



TAP DRILL SIZES INCH / METRIC EQUIVALENT

Thread Size		Tap Drill Size		Thread Size		Tap Drill Size	
Cut Thread	Form Thread	Inch	Metric	Cut Thread	Form Thread	Inch	Metric
#0-80		0.0472	1.20	M10x0.75		0.3622	9.20
	#0-80	0.0551	1.40		M10	0.3681	9.35
#1-64, #1-72		0.0595	1.51	7/16-14		0.3701	9.40
M2	#1-72	0.0630	1.60		M10x1	0.3780	9.60
	#1-64	0.0669	1.70	7/17-20	M10x0.75	0.3819	9.70
#2-56		0.0700	1.78			0.3898	9.90
	M2	0.0728	1.85	M12x1.5	7/16-14	0.4035	10.25
#2-64		0.0728	1.85		7/16-20	0.4134	10.50
	#2-56	0.0787	2.00	1/2-13		0.4219	10.72
	#2-64	0.0787	2.00	M12x1.25		0.4252	10.80
M2.5		0.0807	2.05	M12x1		0.4331	11.00
#3-48		0.0820	2.08	M12x0.75	M12	0.4429	11.25
#3-56		0.0827	2.10		M12x1.5	0.4469	11.35
#4-40		0.0890	2.26		M12x1.25	0.4508	11.45
	#3-48	0.0906	2.30	1/2-20		0.4528	11.50
	#3-56	0.0906	2.30		M12x1	0.4567	11.60
	M2.5	0.0917	2.33		1/2-13	0.4646	11.80
#4-48		0.0945	2.40	M14		0.4724	12.00
M3		0.0984	2.50		1/2-20	0.4783	12.15
	#4-40	0.1004	2.55	9/16-12		0.4844	12.30
#5-40		0.1015	2.58	M14x1.5		0.4921	12.50
	#4-48	0.1024	2.60	M14x1.25		0.5039	12.80
#5-44		0.1063	2.70		M14	0.5157	13.10
#6-32	M3	0.1102	2.80		9/16-12	0.5236	13.30
M3.5	#5-40	0.1142	2.90		M14x1.5	0.5256	13.35
	#5-44	0.1160	2.95		M14x1.25	0.5295	13.45
#6-40		0.1181	3.00	5/8-11		0.5313	13.49
M3.5x0.35	#6-32	0.1240	3.15		9/16-18	0.5374	13.65
	#6-40	0.1260	3.20	M16, M15x1		0.5512	14.00
	M3.5	0.1280	3.25	5/8-18		0.5709	14.50
M4		0.1299	3.30		M15x1	0.5748	14.60
	M3.5x0.35	0.1338	3.40		5/8-11	0.5827	14.80
#8-32		0.1378	3.50	M16x1		0.5906	15.00
M4.5	M4	0.1457	3.70		M16	0.5945	15.10
	#8-32	0.1496	3.80		5/8-18	0.6004	15.25
	#8-36	0.1516	3.85		M16x1.5	0.6043	15.35
#10-24		0.1535	3.90	M18		0.6102	15.50
M4.5x0.0.5		0.1575	4.00		M16x1	0.6142	15.60
#10-32		0.1614	4.10	M18x2		0.6299	16.00
M5	M4.5	0.1654	4.20	3/4-10		0.6563	16.67
	#10-24	0.1713	4.35		M18x2.5	0.6634	16.85
M5x0.75		0.1732	4.40	M18x1		0.6693	17.00
	#10-32	0.1752	4.45		M18x1.5	0.6831	17.35
#12-24		0.1772	4.50	M20, 3/4-16		0.6890	17.50
#12-28		0.1811	4.60		3/4-10	0.7028	17.85
	M5	0.1831	4.65	M20x2		0.7087	18.00
	M5x0.5	0.1890	4.80		3/4-16	0.7224	18.35
M6	#12-24	0.1969	5.00		M20x2.5	0.7421	18.85
	#12-28	0.2008	5.10	M20x1		0.7480	19.00
1/4-20		0.2047	5.20		M20x1.5	0.7618	19.35
1/4-28		0.2165	5.50	7/8-9		0.7656	19.45
	M6	0.2205	5.60	M22x2.5		0.7677	19.50
	1/4-20	0.2264	5.75	M22x2		0.7874	20.00
	M6x0.5	0.2283	5.80	7/8-14		0.8071	20.50
	1/4-28	0.2344	5.95		M22x2.5	0.8209	20.85
M7		0.2362	6.00		7/8-9	0.8228	20.90
M7x0.75		0.2441	6.20	M24x3		0.8268	21.00
M7x0.5		0.2480	6.30		M22x1.5	0.8406	21.35
5/16-18	M7	0.2598	6.60		7/8-14	0.8425	21.40
	M7x0.75	0.2638	6.70	1-8		0.8750	22.23
M8		0.2677	6.80		M24x3	0.8917	22.65
5/16-24		0.2717	6.90		M24x1.5	0.9193	23.35
	5/16-18	0.2854	7.25	1-12		0.9219	23.42
	M8, 5/16-24	0.2933	7.45		1-8	0.9409	23.90
M8x0.5		0.2953	7.50	M27x3		0.9449	24.00
	M8x1	0.2992	7.60		1-12	0.9626	24.45
	M8x0.75	0.3031	7.70	1-1/8 7		0.9843	25.00
M9		0.3071	7.80	1-1/8 12, M30x3.5		1.0433	26.50
3/8-16		0.3150	8.00	1-1/4 7		1.1094	28.18
M9x0.75		0.3228	8.20	M33x3.5		1.1614	29.50
M10, 3/8-24		0.3346	8.50	1-1/4 12		1.1719	29.77
	M9x1	0.3386	8.60	1-3/8 6		1.2205	31.00
	M9x0.75	0.3425	8.70	M36x4		1.2598	32.00
M10x1.25	3/8-16	0.3465	8.80	1-3/8 12		1.2992	33.00
M10x1.25		0.3543	9.00	1-1/2 6		1.3386	34.00
	3/8-24	0.3563	9.05				

TAP DRILL SIZE CALCULATORS

EMUGE Corp. ▲ 800-323-3013 ▲ www.emuge.com

CUT TAPS

UNC/UNF CUT TAPS - Special Percentage of Thread Requirements

$$\text{Drill Size} = \text{Basic Major Diameter} - \frac{0.01299 \times \text{desired \% of thread}^*}{\text{threads per inch}}$$

M/MF CUT TAPS - Special Percentage of Thread Requirements

$$\text{Drill Size (mm)} = \text{Basic Major Diameter} - \frac{\text{pitch} \times \text{desired \% of thread}^*}{76.98}$$

* Actual % will vary due to runout of drilling operation

FORM TAPS

UNC/UNF FORM TAPS - Special Percentage of Thread Requirements

$$\text{Drill Size} = \text{Basic Major Diameter} - \frac{0.0068 \times \text{desired \% of thread}^*}{\text{threads per inch}}$$

M/MF FORM TAPS - Special Percentage of Thread Requirements

$$\text{Drill Size (mm)} = \text{Basic Major Diameter} - \frac{\text{pitch (mm)} \times \text{desired \% of thread}^*}{147.06}$$

* Actual % will vary due to runout of drilling operation

IMPRINT AREA = 1.5" FROM TOP OF SHADED BOX TO THE TRIM



DECIMAL EQUIVALENT CHART

Fraction / Wire / Letter	mm	Decimal	Fraction / Wire / Letter	mm	Decimal	Fraction / Wire / Letter	mm	Decimal
-	0.10	0.0039	3/32	2.38	0.0938	Q	8.43	0.3320
97	0.15	0.0059	41	2.44	0.0960		8.50	0.3346
96	0.16	0.0063	40	2.50	0.0980	R	8.61	0.3390
95	0.17	0.0067	39	2.53	0.0995	11/32	8.73	0.3438
94	0.18	0.0071	38	2.58	0.1015		8.75	0.3445
93	0.19	0.0075	37	2.64	0.1040	S	8.84	0.3480
92	0.20	0.0079	36	2.71	0.1065	-	9.00	0.3543
91	0.21	0.0083	7/64	2.78	0.1094	T	9.09	0.3580
90	0.22	0.0087	35	2.79	0.1100	23/64	9.13	0.3594
89	0.23	0.0091	34	2.82	0.1110	U	9.35	0.3680
88	0.24	0.0095	33	2.87	0.1130		9.50	0.3740
-	0.25	0.0098		2.90	0.1142	3/8	9.53	0.3750
87	0.25	0.0100	32	2.95	0.1160	V	9.56	0.3770
	0.26	0.0102	-	3.00	0.1181	W	9.80	0.3860
86	0.27	0.0105	31	3.05	0.1200	25/64	9.92	0.3906
	0.27	0.0106	1/8	3.18	0.1250		10.00	0.3937
85	0.28	0.0110	30	3.26	0.1285	X	10.08	0.3970
	0.29	0.0114		3.30	0.1299	Y	10.26	0.4040
84	0.29	0.0115	29	3.45	0.1360	13/32	10.32	0.4062
-	0.30	0.0118		3.50	0.1378	Z	10.49	0.4130
83	0.30	0.0120	28	3.57	0.1405		10.50	0.4134
82	0.32	0.0125	9/64	3.57	0.1406	27/64	10.72	0.4219
	0.32	0.0126	27	3.66	0.1440	-	11.00	0.4331
81	0.33	0.0130	26	3.73	0.1470	7/16	11.11	0.4375
80	0.34	0.0135		3.75	0.1476		11.50	0.4528
79	0.37	0.0145	25	3.80	0.1495	29/64	11.51	0.4531
1/64	0.40	0.0156	24	3.86	0.1520	15/32	11.91	0.4688
78	0.41	0.0160	23	3.91	0.1540	-	12.00	0.4724
77	0.46	0.0180	5/32	3.97	0.1562	31/64	12.30	0.4844
-	0.50	0.0197	22	3.99	0.1570		12.50	0.4921
76	0.51	0.0200	-	4.00	0.1575	1/2	12.70	0.5000
75	0.53	0.0210	21	4.04	0.1590	-	13.00	0.5118
74	0.57	0.0225	20	4.09	0.1610	33/64	13.10	0.5156
-	0.60	0.0236		4.20	0.1654	17/32	13.49	0.5312
73	0.61	0.0240	19	4.22	0.1660		13.50	0.5315
72	0.64	0.0250	18	4.31	0.1695	35/64	13.89	0.5469
71	0.66	0.0260	11/64	4.37	0.1719	-	14.00	0.5512
-	0.70	0.0276	17	4.39	0.1730	9/16	14.29	0.5625
70	0.71	0.0280	16	4.50	0.1770		14.50	0.5709
69	0.74	0.0292	15	4.57	0.1800	37/64	14.68	0.5781
-	0.75	0.0295	14	4.62	0.1820	-	15.00	0.5906
68	0.79	0.0310	13	4.70	0.1850	19/32	15.08	0.5938
1/32	0.79	0.0313	3/16	4.76	0.1875	39/64	15.48	0.6094
-	0.80	0.0315	12	4.80	0.1890		15.50	0.6102
67	0.81	0.0320	11	4.85	0.1910	5/8	15.88	0.6250
66	0.84	0.0330	10	4.91	0.1935	-	16.00	0.6299
65	0.89	0.0350	9	4.98	0.1960	41/64	16.27	0.6406
-	0.90	0.0354	-	5.00	0.1968		16.50	0.6496
64	0.91	0.0360	8	5.05	0.1990	21/32	16.67	0.6562
63	0.94	0.0370	7	5.11	0.2010	-	17.00	0.6693
62	0.97	0.0380	13/64	5.16	0.2031	43/64	17.07	0.6719
61	0.99	0.0390	6	5.18	0.2040	11/16	17.46	0.6875
-	1.00	0.0394	5	5.22	0.2055		17.50	0.6890
60	1.02	0.0400		5.25	0.2067	45/64	17.86	0.7031
59	1.04	0.0410	4	5.31	0.2090	-	18.00	0.7087
58	1.07	0.0420	3	5.41	0.2130	23/32	18.26	0.7188
57	1.09	0.0430		5.50	0.2165		18.50	0.7283
56	1.18	0.0465	7/32	5.56	0.2188	47/64	18.65	0.7344
3/64	1.19	0.0469	2	5.61	0.2210	-	19.00	0.7480
	1.20	0.0472	1	5.79	0.2280	3/4	19.05	0.7500
	1.25	0.0492	A	5.94	0.2340	49/64	19.45	0.7656
	1.30	0.0512	15/64	5.95	0.2344		19.50	0.7677
55	1.32	0.0520	-	6.00	0.2362	25/32	19.84	0.7812
54	1.40	0.0550		6.05	0.2380	-	20.00	0.7874
	1.45	0.0571	B	6.15	0.2420		20.24	0.7969
	1.50	0.0591	C	6.25	0.2460	51/64	20.50	0.8071
	1.51	0.0595	D	6.35	0.2500	13/16	20.64	0.8125
53	1.55	0.0610	1/4	6.35	0.2500	-	21.00	0.8268
1/16	1.59	0.0625	E	6.50	0.2559	53/64	21.03	0.8281
	1.60	0.0630	F	6.53	0.2570	27/32	21.43	0.8438
52	1.61	0.0635	G	6.63	0.2610		21.50	0.8465
	1.65	0.0650	17/64	6.75	0.2656	55/64	21.84	0.8594
51	1.70	0.0670		6.75	0.2657	-	22.00	0.8661
	1.75	0.0689	H	6.76	0.2660	7/8	22.23	0.8750
50	1.78	0.0700	I	6.91	0.2720		22.50	0.8858
	1.80	0.0709	-	7.00	0.2756	57/64	22.62	0.8906
49	1.85	0.0730	J	7.04	0.2772	-	23.00	0.9055
	1.90	0.0748	K	7.14	0.2810	29/32	23.02	0.9062
48	1.93	0.0760	9/32	7.14	0.2812	59/64	23.42	0.9219
	1.95	0.0768	L	7.37	0.2900		23.50	0.9252
5/64	1.98	0.0781	M	7.49	0.2949	15/16	23.81	0.9375
47	1.99	0.0785		7.50	0.2953	-	24.00	0.9449
-	2.00	0.0787	19/64	7.54	0.2969	61/64	24.21	0.9531
	2.05	0.0807	N	7.67	0.3020		24.50	0.9646
46	2.06	0.0810		7.75	0.3051	31/32	24.61	0.9688
45	2.08	0.0820	5/16	7.94	0.3125	-	25.00	0.9843
	2.15	0.0846	-	8.00	0.3150	63/64	25.00	0.9844
44	2.18	0.0860		8.03	0.3160	1	25.40	1.0000
43	2.26	0.0890	O	8.20	0.3230			
42	2.37	0.0935	21/64	8.33	0.3281			

IMPRINT AREA = 1.5" FROM TOP OF SHADED BOX TO THE TRIM