DORMER PRAMET Draadtappen selector

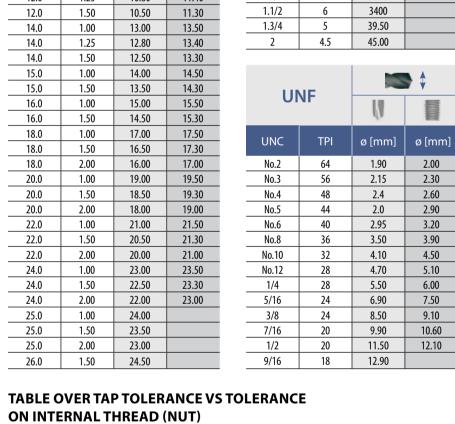




RECOMMENDED TAPPING DRILL SIZES * ***

M			₩	MF				
[met	risch]	(A	靊		[met	risch]	(A	
Ø	P [mm]	ø [mm]	ø [mm]		Ø	P [mm]	ø [mm]	
1.0	0.25	0.75	0.90		27.0	1.50	25.50	
1.6	0.35	1.25	1.40		27.0	2.00	25.00	
1.8	0.35	1.45	1.65		28.0	1.50	26.50	
2.0	0.40	1.60	1.80		28.0	2.00	26.00	
2.2	0.45	1.75	2.00		30.0	1.50	28.50	
2.5	0.45	2.05	2.30		30.0	2.00	28.00	
3.0	0.50	2.50	2.80		32.0	1.50	30.50	
3.5	0.60	2.90	3.20		32.0	2.00	30.00	
4.0	0.70	3.30	3.70		33.0	2.00	31.00	
4.5	0.75	3.80	4.15		35.0	1.50	33.50	
5.0	0.80	4.20	4.60		36.0	1.50	34.50	
6.0	1.00	5.00	5.50		36.0	2.00	34.00	
7.0	1.00	6.00	6.50		36.0	3.00	33.00	
8.0	1.25	6.80	7.40		38.0	1.50	36.5	
9.0	1.25	7.80	8.40		39.0	3.00	36.00	
10.0	1.50	8.50	9.30		40.0	1.50	38.50	
11.0	1.50	9.50	10.30		40.0	2.00	38.00	
12.0	1.75	10.30	11.20		40.0	3.00	37.00	
14.0	2.00	12.00	13.00		42.0	1.50	40.50	
16.0	2.00	14.00	15.00		42.0	2.00	40.00	
18.0	2.50	15.50	16.80		42.0	3.00	39.00	
20.0	2.50	17.50	18.90		45.0	1.50	43.50	
22.0	2.50	19.50	20.80		45.0	2.00	43.00	
24.0	3.00	21.00	22.70		45.0	3.00	42.00	
27.0	3.00	24.00			48.0	1.50	46.50	
30.0	3.50	26.50			48.0	2.00	46.00	
33.0	3.50	29.50			48.0	3.00	45.00	
36.0	4.00	32.00			50.0	1.50	48.50	
39.0	4.00	35.00			50.0	2.00	48.00	
42.0	4.50	37.50			50.0	3.00	47.00	Г
45.0	4.50	40.50						_
48.0	5.00	43.00						
52.0	5.00	47.00				16		7
56.0	5.50	50.50			U	VC	10	
64.0	6.00	58.00					14	
					LING	TO		
			- A		UNC	TPI	ø [mm]	

00	43.00					A
00	47.00			NC		V
50	50.50		U	NC	1/1	吾
00	58.00				dh.	橿
	A		UNC	TPI	ø [mm]	ø [mm]
	₩		No.2	56	1.85	2.00
าไ	18	吾	No.3	48	2.10	2.30
	1/4	鬟	No.4	40	2.35	2.60
			No.5	40	2.65	2.90
nm]	ø [mm]	ø [mm]	No.6	32	2.85	3.20
35	2.65	2.85	No.8	32	3.50	3.80
35	3.20	3.35	No.10	24	3.90	4.40
50	3.50	3.80	No.12	24	4.50	5.00
50	4.50	4.80	1/4	20	5.10	5.80
50	5.00	5.25	5/16	18	6.60	7.30
75	5.30	5.70	3/8	16	8.00	8.80
75	6.30	6.65	7/16	14	9.40	10.30
75	7.30	7.70	1/2	13	10.80	11.90
00	7.00	7.50	9/16	12	12.20	
00	8.00	8.50	5/8	11	13.50	14.80
75	9.30	9.65	3/4	10	16.50	17.90
00	9.00	9.50	7/8	9	19.50	
25	8.80	9.40	1	8	22.25	24.00
00	10.00	10.50	1.1/8	7	25.00	
00	11.00	11.50	1.1/4	7	28.00	
25	10.80	11.40	1.3/8	6	30.75	
50	10.50	11.30	1.1/2	6	3400	
<u> </u>	13.00	13.50	1.3/4	5	39.50	



	All I III O DIVILL SIZES										
MF [metrisch]		★				ME		***			
		(#			UNF		1/1				
Ø	P [mm]	ø [mm]	ø [mm]		UNF	TPI	ø [mm]	ø [mm]			
27.0	1.50	25.50			5/8	18	14.50	15.30			
27.0	2.00	25.00			3/4	16	17.50	18.30			
28.0	1.50	26.50			7/8	14	20.40				
28.0	2.00	26.00			1	12	23.25				
0.0	1.50	28.50			1.1/8	12	26.50				
0.0	2.00	28.00			1.1/4	12	29.50				
32.0	1.50	30.50			1.3/8	12	32.75				
32.0	2.00	30.00			1.1/2	12	36.00				
3.0	2.00	31.00					•				
5.0	1.50	33.50									
	1.50	24.50						▲			

DC	14/			
D3	5W	[/]	-	
BSW	TPI	ø [mm]	ø [mm]	
3/32	48	1.85	2.10	
1/8	40	2.55	2.90	
5/32	32	3.20	3.60	
3/16	24	3.70	4.30	
7/32	24	4.50		
1/4	20	5.10	5.80	
5/16	18	6.50	7.30	
3/8	16	7.90	8.80	
7/16	14	9.20	10.20	
1/2	12	10.50	11.60	
9/16	12	12.00	13.20	
5/8	11	13.50	14.70	
3/4	10	16.50	17.70	
7/8	9	19.25	20.75	
1	8	22.00	23.75	
1.1/8	7	24.75		
1.1/4	7	28.00		
1.3/8	6	30.50		
1.1/2	6	33.50		
1 5 /0	_	25.50		

D	SE SE		\$
BSF		[/]	
BSF	TPI	ø [mm]	ø [mm]
3/16	32	4	
7/32	28	4,5	
1/4	26	5,3	
9/32	26	6	
5/16	22	6,8	
3/8	20	8,3	
7/16	18	9,7	
1/2	16	11	
9/16	16	12,7	
5/8	14	14	
11/16	14	15,5	
3/4	12	17	
13/16	12	18,25	
7/8	11	19,75	
1	10	22,75	

		1.3/0	0	31,3	
18	200	1.1/2	8	34,5	
f/A	- 日	1.5/8	8	37,5	
ø [mm]	ø [mm]			M	*
1.90	2.00	D	Λ		*
2.15	2.30	В	A	1.0	目
2.4	2.60			dh	疆
2.0	2.90	DA TOL		ø [mm]	ø [mm]
2.95	3.20	BA	TPI	[۱۱۱۱۱] ه	[اااااا] ه
3.50	3.90	10	0.35	1.30	
4.10	4.50	8	0.43	1.80	
4.70	5.10	6	0.53	2.30	
5.50	6.00	5	0.59	2.65	
6.90	7.50	4	0.66	3.00	
8.50	9.10	3	0.73	3.40	
9.90	10.60	2	0.81	4.00	

1 0.90 4.50 0 1.00 5.10

G		*** †		NII			
		1/4		NPT		(A	
Ø	TPI	ø [mm]	ø [mm]	NPT	TPI	ø [mm]	ø
1/8	28	8.80	9.30	1/16	27	6.30	
1/4	19	11.80	12.50	1/8	27	8.50	
3/8	14	15.25	16.00	1/4	18	11.00	
1/2	14	19.00	20.00	3/8	18	14.50	
5/8	14	21.00	22.00	1/2	14	18.00	
3/4	14	24.50	25.50	3/4	14	23.00	
7/8	14	28.25	29.30	1	11.5	29.00	
1	11	30.75	32.00	1.1/4	11.5	38.00	
1.1/4	11	39.50		1.1/2	11.5	44.00	
1.1/2	11	45.00		2	11.5	56.00	
1.3/4	11	51.00		2.1/2	8	67.00	
2	11	57.00		3	8	83.00	
2.1/4	11	63.00					

3	11	85.50			NPTF			*			
			- 1		NETE		[4				
EGM		***			NPTF	TPI	ø [mm]	ø [mm]			
		[4	日		1/16	27	6.30				
					1/8	27	8.50				
М	P [mm]	P [mm]	P [mm] ø	P [mm] ø [mm]	ø [mm]	ø [mm]		1/4	18	11.00	
2.5	0.45	2.60			3/8	18	14.50				
3	0.50	3.20			1/2	14	18.00				
3.5	0.60	3.70			3/4	14	23.00				
4	0.70	4.20			1	11.5	29.00				
5	0.80	5.20			1.1/4	11.5	38.00				
6	1.00	6.30			1.1/2	11.5	44.00				
8	1.25	8.40			2	11.5	56.00				
10	1.50	10.50			2.1/2	8	67.00				
12	1.75	12.50			3	8	83.00				
14	2.00	14.50									
16	2.00	16.50									
18	2.50	18.75						\$			
						-		- ·			

24	3.00	24.75	
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Rc		W.	• •
Rc	TPI	ø [mm]	ø [mm]
1/8	28	8.40	
1/4	19	11.20	
3/8	19	14.75	
1/2	14	18.25	
5/8	14	20.25	
3/4	14	23.75	
7/8	14	27.50	
1	11	30.00	
1.1/8	11	34.50	
1.1/4	11	38.50	
1.3/8	11	41.00	

	3/4	14	23.75	
	7/8	14	27.50	
	1	11	30.00	
	1.1/8	11	34.50	
	1.1/4	11	38.50	
	1.3/8	11	41.00	
	1.1/2	11	44.50	
	1.3/4	11	50.00	
ing.	2	11	56.00	
mm]	2.1/4	11	62.00	
	2.1/2	11	71.50	
	2.3/4	11	78.00	
	3	11	84.00	
		Drill	diameter	

3	11	84.00	
	♦ Dril	l diameter	
Militan.	For	thread cutting	
	For	thread forming	

20	2.50	20.75		
22	2.50	22.75		
24	3.00	24.75		
	lu.		4	
بخلالك				_
EG				_
		ad form		1

is	a "Helic	ol" threa	ıd	,
Rc TPI 1/8 28		*	nps	
К	C	1.0	1/8	
		dh	鬟	1/4
D _C	TDI	a [mm]	ø [mm]	3/8
nc .	IFI	ø [mm]	Ø [IIIII]	1/2
1/8	28	8.40		3/4
1/4	19	11.20		1
3/8	19	14.75		1.1,
1/2	14	18.25		1.1,
5/8	14	20.25		2
3/4	14	23.75		2.1,
7/8	14	27.50		3
1	11	30.00		
1.1/8	11	34.50		
1.1/4	11	38.50		
1.3/8	11	41.00		
1.1/2	11	44.50		

1.1/8	11	34.50					ı
1.1/4	11	38.50					
1.3/8	11	41.00			P	G	
1.1/2	11	44.50				•	1
1.3/4	11	50.00					
2	11	56.00			PG	TPI	ø[r
2.1/4	11	62.00					
2.1/2	11	71.50			7	20	11
2.3/4	11	78.00			9	18	13
3	11	84.00			11	18	17
					13.5	18	19
	Drill	diameter		16	18	21	
	V DIIII	ulallielei			21	16	27
Military.	For t	hread cutti	na		29	16	35
Name of Street	TOLL	ili cau culli	iig		36	16	45
MMMM					42	16	52
MATERIAL STATE	∣ For t	hread form	ııng		10	16	50

*	Drill diameter	21
MINNA.	For thread cutting	29
Name and Address of the Owner, where	For timeau cutting	36
	Four Moure of formations	42
MANAGE	For thread forming	48

PLEASE NOTE: These tables for drill diameters refer to ordinary standard drills. Modern
•
drills such as high performance HSS-E or HM drills produce a tighter and more accurate
hole which makes it necessary to increase the diameter of the drill in order to avoid
breakage of the tap. As a general rule;
- when threading up to M8 increase the drill size by 0.1mm

calculated from:

D = Drill diameter (mm)

D_{nom} = Tap nominal diameter (mm)P = Tap pitch (mm)

Normal tolerance is ISO 2 (6H) on taps, which generates an average quality fit between screw and nut. Lower tolerance (ISO 1) generates a fine fit without a gap on the flanks between screw and nut. Higher tolerance (ISO 3) generates a rough fit, with large gap. It is used in the case of a nut which will later be coated or if a loose fit is preferred.

Fit without allowance Normal fit

Fit with large allowance

Loose fit following treatment or coating

Between tolerances 6H (ISO2) and 6G (ISO3), as well as between 6G and 7G, the tap manufacturer produces taps with tolerance 6HX and 6GX. "X" means the tolerance is outside standard and it is used for taps working high strength material or abrasive material such as cast iron. These materials do not cause oversize problems, so higher tolerance can be used in order to increase tool life. The width of the tolerance is equal between, for example, 6H and 6HX.

Forming taps are usually produced with a 6HX or 6GX tolerance.

Thread tolerances for taps are collected in standard reference DIN 13.

The tolerance icon for BSW and BSF is medium. This refers to BS 84 "medium fit".

Pipe threads with the tolerance icon "Normal" refer to the following standards:

G threads to ISO 228-1. One class for internal thread (tap), and class A and B for external thread (die).

6G 7H 8H

7G 8G

PG to DIN 40 430.

ISO 3 6 G 1 B

- 7 G

R, Rc and R threads to ISO 7-1. NPT and NPSM to ANSI B1.20.1. NPTF and NPSF to ANSI B1.20.3.

vnen threading up to M8 increase the drill size by 0. imm - when threading over M8 increase the drill size by 0.2mm

Drill diameter for cutting taps can be can be calculated from: $D = D_{nom} - P$

 $\mathbf{D} =$ Drill diameter (mm) \mathbf{D}_{nom} = Tap nominal diameter (mm) $\mathbf{P} = \mathbf{Tap pitch (mm)}$

1 11.5 30.50 1.1.1/4 11.5 39.50 1.1.1/2 11.5 45.50 2 11.5 57.50 2.1/2 8 69.00 3 8 85.00 Drill diameter for thread forming taps $D = D_{nom} - 0.0068 * P * 65$ 65 in the formula stands for desired thread height in %

ISO WMG					P								K1 K2 K3 K4 K5						N S H N1 N2 N3 N4 S1 S2 S3 S4 H1 H2 H3 H4																				
								F	1.1 P1.2 P1.3 P2.1 P		P3 3.1 P3.2 P3.	.3 P4.1 P4.2				M3.1 M3.2 M3	M4 3.3 M4.1 M4					K4 1.2 K4.3 K4.4 K4	.5 K5.1 K5.2	K5.3 N1.1 N1.				3.3 N4.1 N	N4.2 N4.3		S2 S1.3 S2.1 S2	2.2 S3.1 S3	.2 \$4.1 \$4						
"GENERAL PURPOSE SERIAL TAPS"	E100		THREAD FORM STANDARD		HSS	CHAMFER FLUTE GEOMETRY	COATING	M1.6- M52	Free machining sulfurized carbon steel with a hardness of < 220HB Free machining sulfurized and phosphorized carbon steel with a hardness of < 180HB Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 160HE Plain low carbon steel containing < 0.25%C with a hardness of < 180HB	Plain mediun Plain high car		Tool steel wit	Tool steel with a hardness of 39 - 45HRC Stainless stee, ferritic with a hardness of < 160HB	Stainless steel, ferritic with a hardness of 160 - 220HB Stainless steel, martensitic with a hardness of < 200HB	Stainless steel, martensitic with a hardness of 200 - 280HB Stainless steel, martensitic with a hardness of 280 - 380HB	Stainless steel, austenitic with a hardness of < 200HB Stainless steel, austenitic with a hardness of 200 - 260HB Crainless steel, austenitic with a hardness of 200, 200HB	Stainless steet, austenitic-ferritic or super-austenitic with a hardness of < 300HB Ceriplese seed, anotheristic hardness are super-austenitic with a hardness of < 300HB		Gray iron, pearlitic with a hardness of 240 - 280HB Malleable iron, ferritic with a hardness of < 160HB Malleable iron ferritic or nearlitic with a hardness of 160 - 200HR	Malleable iron, pearlitic with a hardness of 200 - 2 Ductile (nodular/spheriodal) iron, ferritic with a h			Vermicular, compacted grap	Vermicular, compacted graphite iron with a hardness of 220 - 260HB Pure aluminium and wrought aluminium alloys with a hardness of < 60HB Wrought aluminium allows with a hardness of 60 - 100HB	Wrought aluminium alloys with a hardness of 100 - 150HB Cast aluminium alloys with a hardness of < 75HB	Cast aluminium alloys with a hardness of 75 - 90HB Cast aluminium alloys with a hardness of 90 < 140HB	Tree-cutting copper-alloys materials with excellent machining properties Short-chip copper-alloys with good to moderate machining properties	Electrolytic copper and long-chip copper-alloys with moderate to poor machining propertie Thermoplastic polymers	Thermosetting polymers Reinforced polymers or composites	Titanium alloys, with a hardness of <200HB Titanium alloys, with a hardness of 200 - 280HB	Titanium alloys, a hardness of 280 - 360HB High-temperature Fe-based alloys with a hardness High-temperature Fe-based allows with a hardness	High-temperature Ni-based alloys with a hardness of <280HB High-temperature Ni-based alloys with a hardness of <280HB	High-temperature Co-based alloys with a hardness of <240HB High-temperature Co-based alloys with a hardness of <240HB High-temperature Co-based alloys with a hardness of 240 - 320HB	Chilled cast iron with a hardness of <440HB Hardened cast iron with a hardness <55HRC	Hardened cast iron with a hardness >55HRC Hardened steel with a hardness of <51HRC	Hardened steel with a hardness of 55 - 59HRC Hardened steel with a hardness of >59HRC Hardened steel with a hardness of >59HRC			
	E102				HSS-E		ST																																
"GENERAL PURPOSE MACHINE AND HAND TAPS"	E500 E504	ACTIVATION.	1SO 529		HSS	U	TIN	M56 M3 - M24	7 7 8 6 13 15 15 11	5 4 4 10 9 9	4 4 3 2 2 2 9 7 6	3 2 1						12 9 18 13	7 12 10 1	8 11 8 18 24 18	3 7 10 8 4 2 4 4 8 15 22 1	3 6 5 4	11 9 25 19	7 2 15		19 14 3	34 20	1	5 3										
INE TAPS"	EP006H EP016H				3	3.5-5	şī	M2 - M30	24 27 28 20 24 27 28 20	18 16 1	15 12 10	9 7	6 10	8 9	7	7 6 5	4	15 1	1 8 18 15 1 8 18 15 1 8 18 15	12 16 12	2 10 15 1	1 8 7 6	17 13	10															
APPLICATION MACH	EX006H		DIN 37141 37691	100	HSS-E PM		TIN	M2 - M64	42 47 49 36 42 27 28 20	1 8 16 1	I I I I I I	0 9 7				8 7 6		22 16	1 2 2 5	20 27 21	1 17 25 1	9 14 12 10	29 21		46 8 31	42 30 7 28 20	76 45 2	23	45										
"MULTI	EX016H EX00TIN					C 2-3 λ45	st st		24 27 28 20 42 47 49 36						7	7 6 5	4		1 2 2 25							42 30													
	E297						TIN	M3 -					11	9 10	8	8 7 6	5 5	22 16	5 12 31 25	20 27 21	1 17 25 19	9 14 12 10	0 29 21	17	46			<u> </u>											
	E255		DIN 37141 37691	10			Ġ.	M30 M3 - M20	24 27 28 20	11 1	I I I I I I I I I I	6 5	4													5	51 30 1	15		№ № 3 2		2							
	E256 E334		DIN		3	B 3.5-5	TIAIN TO	M3 -			25 20 17		10																	4 3		3							
	E240						ST	ST	ST	ST	M12			17	7 13		9 10		8 7 6	I I 5													13 8	8	5 3			7	
	E241		DIN 371<1 376>1		HSS-E PM		Super B	M3 - M20					19			12 10 9																							
	E201 E252		M DIN 371			C 2-3	ST	M10 M8 -										15 11		12 16 12	2 10 15 1	1 8 7 6 1	17 13	10			20		10										
S	E390		376		•	2-3	ST	M24 M3 - M20										15 1° 30 22	1 8 18 15 1 1 1 1 2 17 43 35		2 10 15 1		17 13 1	10 Z			20		10 15										
SPECIFIC TAI	E471	wanning	DIN 37141 376>1	10	3	B 3.5-5		M3 - M20																16 12	8 31	28 20 5	51 30 1	15 25 L											
MATERIAL S	E472 T200		376>1				Super B	M20 M3 -										60 44	1 2					35 26		42 30 7		30 I	∠ ∠ 50 30					11 7	∠ ■ 5 7	6 4 3			
FORMANCE	T210				нм	c 2-3	TICH	M12										00 1											30 30							6 4 3			
HIGH PER	E298 E412					λ40) 0	M30	24 27 28 20	18 16 1	15 12 10	9 7														5	51 30 1	15											
	E260		DIN 371<1 376>1	10		λ48		M30 M3 - M20	46 52 54 40			5 14 12 1	4																	I		2							
	E261	- Coord	SDORM			λ45 Ψ/	TIAIN To	M3 - M20 M3 -			25 20 17		10																	4 3		3							
	E335 E238		M		HSS-E PM	C 2-3	st	M12 M3 - M30			17	7 13	11	9 10	8	8 7 6	5 5													13 8	8	5 3			7				
	E239 E414		DIN			λ40	Super B	M2					19		14	12 10 9	6																						
	E473		371			λ48		M20 M3 - M20					22	19 20	16 13	14 12 1	1								8 31														
	E474					λ35		1420																	18 46		⊿ ■	30											
	E291							M1.6 - M16	31 34 35 26	23														26 20	13 34	30 22													
TAPS	E292				HSS-E	811		M1.6 - M16	60 67 69 51	45 40 2	9 24 20	18 15		21 22		17 15 14									28 62					35	11	8	6						
FLUTELESS 1	E294	- Introducial	M 217	4		2-3	TN	M3 - M16	60 67 69 51	45 40 2	.9 24 20	18 15		21 22		17 15 14									28 62					35	11	8	6						
_	E289							M12	60 67 69 51	45 40 2	29 24 20	0 18 15	25	21 22	18	17 15 1	4 10							55 41	28 62	55 40				35	11	8	6						
	T215				нм		TICN	M3 - M10	80 89 92 68	60 53 4	4 36 30	26 22				29 25 2		22						70 53	35 123	111 80					20	15	12						
	M	METRIC THREAD FORM	Н	ISS	HIGH SF	PEED STE	EL			U	STI	RAIGHT F	LUTE					λ40		SPIRAL FLU	JTE		•	EXCE	LLENT FO	OR APPLI	CATION	N			Exa	ample: 10	= Linear spe	eed in meters	s/minute +	-/- 10%			
	ISO 529	STANDARD			HIGH SF	PEED COE	BALT			V	SPI	IRAL POII	NT					λ45		SPIRAL FLU	JTE			GOO	D FOR AF	PPLICATI	ON												
		THROUGH HOLE		IM	HSS-E P	POWDER I	METAL	LURGY			FLU	JTELESS						λ48		SPIRAL FLU	JTE																		
		BLIND HOLE			CARBID	ÞΕ				CONTRACT OF THE PERSON NAMED IN COLUMN NAMED I		JTELESS -	- WITH	OIL GI	ROOVES	5		TiN	COA	TING																			
	I V	THROUGH OR BLIND HOLE	3.	B .5-5	CHAMF	ER				λ35°	35°	° SPIRAL	FLUTE																										





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