

JARVIS CUTTING TOOLS

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Tap Drill Sizes for Unified Inch Screw Threads

Tap Size	75% Thread			70% Thread			65% Thread		
	Theoretical Hole Size	Nearest Drill	Decimal Equivalent	Theoretical Hole Size	Nearest Drill	Decimal Equivalent	Theoretical Hole Size	Nearest Drill	Decimal Equivalent
0-80	.0479	56	.0465	.0486	3/64	.0469	.0494	1.20mm	.0472
1-64	.0578	54	.0550	.0588	1.45mm	.0571	.0599	---	---
1-72	.0595	---	---	.0604	1.50mm	.0591	.0613	53	.0595
2-56	.0686	51	.0670	.0698	---	---	.0710	1.75mm	.0689
2-64	.0708	---	---	.0718	50	.0700	.0729	1.80mm	.0709
3-48	.0788	48	.0760	.0801	5/64	.0781	.0815	2.00mm	.0787
3-56	.0816	---	---	.0828	46	.0810	.0840	45	.0820
4-40	.0877	44	.0860	.0893	2.20mm	.0866	.0909	43	.0890
4-48	.0918	---	---	.0931	2.35mm	.0925	.0945	42	.0935
5-40	.1007	40	.0980	.1023	39	.0995	.1039	38	.1015
5-44	.1029	38	.1015	.1044	2.60mm	.1024	.1059	37	.1040
6-32	.1076	37	.1040	.1096	36	.1065	.1117	7/64	.1095
6-40	.1137	34	.1110	.1153	33	.1130	.1169	2.90mm	.1142
8-32	.1336	---	---	.1356	3.40mm	.1339	.1377	29	.1360
8-36	.1370	---	---	.1388	29	.1360	.1406	3.50mm	.1378
10-24	.1495	26	.1470	.1522	24	.1520	.1549	---	---
10-32	.1596	5/32	.1563	.1616	21	.1590	.1637	---	---
12-24	.1755	11/64	.1719	.1782	17	.1730	.1809	16	.1770
12-28	.1813	16	.1770	.1836	15	.1800	.1859	14	.1820
1/4-20	.2012	9	.1960	.2046	7	.2010	.2078	13/64	.2031
1/4-28	.2153	---	---	.2176	3	.2130	.2199	---	---
5/16-18	.2584	F	.2570	.2620	6.60mm	.2598	.2656	G	.2610
5/16-24	.2720	6.80mm	.2677	.2747	I	.2720	.2774	---	---
3/8-16	.3142	7.80mm	.3071	.3182	5/16	.3125	.3223	O	.3160
3/8-24	.3345	8.40mm	.3307	.3372	Q	.3320	.3399	8.50mm	.3346
7/16-14	.3680	9.20mm	.3622	.3726	U	.3680	.3772	9.40mm	.3701
7/16-20	.3888	---	---	.3921	W	.3860	.3953	25/64	.3906
1/2-13	.4251	27/64	.4219	.4301	---	---	.4351	---	---
1/2-20	.4513	---	---	.4546	---	---	.4578	29/64	.4531
9/16-12	.4814	---	---	.4868	31/64	.4844	.4922	---	---
9/16-18	.5084	1/2	.5000	.5120	---	---	.5156	---	---
5/8-11	.5365	17/32	.5313	.5424	---	---	.5483	---	---
5/8-18	.5709	9/16	.5625	.5745	---	---	.5787	---	---
3/4-10	.6526	41/64	.6406	.6591	21/32	.6563	.6656	---	---
3/4-16	.6892	---	---	.6932	11/16	.6875	.6973	---	---
7/8-9	.7668	---	---	.7740	49/64	.7656	.7812	---	---
7/8-14	.8055	51/64	.7969	.8101	---	---	.8147	---	---
1 - 8	.8783	---	---	.8864	7/8	.8750	.8945	---	---
1 - 12	.9188	29/32	.9063	.9242	---	---	.9296	59/64	.9219
1 1/8-7	.9859	31/32	.9688	.9951	63/64	.9844	1.0044	---	---
1 1/8-12	1.0439	1 1/32	1.0313	1.0493	---	---	1.0547	---	---

Notes: Above are recommended tap drill sizes for cutting taps.
Hole sizes shown may not be suitable for UNJ and MJ hole requirements.
Oversize pitch diameters will need larger holes. Call the factory for assistance.

Tap Drill Formula

$$\text{Hole size} = \text{Basic Major Diameter} - 0.0130 \times \frac{\text{Percent of Full Thread}}{\text{Number of Threads per Inch}}$$

Example: Find the nearest drill size for a 1/4-20 tap to produce 75% thread.

$$\text{Hole size} = 0.250 - 0.0130 \times 75/20$$

$$\text{Hole size} = 0.250 - 0.049$$

Hole size = 0.2012 inches; the nearest drill is #8 (0.1990).

