

# Drill Size Decimal Equivalents

drill	in	drill	in	drill	in	drill	in
0.30	.0118	44	.0860	5.50	.2165	Y	.4040
0.32	.0126	2.20	.0866	7/32	.2188	13/32	.4062
80	.0135	2.25	.0886	5.60	.2205	Z	.4130
0.35	.0138	43	.0890	2	.2210	10.50	.4134
79	.0145	2.30	.0906	5.70	.2244	27/64	.4219
0.38	.0150	2.35	.0925	1	.2280	10.80	.4252
1/64	.0156	42	.0935	5.80	.2283	11.00	.4331
0.40	.0157	3/32	.0938	5.90	.2323	7/16	.4375
78	.0160	2.40	.0945	A	.2340	11.20	.4409
0.42	.0165	41	.0960	15/64	.2344	11.50	.4528
0.45	.0177	2.45	.0965	6.00	.2362	29/64	.4531
77	.0180	40	.0980	B	.2380	11.80	.4646
0.48	.0189	2.50	.0984	6.10	.2402	15/32	.4688
0.50	.0197	39	.0995	C	.2420	12.00	.4724
76	.0200	38	.1015	6.20	.2441	12.20	.4803
75	.0210	2.60	.1024	D	.2460	31/64	.4844
0.55	.0217	37	.1040	6.30	.2480	12.50	.4921
74	.0225	2.70	.1063	1/4, E	.2500	1/2	.5000
0.60	.0236	36	.1065	6.40	.2520	12.80	.5039
73	.0240	7/64	.1094	6.50	.2559	13.00	.5118
0.62	.0244	35	.1100	F	.2570	33/64	.5156
72	.0250	2.80	.1102	6.60	.2598	13.20	.5197
0.65	.0256	34	.1110	G	.2610	17/32	.5312
71	.0260	33	.1130	6.70	.2638	13.50	.5315
0.70	.0276	2.90	.1142	17/64	.2656	13.80	.5433
70	.0280	32	.1160	H	.2660	35/64	.5469
69	.0292	3.00	.1181	6.80	.2677	14.00	.5512
0.75	.0295	31	.1200	6.90	.2717	14.25	.5610
68	.0310	3.10	.1220	I	.2720	9/16	.5625
1/32	.0312	1/8	.1250	7.00	.2756	14.50	.5709
0.80	.0315	3.20	.1260	J	.2770	37/64	.5781
67	.0320	30	.1285	7.10	.2795	14.75	.5807
66	.0330	3.30	.1299	K	.2810	15.00	.5906
0.85	.0335	3.40	.1339	9/32	.2812	19/32	.5938
65	.0350	29	.1360	7.20	.2835	15.25	.6004
0.90	.0354	3.50	.1378	7.30	.2874	39/64	.6094
64	.0360	28	.1405	L	.2900	15.50	.6102
63	.0370	9/64	.1406	7.40	.2913	15.75	.6201
0.95	.0374	3.60	.1417	M	.2950	5/8	.6250
62	.0380	27	.1440	7.50	.2953	16.00	.6299
61	.0390	3.70	.1457	19/64	.2969	16.25	.6398
1.00	.0394	26	.1470	7.60	.2992	41/64	.6406
60	.0400	25	.1495	N	.3020	16.50	.6496
59	.0410	3.80	.1496	7.70	.3031	21/32	.6562
1.05	.0413	24	.1520	7.80	.3071	16.75	.6594
58	.0420	3.90	.1535	7.90	.3110	17.00	.6693
57	.0430	23	.1540	5/16	.3125	43/64	.6719
1.10	.0433	5/32	.1562	8.00	.3150	17.25	.6791
1.15	.0453	22	.1570	O	.3160	11/16	.6875
56	.0465	4.00	.1575	8.10	.3189	17.50	.6890
3/64	.0469	21	.1590	8.20	.3228	45/64	.7031
1.20	.0472	20	.1610	P	.3230	18.00	.7087
1.25	.0492	4.10	.1614	8.30	.3268	23/32	.7188
1.30	.0512	4.20	.1654	21/64	.3281	18.50	.7283
55	.0520	19	.1660	8.40	.3307	47/64	.7344
1.35	.0531	4.30	.1693	Q	.3320	19.00	.7480
54	.0550	18	.1695	8.50	.3346	3/4	.7500
1.40	.0551	11/64	.1719	8.60	.3386	49/64	.7656
1.45	.0571	17	.1730	R	.3390	19.50	.7677
1.50	.0591	4.40	.1732	8.70	.3425	25/32	.7812
53	.0595	16	.1770	11/32	.3438	20.00	.7874
1.55	.0610	4.50	.1772	8.80	.3465	51/64	.7969
1/16	.0625	15	.1800	S	.3480	20.50	.8071
1.60	.0630	4.60	.1811	8.90	.3504	13/16	.8125
52	.0635	14	.1820	9.00	.3543	21.00	.8268
1.65	.0650	4.70, 13	.1850	T	.3580	53/64	.8281
1.70	.0669	3/16	.1875	9.10	.3583	27/32	.8438
51	.0670	4.80, 12	.1890	23/64	.3594	21.50	.8465
1.75	.0689	11	.1910	9.20	.3622	55/64	.8594
50	.0700	4.90	.1929	9.30	.3661	22.00	.8661
1.80	.0709	10	.1935	U	.3680	7/8	.8750
1.85	.0728	9	.1960	9.40	.3701	22.50	.8858
49	.0730	5.00	.1969	9.50	.3740	57/64	.8906
1.90	.0748	8	.1990	3/8	.3750	23.00	.9055
48	.0760	5.10	.2008	V	.3770	29/32	.9062
1.95	.0768	7	.2010	9.60	.3780	59/64	.9219
5/64	.0781	13/64	.2031	9.70	.3819	23.50	.9252
47	.0785	6	.2040	9.80	.3858	15/16	.9375
2.00	.0787	5.20	.2047	W	.3860	24.00	.9449
2.05	.0807	5	.2055	9.90	.3898	61/64	.9531
46	.0810	5.30	.2087	25/64	.3906	24.50	.9646
45	.0820	4	.2090	10.00	.3937	31/32	.9688
2.10	.0827	5.40	.2126	X	.3970	25.00	.9843
2.15	.0846	3	.2130	10.20	.4016	63/64	.9844
						1"	1.0000

\*special Metric



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# Tap/Drill Recommendations



## Machine Screw, Fractional, and Metric Sizes

Tap size and pitch	Cutting Taps		Forming Taps	
	drill	in	drill	in
0-80	3/64	.0469	54	.0550
M1.6 x 0.35	1.25	.0492	1.45	.0571
M1.8 x 0.35	1.45	.0571	1.65	.0650
1-64	53	.0595	51	.0670
1-72	53	.0595	51	.0670
M2 x 0.40	1.60	.0630	1.80	.0709
2-56	50	.0700	5/64	.0781
2-64	50	.0700	47	.0785
M2.2 x 0.45	1.75	.0689	2.00	.0787
M2.5 x 0.45	2.05	.0807	2.30	.0906
3-48	47	.0785	43	.0890
3-56	46	.0810	2.30	.0906
4-40	43	.0890	38	.1015
4-48	42	.0935	2.60	.1024
M3 x 0.50	2.50	.0984	7/64	.1094
5-40	38	.1015	33	.1130
5-44	37	.1040	2.90	.1142
M3.5 x 0.60	2.90	.1142	3.20	.1260
6-32	36	.1065	1/8	.1250
6-40	33	.1130	3.25	.1280
M4 x 0.70	3.30	.1299	3.70	.1457
8-32	29	.1360	25	.1495
8-36	29	.1360	24	.1520
M4.5 x 0.75	3.70	.1457	4.10	.1614
10-24	26	.1470	11/64	.1719
10-32	21	.1590	16	.1770
M5 x 0.80	4.20	.1654	14	.1820
12-24	16	.1770	8	.1990
12-28	15	.1800	7	.2010
M6 x 1.00	5.00	.1969	7/32	.2188
1/4-20	7	.2010	1	.2280
1/4-28	3	.2130	15/64	.2340
M7 x 1.00	6.00	.2362	F	.2570
5/16-18	F	.2570	L	.2900
5/16-24	I	.2720	M	.2950
M8 x 1.25	6.70	.2638	7.40	.2913
M8 x 1.00	7.00	.2756	19/64	.2969
3/8-16	5/16	.3125	S	.3480
3/8-24	Q	.3320	T	.3580
M10 x 1.50	8.50	.3346	U	.3680
M10 x 1.25	8.70	.3425	9.40	.3701
7/16-14	U	.3680	Y	.4040
7/16-20	25/64	.3906	Z	.4130
M12 x 1.75	10.20	.4016	11.20	.4409
M12 x 1.25	10.80	.4252	11.50	.4528
1/2-13	27/64	.4219	15/32	.4688
1/2-20	29/64	.4531	12.25	.4823
M14 x 2.00	12.00	.4724	33/64	.5156
9/16-12	31/64	.4844	17/32	.5312
9/16-18	33/64	.5156	13.50	.5315
5/8-11	17/32	.5312	14.75	.5807
5/8-18	37/64	.5781	15.25	.6004
M16 x 2.00	14.00	.5512	19/32	.5938
M16 x 1.50	14.50	.5709	15.25	.6004
M18 x 2.50	15.50	.6102	39/64	.6094
M18 x 1.50	16.50	.6496	17.25	.6791
3/4-10	21/32	.6562	45/64	.7031
3/4-16	11/16	.6875	23/32	.7188
M20 x 2.50	17.50	.6890	—	—
M20 x 1.50	18.50	.7283	—	—
M22 x 2.50	19.50	.7677	—	—
M22 x 1.50	20.50	.8071	—	—

Tap size and pitch	Cutting Taps		Forming Taps	
	drill	in	drill	in
7/8-9	49/64	.7656	—	—
7/8-14	13/16	.8125	—	—
M24 x 3.00	21.00	.8268	—	—
M24 x 2.00	22.00	.8661	—	—
1-8	7/8	.8750	—	—
1-12	59/64	.9219	—	—
M27 x 3.00	24.00	.9449	—	—
M27 x 2.00	25.00	.9843	—	—
1-1/8-7	63/64	.9844	—	—
1-1/8-12	1-3/64	1.0469	—	—
M30 x 3.50	26.50	1.0433	—	—
M30 x 2.00	28.00	1.1024	—	—
1-1/4-7	1-7/64	1.1094	—	—
1-1/4-12	1-11/64	1.1719	—	—
M33 x 3.50	29.50	1.1614	—	—
M33 x 2.00	31.00	1.2205	—	—
1-3/8-6	1-7/32	1.2188	—	—
1-3/8-12	1-19/64	1.2969	—	—
M36 x 4.00	32.00	1.2598	—	—
M36 x 3.00	33.00	1.2992	—	—
1-1/2-6	1-11/32	1.3438	—	—
1-1/2-12	1-27/64	1.4219	—	—
M39 x 4.00	35.00	1.3780	—	—
M39 x 3.00	36.00	1.4173	—	—

## Pipe Taps — NPT, NPTF, NPSM, NPSC, NPSF

Nominal pipe tap size	NPT and NPTF		NPSM	NPSC	NPSF
	without reamer	with reamer			
1/16-27	C (.242)	A (.234)	—	1/4	D (.246)
1/8-27	Q (.332)	21/64	T (.358)	Q	R (.339)
1/4-18	7/16	27/64	15/32	7/16	7/16
3/8-18	9/16	9/16	.603*	37/64	37/64
1/2-14	45/64	11/16	19.00	23/32	.705*
3/4-14	29/32	57/64	61/64	59/64	59/64
1-11-1/2	1-9/64	1-1/8	1-13/64	1-5/32	1-5/32
1-1/4-11-1/2	1-31/64	1-15/32	1.546*	1-1/2	—
1-1/4-11-1/2	1-23/32	1-45/64	1-25/32	1-47/64	—
2-11-1/2	2-3/16	2-11/64	2-1/4	2-1/4	—



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NOTE: Drill size recommendations are for approximately 70-75% thread height.  
 Drills produce a hole slightly larger than their nominal size. Size obtained will depend on the drill style, machine, drilling conditions, fixturing, and coating selected.

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