

RECOMMENDATION TABLES: DRILL DIAMETERS FOR CUTTING TAPS

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

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

$$D = D_{nom} - P$$

ISO METRIC COARSE THREAD			
TAP	Max. Internal Diam.	DRILL Diam.	DRILL Diam.
M	mm	mm	inch
1.6x0.35	1.321	1.25	3/64
1.8x0.35	1.521	1.45	5/4
2x0.4	1.679	1.6	1/16
2.2x0.45	1.833	1.75	50
2.5x0.45	2.138	2.05	46
3x0.5	2.599	2.5	40
3.5x0.6	3.010	2.9	33
4x0.7	3.422	3.3	30
4.5x0.75	3.878	3.8	27
5x0.8	4.334	4.2	19
6x1	5.153	5	9
7x1	6.153	6	15/64
8x1.25	6.912	6.8	H
9x1.25	7.912	7.8	5/16
10x1.5	8.676	8.5	Q
11x1.5	9.676	9.5	3/8
12x1.75	10.441	10.3	Y
14x2	12.210	12	15/32
16x2	14.210	14	35/64
18x2.5	15.744	15.5	39/64
20x2.5	17.744	17.5	11/16
22x2.5	19.744	19.5	49/64
24x3	21.252	21	53/64
27x3	24.252	24	61/64
30x3.5	26.771	26.5	1.3/64
33x3.5	29.771	29.5	1.5/32
36x4	32.270	32	1.1/4
39x4	35.270	35	1.3/8
42x4.2	37.799	37.5	
45x4.5	40.799	40.5	
48x5	43.297	43	
52x5	47.297	47	

ISO METRIC FINE THREAD			
TAP	Max. Internal Diam.	DRILL Diam.	DRILL Diam.
MF	mm	mm	inch
3x0.35	2.721	2.65	37
3.5x0.35	3.221	3.2	1/8
4x0.5	3.599	3.5	29
5x0.5	4.599	4.5	16
5.5x0.50	5.099	5	9
6x0.75	5.378	5.3	5
7x0.75	6.378	6.3	D
8x0.75	7.378	7.3	9/32
8x1	7.153	7	J
9x1	8.153	8	O
10x0.75	9.378	9.3	U
10x1	9.153	9	T
10x1.25	8.912	8.8	11/32
11x1	10.153	10	X
12x1	11.153	11	7/16
12x1.25	10.912	10.8	27/64
12x1.5	10.676	10.5	Z
14x1	13.153	13	17/32
14x1.25	12.912	12.8	1/2
14x1.5	12.676	12.5	31/64
15x1	14.153	14	35/64
15x1.5	13.676	13.5	17/32
16x1	15.153	15	19/32
16x1.5	14.676	14.5	9/16
18x1	17.153	17	43/64
18x1.5	16.676	16.5	41/64
18x2	16.210	16	5/8
20x1	19.153	19	3/4
20x1.5	18.676	18.5	47/64
20x2	18.210	18	45/64
22x1	21.153	21	53/64
22x1.5	20.676	20.5	13/16
22x2	20.210	20	25/32
24x1	23.153	23	29/32
24x1.5	22.676	22.5	7/8
24x2	22.210	22	55/64
25x1	24.153	24	
25x1.5	23.676	23.5	
25x2	23.210	23	
26x1.5	24.676	24.5	
27x1.5	25.676	25.5	
27x2	25.210	25	
28x1.5	26.676	26.5	
28x2	26.210	26	
30x1.5	28.676	28.5	
30x2	28.210	28	
32x1.5	30.676	30.5	
32x2	30.210	30	
33x2	31.210	31	
35x1.5	33.676	33.5	
36x1.5	34.676	34.5	
36x2	34.210	34	
36x3	33.252	33	
38x1.5	36.676	36.5	
39x3	36.252	36	
40x1.5	38.676	38.5	
40x2	38.210	38	
40x3	37.252	37	
42x1.5	40.676	40.5	
42x2	40.210	40	
42x3	39.252	39	
45x1.5	43.676	43.5	
45x2	43.210	43	
45x3	45.252	42	
48X1.5	46.676	46.5	
48X2	46.210	46	
48X3	45.252	45	
50X1.5	48.686	48.2	
50X2	48.210	48	
50X3	47.252	47	

ISO UNIFIED COARSE THREAD			
TAP	Max. Internal Diam.	DRILL Diam.	DRILL Diam.
UNC	mm	mm	Inch
nr 2-56	1.872	1.85	50
nr 3-48	2.146	2.1	47
nr 4-40	2.385	2.35	43
nr 5-40	2.697	2.65	38
nr 6-32	2.896	2.85	36
nr 8-32	3.513	3.5	29
nr 10-24	3.962	3.9	25
nr 12-24	4.597	4.5	16
1/4-20	5.268	5.1	7
5/16-18	6.734	6.6	F
3/8-16	8.164	8	5/16
7/16-14	9.550	9.4	U
1/2-13	11.013	10.8	27/64
9/16-12	12.456	12.2	31/64
5/8-11	13.868	13.5	17/32
3/4-10	16.833	16.5	21/32
7/8-9	19.748	19.5	49/64
1-8	22.598	22.25	7/8
1.1/8-7	25.349	25	63/64
1.1/4-7	28.524	28	1.7/64
1.3/8-6	31.120	30.75	1.7/32
1.1/2-6	34.295	34	1.11/32
1.3/4-5	39.814	39.5	1.9/16
2-41/2	45.595	45	1.25/32

ISO UNIFIED FINE THREAD			
TAP	Max. Internal Diam.	DRILL Diam.	DRILL Diam.
UNF	mm	mm	Inch
nr 2-64	1.913	1.9	50
nr 3-56	2.197	2.15	45
nr 4-48	2.459	2.4	42
nr 5-44	2.741	2.7	37
nr 6-40	3.023	2.95	33
nr 8-36	3.607	3.5	29
nr 10-32	4.166	4.1	21
nr 12-28	4.724	4.7	14
1/4-28	5.580	5.5	3
5/16-24	7.038	6.9	I
3/8-24	8.626	8.5	Q
7/16-20	10.030	9.9	25/64
1/2-20	11.618	11.5	29/64
9/16-18	13.084	12.9	33/64
5/8-18	14.671	14.5	37/64
3/4-16	17.689	17.5	11/16
7/8-14	20.663	20.4	13/16
1-12	23.569	23.25	59/64
1.1/8-12	26.744	26.5	1.3/64
1.1/4-12	29.919	29.5	1.11/64
1.3/8-12	33.094	32.75	1.19/64
1.1/2-12	36.269	36	1.27/64

BSW THREAD			
TAP	Number of t.p.i.	Max. Internal Diam.	DRILL Diam.
BSW	t.p.i.	mm	mm
3/32	48	1.910	1.85
1/8	40	2.590	2.55
5/32	32	3.211	3.2
3/16	24	3.744	3.7
7/32	24	4.538	4.5
1/4	20	5.224	5.1
5/16	18	6.661	6.5
3/8	16	8.052	7.9
7/16	14	9.379	9.2
1/2	12	10.610	10.5
9/16	12	12.176	12
5/8	11	13.598	13.5
3/4	10	16.538	16.5
7/8	9	19.411	19.25
1	8	22.185	22
1.1/8	7	24.879	24.75
1.1/4	7	28.054	28
1.3/8	6	30.555	30.5
1.1/2	6	33.730	33.5
1.5/8	5	35.921	35.5
1.3/4	5	39.098	39
1.7/8	4.1/2	41.648	41.5
2	4.1/2	44.823	44.5

BSP(G) THREAD			
TAP	Number of t.p.i.	Max. Internal Diam.	DRILL Diam.
G	t.p.i.	mm	mm
1/8	28	8.848	8.8
1/4	19	11.890	11.8
3/8	19	15.395	15.25
1/2	14	19.172	19
5/8	14	21.128	21
3/4	14	24.658	24.5
7/8	14	28.418	28.25
1	11	30.931	30.75
1.1/4	11	39.592	39.5
1.1/2	11	45.485	45
1.3/4	11	51.428	51
2	11	57.296	57
2.1/4	11	63.342	63
2.1/2	11	72.866	72.5
2.3/4	11	79.216	79
3	11	85.566	85.5

BSPT THREAD		
TAP	Number of t.p.i.	DRILL Diam.
Rc	t.p.i.	mm
1/8	28	8.4
1/4	19	11.2
3/8	19	14.75
1/2	14	18.25
5/8	14	20.25
3/4	14	23.75
7/8	14	27.5
1	11	30
1.1/8	11	34.5
1.1/4	11	38.5
1.3/8	11	41
1.1/2	11	44.5
1.3/4	11	50
2	11	56
2.1/4	11	62
2.1/2	11	71.5
2.3/4	11	78
3	11	84