1/2 NPT Tap Drill Chart

National Pipe Taper (NPT) · 14 threads per inch · ASME B1.20.1

TAP DRILL (NO REAMING)

23/32" = 0.7188 in = 18.26 mm

Drills near the tap drill

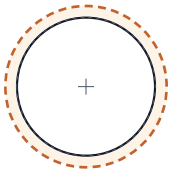
DRILL	INCH	MM	NOTE
3/4"	0.7500	19.05	larger
47/64"	0.7344	18.65	larger
23/32"	0.7188	18.26	Recommended
45/64"	0.7031	17.86	smaller
11/16"	0.6875	17.46	smaller

Pipe thread dimensions (ASME B1.20.1)

DIMENSION	INCH	MM
Pipe outside diameter (D)	0.8400	21.34
Threads per inch (pitch in mm)	14	1.81
Pitch diameter at pipe end (E0)	0.7584	19.26
Pitch diameter at gauge plane (E1)	0.7784	19.77
Hand-tight engagement (L1)	0.3200	8.13
Effective thread length (L2)	0.5337	13.56
Thread height (h = 0.8p)	0.0571	1.45
Minor diameter at gauge plane (E1 – h)	0.7213	18.32

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.

Tap drill, actual size (18.26 mm):







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/1-2-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/