MAX MACHINING

Helical Insert Tap Drill Chart

STI drill sizes for wire thread inserts (screw thread insert), inch and metric.

MAXMACHINING.COM · REV. NOV 2026

Inch UNIFIED COARSE AND FINE

THREAD insert size	STI TAP DRILL
#2-56	#44 .0860 2.18 mm
#4-40	#33 .1130 2.87 mm
#4-48	#32 .1160 2.95 mm
#6-32	#26 .1470 3.73 mm
#6-40	#28 .1405 3.57 mm
#8-32	#17 .1730 4.39 mm
#8-36	#18 .1695 4.31 mm
#10-24	#5 .2055 5.22 mm
#10-32	#6 .2040 5.18 mm
1/4-20	17/64 .2656 6.75 mm
1/4-28	G .2610 6.63 mm
5/16-18	Q .3320 8.43 mm
5/16-24	21/64 .3281 8.33 mm
3/8-16	X .3970 10.08 mm
3/8-24	25/64 .3906 9.92 mm
7/16-14	29/64 .4531 11.51 mm
7/16-20	29/64 .4531 11.51 mm
1/2-13	33/64 .5156 13.10 mm
1/2-20	33/64 .5156 13.10 mm
9/16-12	37/64 .5781 14.68 mm
9/16-18	37/64 .5781 14.68 mm
5/8-11	41/64 .6406 16.27 mm
5/8-18	41/64 .6406 16.27 mm
3/4-10	49/64 .7656 19.45 mm
3/4-16	49/64 .7656 19.45 mm
7/8-9	57/64 .8906 22.62 mm
1-8	1-1/64 1.0156 25.80 mm

Metric COARSE

THREAD insert size	STI TAP DRILL	NEAREST INCH DRILL
M3 × 0.5	3.20 mm 0.1260 in	1/8 .1250
M4 × 0.7	4.20 mm 0.1654 in	#19 .1660
M5 × 0.8	5.20 mm 0.2047 in	#6 .2040
M6 × 1.0	6.30 mm 0.2480 in	E .2500
M8 × 1.25	8.40 mm 0.3307 in	Q .3320
M10 × 1.5	10.50 mm 0.4134 in	Z .4130
M12 × 1.75	12.50 mm 0.4921 in	31/64 .4844
M14 × 2.0	14.50 mm 0.5709 in	37/64 .5781
M16 × 2.0	16.50 mm 0.6496 in	21/32 .6562
M20 × 2.5	20.75 mm 0.8169 in	13/16 .8125

CAUTION

These holes are oversize on purpose. They take an **STI tap** for the same thread, never a standard tap. Insert makers publish their own drill sizes and they vary slightly by brand and tolerance class. Verify against the data for the insert you stock before cutting.

WHY INSERTS

Full strength threads in aluminum, magnesium and plastics, and a clean repair for a stripped hole. Drill, tap with the STI tap, install the insert, break the tang.