1-1/2 NPT Tap Drill Chart

National Pipe Taper (NPT) · 11.5 threads per inch · ASME B1.20.1

TAP DRILL (NO REAMING)

1-3/4" = 1.7500 in = 44.45 mm

Drills near the tap drill

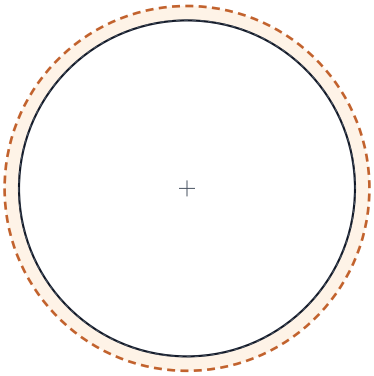
DRILL	INCH	MM	NOTE
1-25/32"	1.7813	45.24	larger
1-49/64"	1.7656	44.85	larger
1-3/4"	1.7500	44.45	Recommended
1-47/64"	1.7344	44.05	smaller
1-23/32"	1.7188	43.66	smaller

Pipe thread dimensions (ASME B1.20.1)

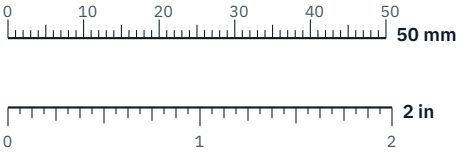
DIMENSION	INCH	MM
Pipe outside diameter (D)	1.9000	48.26
Threads per inch (pitch in mm)	11.5	2.21
Pitch diameter at pipe end (E0)	1.7961	45.62
Pitch diameter at gauge plane (E1)	1.8223	46.29
Hand-tight engagement (L1)	0.4200	10.67
Effective thread length (L2)	0.7235	18.38
Thread height (h = 0.8p)	0.0696	1.77
Minor diameter at gauge plane (E1 – h)	1.7528	44.52

Actual size

Print at 100% scale ("Actual size", not "Fit to page"). Check with the rulers below.



Dashed copper circle: pipe OD; solid: tap drill hole; dotted: minor diameter at the gauge plane.



Pipe tap drill charts vary by up to 1/32 in for sizes over 1 in. Reaming the drilled hole with a taper pipe reamer before tapping lowers tapping torque.

Scan for the interactive version:

whatsizeis.com/tap-drill/1-1-2-npt/

Values from the ASME B1.1, ISO 261/68-1 and ASME B1.20.1 thread formulas; drill sizes per ASME B94.11M; clearance holes per ISO 273. Method: whatsizeis.com/how-we-calculate/