Shank

Cylindrical h6, DIN6535 HA

Flute

15° right hand spiral

Field of application

Thread Milling of all types of steel

M

METRIC

Pitch mm	M coarse	M fine	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
0,4	M2 (1,5xD)		NB04015C3_0.4ISO_AC	4	1,5	3	3,4	50
0,4	M2 (2xD)		NB04015C4_0.4ISO_AC	4	1,5	3	4,6	50
0,45	M2,2 (1,5xD)		NB04016C3_0.45ISO_AC	4	1,6	3	3,82	50
0,45	M2,2 (2xD)		NB04016C5_0.45ISO_AC	4	1,6	3	5,17	50
0,45	M2,5 (1,5xD)		NB04019C4_0.45ISO_AC	4	1,9	3	4,27	50
0,45	M2,5 (2xD)		NB04019C5_0.45ISO_AC	4	1,9	3	5,62	50
0,5	M3 (1,5xD)	≥ M4	NB04023C5_0.5ISO_AC	4	2,3	3	5,25	50
0,5	M3 (2xD)	≥ M4	NB04023C6_0.5ISO_AC	4	2,3	3	6,75	50
0,5	M3 (2,5xD)	≥ M4	NB04023C8_0.5ISO_AC	4	2,3	3	8,25	50
0,5	M3 (1,5xD)	≥ M4	NB06023C5_0.5ISO_AC	6	2,3	3	5,25	63
0,5	M3 (2xD)	≥ M4	NB06023C6_0.5ISO_AC	6	2,3	3	6,75	63
0,5	M3 (2,5xD)	≥ M4	NB06023C8_0.5ISO_AC	6	2,3	3	8,25	63
0,5		≥ M5	NB04038C10_0.5ISO_AC	4	3,8	3	10,75	50
0,5		≥ M5	NB06038C10_0.5ISO_AC	6	3,8	3	10,75	63
0,6	M3,5 (1,5xD)		NB04026C6_0.6ISO_AC	4	2,6	3	6,3	50
0,6	M3,5 (2xD)		NB04026C8_0.6ISO_AC	4	2,6	3	8,1	50
0,7	M4 (1,5xD)		NB0403C7_0.7ISO_AC	4	3	3	7,35	50
0,7	M4 (2xD)		NB0403C8_0.7ISO_AC	4	3	3	8,75	50
0,7	M4 (2,5xD)		NB0403C10_0.7ISO_AC	4	3	3	10,85	50
0,7	M4 (1,5xD)		NB0603C7_0.7ISO_AC	6	3	3	7,35	63
0,7	M4 (2xD)		NB0603C8_0.7ISO_AC	6	3	3	8,75	63
0,7	M4 (2,5xD)		NB0603C10_0.7ISO_AC	6	3	3	10,85	63
0,75	M4,5 (1,5xD)		NB04034C7_0.75ISO_AC	4	3,4	3	7,87	50
0,75	M4,5 (2xD)		NB04034C10_0.75ISO_AC	4	3,4	3	10,12	50
0,75		≥ M6	NB06045C10_0.75ISO_AC	6	4,5	3	10,87	63
0,75		≥ M6	NB06045C16_0.75ISO_AC	6	4,5	3	16,87	63
0,8	M5 (1,5xD)		NB04038C8_0.8ISO_AC	4	3,8	3	8,4	50
0,8	M5 (2xD)		NB04038C10_0.8ISO_AC	4	3,8	3	10,8	50
0,8	M5 (2,5xD)		NB04038C13_0.8ISO_AC	4	3,8	3	13,2	50
0,8	M5 (1,5xD)		NB06038C8_0.8ISO_AC	6	3,8	3	8,4	63
0,8	M5 (2xD)		NB06038C10_0.8ISO_AC	6	3,8	3	10,8	63
0,8	M5 (2,5xD)		NB06038C13_0.8ISO_AC	6	3,8	3	13,2	63
1,0	M6 (1,5xD)	≥ M8	NB06045C10_1.0ISO_AC	6	4,5	3	10,5	63
1,0	M6 (2xD)	≥ M8	NB06045C13_1.0ISO_AC	6	4,5	3	13,5	63
1,0	M6 (2,5xD)	≥ M8	NB06045C16_1.0ISO_AC	6	4,5	3	16,5	63
1,0	M6 (3xD)	≥ M8	NB06045C19_1.0ISO_AC	6	4,5	3	19,5	63
1,0		≥ M8	NB0606C10_1.0ISO_AC	6	6	3	10,5	63
1,0		≥ M8	NB0606C13_1.0ISO_AC	6	6	3	13,5	63
1,0		≥ M10	NB0808D10_1.0ISO_AC	8	8	4	10,5	63
1,0		≥ M10	NB0808D13_1.0ISO_AC	8	8	4	13,5	63
1,0		≥ M10	NB0808D17_1.0ISO_AC	8	8	4	17,5	63
1,0		≥ M12	NB1010E14_1.0ISO_AC	10	10	5	14,5	76
1,0		≥ M12	NB1010E19_1.0ISO_AC	10	10	5	19,5	76
1,0		≥ M14	NB1212F15_1.0ISO_AC	12	12	6	15,5	83
1,0		≥ M14	NB1212F21_1.0ISO_AC	12	12	6	21,5	83
1,25	M8 (1,5xD)	≥ M10	NB0606C14_1.25ISO_AC	6	6	3	14,37	63

continue

M

METRIC

Pitch mm	M coarse	M fine	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
1,25	M8 (2xD)	≥ M10	NB0606C18_1.25ISO_AC	6	6	3	18,12	63
1,25	M8 (2,5xD)	≥ M10	NB0606C21_1.25ISO_AC	6	6	3	21,87	63
1,25	M8 (3xD)	≥ M10	NB0606C25_1.25ISO_AC	6	6	3	25,62	76
1,5	M10 (1,5xD)	≥ M12	NB08075C17_1.5ISO_AC	8	7,5	3	17,25	63
1,5	M10 (2xD)	≥ M12	NB08075C21_1.5ISO_AC	8	7,5	3	21,75	76
1,5	M10 (2,5xD)	≥ M12	NB08075C27_1.5ISO_AC	8	7,5	3	27,75	76
1,5	M10 (3xD)	≥ M12	NB08075C32_1.5ISO_AC	8	7,5	3	32,25	76
1,5		≥ M14	NB1010D17_1.5ISO_AC	10	10	4	17,25	76
1,5		≥ M14	NB1010D23_1.5ISO_AC	10	10	4	23,25	76
1,5		≥ M16	NB1212D15_1.5ISO_AC	12	12	4	15,75	83
1,5		≥ M16	NB1212D21_1.5ISO_AC	12	12	4	21,75	83
1,5		≥ M16	NB1212D29_1.5ISO_AC	12	12	4	29,25	83
1,5		≥ M20	NB1616F18_1.5ISO_AC	16	16	6	18,75	89
1,5		≥ M20	NB1616F26_1.5ISO_AC	16	16	6	26,25	89
1,5		≥ M20	NB1616F35_1.5ISO_AC	16	16	6	35,25	100
1,75	M12 (1,5xD)		NB0808C20_1.75ISO_AC	8	8	3	20,12	76
1,75	M12 (2xD)		NB0808C27_1.75ISO_AC	8	8	3	27,12	76
1,75	M12 (1,5xD)		NB1009C20_1.75ISO_AC	10	9	3	20,12	76
1,75	M12 (2xD)		NB1009C27_1.75ISO_AC	10	9	3	27,12	76
1,75	M12 (2,5xD)		NB1009C32_1.75ISO_AC	10	9	3	32,37	100
1,75	M12 (3xD)		NB1009C37_1.75ISO_AC	10	9	3	37,62	100
2,0	M14 (1,5xD)	≥ M18	NB1010C23_2.0ISO_AC	10	10	3	23	76
2,0	M14 (2xD)	≥ M18	NB1010C31_2.0ISO_AC	10	10	3	31	100
2,0	M14 (2,5xD)	≥ M18	NB1010C37_2.0ISO_AC	10	10	3	37	100
2,0	M16 (1,5xD)	≥ M18	NB1212D27_2.0ISO_AC	12	12	4	27	83
2,0	M16 (2xD)	≥ M18	NB1212D35_2.0ISO_AC	12	12	4	35	100
2,0	M16 (2,5xD)	≥ M18	NB1212D43_2.0ISO_AC	12	12	4	43	100
2,0	M16 (3xD)	≥ M18	NB1212C51_2.0ISO_AC	12	12	3	51	100
2,0		≥ M20	NB1616E29_2.0ISO_AC	12	12	5	29	89
2,0		≥ M20	NB1616E39_2.0ISO_AC	16	16	5	39	100
2,0		≥ M24	NB2020F43_2.0ISO_AC	20	20	6	43	100
2,0		≥ M30	NB2525F57_2.0ISO_AC	25	25	6	57	130
2,5	M18 (1,5xD)		NB1212C31_2.5ISO_AC	12	12	3	31,25	100
2,5	M18 (2xD)		NB1212C38_2.5ISO_AC	12	12	3	38,75	100
2,5	M18 (2,5xD)		NB1212C48_2.5ISO_AC	12	12	3	48,75	100
2,5	M20 (1,5xD)		NB1414D33_2.5ISO_AC	14	14	4	33,75	89
2,5	M20 (2xD)		NB1414D43_2.5ISO_AC	14	14	4	43,75	100
2,5	M20 (2,5xD)		NB1615D53_2.5ISO_AC	16	15	4	53,75	120
2,5	M20 (3xD)		NB1615C63_2.5ISO_AC	16	15	3	63,75	120
3,0	M24 (1,5xD)	≥ M30	NB1616C40_3.0ISO_AC	16	16	3	40,5	100
3,0	M24 (2xD)	≥ M30	NB1616C52_3.0ISO_AC	16	16	3	52,5	120
3,0	M24 (2,5xD)	≥ M30	NB1818C64_3.0ISO_AC	18	18	3	64,5	130
3,0		≥ M30	NB2020D46_3.0ISO_AC	20	20	4	46,5	120
3,0		≥ M33	NB2525D61_3.0ISO_AC	25	25	4	61,5	130
3,5	M30 (1,5xD)		NB2020C50_3.5ISO_AC	20	20	3	50,75	120
3,5	M30 (2xD)		NB2020C64_3.5ISO_AC	20	20	3	64,75	150
3,5	M30 (2,5xD)		NB2020C78_3.5ISO_AC	20	20	3	78,75	150
4,0	M36 (1,5xD)	≥ M42	NB2525C58_4.0ISO_AC	25	25	3	58	130
4,0	M36 (2xD)	≥ M42	NB2525C78_4.0ISO_AC	25	25	3	78	150

M

METRIC (external)

Pitch mm	EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
1,0	EB1010D21_1.0ISO_AC	10	10	4	21,5	76
1,5	EB1212D26_1.5ISO_AC	12	12	4	26,25	83
2,0	EB1616D35_2.0ISO_AC	16	16	4	35	100

■ SmiCut produce Solid Carbide Thread Mills with pitches up to 6,0 mm (4TPI).

UN

UNIFIED

Pitch TPI	UNC	UNF	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
44		No.5 (1,5xD)	NB04024C5_44UN_AC	4	2,4	3	5,48	50
40	No.5 (1,5xD)		NB04023C5_40UN_AC	4	2,3	3	5,4	50
40	No.5 (2xD)		NB04023C7_40UN_AC	4	2,3	3	7,3	50
40	No.5 (2,5xD)		NB04023C8_40UN_AC	4	2,3	3	8,57	50
40		No.6 (1,5xD)	NB04026C6_40UN_AC	4	2,6	3	6,03	50
36		No.8 (1,5xD)	NB04031C7_36UN_AC	4	3,1	3	7,41	50
36		No.8 (2xD)	NB04031C9_36UN_AC	4	3,1	3	9,53	50
32	No.6 (1,5xD)		NB04025C6_32UN_AC	4	2,5	3	6,75	50
32	No.6 (2xD)		NB04025C8_32UN_AC	4	2,5	3	8,33	50
32	No.6 (2,5xD)		NB04025C10_32UN_AC	4	2,5	3	9,92	50
32	No.8 (1,5xD)		NB0403C7_32UN_AC	4	3	3	7,54	50
32	No.8 (2xD)		NB0403C9_32UN_AC	4	3	3	9,13	50
32	No.8 (2,5xD)		NB0403C11_32UN_AC	4	3	3	11,51	50
32		No.10 (1,5xD)	NB04036C8_32UN_AC	4	3,6	3	8,33	50
32		No.10 (2xD)	NB04036C10_32UN_AC	4	3,6	3	10,72	50
32			NB0606D13_32UN_AC	6	6	4	13,1	63
28		No.12 (1,5xD)	NB0404C9_28UN_AC	4	4	3	9,52	50
28		No.12 (2xD)	NB0404C12_28UN_AC	4	4	3	12,25	50
28		1/4 (1,5xD)	NB0605C10_28UN_AC	6	5	3	10,43	63
28		1/4 (2xD)	NB0605C14_28UN_AC	6	5	3	14,06	63
28			NB0808D17_28UN_AC	8	8	4	17,69	63
24	No.10 (1,5xD)		NB04038C9_24UN_AC	4	3,8	3	9	50
24	No.10 (2xD)		NB04038C11_24UN_AC	4	3,8	3	11,11	50
24	No.10 (2,5xD)		NB04038C13_24UN_AC	4	3,8	3	13,23	50
24	No.12 (1,5xD)		NB0404C10_24UN_AC	4	4	3	10,05	50
24	No.12 (2xD)		NB0404C12_24UN_AC	4	4	3	12,17	50
24	No.12 (2,5xD)		NB0404C15_24UN_AC	4	4	3	15,35	50
24		5/16 (1,5xD)	NB0606C13_24UN_AC	6	6	3	13,23	63
24		5/16 (2xD)	NB0606C17_24UN_AC	6	6	3	17,46	63
24		3/8 (1,5xD)	NB08076C15_24UN_AC	8	7,6	3	15,35	63
24		3/8 (2xD)	NB08076C20_24UN_AC	8	7,6	3	20,64	76
20	1/4 (1,5xD)		NB06045C10_20UN_AC	6	4,5	3	10,8	63
20	1/4 (2xD)		NB06045C14_20UN_AC	6	4,5	3	14,6	63
20	1/4 (2,5xD)		NB06045C17_20UN_AC	6	4,5	3	17,15	63
20		7/16 (1,5xD)	NB0808C18_20UN_AC	8	8	3	18,41	63
20		7/16 (2xD)	NB0808C23_20UN_AC	8	8	3	23,5	76
20		1/2 (1,5xD)	NB1010D21_20UN_AC	10	10	4	20,96	76
20		1/2 (2xD)	NB1010D27_20UN_AC	10	10	4	27,31	76
20			NB1212E28_20UN_AC	12	12	5	28,57	83
18	5/16 (1,5xD)		NB06058C13_18UN_AC	6	5,8	3	13,41	63
18	5/16 (2xD)		NB06058C17_18UN_AC	6	5,8	3	17,64	63
18	5/16 (2,5xD)		NB06058C21_18UN_AC	6	5,8	3	21,87	63
18		9/16 (1,5xD)	NB1010D23_18UN_AC	10	10	4	23,28	76
18		9/16 (2xD)	NB1010D30_18UN_AC	10	10	4	30,34	100
18		5/8 (1,5xD)	NB1212D26_18UN_AC	12	12	4	26,11	83
18		5/8 (2xD)	NB1212D33_18UN_AC	12	12	4	33,16	100
16	3/8 (1,5xD)		NB0606C16_16UN_AC	6	6	3	16,67	63
16	3/8 (2xD)		NB0606C21_16UN_AC	6	6	3	21,43	63
16	3/8 (2,5xD)		NB0807C26_16UN_AC	8	7	3	26,19	76
16		3/4 (1,5xD)	NB1212D31_16UN_AC	12	12	4	30,96	100
16		3/4 (2xD)	NB1212D40_16UN_AC	12	12	4	40,48	100
16			NB1616E35_16UN_AC	16	16	5	35,72	100
14	7/16 (1,5xD)		NB0808C19_14UN_AC	8	8	3	19,05	63
14	7/16 (2xD)		NB0808C24_14UN_AC	8	8	3	24,49	76
14	7/16 (2,5xD)		NB0808C30_14UN_AC	8	8	3	29,94	76
14		7/8 (1,5xD)	NB1616E35_14UN_AC	16	16	5	35,38	100
14		7/8 (2xD)	NB1616E46_14UN_AC	16	16	5	46,26	120
13	1/2 (1,5xD)		NB0808C22_13UN_AC	8	8	3	22,47	76
13	1/2 (2xD)		NB0808C28_13UN_AC	8	8	3	28,33	76
13	1/2 (2,5xD)		NB10093C34_13UN_AC	10	9,3	3	34,19	100

continue

UN

UNIFIED

Pitch TPI	UNC	UNF	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
12	9/16 (1,5xD)		NB1010C24_12UN_AC	10	10	3	24,34	76
12	9/16 (2xD)		NB1010C30_12UN_AC	10	10	3	30,69	100
12			NB1616E43_12UN_AC	16	16	5	43,39	100
11	5/8 (1,5xD)		NB1010C26_11UN_AC	10	10	3	26,55	76
11	5/8 (2xD)		NB1010C35_11UN_AC	10	10	3	35,79	100
11	5/8 (2,5xD)		NB12117C42_11UN_AC	12	11,7	3	42,72	100
10	3/4 (1,5xD)		NB1212C31_10UN_AC	12	12	3	31,75	100
10	3/4 (2xD)		NB1212C41_10UN_AC	12	12	3	41,91	100
9	7/8 (1,5xD)		NB1616C38_9UN_AC	16	16	3	38,1	100
9	7/8 (2xD)		NB1616C49_9UN_AC	16	16	3	49,39	120
8	1 (1,5xD)		NB1616C42_8UN_AC	16	16	3	42,86	100
8	1 (2xD)		NB1616C55_8UN_AC	16	16	3	55,56	120
8			NB2020D49_8UN_AC	20	20	4	49,21	120
7	1 1/8 - 1 1/4 (1,5xD)		NB2020C52_7UN_AC	20	20	3	52,61	120
6	1 3/8 - 1 1/2 (1,5xD)		NB2525C61_6UN_AC	25	25	3	61,38	130

G

WHITWORTH PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
28	G 1/16 - 1/8	XB0606C10_28W_AC	6	6	3	10,43	63
19	G 1/4 - 3/8	XB0808C15_19W_AC	8	8	3	15,37	63
19	G 1/4 - 3/8	XB1010D22_19W_AC	10	10	4	22,06	76
14	G 1/2 - 7/8	XB1212D20_14W_AC	12	12	4	20,86	83
14	G 1/2 - 7/8	XB1212D28_14W_AC	12	12	4	28,12	83
14	G 1/2 - 7/8	XB1616E28_14W_AC	16	16	5	28,12	89
11	G 1 - 1 1/2	XB1212C26_11W_AC	12	12	3	26,55	83
11	G 1 - 3	XB1616D40_11W_AC	16	16	4	40,41	100
11	G ≥ 1	XB2020E49_11W_AC	20	20	5	49,65	120

BSPT

BSPT PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
28	Rc 1/16 - 1/8	XB0606C10_28BSPT_AC	6	6	3	10,43	63
19	Rc 1/4 - 3/8	XB0808C15_19BSPT_AC	8	8	3	15,37	63
14	Rc 1/2 - 7/8	XB1212D20_14BSPT_AC	12	12	4	20,86	83
11	Rc 1 - 2	XB1616D31_11BSPT_AC	16	16	4	31,17	89

PG

STEEL CONDUIT THREAD DIN 40430

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
20	Pg 7	XB0808C21_20PG_AC	8	8	3	20,96	63
18	Pg 9 - 16	XB1010C27_18PG_AC	10	10	3	27,52	76
16	Pg 21 - 48	XB1212D31_16PG_AC	12	12	4	30,96	83

NPSF

NPSF PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
27	1/16 - 1/8	XB0606C12_27NPSF_AC	6	6	3	12,70	63
18	1/4 - 3/8	XB0808C16_18NPSF_AC	8	8	3	16,23	63
14	1/2 - 3/4	XB1212D22_14NPSF_AC	12	12	4	22,68	83
11,5	1	XB1616D29_11.5NPSF_AC	16	16	4	29,82	89

■ SmiCut produce Solid Carbide Thread Mills with pitches up to 6,0 mm (4TPI).

NPT

NPT PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
27	1/16 - 1/8	XB0606C10_27NPT_AC	6	6	3	10,82	63
18	1/4 - 3/8	XB0808C16_18NPT_AC	8	8	3	16,23	63
14	1/2 - 3/4	XB1212D22_14NPT_AC	12	12	4	22,68	83
14	3/4	XB1616D22_14NPT_AC	16	16	4	22,68	89
11,5	1 - 2	XB1616D29_11.5NPT_AC	16	16	4	29,82	89
8	≥ 2 1/2	XB2020D42_8NPT_AC	20	20	4	42,86	100

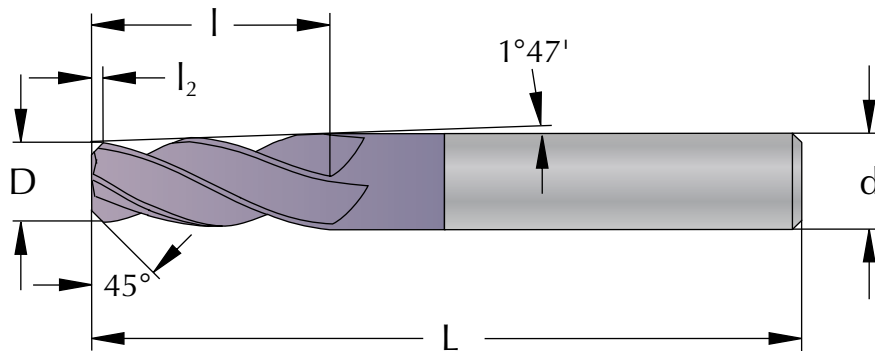
NPTF

NPTF DRYSEAL PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
27	1/16 - 1/8	XB0606C10_27NPTF_AC	6	6	3	10,82	63
18	1/4 - 3/8	XB0808C16_18NPTF_AC	8	8	3	16,23	63
14	1/2 - 3/4	XB1212D22_14NPTF_AC	12	12	4	22,68	83
11,5	1 - 2	XB1616D29_11.5NPTF_AC	16	16	4	29,82	89
8	≥ 2 1/2	XB2020D42_8NPTF_AC	20	20	4	42,86	100

Tapered End Mills for NPT/NPTF/BSPT

FC
TiAlN coated
Micrograin Carbide
Tolerance
D 5,0 - 17,0 +0 / -0,050
Shank
Cylindrical h6, DIN6535 HA
Flute
30° right hand spiral
Field of application
Before Thread Milling of
NPT/NPTF/BSPT



D mm	d mm	Part Number	Cutting edges	l mm	l ₂ mm	L mm
5	6	NPT0605D16_FC	4	16	1,0	63
8,5	10	NPT10085D24_FC	4	24	1,5	76
14	16	NPT1614D32_FC	4	32	2	89
17	20	NPT2017D48_FC	4	48	3	120

Chamfering of the thread



Premilling of conical holes
result in longer tool life
of thread mill

with Chamfer

AC

TiAlCN coated
Micrograin Carbide

Tolerance

The theoretical external diameter of the cutter is lasermarked on the tool.

Shank

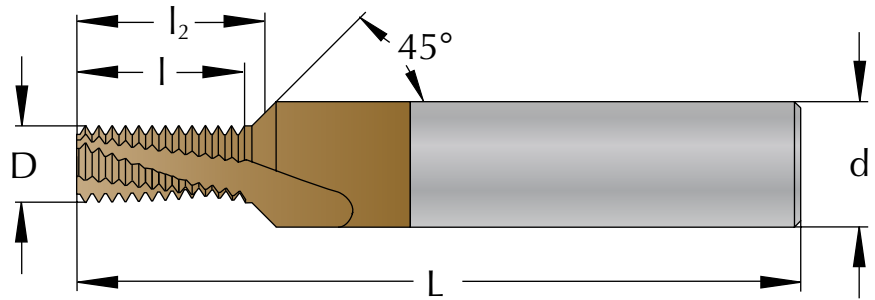
Cylindrical h6, DIN6535 HA

Flute

15° right hand spiral

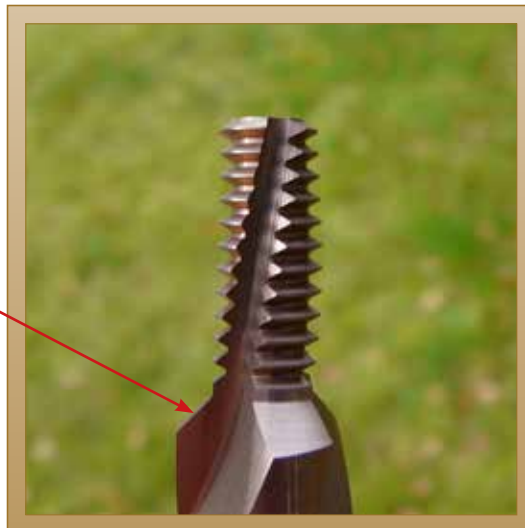
Field of application

Thread Milling of all types of steel

**M****METRIC**

Pitch mm	M coarse	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	l ₂ mm	L mm
0,5	M3 (1,5xD)	NF06023C5_0.5ISO_AC	6	2,3	3	5,25	5,85	63
0,5	M3 (2xD)	NF06023C6_0.5ISO_AC	6	2,3	3	6,75	7,35	63
0,5	M3 (2,5xD)	NF06023C8_0.5ISO_AC	6	2,3	3	8,25	8,85	63
0,5	M3 (3xD)	NF06023C9_0.5ISO_AC	6	2,3	3	9,75	10,35	63
0,7	M4 (1,5xD)	NF0603C7_0.7ISO_AC	6	3	3	7,35	8,2	63
0,7	M4 (2xD)	NF0603C8_0.7ISO_AC	6	3	3	8,75	9,6	63
0,7	M4 (2,5xD)	NF0603C10_0.7ISO_AC	6	3	3	10,85	11,7	63
0,7	M4 (3xD)	NF0603C12_0.7ISO_AC	6	3	3	12,95	13,8	63
0,8	M5 (1,5xD)	NF06038C8_0.8ISO_AC	6	3,8	3	8,4	9,4	63
0,8	M5 (2xD)	NF06038C10_0.8ISO_AC	6	3,8	3	10,8	11,8	63
0,8	M5 (2,5xD)	NF06038C13_0.8ISO_AC	6	3,8	3	13,2	14,2	63
0,8	M5 (3xD)	NF06038C16_0.8ISO_AC	6	3,8	3	16,4	17,4	63
1,0	M6 (1,5xD)	NF08045C10_1.0ISO_AC	8	4,5	3	10,5	11,75	63
1,0	M6 (2xD)	NF08045C13_1.0ISO_AC	8	4,5	3	13,5	14,75	63
1,0	M6 (2,5xD)	NF08045C16_1.0ISO_AC	8	4,5	3	16,5	17,75	63
1,25	M8 (1,5xD)	NF1006C14_1.25ISO_AC	10	6	3	14,37	16	76
1,25	M8 (2xD)	NF1006C18_1.25ISO_AC	10	6	3	18,12	19,75	76
1,25	M8 (2,5xD)	NF1006C21_1.25ISO_AC	10	6	3	21,87	23,5	76
1,5	M10 (1,5xD)	NF12075C17_1.5ISO_AC	12	7,5	3	17,25	19,25	83
1,5	M10 (2xD)	NF12075C21_1.5ISO_AC	12	7,5	3	21,75	23,75	83
1,5	M10 (2,5xD)	NF12075C27_1.5ISO_AC	12	7,5	3	27,75	29,75	83
1,75	M12 (1,5xD)	NF1409C20_1.75ISO_AC	14	9	3	20,12	22,5	89
1,75	M12 (2xD)	NF1409C27_1.75ISO_AC	14	9	3	27,12	29,5	89
1,75	M12 (2,5xD)	NF1409C32_1.75ISO_AC	14	9	3	32,37	34,75	89

Chamfering of the thread



ThreadBurr with Internal Coolant

AC

TiAlCN coated
Micrograin Carbide

Tolerance

The theoretical external diameter of the cutter is lasermarked on the tool.

Shank

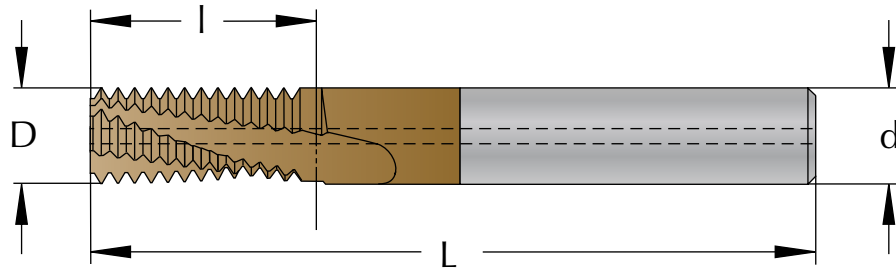
Cylindrical h6, DIN6535 HA

Flute

15° right hand spiral

Field of application

Thread Milling of all types of steel



M

METRIC

Pitch mm	M coarse	M fine	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
0,8	M5 (1,5xD)		NBK04038C8_0.8ISO_AC	4	3,8	3	8,4	50
0,8	M5 (2xD)		NBK04038C10_0.8ISO_AC	4	3,8	3	10,8	50
0,8	M5 (2,5xD)		NBK04038C13_0.8ISO_AC	4	3,8	3	13,2	50
1,0	M6 (1,5xD)		NBK06045C10_1.0ISO_AC	6	4,5	3	10,5	63
1,0	M6 (2xD)		NBK06045C13_1.0ISO_AC	6	4,5	3	13,5	63
1,0	M6 (2,5xD)		NBK06045C16_1.0ISO_AC	6	4,5	3	16,5	63
1,0		≥ M10	NBK0808D17_1.0ISO_AC	8	8	3	17,5	76
1,25	M8 (1,5xD)	≥ M10	NBK0606C14_1.25ISO_AC	6	6	3	14,37	63
1,25	M8 (2xD)	≥ M10	NBK0606C18_1.25ISO_AC	6	6	3	18,12	63
1,25	M8 (2,5xD)	≥ M10	NBK0606C21_1.25ISO_AC	6	6	3	21,87	63
1,5	M10 (1,5xD)	≥ M12	NBK08075C17_1.5ISO_AC	8	7,5	3	17,25	76
1,5	M10 (2xD)	≥ M12	NBK08075C21_1.5ISO_AC	8	7,5	3	21,75	76
1,5	M10 (2,5xD)	≥ M12	NBK08075C27_1.5ISO_AC	8	7,5	3	27,75	76
1,5	M10 (3xD)	≥ M12	NBK08075C32_1.5ISO_AC	8	7,5	3	32,25	76
1,5		≥ M16	NBK1212D29_1.5ISO_AC	12	12	4	29,25	100
1,5		≥ M20	NBK1616F35_1.5ISO_AC	16	16	6	35,25	120
1,75	M12 (1,5xD)		NBK0808C20_1.75ISO_AC	8	8	3	20,12	76
1,75	M12 (2xD)		NBK0808C27_1.75ISO_AC	8	8	3	27,12	76
1,75	M12 (1,5xD)		NBK1009C20_1.75ISO_AC	10	9	3	20,12	100
1,75	M12 (2xD)		NBK1009C27_1.75ISO_AC	10	9	3	27,12	100
1,75	M12 (2,5xD)		NBK1009C32_1.75ISO_AC	10	9	3	32,37	100
1,75	M12 (3xD)		NBK1009C37_1.75ISO_AC	10	9	3	37,62	100
2,0	M14 (1,5xD)	≥ M18	NBK1010C23_2.0ISO_AC	10	10	3	23	100
2,0	M14 (2xD)	≥ M18	NBK1010C31_2.0ISO_AC	10	10	3	31	100
2,0	M16 (1,5xD)	≥ M18	NBK1212D27_2.0ISO_AC	12	12	4	27	100
2,0	M16 (2xD)	≥ M18	NBK1212D35_2.0ISO_AC	12	12	4	35	100
2,0	M16 (2,5xD)	≥ M18	NBK1212D43_2.0ISO_AC	12	12	4	43	100
2,0	M16 (3xD)	≥ M18	NBK1212C51_2.0ISO_AC	12	12	3	51	100
2,0		≥ M20	NBK1616E39_2.0ISO_AC	16	16	5	39	120
2,5	M20 (1,5xD)		NBK1414D33_2.5ISO_AC	14	14	4	33,75	100
2,5	M20 (2xD)		NBK1414D43_2.5ISO_AC	14	14	4	43,75	100
2,5	M20 (2,5xD)		NBK1615D53_2.5ISO_AC	16	15	4	53,75	120
3,0	M24 (1,5xD)	≥ M30	NBK1616C40_3.0ISO_AC	16	16	3	40,5	120
3,0	M24 (2xD)	≥ M30	NBK1616C52_3.0ISO_AC	16	16	3	52,5	120
3,5	M30 (1,5xD)		NBK2020C50_3.5ISO_AC	20	20	3	50,75	150
3,5	M30 (2xD)		NBK2020C64_3.5ISO_AC	20	20	3	64,75	150



AC

TiAlCN coated
Micrograin Carbide

Tolerance

The theoretical external diameter of the cutter is lasermarked on the tool.

Shank

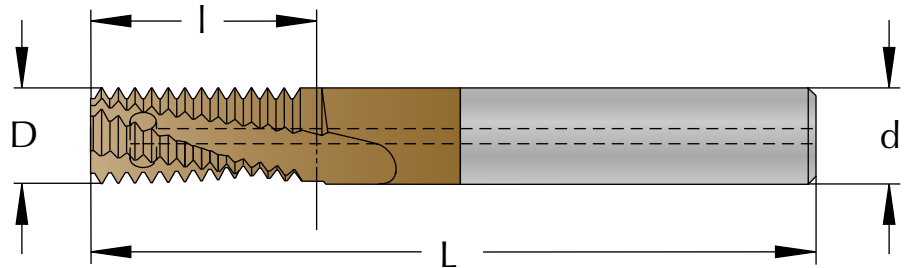
Cylindrical h6, DIN6535 HA

Flute

15° right hand spiral

Field of application

Thread Milling of all types of steel

**M****METRIC**

Pitch mm	M coarse	M fine	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
1,0		≥ M10	NBT0808D17_1.0ISO_AC	8	8	4	17,5	76
1,25	M8 (2xD)	≥ M10	NBT0606C18_1.25ISO_AC	6	6	3	18,12	76
1,5	M10 (2xD)	≥ M12	NBT08075C21_1.5ISO_AC	8	7,5	3	21,75	76
1,5		≥ M16	NBT1212D29_1.5ISO_AC	12	12	4	29,25	100
1,75	M12 (2xD)		NBT0808C27_1.75ISO_AC	8	8	3	27,12	76
1,75	M12 (2xD)		NBT1009C27_1.75ISO_AC	10	9	3	27,12	100
2,0	M14 (2xD)	≥ M18	NBT1010C31_2.0ISO_AC	10	10	3	31	100
2,0	M16 (2xD)	≥ M18	NBT1212D35_2.0ISO_AC	12	12	4	35	100
2,0		≥ M20	NBT1616E39_2.0ISO_AC	16	16	5	39	100

G**WHITWORTH PIPE THREAD**

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
28	G 1/16 - 1/8	XBT0606C10_28W_AC	6	6	3	10,43	76
19	G 1/4 - 3/8	XBT1010D22_19W_AC	10	10	4	22,06	100
14	G 1/2 - 7/8	XBT1212D28_14W_AC	12	12	4	28,12	100
11	G 1 - 3	XBT1616D40_11W_AC	16	16	4	40,41	100



Micro, one tooth

AC / LC

TiAlCN / AlCrN coated
Micrograin Carbide

Tolerance

D 1,0 - 4,0 +0 / -0,050

Shank

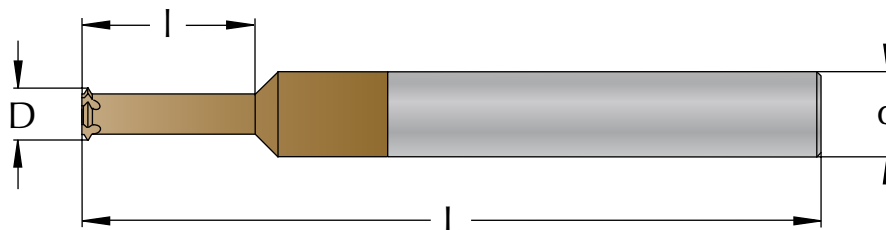
Cylindrical h6, DIN6535 HA

Flute

15° right hand spiral

Field of application

Thread Milling of all types of steel



60°

V-PROFILE 60°

M coarse	M fine	UNC UNF	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
M1	M1		NS03007C1.7_P60_LC	3	0,7	3	1,7	39
M1	M1		NS03007C2.5_P60_LC	3	0,7	3	2,5	39
M1	M1		NS03007C3.2_P60_LC	3	0,7	3	3,2	39
M1,2	M1,2		NS03009C2.0_P60_LC	3	0,9	3	2	39
M1,2	M1,2		NS03009C2.9_P60_LC	3	0,9	3	2,9	39
M1,2	M1,2		NS03009C3.9_P60_LC	3	0,9	3	3,9	39
M1,4	M1,4		NS03010C2.2_P60_LC	3	1,03	3	2,3	39
M1,4	M1,4		NS03010C3.3_P60_LC	3	1,03	3	3,3	39
M1,4	M1,4		NS03010C4.4_P60_LC	3	1,03	3	4,4	39
M1,6	M1,4	No.0-80	NS03011C2.5_P60_LC	3	1,16	3	2,5	39
M1,6	M1,4	No.0-80	NS03011C3.6_P60_LC	3	1,16	3	3,6	39
M1,6	M1,4	No.0-80	NS03011C5.1_P60_LC	3	1,16	3	5,1	39
M1,8	M1,6	No.1	NS03013C2.8_P60_LC	3	1,35	3	2,8	39
M1,8	M1,6	No.1	NS03013C4.2_P60_LC	3	1,35	3	4,2	39
M1,8	M1,6	No.1	NS03013C5.6_P60_LC	3	1,35	3	5,6	39
M2-M2,2	M1,8-M2	No.2	NS03015C3.8_P60_AC	3	1,5	3	3,8	39
M2-M2,2	M1,8-M2	No.2	NS03015C5.4_P60_AC	3	1,5	3	5,4	39
M2,5	M2,2	No.3	NS03019C4.3_P60_AC	3	1,9	3	4,3	39
M2,5	M2,2	No.3	NS03019C6.2_P60_AC	3	1,9	3	6,2	39
	M2,5	No.4	NS03021C4.9_P60_AC	3	2,1	3	4,9	39
	M2,5	No.4	NS03021C7.1_P60_AC	3	2,1	3	7,1	39
M3		No.5	NS03023C5.4_P60_AC	3	2,3	3	5,4	39
M3		No.5	NS03023C7.8_P60_AC	3	2,3	3	7,8	39
M3,5	M3	No.6	NS03026C6.1_P60_AC	3	2,6	3	6,1	39
M3,5	M3	No.6	NS03026C8.7_P60_AC	3	2,6	3	8,7	39
M4	M3,5-M4	No.8	NS0303C7.1_P60_AC	3	3	3	7,1	39
M4	M3,5-M4	No.8	NS0303C10.2_P60_AC	3	3	3	10,2	39
M4,5	M4,5	No.10	NS04036C8.3_P60_AC	4	3,6	3	8,3	50
M4,5	M4,5	No.10	NS04036C12.0_P60_AC	4	3,6	3	12	50
M5-M6	M5-M6	No.12	NS0404C10.0_P60_AC	4	4	3	10	50
M5-M6	M5-M6	No.12	NS0404C14.5_P60_AC	4	4	3	14,5	50



Micro, two teeth

AC

TiAlCN coated

Micrograin Carbide

Tolerance

The theoretical external diameter of the cutter is lasermarked on the tool.

Shank

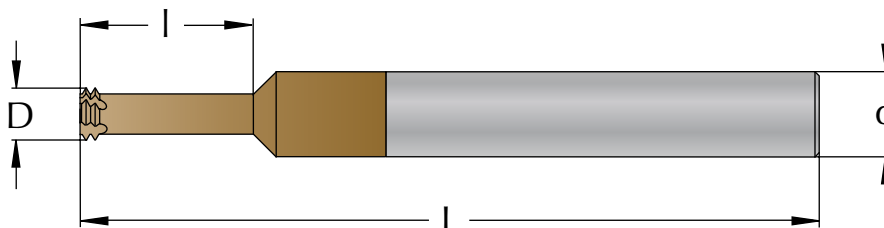
Cylindrical h6, DIN6535 HA

Flute

15° right hand spiral

Field of application

Thread Milling of all types of steel

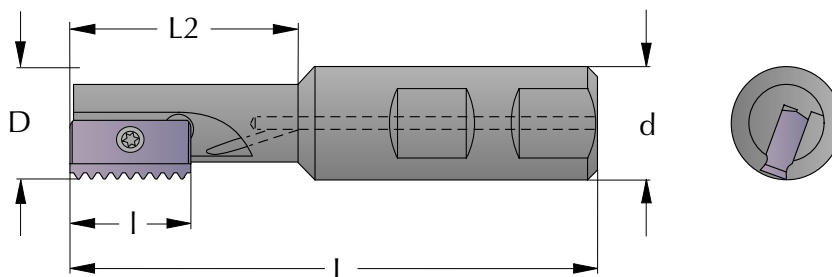
**M****METRIC**

Pitch mm	M coarse	INTERNAL Part Number	d mm	D mm	Cutting edges	l mm	L mm
0,4	M2 (1,5xD)	NM03015C3_0.4ISO_AC	3	1,5	3	3,4	39
0,4	M2 (2,25xD)	NM03015C5_0.4ISO_AC	3	1,5	3	5	39
0,45	M2,2 (1,5xD)	NM03016C3_0.45ISO_AC	3	1,6	3	3,8	39
0,45	M2,2 (2,25xD)	NM03016C5_0.45ISO_AC	3	1,6	3	5,4	39
0,45	M2,5 (1,5xD)	NM03019C4_0.45ISO_AC	3	1,9	3	4,2	39
0,45	M2,5 (2,25xD)	NM03019C6_0.45ISO_AC	3	1,9	3	6,1	39
0,5	M3 (1,5xD)	NM03023C5_0.5ISO_AC	3	2,3	3	5	39
0,5	M3 (2,25xD)	NM03023C7_0.5ISO_AC	3	2,3	3	7,3	39
0,6	M3,5 (1,5xD)	NM03026C6_0.6ISO_AC	3	2,6	3	6	39
0,6	M3,5 (2,25xD)	NM03026C8_0.6ISO_AC	3	2,6	3	8,5	39
0,7	M4 (1,5xD)	NM0303C7_0.7ISO_AC	3	3	3	7	39
0,7	M4 (2,25xD)	NM0303C10_0.7ISO_AC	3	3	3	10	39
0,8	M5 (1,5xD)	NM04038C9_0.8ISO_AC	4	3,8	3	9	50
0,8	M5 (2,25xD)	NM04038C12_0.8ISO_AC	4	3,8	3	12,1	50
1,0	M6 (1,5xD)	NM06045C10_1.0ISO_AC	6	4,5	3	10	63
1,0	M6 (2,25xD)	NM06045C14_1.0ISO_AC	6	4,5	3	14,5	63
1,25	M8 (1,5xD)	NM0606C14_1.25ISO_AC	6	6	3	14	63
1,25	M8 (2,25xD)	NM0606C19_1.25ISO_AC	6	6	3	19,3	63



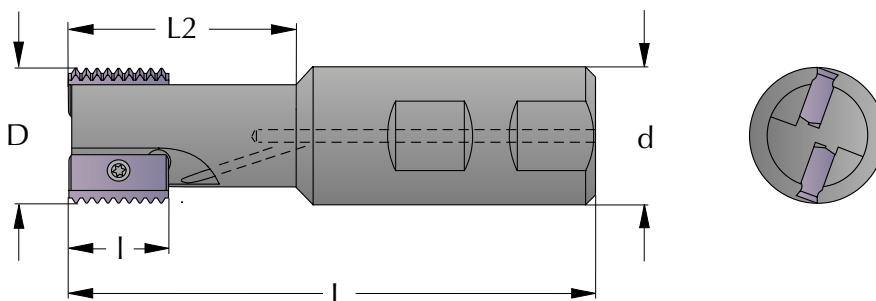
THREAD MILLING CUTTERS

with One Pocket



D mm	d mm	Part Number	l mm	L2 mm	L mm	Cutting edges
12	20	SR0012F14	14	20	75	1
14,5	20	SR0014H14	14	25	85	1
17	20	SR0017H14	14	30	85	1
18	20	SR0018H21	21	30	85	1
21	20	SR0021H21	21	40	94	1
25	20	SR0025K21	21	-	125	1
29	25	SR0029J30	30	50	110	1
31	25	SR0031M30	30	-	150	1
38	32	SR0038M30	30	-	150	1
48	40	SR0048M40	40	78	153	1
48	40	SR0048R40	40	-	210	1

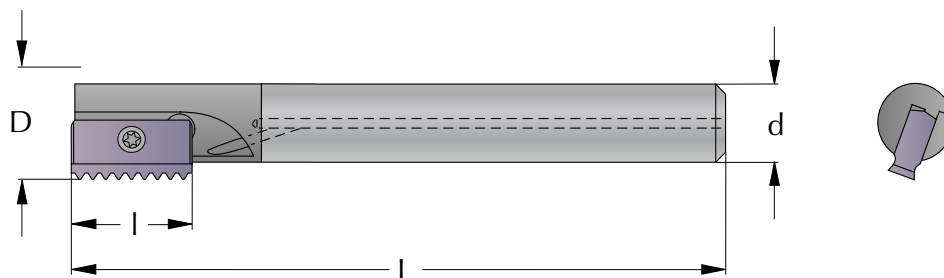
with Two Pockets



D mm	d mm	Part Number	l mm	L2 mm	L mm	Cutting edges
20	20	SR0020H14-2	14	41	93	2
30	25	SR0030J21-2	21	52	108	2
40	32	SR0040L30-2	30	70	130	2
50	40	SR0050M40-2	40	78	153	2

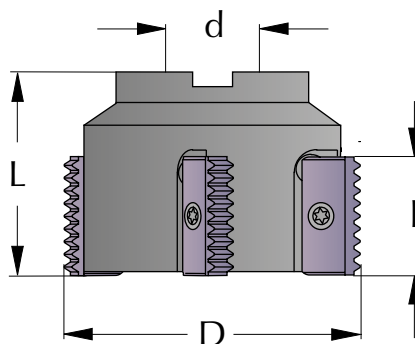
THREAD MILLING CUTTERS

with Carbide Shank



D mm	d mm	Part Number	l mm	L mm	Cutting edges
13	10	SR0013J14C	14	150	1
15	12	SR0015K14C	14	175	1
21	16	SR0021M21C	21	200	1
27	20	SR0027S30C	30	260	1
33	25	SR0033T30C	30	270	1

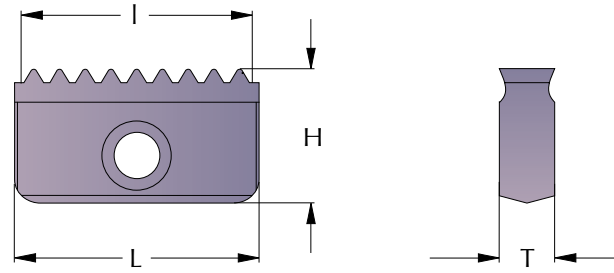
with Multi Pockets



D mm	d mm	Part Number	l mm	L mm	Cutting edges
63	22	SR0063C21-5	21	50	5
63	22	SR0063C30-4	30	50	4
80	27	SR0080D30-4	30	55	4
100	32	SR0100D30-4	30	60	4
80	27	SR0080D40-4	40	65	4
100	32	SR0100E40-4	40	70	4

Spare Parts

Insert mm	Screw to insert	Torx key
14	S14	K14
21	S21	K21
30	S30	K30
40	S40	K40



M METRIC

Pitch mm	M coarse	M fine	INTERNAL Part Number	l mm	L mm	T mm	H mm	Cutting edges
1,0		≥ M16	14I_1.0ISO_FC	14	14	3,1	7,5	2
1,0		≥ M24	21I_1.0ISO_FC	21	21	4,7	12	2
1,5		≥ M16	14I_1.5ISO_FC	13,5	14	3,1	7,5	2
1,5		≥ M24	21I_1.5ISO_FC	21	21	4,7	12	2
1,5		≥ M35	30I_1.5ISO_FC	30	30	5,5	16	2
2,0	M16	≥ M18	14I_2.0ISO_FC	14	14	3,1	7,5	2
2,0		≥ M24	21I_2.0ISO_FC	20	21	4,7	12	2
2,0		≥ M36	30I_2.0ISO_FC	30	30	5,5	16	2
2,0		≥ M56	40I_2.0ISO_FC	40	40	6,3	20	2
2,5	M18-M22		14I_2.5ISO_FC	12,5	14	3,1	7,5	2
3,0	M24	≥ M30	21I_3.0ISO_FC	21	21	4,7	12	2
3,0		≥ M40	30I_3.0ISO_FC	30	30	5,5	16	2
3,0		≥ M58	40I_3.0ISO_FC	39	40	6,3	20	2
3,5	M30-M33		21I_3.5ISO_FC	21	21	4,7	12	2
4,0	M36-M39	≥ M42	30I_4.0ISO_FC	28	30	5,5	16	2
4,0		≥ M64	40I_4.0ISO_FC	40	40	6,3	20	2
4,5	M42-M45		30I_4.5ISO_FC	27	30	5,5	16	2
5,0	M48-M52		30I_5.0ISO_FC	30	30	5,5	16	1
6,0		≥ M72	40I_6.0ISO_FC	36	40	6,3	20	2

G WHITWORTH PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	T mm	H mm	Cutting edges
19	G 3/8	14X_19W_FC	13,37	14	3,1	7,5	2
14	G 1/2 - 5/8	14X_14W_FC	12,7	14	3,1	7,5	2
14	G 3/4 - 7/8	21X_14W_FC	19,96	21	4,7	12	2
11	G 1	14X_11W_FC	13,85	14	3,1	7,5	1
11	G 1	21X_11W_FC	20,78	21	4,7	12	2
11	G 1 1/8	30X_11W_FC	30,02	30	5,5	16	2
11	G ≥ 2	40X_11W_FC	39,25	40	6,3	20	2

BSPT BSPT PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	T mm	H mm	Cutting edges
19	Rc 3/8	14X_19BSPT_FC	13,37	14	3,1	7,5	1
14	Rc 1/2 - 5/8	14X_14BSPT_FC	12,7	14	3,1	7,5	1
14	Rc 3/4 - 7/8	21X_14BSPT_FC	19,96	21	4,7	12	1
11	Rc 1	21X_11BSPT_FC	20,78	21	4,7	12	1
11	Rc 1 1/8	30X_11BSPT_FC	30,02	30	5,5	16	1
11	Rc ≥ 2	40X_11BSPT_FC	39,25	40	6,3	20	1

PG STEEL CONDUIT THREAD DIN 40430

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	T mm	H mm	Cutting edges
18	Pg 9 - 16	14X_18PG_FC	14,11	14	3,1	7,5	2
18	Pg 13,5 - 16	21X_18PG_FC	21	21	4,7	12	2
16	Pg 21 - 48	21X_16PG_FC	20,64	21	4,7	12	2
16	Pg 29 - 48	30X_16PG_FC	30	30	5,5	16	2

UN

UNIFIED

Pitch TPI	UNC	UNF	UNEF	INTERNAL Part Number	I mm	L mm	T mm	H mm	Cutting edges
32				14I_32UN_FC	13,49	14	3,1	7,5	2
28				14I_28UN_FC	13,61	14	3,1	7,5	2
24			5/8	14I_24UN_FC	13,75	14	3,1	7,5	2
20			3/4 - 1	14I_20UN_FC	13,97	14	3,1	7,5	2
20			1	21I_20UN_FC	20,32	21	4,7	12	2
20				30I_20UN_FC	29,21	30	5,5	16	2
18		5/8	1 1/8-1 5/8	14I_18UN_FC	14,11	14	3,1	7,5	2
18			1 1/8-1 5/8	21I_18UN_FC	21,17	21	4,7	12	2
18			1 1/4-1 5/8	30I_18UN_FC	29,63	30	5,5	16	2
16		3/4		14I_16UN_FC	12,7	14	3,1	7,5	2
16				21I_16UN_FC	20,64	21	4,7	12	2
16				30I_16UN_FC	30,16	30	5,5	16	2
16				40I_16UN_FC	39,69	40	6,3	20	2
14		7/8		14I_14UN_FC	12,7	14	3,1	7,5	2
14		7/8		21I_14UN_FC	19,96	21	4,7	12	2
12		1-1 1/2		14I_12UN_FC	12,7	14	3,1	7,5	2
12		1 1/8-1 1/2		21I_12UN_FC	21,12	21	4,7	12	2
12		1 1/2		30I_12UN_FC	29,63	30	5,5	16	2
12				40I_12UN_FC	40,22	40	6,3	20	2
10	3/4			14I_10UN_FC	12,7	14	3,1	7,5	2
8				21I_8UN_FC	19,05	21	4,7	12	2
8				30I_8UN_FC	28,57	30	5,5	16	2
8				40I_8UN_FC	38,1	40	6,3	20	2
7	1 1/8-1 1/4			21I_7UN_FC	21,77	21	4,7	12	2
6	1 1/2			30I_6UN_FC	29,63	30	5,5	16	2
6				40I_6UN_FC	38,1	40	6,3	20	2
5	1 3/4			30I_5UN_FC	30,48	30	5,5	16	1
4	3 - 4			40I_4UN_FC	38,1	40	6,3	20	2

NPT

NPT PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	I mm	L mm	T mm	H mm	Cutting edges
18	3/8	14X_18NPT_FC	12,7	14	3,1	7,5	1
14	1/2 - 5/8	14X_14NPT_FC	12,7	14	3,1	7,5	1
14	3/4 - 7/8	21X_14NPT_FC	19,96	21	4,7	12	1
11,5	1	21X_11.5NPT_FC	19,88	21	4,7	12	1
11,5	1 1/4 - 2	30X_11.5NPT_FC	28,71	30	5,5	16	1
8	≥ 2 1/2	30X_8NPT_FC	28,58	30	5,5	16	1
8	≥ 2 1/2	40X_8NPT_FC	38,1	40	6,3	20	1

NPTF

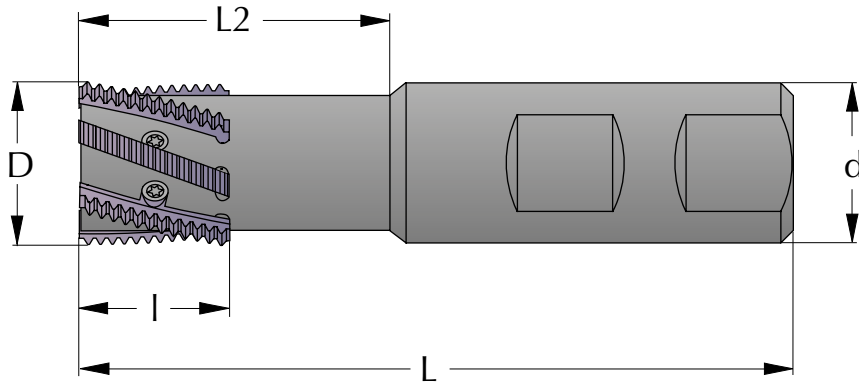
NPTF DRYSEAL PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	I mm	L mm	T mm	H mm	Cutting edges
18	3/8	14X_18NPTF_FC	12,7	14	3,1	7,5	1
14	1/2 - 5/8	14X_14NPTF_FC	12,7	14	3,1	7,5	1
14	3/4 - 7/8	21X_14NPTF_FC	19,96	21	4,7	12	1
11,5	1	21X_11.5NPTF_FC	19,88	21	4,7	12	1
11,5	1 1/4 - 2	30X_11.5NPTF_FC	28,71	30	5,5	16	1
8	≥ 2 1/2	30X_8NPTF_FC	28,58	30	5,5	16	1
8	≥ 2 1/2	40X_8NPTF_FC	38,1	40	6,3	20	1

- Part number with I is for internal thread profile.
- Part number with X is for in- and external thread profile.
- For external profile indicate E instead of I. The price is 10% higher for E.

THREAD MILLING CUTTERS

Spiral Fluted

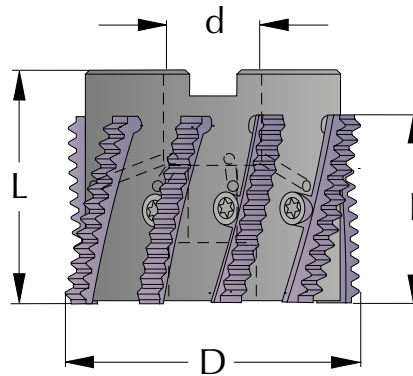


D mm	d mm	Part Number	l mm	L2 mm	L mm	Cutting edges
23	25	SRH23-2	27	50	110	2
32	32	SRH32-5	32	60	130	5
45	32	SRH45-6	37	-	130	6



THREAD MILLING CUTTERS

Spiral Fluted



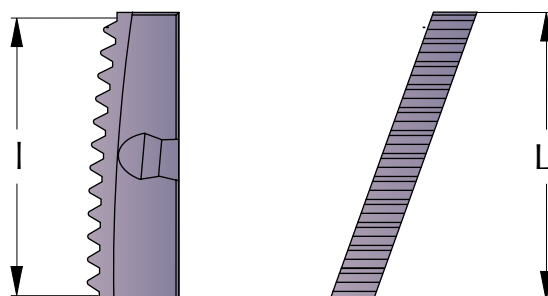
D mm	d mm	Part Number	l mm	L mm	Cutting edges
32	16	SRH32-5M	32	52	5
45	22	SRH45-6M	37	60	6
63	22	SRH63-9	38	50	9

Spare Parts

Insert mm	Screw to insert	Torx key
H23	S23	K21
H32	S32	K22
H45	S45	K40
H63	S63	K40



Spiral Fluted



M

METRIC

Pitch mm	M fine	INTERNAL Part Number	l mm	L mm	Cutting edges
1,0	≥ M27	H23I_1.0ISO_FC	27	27	1
1,5	≥ M27	H23I_1.5ISO_FC	27	27	1
1,5	≥ M36	H32I_1.5ISO_FC	31,5	32	1
1,5	≥ M52	H45I_1.5ISO_FC	36	37	1
1,5	≥ M68	H63I_1.5ISO_FC	37,5	38	1
2,0	≥ M27	H23I_2.0ISO_FC	26	27	1
2,0	≥ M36	H32I_2.0ISO_FC	32	32	1
2,0	≥ M52	H45I_2.0ISO_FC	36	37	1
2,0	≥ M68	H63I_2.0ISO_FC	38	38	1
3,0	≥ M30	H23I_3.0ISO_FC	27	27	1
3,0	≥ M39	H32I_3.0ISO_FC	30	32	1
3,0	≥ M52	H45I_3.0ISO_FC	36	37	1
3,0	≥ M72	H63I_3.0ISO_FC	36	38	1
3,5	≥ M30	H23I_3.5ISO_FC	24,5	27	1
4,0	≥ M36	H23I_4.0ISO_FC	24	27	1
4,0	≥ M42	H32I_4.0ISO_FC	32	32	1
4,0	≥ M56	H45I_4.0ISO_FC	36	37	1
4,0	≥ M72	H63I_4.0ISO_FC	36	38	1
4,5	≥ M42	H32I_4.5ISO_FC	31,5	32	1
5,0	≥ M48	H32I_5.0ISO_FC	30	32	1
5,5	≥ M56	H45I_5.5ISO_FC	33	37	1
6,0	≥ M64	H45I_6.0ISO_FC	36	37	1
6,0	≥ M80	H63I_6.0ISO_FC	36	38	1

G

WHITWORTH PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	Cutting edges
14	G ≥ 7/8	H23X_14W_FC	25,4	27	1
11	G ≥ 1	H23X_11W_FC	25,4	27	1
11	G ≥ 1 1/8	H32X_11W_FC	30,02	32	1
11	G ≥ 1 3/4	H45X_11W_FC	36,95	37	1
11	G ≥ 2 1/2	H63X_11W_FC	36,95	38	1

BSPT

BSPT PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	Cutting edges
11	Rc ≥ 1	H23X_11BSPT_FC	25,4	27	1
11	Rc ≥ 1 1/8	H32X_11BSPT_FC	30,02	32	1
11	Rc ≥ 1 3/4	H45X_11BSPT_FC	36,95	37	1
11	Rc ≥ 2 1/2	H63X_11BSPT_FC	36,95	38	1

NPT

NPT PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	Cutting edges
11,5	1 - 2	H23X_11.5NPT_FC	26,5	27	1
11,5	1 ¹ / ₄ - 2	H32X_11.5NPT_FC	30,92	32	1
11,5	2	H45X_11.5NPT_FC	35,34	37	1
8	2 ¹ / ₂	H45X_8NPT_FC	34,93	37	1
8	3	H63X_8NPT_FC	38,1	38	1

NPTF

NPTF PIPE THREAD

Pitch TPI	Standard	INTERNAL / EXTERNAL Part Number	l mm	L mm	Cutting edges
11,5	1 - 2	H23X_11.5NPTF_FC	26,5	27	1
11,5	1 ¹ / ₄ - 2	H32X_11.5NPTF_FC	30,92	32	1

UN

UNIFIED

Pitch TPI	Standard	INTERNAL Part Number	l mm	L mm	Cutting edges
24	≥ 1	H23I_24UN_FC	26,46	27	1
20	≥ 1 ¹ / ₁₆	H23I_20UN_FC	26,67	27	1
20	≥ 1 ³ / ₈	H32I_20UN_FC	31,75	32	1
18	≥ 1 ¹ / ₁₆	H23I_18UN_FC	26,81	27	1
18	≥ 1 ³ / ₈	H32I_18UN_FC	31,04	32	1
16	≥ 1 ¹ / ₈	H23I_16UN_FC	26,99	27	1
16	≥ 1 ¹ / ₂	H32I_16UN_FC	31,75	32	1
16	≥ 2	H45I_16UN_FC	36,51	37	1
16	≥ 2 ⁵ / ₈	H63I_16UN_FC	38,1	38	1
12	≥ 1 ¹ / ₈	H23I_12UN_FC	25,4	27	1
12	≥ 1 ¹ / ₂	H32I_12UN_FC	31,75	32	1
12	≥ 2	H45I_12UN_FC	35,98	37	1
12	≥ 2 ³ / ₄	H63I_12UN_FC	38,1	38	1
8	≥ 1 ¹ / ₈	H23I_8UN_FC	25,4	27	1
8	≥ 1 ¹ / ₂	H32I_8UN_FC	31,75	32	1
8	≥ 2 ¹ / ₈	H45I_8UN_FC	34,93	37	1
8	≥ 2 ³ / ₄	H63I_8UN_FC	38,1	38	1
7	≥ 1 ¹ / ₄	H23I_7UN_FC	25,4	27	1
6	≥ 1 ⁵ / ₈	H32I_6UN_FC	29,63	32	1
6	≥ 2 ¹ / ₈	H45I_6UN_FC	33,97	37	1
6	≥ 2 ⁷ / ₈	H63I_6UN_FC	38,1	38	1
5	≥ 1 ³ / ₄	H32I_5UN_FC	30,48	32	1