



SUGGESTED HOLE SIZES FOR TAPPING SCREWS

Thread Rolling and
Thread Cutting Types D, F, G and T

Formula For Hole Diameter

1.015 x basic nominal thread major diameter. Tolerance is +/- 3%.

SCREW SIZE	HOLE DIAMETER			DRILL BIT SIZE	
	Max	Mean	Min	Drill Size	Drill Dia
2-56	0.078	0.076	0.074	48	0.076
2-64		0.077			
3-48	0.090	0.087	0.084	44	0.086
3-56		0.089			
4-40	0.100	0.097	0.094	41	0.096
4-48		0.100			
5-40	0.113	0.110	0.107	35	0.110
5-44		0.112			
6-32	0.123	0.119	0.115	31	0.120
6-40		0.124			
8-32	0.150	0.146	0.141	20	0.147
8-36		0.148			
10-24	0.170	0.165	0.160	19	0.166
10-32	0.177	0.172	0.167	11/64	0.1719
12-24	0.198	0.192	0.186	11	0.191
12-28		0.196			
1/4-20	0.228	0.221	0.214	2	0.221
1/4-28		0.230			
5/16-18	0.289	0.281	0.273	K	0.281
5/16-24		0.290			
3/8-16	0.349	0.339	0.329	R	0.339
3/8-24		0.353			
7/16-14	0.409	0.397	0.385	X	0.397
7/16-20		0.411			
1/2-13	0.471	0.457	0.443	29/64	0.4531
1/2-20		0.475			

Thread Forming Types AB, B, and BP
Thread Cutting Types BF and BT

Formula For Hole Diameter

0.98 x basic nominal thread major diameter. Tolerance is +/- 7%.

SCREW SIZE	HOLE DIAMETER			DRILL BIT SIZE	
	Max	Mean	Min	Drill Size	Drill Dia.
2-32	.077	.072	.067	49	.073
3-28	.090	.084	.078	45	.082
4-24	.103	.096	.089	41	.096
5-20	.114	.107	.100	36	.1065
6-20	.124	.116	.108	32	.116
7-19	.138	.129	.120	30	.1285
8-18	.148	.138	.128	29	.136
10-16	.170	.159	.148	21	.159
12-14	.194	.182	.169	14	.182
1/4-14	.226	.211	.196	4	.209
5/16-12	.289	.270	.251	I	.272
3/8-12	.356	.333	.310	0	.332
7/16-10	.413	.386	.359	w	.386
1/2-10	.480	.449	A18	29/64	A531

Physical Properties

Fastener Diameter	Nominal Screw Diameter	Torsional (Lb.-In.)	Tensile (Pounds)	Shear (Pounds)
#6-20	0.138	24	1,125	750
#8-18	0.164	42	1,575	1,000
#10-16	0.190	61	2,100	1,400
#10-24	0.190	65	3,400	2,275
#12-14	0.216	92	2,778	2,000
#12-24	0.216	100	3,188	2,100
1/4-14	0.250	150	3,850	2,600
1/4-20	0.250	156	4,275	2,700
#18-9	0.306	196	4,550	2,576
5/16-12	0.313	290	5,439	3,264

Note

As a general practice, tapping torque should equal approximately 70% of the fasteners torsional strength.
Adjust hole size to accommodate hardness and thickness of material.

DISCLAIMER: ALL TEST RESULTS AND SPECIFICATIONS ARE A RESULT OF LABORATORY TESTS. APPROPRIATE SAFETY FACTORS SHOULD BE USED BY THE USER OR SPECIFIER. DETERMINING THE PROPER FASTENER IS THE RESPONSIBILITY OF THE USER OR SPECIFIER. SINCE APPLICATION CONDITIONS VARY AND ARE UNCONTROLLABLE BY TFC, WE ASSUME NO LIABILITY FOR THE USE OF THIS INFORMATION.