



Fastener Hole Guide

Call EBN for Drill Bits & Taps



Drill This Size Hole		To Tap For This Size Bolt Or Screw	For This Size Wood Screw Pilot In Hard Wood
Drill Size	Dec. Equiv.		
60	.0400	0 x 80	
59	.0410		
58	.0420		
57	.0430		
56	.0465		
3/64	.0469		
55	.0520		
54	.0550		
53	.0595		
1/16	.0625		
52	.0635	1 x 56 1 x 64 - 72	No. 3
51	.0670		
50	.0700	2 x 56 - 64	No. 4
49	.0730		
48	.0760		
5/64	.0781		
47	.0785	3 x 48	No. 5
46	.0810		
45	.0820	3 x 56	No. 6
44	.0860		
43	.0890	4 x 36	No. 7
42	.0935		
3/32	.0937	4 x 48	No. 8
41	.0960		
40	.0980	5 x 36	No. 9
39	.0995		
38	.1015	5 x 40	No. 10
37	.1040		
36	.1069	5 x 44	No. 11
7/64	.1094		
35	.1100	6 x 32	No. 12
34	.1110		
33	.1130	6 x 36	
32	.1160		
31	.1200	6 x 40	
1/8	.1250		
30	.1285	7 x 36	
29	.1360		
28	.1405	8 x 30	
		8 x 32 x 36	
		8 x 40	

Drill This Size Hole		To Tap For This Size Bolt Or Screw	For This Size Wood Screw Pilot In Hard Wood		
Drill Size	Dec. Equiv.				
9/64	.1406	9 x 30 3/16 x 24 10 x 24	No. 14		
27	.1440				
26	.1470				
25	.1495				
24	.1520				
23	.1540				
5/32	.1562				
22	.1570				
21	.1590				
20	.1610				
19	.1660	10 x 30 10 x 32 3/16 x 32	No. 16		
18	.1695				
11/64	.1719				
17	.1730				
16	.1770			12 x 24	
15	.1800				
14	.1820			12 x 28	No. 18
13	.1850				
3/16	.1875			12 x 32	
12	.1890				
11	.1910	14 x 20			
10	.1935				
9	.1960	1/4 x 20			
8	.1990				
7	.2010	1/4 x 24	No. 20		
13/64	.2031				
6	.2040	1/4 x 28			
5	.2055				
4	.2090	1/4 x 32	No. 24		
3	.2130				
7/32	.2187	1/4 x 32			
2	.2210				
1	.2280				
A	.2340				
15/64	.2344				
B	.2380				
C	.2420				
D	.2460				
1/4	.2500				

Drill This Size Hole		To Tap For This Size Bolt Or Screw	
Drill Size	Dec. Equiv.		
E	.2500	5/16 x 18	
F	.2570		
G	.2610		
17/64	.2656	5/16 x 18*	
H	.2660		
I	.2720	5/16 x 24	
J	.2770		
K	.2810	5/16 x 24 - 32*	
9/32	.2812		
L	.2900		
M	.2950		
19/64	.2969		
N	.3020		
5/16	.3125		3/8 x 16 - 1/8" P
O	.3160		
P	.3230		3/8 x 20 - 24
21/64	.3281		
Q	.3332		
R	.3390		
11/32	.3437		
S	.3480		
T	.3580		
23/64	.3594		
U	.3680	7/16 x 14	
3/8	.3750		
V	.3770		
W	.3860		
25/64	.3906	7/16 x 20	
X	.3970		
Y	.4040		
13/32	.4062		
Z	.4130		
27/64	.4219		
7/16	.4375	1/2 x 12 - 13 1/4" Pipe	
29/64	.4531		
15/32	.4687	1/2 x 20 - 24 1/2 x 27	
31/64	.4844		
1/2	.5000	9/16 x 12	

Suggested Hole Sizes For Type A

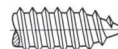
Type A



Nominal Screw Size	Closest Drill Size to Mean Hole Diameter	
	Drill Size	Hole Diam.
6-18	#32	0.1160
7-16	#30	0.1285
8-15	#29	0.1360
10-12	#21	0.1590
12-11	3/16	0.1875
14-10	5.5 mm	0.2165
20-9	L	0.2900
24-9	11/32	0.3438

Self-Tapping Screws Suggested Hole Sizes For Types AB - B - 25

Type AB



Type B



Type 25



Nominal Screw Size	Hole Diameter			Closest Drill Size to Mean Hole Diameter	
	Max	Mean	Min.	Drill Size	Drill Diam.
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	.1056
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	Q	.332

Notes Regarding Hole Preparation:

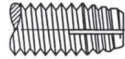
- Preformed holes can be drilled, cored, punched, pierced or extruded. If edge burrs can cause assembly difficulty, they should be removed. Wall ovality and/or taper can affect load carrying ability
- "Minimum torsional strength" is the torque that free standing screws must accept without evidence of damage or failure



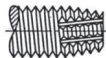
Self-Tapping Screws (Cont.) Types 1, 23, F, U and High-Low

Suggested Hole Sizes For Types 1, 23 & F Thread Cutting Screws

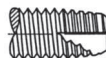
Type 1



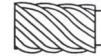
Type F



Type 23

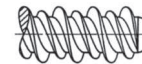


Suggested Hole Sizes For Type U Drive Screws Type U Drive Screw



Screw Size	Drill Size No.	Hole Diameter
00	55	.052
0	51	.067
2	44	.086
4	37	.104
6	31	.120
7	29	.136
8	27	.144
10	20	.161
12	11	.191
14	2	.221

Suggested Hole Sizes For Type High-Low Screws High-Low



Nominal Screw Size	Hole Diameter			Closest Drill Size to Mean Hole Diameter	
	Max	Mean	Min.	Drill Size	Drill Diam.
2-56	0.078	0.076	0.074	48	0.076
4-40	0.100	0.097	0.094	41	0.096
6-32	0.123	0.119	0.115	31	0.120
8-32	0.150	0.146	0.141	20	0.147
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
1/4-20	0.228	0.221	0.214	2	0.221
5/16-18	0.289	0.281	0.273	K	0.281
3/8-16	0.349	0.339	0.329	R	0.339

Screw Size	Pilot Hole Diameter Flexural Modulus of Plastic	
	Up to 200,000 P.S.I.	200,000 - 400,000 P.S.I.
2-32	.0670	.0700
4-24	.0810	.0860
5-20	.0935	.0995
6-19	.1015	.1100
8-18	.1200	.1285
10-16	.1360	.1440
12-16	.1570	.1650
1/4-15	.1890	.2010

“I knew I was an unwanted baby when I saw that my bath toys were a toaster and a radio.”

—Joan Rivers

“I was so ugly when I was born the doctor slapped my mother.”

—Rodney Dangerfield

“I’m so damned unlucky that if I died and got reincarnated, I’d probably come back as myself.”

—Freddy Fender

“America’s health care system is second only to Japan...Canada, Sweden, Great Britain...well, all of Europe. But you can thank your lucky stars we don’t live in Paraguay!”

—Homer Simpson

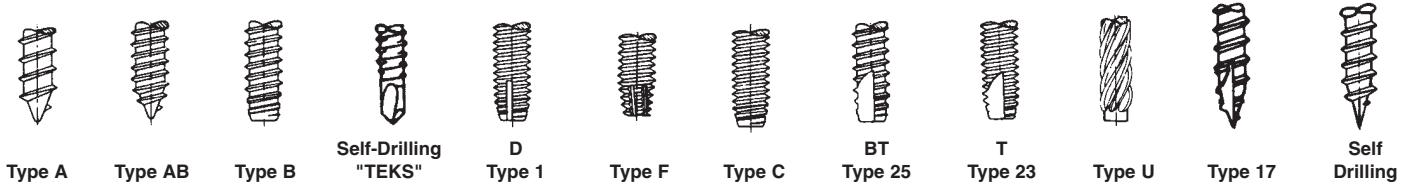
“Dear Lord, the gods have been good to me. As an offering, I present these milk and cookies. If you wish me to eat them instead, please give me no sign whatsoever...Thy will be done.”

—Homer Simpson



Thread Cutting and Rolling Machine Screw

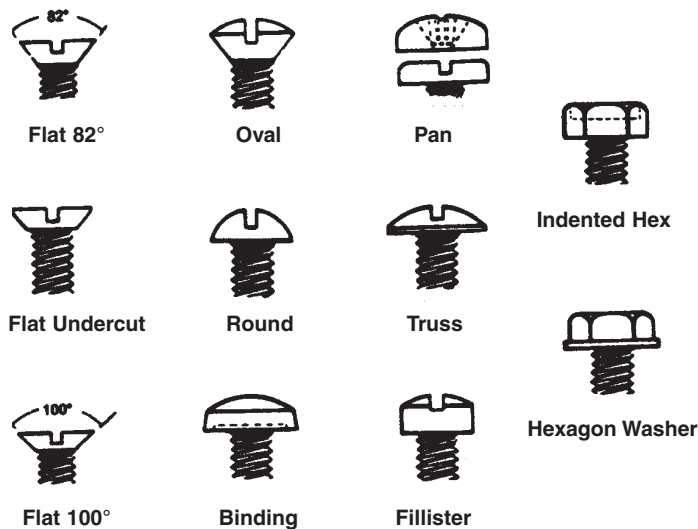
Points



Hole & Drill Size Recommendations For Other Than Type "A"

Nominal Screw Size	Thickness						Hole Size								
	Type AB, A, B, BP and C			Types D or 1, F, G and T			Type C				F, G and T		Types D or 1		
	O.D. Gage	Inch Max.	Size Min.	Max.	Min.	Drill Size	Hole Dia.	Coarse Thread		Fine Thread		Coarse Thread		Fine Thread	
								Drill Size	Hole Dia.	Drill Size	Hole Dia.	Drill Size	Hole Dia.	Drill Size	Hole Dia.
2	18	0.0500	0.0460	0.0800	0.0760	#48	0.0760	#48	0.0760	#48	0.0760	#49	0.0730	-	-
3	18	0.0500	0.0460	0.0960	0.0920	#46	0.0810	#44	0.0860	#43	0.0890	#46	0.0810	-	-
4	18	0.0500	0.0460	0.1110	0.1070	#44	0.0860	#41	0.0960	#40	0.0960	#41	0.0960	-	-
5	18	0.0500	0.0460	0.1110	0.1070	#36	0.1065	#35	0.1100	#35	0.1100	#37	0.1040	-	-
6	14	0.0770	0.0730	0.1425	0.1385	#32	0.1160	#31	0.1200	1/8	0.1250	#31	0.1200	-	-
7	14	0.0770	0.0730	-	-	#30	0.1285	-	-	-	-	-	-	-	-
8	14	0.0770	0.0730	0.1420	0.1380	#29	0.1360	#27	0.1440	#26	0.1470	#26	0.1470	-	-
10	1/8	0.1270	0.1230	0.1905	0.1845	#21	0.1590	#19	0.1660	11/64	0.1719	#17	0.1730	#16	0.1770
12	1/8	0.1270	0.1230	0.1905	0.1845	3/16	0.1875	#11	0.1910	#10	0.1935	#8	0.1990	-	-
14	1/8	0.1270	0.1230	-	-	-	-	-	-	-	-	-	-	-	-
1/4	3/16	0.1905	0.1845	0.2530	0.2470	5.5mm	0.2165	7/32	0.2188	1	0.2280	1	0.2280	A	0.2340
16	3/16	0.1905	0.1845	-	-	-	-	-	-	-	-	-	-	-	-
18	3/16	0.1905	0.1845	-	-	-	-	-	-	-	-	-	-	-	-
5/16	3/16	0.1905	0.1845	0.3155	0.3095	1	0.2720	J	0.2770	L	0.2900	L	0.2900	M	0.2950
20	3/16	0.1905	0.1845	-	-	-	-	-	-	-	-	-	-	-	-
24	3/16	0.1905	0.1845	-	-	-	-	-	-	-	-	-	-	-	-
3/8	3/16	0.1905	0.1845	0.3780	0.3720	21/64	0.3281	R	0.3390	11/32	0.3438	T	0.3580	T	0.3580
7/16	3/16	0.1905	0.1845	-	-	13/32	0.4062	-	-	-	-	-	-	-	-
1/2	3/16	0.1905	0.1845	-	-	15/32	0.4688	-	-	-	-	-	-	-	-

Head Styles



Driving Recesses

