

Tap Size	Pitch	75% Thread		70% Thread		65% Thread		60% Thread	
		Theoretical Hole Size	Nearest Drill Size	Theoretical Hole Size	Nearest Drill Size	Theoretical Hole Size	Nearest Drill Size	Theoretical Hole Size	Nearest Drill Size
2	56	.0769	1.95	.0774	1.95	.0781	5/64	.0787	47
2	64	.0780	5/64	.0785	47	.0791	2.0	.0796	2.0
3	48	.0884	2.25	.0890	43	.0898	43	.0905	2.3
3	56	.0899	43	.0904		.0911	2.3	.0917	2.3
4	40	.0993	2.5	.1000	39	.1010	39	.1018	38
4	48	.1014	38	.1020	38	.1028	2.6	.1035	2.6
5	40	.1123	34	.1130	33	.1140	33	.1148	2.9
5	44	.1134	33	.1141	2.9	.1150	2.9	.1157	
6	32	.1221	3.1	.1230	3.1	.1242		.1252	1/8
6	40	.1253	1/8	.1260	3.2	.1270	3.2	.1278	3.25
8	32	.1481	3.75	.1490		.1502	25	.1512	3.8
8	36	.1498	25	.1507	3.8	.1517	24	.1526	24
10	24	.1688		.1700	18	.1716	11/64	.1729	11/64
10	32	.1741	17	.1750	=	.1762		.1772	16
12	24	.1948	10	.1960	9	.1976	5.0	.1989	8
12	28	.1978	5.0	.1989	8	.2002	8	.2014	7
1/4	20	.2245	5.7	.2260		.2279	1	.2295	1
1/4	28	.2318		.2329	5.9	.2342	A	.2354	15/64
5/16	18	.2842	7.2	.2861	7.25	.2879	7.3	.2898	L
5/16	24	.2912	7.4	.2927		.2941	M	.2955	7.5
3/8	16	.3431	11/32	.3452	8.75	.3474	S	.3495	8.9
3/8	24	.3537	9.0	.3552	9.0	.3566		.3580	T
7/16	14	.4011		.4035	Y	.4059	13/32	.4084	
7/16	20	.4120	Z	.4137	10.5	.4154		.4171	
1/2	13	.4608		.4634		.4660		.4686	15/32
1/2	20	.4745	12.0	.4762		.4779		.4796	
9/16	12	.5200		.5229		.5257		.5285	17/32
9/16	18	.5342	13.5	.5361		.5380		.5398	

FORMULA FOR TAP / DRILL SIZES FOR DECIMAL / INCH TAPS:

$$\text{HOLE SIZE} = \text{Basic Tap O.D.} - \left(\frac{.0068 \times \% \text{ of Thread}^*}{\text{Threads per Inch}} \right)$$

For example:

To determine drill size for a 1/4-20 thread forming tap at 65% of thread: $.250 - \left(\frac{.0068 \times 65}{20} \right) = .2279$

*Use whole number for % of thread... for 65%, use 65 (not .65).

FORMULA FOR TAP / DRILL SIZES FOR METRIC TAPS:

$$\text{HOLE SIZE (mm)} = \text{Basic Tap O.D. (mm)} - \left(\frac{\% \text{ of Thread} \times \text{mm Pitch}}{147.06} \right)$$

*Use whole number for % of thread... for 65%, use 65 (not .65).