

Decimal Equivalents

Brown & Sharpe

of fraction, wire gage, letter and metric sizes

Sizes	Decimal Inches	Sizes	Decimal Inches	Sizes	Decimal Inches	Sizes	Decimal Inches	Sizes	Decimal Inches	Sizes	Decimal Inches
97	.0059	59	.0410	2.75 mm	.1083	5 mm	.1969	N	.3020	1/2	.5000
96	.0063	1.05 mm	.0413	7/64	.1094	8	.1990	7.7 mm	.3031	13 mm	.5118
95	.0067	58	.0420	35	.1100	5.1 mm	.2008	7.75 mm	.3051	33/64	.5156
94	.0071	57	.0430	2.8 mm	.1102	7	.2010	7.8 mm	.3071	17/32	.5312
93	.0075	1.1 mm	.0433	34	.1110	13/64	.2031	7.9 mm	.3110	13.5 mm	.5315
92	.0079	1.15 mm	.0453	33	.1130	6	.2040	5/16	.3125	35/64	.5469
.2 mm	.0079	56	.0465	2.9 mm	.1142	5.2 mm	.2047	8 mm	.3150	14 mm	.5512
91	.0083	3/64	.0469	32	.1160	5	.2055	O	.3160	9/16	.5625
90	.0087	1.2 mm	.0472	3 mm	.1181	5.25 mm	.2067	8.1 mm	.3189	14.5 mm	.5709
.22 mm	.0087	1.25 mm	.0492	31	.1200	5.3 mm	.2087	8.2 mm	.3228	37/64	.5781
89	.0091	1.3 mm	.0512	3.1 mm	.1220	4	.2090	P	.3230	15 mm	.5906
88	.0095	55	.0520	1/8	.1250	5.4 mm	.2126	8.25 mm	.3248	19/32	.5938
.25 mm	.0098	1.35 mm	.0531	3.2 mm	.1260	3	.2130	8.3 mm	.3268	39/64	.6094
87	.0100	54	.0550	3.25 mm	.1280	5.5 mm	.2165	21/64	.3281	15.5 mm	.6102
86	.0105	1.4 mm	.0551	30	.1285	7/32	.2188	8.4 mm	.3307	5/8	.6250
85	.0110	1.45 mm	.0571	3.3 mm	.1299	5.6 mm	.2205	Q	.3320	16 mm	.6299
.28 mm	.0110	1.5 mm	.0591	3.4 mm	.1339	2	.2210	8.5 mm	.3346	41/64	.6406
84	.0115	53	.0595	29	.1360	5.7 mm	.2244	8.6 mm	.3386	16.5 mm	.6496
.3 mm	.0118	1.55 mm	.0610	3.5 mm	.1378	5.75 mm	.2264	R	.3390	21/32	.6562
83	.0120	1/16	.0625	28	.1405	1	.2280	8.7 mm	.3425	17 mm	.6693
82	.0125	1.6 mm	.0630	9/64	.1406	5.8 mm	.2283	11/32	.3438	43/64	.6719
.32 mm	.0126	52	.0635	3.6 mm	.1417	5.9 mm	.2323	8.75 mm	.3445	11/16	.6875
81	.0130	1.65 mm	.0650	27	.1440	A	.2340	8.8 mm	.3465	17.5 mm	.6890
80	.0135	1.7 mm	.0669	3.7 mm	.1457	15/64	.2344	S	.3480	45/64	.7031
.35 mm	.0138	51	.0670	26	.1470	6 mm	.2362	8.9 mm	.3504	18 mm	.7087
79	.0145	1.75 mm	.0689	3.75 mm	.1476	B	.2380	9 mm	.3543	23/32	.7188
1/64	.0156	50	.0700	25	.1495	6.1 mm	.2402	T	.3580	18.5 mm	.7283
.4 mm	.0157	1.8 mm	.0709	3.8 mm	.1496	C	.2420	9.1 mm	.3583	47/64	.7344
78	.0160	1.85 mm	.0728	24	.1520	6.2 mm	.2441	23/64	.3594	19 mm	.7480
.45 mm	.0177	49	.0730	3.9 mm	.1535	D	.2460	9.2 mm	.3622	3/4	.7500
77	.0180	1.9 mm	.0748	23	.1540	6.25 mm	.2461	9.25 mm	.3642	49/64	.7656
.5 mm	.0197	48	.0760	5/32	.1562	6.3 mm	.2480	9.3 mm	.3661	19.5 mm	.7677
76	.0200	1.95 mm	.0768	22	.1570	E	.2500	U	.3680	25/32	.7812
75	.0210	5/64	.0781	4 mm	.1575	1/4	.2500	9.4 mm	.3701	20 mm	.7874
.55 mm	.0217	47	.0785	21	.1590	6.4 mm	.2520	9.5 mm	.3740	51/64	.7969
74	.0225	2 mm	.0787	20	.1610	6.5 mm	.2559	3/8	.3750	20.5 mm	.8071
.6 mm	.0236	2.05 mm	.0807	4.1 mm	.1614	F	.2570	V	.3770	13/16	.8125
73	.0240	46	.0810	4.2 mm	.1654	6.6 mm	.2598	9.6 mm	.3780	21 mm	.8268
72	.0250	45	.0820	19	.1660	G	.2610	9.7 mm	.3819	53/64	.8281
.65 mm	.0256	2.1 mm	.0827	4.25 mm	.1673	6.7 mm	.2638	9.75 mm	.3839	27/32	.8438
71	.0260	2.15 mm	.0846	4.3 mm	.1693	17/64	.2656	9.8 mm	.3858	21.5 mm	.8465
.7 mm	.0276	44	.0860	18	.1695	6.75 mm	.2657	W	.3860	55/64	.8594
70	.0280	2.2 mm	.0866	11/64	.1719	H	.2660	9.9 mm	.3898	22 mm	.8661
69	.0292	2.25 mm	.0886	17	.1730	6.8 mm	.2677	25/64	.3906	7/8	.8750
.75 mm	.0295	43	.0890	4.4 mm	.1732	6.9 mm	.2717	10 mm	.3937	22.5 mm	.8858
68	.0310	2.3 mm	.0906	16	.1770	I	.2720	X	.3970	57/64	.8906
1/32	.0312	2.35 mm	.0925	4.5 mm	.1772	7 mm	.2756	Y	.4040	23 mm	.9055
.8 mm	.0315	42	.0935	15	.1800	J	.2770	13/32	.4062	29/32	.9062
67	.0320	3/32	.0938	4.6 mm	.1811	7.1 mm	.2795	Z	.4130	59/64	.9219
66	.0330	2.4 mm	.0945	14	.1820	K	.2810	10.5 mm	.4134	23.5 mm	.9252
.85 mm	.0335	41	.0960	13	.1850	9/32	.2812	27/64	.4219	15/16	.9375
65	.0350	2.45 mm	.0965	4.7 mm	.1850	7.2 mm	.2835	11 mm	.4331	24 mm	.9449
.9 mm	.0354	40	.0980	4.75 mm	.1870	7.25 mm	.2854	7/16	.4375	61/64	.9531
64	.0360	2.5 mm	.0984	3/16	.1875	7.3 mm	.2874	11.5 mm	.4528	24.5 mm	.9646
63	.0370	39	.0995	4.8 mm	.1890	L	.2900	29/64	.4531	31/32	.9688
.95 mm	.0374	38	.1015	12	.1890	7.4 mm	.2913	15/32	.4688	25 mm	.9843
62	.0380	2.6 mm	.1024	11	.1910	M	.2950	12 mm	.4724	63/64	.9844
61	.0390	37	.1040	4.9 mm	.1929	7.5 mm	.2953	31/64	.4844	1	1.0000
1 mm	.0394	2.7 mm	.1063	10	.1935	19/64	.2969	12.5 mm	.4921		
60	.0400	36	.1065	9	.1960	7.6 mm	.2992				

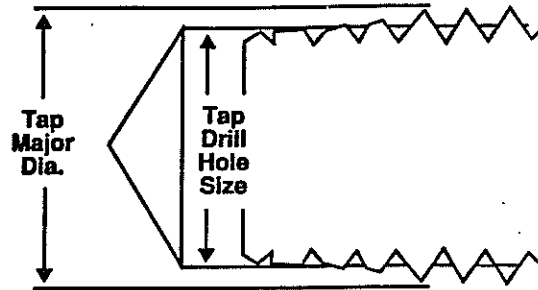
Tap Drill Chart

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The NC and NF tables recommend tap drills that result in approximately 75% thread height based upon drill diameter. In most materials, however, drills will produce a hole slightly larger than the drill diameter.

The tables list actual thread height percentages resulting from the probable hole size each drill will cut.

Thread heights over 60% of thread do not increase the strength of a threaded joint and it is an advantage to favor the use of larger drills.



Machine Screw Sizes NC & NF					Fractional Sizes NC & NF				
Nom. Size Tap	Recommended Tap Drill		Probable Hole Size	Actual % Thread	Nom. Size Tap	Recommended Tap Drill		Probable Hole Size	Actual % Thread
	Drill	Decimal				Drill	Decimal		
0-80	3/64	.0469	.0484	71	1/4-20	7	.2010	.2048	70
1-64	53	.0595	.0610	59	1/4-28	3	.2130	.2168	72
1-72	53	.0595	.0610	67	5/16-18	F	.2570	.2608	72
2-56	50	.0700	.0717	62	5/16-24	I	.2720	.2761	67
2-64	50	.0700	.0717	70	3/8-16	5/16	.3125	.3189	72
3-48	47	.0785	.0804	69	3/8-24	Q	.3320	.3364	71
3-56	46	.0810	.0829	69	7/16-14	U	.3680	.3726	70
4-40	43	.0890	.0910	65	7/16-20	25/64	.3906	.3952	65
4-48	3/32	.0938	.0958	60	1/2-13	27/64	.4219	.4266	73
5-40	38	.1015	.1038	65	1/2-20	29/64	.4531	.4578	65
5-44	37	.1040	.1063	63	9/16-12	31/64	.4844	.4892	68
6-32	36	.1065	.1091	71	9/16-18	33/64	.5156	.5204	58
6-40	33	.1130	.1156	69	5/8-11	17/32	.5313	.5362	75
8-32	29	.1360	.1389	62	5/8-18	37/64	.5781	.5831	58
8-36	29	.1360	.1389	70	3/4-10	21/32	.6563	.6613	68
10-24	26	.1470	.1502	74	3/4-16	11/16	.6875	.6925	71
10-32	21	.1590	.1622	68	7/8-9	49/64	.7656	.7708	72
12-24	16	.1770	.1805	66	7/8-14	13/16	.8125	.8177	62
12-28	15	.1800	.1835	70	1-8	7/8	.8750	.8809	73
..	1-12	59/64	.9219	.9279	67

Taper Pipe Taps			Straight Pipe Taps		
Nominal Size	Tap Drill		Nominal Size	Tap Drill	
	NPT	NPTF		NPS	NPSF
1/16-27	D	D	1/16-27	1/4	1/4
1/8-27	Q	R	1/8-27	11/32	11/32
1/4-18	7/16	7/16	1/4-18	7/16	7/16
3/8-18	9/16	37/64	3/8-18	37/64	37/64
1/2-14	45/64	45/64	1/2-14	23/32	23/32
3/4-14	29/32	59/64	3/4-14	59/64	59/64
1-11 1/2	1 9/64	1 5/32	1-11 1/2	1 5/32	1 5/32
1 1/4-11 1/2	1 31/64	1 1/2	1 1/4-11 1/2	1 1/2	1 1/2
1 1/2-11 1/2	1 47/64	1 47/64	1 1/2-11 1/2	1 3/4	1 3/4
2-11 1/2	2 13/64	2 7/32	2-11 1/2	2 7/32	2 7/32
2 1/2-8	2 5/8	2 41/64			
3-8	3 1/4	3 17/64			



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QUALITY AND PRECISION SINCE 1833

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