

FWB Products Ltd 2020 ([www.fwb.co.uk](http://www.fwb.co.uk))

# Tapping Thread Dimensions

# Contents

<b>Recommended Tapping and Clearance Drill Sizes</b>	<b>Page 3</b>
<b>British Standard Whitworth Thread</b>	<b>Page 4</b>
<b>British Association Thread (BA)</b>	<b>Page 5</b>
<b>Tapping Sizes (mm) for Fractional Threads</b>	<b>Page 6</b>
<b>Tapping Drills (mm) for Number Size Threads</b>	<b>Page 7</b>
<b>British Standard Pipe Thread (BSP) and Tapered Pipe Thread (BSP Tr)Rc</b>	<b>Page 8</b>
<b>American National Taper Pipe (NPT)</b>	<b>Page 9</b>

# Recommended Tapping and Clearance Drill Sizes

Nominal Size Of Tap (mm)	Pitch (mm)	Tapping Drill Size (mm)	Clearance Drill Size (mm)	Nominal Size Of Tap (mm)	Pitch (mm)	Tapping Drill Size (mm)	Clearance Drill Size (mm)
1	0.25	0.75	1.05	11	1.75	9.5	11.2
1.1	0.25	0.85	1.15	12	1.75	10.2	12.2
1.2	0.25	0.95	1.25	14	2	12	14.25
1.4	0.3	1.1	1.45	16	2	14	16.25
1.6	0.35	1.25	1.65	18	2.5	15.5	18.25
1.8	0.35	1.45	1.85	20	2.5	17.5	20.25
2	0.4	1.6	2.05	22	2.5	19.5	22.25
2.2	0.45	1.75	2.25	24	3	21	24.25
2.5	0.45	2.05	2.6	27	3	24	27.25
3	0.5	2.5	3.1	30	3.5	26.5	30.5
3.5	0.6	2.9	3.6	33	3.5	29.5	33.5
4	0.7	3.3	4.1	36	4	32	36.5
4.5	0.75	3.9	4.6	39	4	35	39.5
5	0.8	4.2	5.1	42	4.5	37.5	42.5
6	1	5	6.1	45	4.5	40.5	45.5
7	1	6	7.2	48	5	43	48.5
8	1.25	6.8	8.2	52	5	47	53
59	1.25	7.8	9.2	56	5.5	50.5	57
10	1.5	8.5	10.2				

# British Standard Whitworth Thread

Nominal Tap Size (inches)	Tapping Drill Size (mm)	Clearance Drill Size (mm)
1/8"	2.55	3.3
3/16"	3.7	4.9
1/4"	5.1	6.5
5/16"	6.5	8.1
3/8"	7.9	9.7
7/16"	9.3	11.3
1/2"	10.5	13
9/16"	12.1	14.5
5/8"	13.5	16.25
11/16"	15	17.75
3/4"	16.25	19.25
7/8"	19.25	22.5
1"	22	25.75
1 1/8"	24.75	29
1 1/4"	28	32
1 1/2"	33.5	38.5
1 3/4"	39	45
2"	44.5	51

# British Association Thread (BA)

Nominal Tap Size (inches)	Tapping Drill Size (mm)	Clearance Drill Size (mm)
0	5.1	6.1
1	4.5	5.4
2	4	4.8
3	3.4	4.2
4	3	3.7
5	2.65	3.3
6	2.3	2.9
7	2.05	2.6
8	1.8	2.25
9	1.55	1.92
10	1.4	1.75
11	1.2	1.6
12	1.05	1.4
13	0.98	1.3
14	0.8	1.1
15	0.7	0.98
16	0.6	0.88

# Tapping Sizes (mm) for Fractional Threads

Nominal Tap Diameter (inches)	UNC	UNF	DSW	BSF	Nominal Tap Diameter (inches)	UNC	UNF	DSW	BSF
1/16"	-	-	1.15	-	11/16"	-	-	15	15.5
3/32"	-	-	1.9	-	3/4"	16.5	17.5	16.25	16.75
1/8"	-	-	2.55	-	7/8"	19.5	20.4	19.25	19.75
5/32"	-	-	3.1	-	1"	22.25	23.25	22	22.75
3/16"	-	-	3.7	4	1 1/8"	25	26.5	24.75	25.5
7/32"	-	-	4.4	4.6	1 1/4"	28	29.5	28	28.5
1/4"	5.1	5.5	5.1	5.3	1 3/8"	30.75	32.75	30.5	31.5
5/16"	6.6	6.9	6.5	6.8	1 1/2"	34	36	33.5	34.5
3/8"	8	8.5	7.9	8.3	1 5/8"	-	-	36	38
7/16"	9.4	9.9	9.3	9.7	1 3/4"	39.5	-	39	40.5
1/2"	10.8	11.5	10.5	11.1	1 7/8"	-	-	41.5	44
9/16"	12.2	12.9	12.1	12.7	2"	45	-	44.5	47
5/8"	13.5	14.5	13.5	14					

# Tapping Drills (mm) for Number Size Threads

Tap Number	BA	UNC	UNF
-	5.1	-	1.25
1	4.5	1.55	1.55
2	4	1.85	1.9
3	3.4	2.1	2.15
4	3	2.35	2.4
5	2.65	2.65	2.7
6	2.3	2.85	2.95
7	2.05	-	-
8	1.8	3.5	3.5
9	1.55	-	-
10	1.4	3.9	4.1
11	1.2	-	-
12	1.05	4.5	4.7

# British Standard Pipe Thread (BSP) and Tapered Pipe Thread (BSp Tr)Rc

British Standard Pipe Thread (BSP):

Nominal Thread Size	Tapping Drill Size (mm)	
	BSP PL (Rp)	BSP F (G)
1/8" (0.383)	8.6	8.8
1/4" (0.518)	11.5	11.8
3/8" (0.656)	15	15.25
1/2" (0.825)	18.75	19
5/8" (0.902)	-	21
3/4" (1.041)	24.25	24.5
7/8" (1.189)	-	28.25
1" (1.309)	30.4	30.75
1 1/4" (1.650)	39	39.5
1 1/2" (1.882)	45	45
1 3/4" (2.116)	-	51
2" (2.347)	56.75	57

British Standard Tapered Pipe Thread (BSP Tr)Rc:

Nominal Thread Size	Tapping Drill Size (mm)	
	With Reamer	Without Reamer
1/8" (0.383)	8	8.4
1/4" (0.518)	10.8	11.2
3/8" (0.656)	14.25	14.75
1/2" (0.825)	17.75	18.25
3/4" (1.041)	23	23.57
1" (1.309)	29	30
1 1/4" (1.650)	37.5	38.5
1 1/2" (1.882)	43.5	44.5
2" (2.347)	55	56
2 1/2" (2.960)	70	71



# American National Taper Pipe (NPT)

Nominal Thread Size	Tapping Drill Size	
	With Reamer	Without Reamer
1/16" (0.311)	6	6.3
1/8" (0.405)	8.4	8.7
1/4" (0.534)	10.7	11.1
3/8" (0.671)	14.25	14.5
1/2" (0.386)	17.5	18
3/4" (1.046)	22.75	23.25
1" (1.309)	28.5	29
1 1/4" (1.653)	37.5	38
1 1/2" (1.892)	43.5	44
2" (2.366)	55	56
2 1/2" (2.862)	66	67