

Tap drill size chart

Tap drills for UNC/UNF inch threads and ISO metric coarse and fine threads.

Tap drills for UNC and UNF threads #0 to 1 in

Thread	Major diameter	TPI	Tap drill, 75% thread	Tap drill, 50% thread
#0-80 UNF	0.0600 in	80	3/64 in (0.0469 in / 1.19 mm)	#55 (0.0520 in / 1.32 mm)
#1-64 UNC	0.0730 in	64	#53 (0.0595 in / 1.51 mm)	1/16 in (0.0625 in / 1.59 mm)
#1-72 UNF	0.0730 in	72	#53 (0.0595 in / 1.51 mm)	#52 (0.0635 in / 1.61 mm)
#2-56 UNC	0.0860 in	56	#50 (0.0700 in / 1.78 mm)	#49 (0.0730 in / 1.85 mm)
#2-64 UNF	0.0860 in	64	#50 (0.0700 in / 1.78 mm)	#48 (0.0760 in / 1.93 mm)
#3-48 UNC	0.0990 in	48	#47 (0.0785 in / 1.99 mm)	#44 (0.0860 in / 2.18 mm)
#3-56 UNF	0.0990 in	56	#45 (0.0820 in / 2.08 mm)	#43 (0.0890 in / 2.26 mm)
#4-40 UNC	0.1120 in	40	#43 (0.0890 in / 2.26 mm)	#41 (0.0960 in / 2.44 mm)
#4-48 UNF	0.1120 in	48	#42 (0.0935 in / 2.37 mm)	#40 (0.0980 in / 2.49 mm)
#5-40 UNC	0.1250 in	40	#38 (0.1015 in / 2.58 mm)	7/64 in (0.1094 in / 2.78 mm)
#5-44 UNF	0.1250 in	44	#37 (0.1040 in / 2.64 mm)	#35 (0.1100 in / 2.79 mm)
#6-32 UNC	0.1380 in	32	#36 (0.1065 in / 2.71 mm)	#32 (0.1160 in / 2.95 mm)
#6-40 UNF	0.1380 in	40	#33 (0.1130 in / 2.87 mm)	#31 (0.1200 in / 3.05 mm)
#8-32 UNC	0.1640 in	32	#29 (0.1360 in / 3.45 mm)	#27 (0.1440 in / 3.66 mm)
#8-36 UNF	0.1640 in	36	#29 (0.1360 in / 3.45 mm)	#26 (0.1470 in / 3.73 mm)
#10-24 UNC	0.1900 in	24	#25 (0.1495 in / 3.80 mm)	#20 (0.1610 in / 4.09 mm)
#10-32 UNF	0.1900 in	32	#21 (0.1590 in / 4.04 mm)	#18 (0.1695 in / 4.31 mm)
#12-24 UNC	0.2160 in	24	#16 (0.1770 in / 4.50 mm)	#12 (0.1890 in / 4.80 mm)
#12-28 UNF	0.2160 in	28	#14 (0.1820 in / 4.62 mm)	#10 (0.1935 in / 4.91 mm)
1/4-20 UNC	0.2500 in	20	#7 (0.2010 in / 5.11 mm)	7/32 in (0.2188 in / 5.56 mm)
1/4-28 UNF	0.2500 in	28	#3 (0.2130 in / 5.41 mm)	#1 (0.2280 in / 5.79 mm)
5/16-18 UNC	0.3125 in	18	F (0.2570 in / 6.53 mm)	J (0.2770 in / 7.04 mm)
5/16-24 UNF	0.3125 in	24	I (0.2720 in / 6.91 mm)	9/32 in (0.2812 in / 7.14 mm)
3/8-16 UNC	0.3750 in	16	5/16 in (0.3125 in / 7.94 mm)	Q (0.3320 in / 8.43 mm)
3/8-24 UNF	0.3750 in	24	Q (0.3320 in / 8.43 mm)	S (0.3480 in / 8.84 mm)
7/16-14 UNC	0.4375 in	14	U (0.3680 in / 9.35 mm)	25/64 in (0.3906 in / 9.92 mm)
7/16-20 UNF	0.4375 in	20	25/64 in (0.3906 in / 9.92 mm)	13/32 in (0.4062 in / 10.32 mm)
1/2-13 UNC	0.5000 in	13	27/64 in (0.4219 in / 10.72 mm)	29/64 in (0.4531 in / 11.51 mm)
1/2-20 UNF	0.5000 in	20	29/64 in (0.4531 in / 11.51 mm)	15/32 in (0.4688 in / 11.91 mm)
9/16-12 UNC	0.5625 in	12	31/64 in (0.4844 in / 12.30 mm)	33/64 in (0.5156 in / 13.10 mm)
9/16-18 UNF	0.5625 in	18	33/64 in (0.5156 in / 13.10 mm)	17/32 in (0.5312 in / 13.49 mm)
5/8-11 UNC	0.6250 in	11	17/32 in (0.5312 in / 13.49 mm)	9/16 in (0.5625 in / 14.29 mm)
5/8-18 UNF	0.6250 in	18	37/64 in (0.5781 in / 14.68 mm)	19/32 in (0.5938 in / 15.08 mm)

Thread	Major diameter	TPI	Tap drill, 75% thread	Tap drill, 50% thread
3/4-10 UNC	0.7500 in	10	21/32 in (0.6562 in / 16.67 mm)	11/16 in (0.6875 in / 17.46 mm)
3/4-16 UNF	0.7500 in	16	11/16 in (0.6875 in / 17.46 mm)	45/64 in (0.7031 in / 17.86 mm)
7/8-9 UNC	0.8750 in	9	49/64 in (0.7656 in / 19.45 mm)	51/64 in (0.7969 in / 20.24 mm)
7/8-14 UNF	0.8750 in	14	13/16 in (0.8125 in / 20.64 mm)	53/64 in (0.8281 in / 21.03 mm)
1-8 UNC	1.0000 in	8	7/8 in (0.8750 in / 22.22 mm)	59/64 in (0.9219 in / 23.42 mm)
1-12 UNF	1.0000 in	12	15/16 in (0.9375 in / 23.81 mm)	61/64 in (0.9531 in / 24.21 mm)

Values from Little Machine Shop. UPenn agrees on all rows it lists (#0-80 to 1/2-20 UNC/UNF; it omits #1, #3, #5 and sizes above 1/2 in). Rows 9/16 in to 1 in are single-source. UNC/UNF labels follow Engineering ToolBox thread tables. mm values are conversions. Extra-fine (UNEF) rows on the LMS page are omitted.

Tap drills for ISO metric coarse threads M2 to M24

Thread	Tap drill (UPenn 75% value where listed)	Tap drill, 50% thread (UPenn)	Source agreement
M2 x 0.4	1.60 mm (0.0630 in)	1.75 mm	UPenn + ETB
M2.5 x 0.45	2.05 mm (0.0807 in)	2.20 mm	UPenn (ETB differs)
M3 x 0.5	2.50 mm (0.0984 in)	2.70 mm	UPenn + ETB
M3.5 x 0.6	2.90 mm (0.1142 in)	not listed	ETB only
M4 x 0.7	3.30 mm (0.1299 in)	3.50 mm	UPenn + ETB
M5 x 0.8	4.20 mm (0.1654 in)	4.50 mm	UPenn + ETB
M6 x 1	5.00 mm (0.1969 in)	5.40 mm	UPenn + ETB
M8 x 1.25	6.80 mm (0.2677 in)	7.20 mm	UPenn + ETB
M10 x 1.5	8.50 mm (0.3346 in)	9.00 mm	UPenn + ETB
M12 x 1.75	10.30 mm (0.4055 in)	10.90 mm	UPenn (ETB differs)
M14 x 2	12.10 mm (0.4764 in)	12.70 mm	UPenn (ETB differs)
M16 x 2	14.00 mm (0.5512 in)	not listed	ETB only
M20 x 2.5	17.50 mm (0.6890 in)	not listed	ETB only
M22 x 2.5	19.50 mm (0.7677 in)	not listed	ETB only
M24 x 3	21.00 mm (0.8268 in)	not listed	ETB only

UPenn gives 75% and 50% values up to M14; Engineering ToolBox (ISO 724 coarse) gives one tap drill value up to M68 without stating a thread percentage. M18 is not listed by either source. Inch values are conversions.

Metric fine-pitch tap drills

Thread	Tap drill
M8 x 1.0	7.0 mm (0.276 in)
M10 x 1.0	9.0 mm (0.354 in)
M10 x 1.25	8.8 mm (0.346 in)
M12 x 1.25	10.8 mm (0.425 in)
M12 x 1.5	10.5 mm (0.413 in)
M14 x 1.5	12.5 mm (0.492 in)
M16 x 1.5	14.5 mm (0.571 in)
M18 x 1.5	16.5 mm (0.650 in)

Thread	Tap drill
M20 x 1.5	18.5 mm (0.728 in)

Both sources agree on every row. Inch values calculated. Percent of thread not stated by either source.

Sources: AmesWeb; Engineering ToolBox; Little Machine Shop; University of Pennsylvania, MEAM Design. Checked 22 October 2026. Always confirm against your tool and accessory manuals. Free to share under CC BY 4.0 with credit to AccessoryFit (accessoryfit.com/printables/).