1/2-20 Tap Drill Chart

Unified National Fine (UNF) · 20 threads per inch · ASME B1.1

TAP DRILL (72% THREAD)

29/64" = 0.4531 in = 11.51 mm

Drills for 1/2-20 (50–85% thread)

DRILL	INCH	MM	% THREAD	
29/64"	**0.4531**	**11.51**	**72%**	Recommended

Clearance hole (bolt passes through)

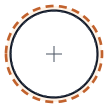
FIT	DRILL	INCH	MM
Close	35/64"	**0.5469**	**13.89**
Normal	9/16"	**0.5625**	**14.29**
Loose	39/64"	**0.6094**	**15.48**

Thread dimensions (basic)

DIMENSION	INCH	MM
Major diameter (basic)	**0.5000**	**12.70**
Pitch diameter (basic)	**0.4675**	**11.88**
Minor diameter, internal (basic)	**0.4459**	**11.33**
Pitch (1/20 in)	**0.0500**	**1.27**

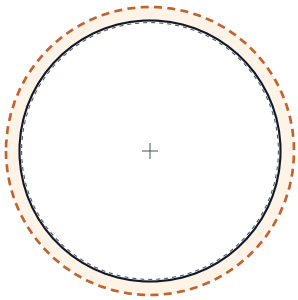
Actual size

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

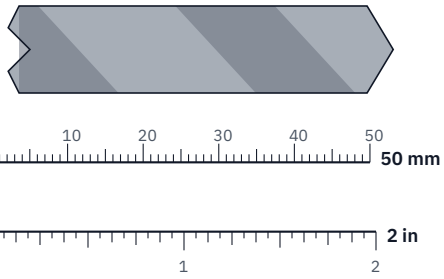


Dashed copper circle: thread major diameter; solid: tap drill hole; dotted: basic minor diameter.

Enlarged 3x:



Tap drill, actual size (11.51 mm):



Scan for the interactive version:

whatsizeis.com/tap-drill/1-2-20/

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/