TAP DRILL SIZE CHART - STOCK SIZE DRILLS

TAP	TAP DRILL	DECIMAL EQUIVALENT OF TAP DRILL	THEORETICAL % OF THREAD	TAP	TAP DRILL	DECIMAL EQUIVALENT OF TAP DRILL	THEORETICAL % OF THREAD
1/4-20	9	0.1960	83	7/16-20	W	0.3860	79
	8	0.1990	79		25/64	0.3906	72
	7	0.2010	75		X	0.3970	62
	13/64	0.2031	72.5	1/2-13	27/64	0.4219	78
	6	0.2040	71		7/16	0.4375	63
	5	0.2055	69	1/2-20	29/64	0.4531	72
	4	0.2090	63	9/16-12	15/32	0.4688	87
1/4-28	3	0.2130	80		31/64	0.4844	72
	7/32	0.2188	67	9/16-18	1/2	0.5000	87
	2	0.2210	63		33/64	0.5156	65
5/16-18	F	0.2570	77	5/8-11	17/32	0.5312	79
	G	0.2610	71		35/64	0.5469	66
	17/64	0.2656	65	5/8-18	9/16	0.5625	87
	H	0.2660	64		37/64	0.5781	65
5/16-24	H	0.2660	86	3/4-10	41/64	0.6406	84
	I	0.2720	75		21/32	0.6562	72
	J	0.2770	66	3/4-16	11/16	0.6875	77
3/8-16	5/16	0.3125	77	7/8-9	49/64	0.7656	76
	O	0.3160	73		25/32	0.7812	65
	P	0.3230	64	7/8-14	51/64	0.7969	84
3/8-24	21/64	0.3281	87		13/16	0.8125	67
	Q	0.3320	79	1”-8	55/64	0.8594	87
	R	0.3390	67		7/8	0.8750	77
7/16-14	T	0.3580	86		57/64	0.8906	67
	23/64	0.3594	84		29/32	0.9062	58
	U	0.3680	75	1”-12	29/32	0.9062	87
	3/8	0.3750	67		59/64	0.9219	72
	V	0.3770	65		15/16	0.9375	58

TAP DRILL SIZE FORMULAS

$$\text{DRILLED HOLE SIZE} = \text{MAJOR DIAMETER OF THREAD} - \frac{(0.01299 \times \text{AMOUNT OF \% OF FULL THREAD})}{\text{(THREADS PER INCH)}}$$

$$\text{\% of FULL THREAD} = \text{THREADS PER INCH} \times \frac{\text{(MAJOR DIA OF THREAD - TAP DRILL DIAMETER)}}{0.01299}$$

SUGGESTED PROCESS FOR TAPPING DIFFICULT TO MACHINE MATERIALS

When tapping difficult to machine materials (such as Inconel, 17-4 pH Stainless, and Hastelloy), the following processing has been used to insure consistency of the final threads and longer tap life:

1. Drill the hole using a slightly undersized tap drill.

2. Bore the hole to the largest allowable diameter to achieve specified percentage of thread, using a 2 flute end mill

3. Tap the hole.

While this adds an extra step to the process, this has been used successfully and may be a viable option
Be sure to check our website at www.coolantfedtooling.com for more technical information

Visit our website at **www.coolantfedtooling.com** for technical information and our latest product offerings.