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Here are a set of tables to pick the correct size of drill to tape threads. They are similar tables with a small twist on how the drill is picked. This is a table of contents to the following pages. The drills used for US are numbered, lettered and fractions. Some tables have added the drill sizes in 0.1mm increments

The best recommended tables to use for picking a drill is on page 8 because it does not use the uncommon letter size drills. US and metric drill have been included for all the tapes listed. Most hardware store at the present only carry number and fraction sizes drills. Metric size drills will be coming in the future.

For most common usage 75% thread remaining is the general recommendation. A fast and general rule is take the diameter and subtract the pitch, the distance between threads or one divided by the threads per inch. As an example start with a 10 32 screw. First you need to know that the diameter is .190 inch. To do this take the size and multiply it by .013” and add .060”, this is not common knowledge. Then the pitch is 1/32 or .03125” or about .031”, this also take some effort. Now take .190” and subtract .031 which leave .159” for a required drill. Now you must look up in a table and find that a number 21 drill just happens to be .159 the correct size. Now lets look at the metric world. Take a 5 .8 screw, it is 5mm in diameter and the pitch is 0.8mm so 5 subtract 0.8 you have 4.2mm so that is the required dirll.

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is group 2. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use group 1. For mild steel, aluminum, cast iron, and cast brass use group 2. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use group 3. This table lists the next available American drill except for the letter drills use the next larger size. Pick the group best suited for you work pick either drill listed. Metric drills have been add as they will become more available. Note letter drills have been substituted for the next larger fractional drill.

Size		diam.	group 1		group 2		group 3			
			80%		75%		70%		65%	
00	90	.0470	#64	0.9mm	#64	0.9mm	#63	0.9mm	#62	1.0mm
0	80	.0600	#55	1.2mm	#55	1.2mm	#55	1.2mm	#55	1.3mm
1	72	.0730	#53	1.5mm	#53	1.5mm	1/16	1.5mm	1/16	1.6mm
2	64	.0860	#50	1.8mm	#49	1.8mm	#49	1.8mm	#49	1.8mm
3	56	.0990	#46	2.0mm	#45	2.1mm	#44	2.1mm	#44	2.1mm
4	40	.1120	#44	2.2mm	#43	2.2mm	#43	2.3mm	#42	2.3mm
6	32	.1380	#36	2.7mm	7/64	2.7mm	7/64	2.8mm	#34	2.8mm
8	32	.1640	#29	3.3mm	#29	3.4mm	#29	3.4mm	#28	3.5mm
10	24	.1900	#26	3.7mm	#25	3.8mm	#24	3.9mm	#23	3.9mm
10	32	.1900	#22	4.0mm	#21	4.1mm	#20	4.1mm	#19	4.2mm
12	24	.2160	11/64	4.4mm	#16	4.5mm	#15	4.5mm	#15	4.6mm
12	28	.2160	#15	4.5mm	#14	4.6mm	#13	4.7mm	#13	4.7mm
1/ 4	20	.2500	# 8	5.0mm	# 7	5.1mm	# 6	5.2mm	# 4	5.3mm
1/ 4	28	.2500	# 3	5.4mm	7/32	5.5mm	7/32	5.5mm	7/32	5.6mm
5/16	18	.3125	17/64	6.5mm	17/64	6.6mm	17/64	6.7mm	17/64	6.7mm
5/16	24	.3125	9/32	6.8mm	9/32	6.9mm	9/32	7.0mm	9/32	7.0mm
3/ 8	16	.3750	5/16	7.9mm	5/16	8.0mm	21/64	8.1mm	21/64	8.2mm
3/ 8	24	.3750	11/32	8.4mm	11/32	8.5mm	11/32	8.6mm	11/32	8.6mm
7/16	14	.4375	3/ 8	9.2mm	3/ 8	9.3mm	3/ 8	9.5mm	25/64	9.6mm
7/16	20	.4375	25/64	9.8mm	25/64	9.9mm	25/64	10.0mm	13/32	10.0mm
1/ 2	13	.5000	27/64	10.7mm	7/16	10.8mm	7/16	10.9mm	7/16	11.1mm
1/ 2	20	.5000	29/64	11.4mm	29/64	11.5mm	29/64	11.5mm	15/32	11.6mm
5/ 8	11	.6250	17/32	13.5mm	35/64	13.6mm	35/64	13.8mm	35/64	13.9mm
5/ 8	18	.6250	37/64	14.4mm	37/64	14.5mm	37/64	14.6mm	37/64	14.7mm
M 2	0.40	.0787	1/16	1.6mm	#52	1.6mm	#51	1.6mm	#51	1.7mm
M 2	0.25	.0787	#50	1.7mm	#50	1.8mm	#50	1.8mm	#49	1.8mm
M 3	0.50	.1181	#40	2.5mm	#39	2.5mm	#38	2.5mm	#38	2.6mm
M 3	0.35	.1181	#37	2.6mm	#36	2.7mm	#36	2.7mm	#36	2.7mm
M 4	0.70	.1575	#30	3.3mm	#29	3.3mm	#29	3.4mm	#29	3.4mm
M 4	0.50	.1575	#28	3.5mm	#28	3.5mm	#28	3.5mm	#28	3.6mm
M 5	0.80	.1969	#19	4.2mm	#19	4.2mm	#18	4.3mm	#18	4.3mm
M 5	0.50	.1969	#16	4.5mm	#16	4.5mm	#15	4.5mm	#15	4.6mm
M 6	1.00	.2362	# 9	5.0mm	# 8	5.0mm	# 7	5.1mm	13/64	5.2mm
M 6	0.75	.2362	# 5	5.2mm	# 4	5.3mm	# 4	5.3mm	# 3	5.4mm
M 7	1.00	.2756	15/64	6.0mm	1/ 4	6.0mm	1/ 4	6.1mm	1/ 4	6.2mm
M 7	0.75	.2756	1/ 4	6.2mm	1/ 4	6.3mm	1/ 4	6.3mm	1/ 4	6.4mm
M 8	1.25	.3150	17/64	6.7mm	17/64	6.8mm	9/32	6.9mm	9/32	6.9mm
M 8	1.00	.3150	9/32	7.0mm	9/32	7.0mm	9/32	7.1mm	9/32	7.2mm
M 8	0.75	.3150	19/64	7.2mm	19/64	7.3mm	19/64	7.3mm	19/64	7.4mm
M 10	1.50	.3937	11/32	8.4mm	11/32	8.5mm	11/32	8.6mm	11/32	8.7mm
M 10	1.25	.3937	11/32	8.7mm	11/32	8.8mm	23/64	8.9mm	23/64	8.9mm
M 10	1.00	.3937	23/64	9.0mm	23/64	9.0mm	23/64	9.1mm	23/64	9.2mm
M 10	0.75	.3937	3/ 8	9.2mm	3/ 8	9.3mm	3/ 8	9.3mm	3/ 8	9.4mm
M 12	1.75	.4724	13/32	10.2mm	13/32	10.3mm	27/64	10.4mm	27/64	10.5mm
M 12	1.50	.4724	27/64	10.4mm	27/64	10.5mm	27/64	10.6mm	27/64	10.7mm
M 12	1.25	.4724	27/64	10.7mm	7/16	10.8mm	7/16	10.9mm	7/16	10.9mm
M 12	1.00	.4724	7/16	11.0mm	7/16	11.0mm	7/16	11.1mm	7/16	11.2mm

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is group 2. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use group 1. For mild steel, aluminum, cast iron, and cast brass use group 2. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use group 3. This table lists the next available American drill except for the letter drills use the next larger size. Pick the group best suited for you work pick either drill listed. Metric drills have been add as **they will become more available.**

Size	diam.	group 1		group 2		group 3			
		80%		75%		70%		65%	
00	90 .0470	#64	0.9mm	#64	0.9mm	#63	0.9mm	#62	1.0mm
0	80 .0600	#55	1.2mm	#55	1.2mm	#55	1.2mm	#55	1.3mm
1	72 .0730	#53	1.5mm	#53	1.5mm	1/16	1.5mm	1/16	1.6mm
2	64 .0860	#50	1.8mm	#49	1.8mm	#49	1.8mm	#49	1.8mm
3	56 .0990	#46	2.0mm	#45	2.1mm	#44	2.1mm	#44	2.1mm
4	40 .1120	#44	2.2mm	#43	2.2mm	#43	2.3mm	#42	2.3mm
6	32 .1380	#36	2.7mm	7/64	2.7mm	7/64	2.8mm	#34	2.8mm
8	32 .1640	#29	3.3mm	#29	3.4mm	#29	3.4mm	#28	3.5mm
10	24 .1900	#26	3.7mm	#25	3.8mm	#24	3.9mm	#23	3.9mm
10	32 .1900	#22	4.0mm	#21	4.1mm	#20	4.1mm	#19	4.2mm
12	24 .2160	11/64	4.4mm	#16	4.5mm	#15	4.5mm	#15	4.6mm
12	28 .2160	#15	4.5mm	#14	4.6mm	#13	4.7mm	#13	4.7mm
1/ 4	20 .2500	# 8	5.0mm	# 7	5.1mm	# 6	5.2mm	# 4	5.3mm
1/ 4	28 .2500	# 3	5.4mm	7/32	5.5mm	7/32	5.5mm	7/32	5.6mm
5/16	18 .3125	F	6.5mm	F	6.6mm	G	6.7mm	17/64	6.7mm
5/16	24 .3125	I	6.8mm	I	6.9mm	J	7.0mm	J	7.0mm
3/ 8	16 .3750	5/16	7.9mm	5/16	8.0mm	P	8.1mm	P	8.2mm
3/ 8	24 .3750	Q	8.4mm	R	8.5mm	R	8.6mm	R	8.6mm
7/16	14 .4375	U	9.2mm	U	9.3mm	3/ 8	9.5mm	V	9.6mm
7/16	20 .4375	W	9.8mm	25/64	9.9mm	25/64	10.0mm	X	10.0mm
1/ 2	13 .5000	27/64	10.7mm	7/16	10.8mm	7/16	10.9mm	7/16	11.1mm
1/ 2	20 .5000	29/64	11.4mm	29/64	11.5mm	29/64	11.5mm	15/32	11.6mm
5/ 8	11 .6250	17/32	13.5mm	35/64	13.6mm	35/64	13.8mm	35/64	13.9mm
5/ 8	18 .6250	37/64	14.4mm	37/64	14.5mm	37/64	14.6mm	37/64	14.7mm
M 2	0.40 .0787	1/16	1.6mm	#52	1.6mm	#51	1.6mm	#51	1.7mm
M 2	0.25 .0787	#50	1.7mm	#50	1.8mm	#50	1.8mm	#49	1.8mm
M 3	0.50 .1181	#40	2.5mm	#39	2.5mm	#38	2.5mm	#38	2.6mm
M 3	0.35 .1181	#37	2.6mm	#36	2.7mm	#36	2.7mm	#36	2.7mm
M 4	0.70 .1575	#30	3.3mm	#29	3.3mm	#29	3.4mm	#29	3.4mm
M 4	0.50 .1575	#28	3.5mm	#28	3.5mm	#28	3.5mm	#28	3.6mm
M 5	0.80 .1969	#19	4.2mm	#19	4.2mm	#18	4.3mm	#18	4.3mm
M 5	0.50 .1969	#16	4.5mm	#16	4.5mm	#15	4.5mm	#15	4.6mm
M 6	1.00 .2362	# 9	5.0mm	# 8	5.0mm	# 7	5.1mm	13/64	5.2mm
M 6	0.75 .2362	# 5	5.2mm	# 4	5.3mm	# 4	5.3mm	# 3	5.4mm
M 7	1.00 .2756	A	6.0mm	B	6.0mm	C	6.1mm	C	6.2mm
M 7	0.75 .2756	D	6.2mm	D	6.3mm	1/ 4	6.3mm	1/ 4	6.4mm
M 8	1.25 .3150	17/64	6.7mm	17/64	6.8mm	I	6.9mm	I	6.9mm
M 8	1.00 .3150	J	7.0mm	J	7.0mm	K	7.1mm	K	7.2mm
M 8	0.75 .3150	L	7.2mm	L	7.3mm	L	7.3mm	L	7.4mm
M 10	1.50 .3937	Q	8.4mm	R	8.5mm	R	8.6mm	11/32	8.7mm
M 10	1.25 .3937	11/32	8.7mm	11/32	8.8mm	S	8.9mm	T	8.9mm
M 10	1.00 .3937	T	9.0mm	T	9.0mm	T	9.1mm	23/64	9.2mm
M 10	0.75 .3937	U	9.2mm	U	9.3mm	U	9.3mm	U	9.4mm
M 12	1.75 .4724	Y	10.2mm	Y	10.3mm	Z	10.4mm	Z	10.5mm
M 12	1.50 .4724	Z	10.4mm	Z	10.5mm	27/64	10.6mm	27/64	10.7mm
M 12	1.25 .4724	27/64	10.7mm	7/16	10.8mm	7/16	10.9mm	7/16	10.9mm
M 12	1.00 .4724	7/16	11.0mm	7/16	11.0mm	7/16	11.1mm	7/16	11.2mm

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is 75%. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use 75% to 80%. For mild steel, aluminum, cast iron, and cast brass use 70% to 75%. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use 65% to 70%. This table list the actual size of drill wanted there may not be an exact match use the next large drill you can purchase.

Size	diam.	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%
00 90	.0470	.0326	.0333	.0340	.0347	.0355	.0362	.0369	.0376	.0383	.0391	.0398
0 80	.0600	.0438	.0446	.0454	.0462	.0470	.0478	.0486	.0494	.0503	.0511	.0519
1 72	.0730	.0550	.0559	.0568	.0577	.0586	.0595	.0604	.0613	.0622	.0631	.0640
2 64	.0860	.0657	.0667	.0677	.0687	.0698	.0708	.0718	.0728	.0738	.0748	.0759
3 56	.0990	.0758	.0770	.0781	.0793	.0804	.0816	.0828	.0839	.0851	.0862	.0874
4 40	.1120	.0795	.0811	.0828	.0844	.0860	.0876	.0893	.0909	.0925	.0941	.0958
6 32	.1380	.0974	.0994	.1015	.1035	.1055	.1076	.1096	.1116	.1136	.1157	.1177
8 32	.1640	.1234	.1254	.1275	.1295	.1315	.1336	.1356	.1376	.1396	.1417	.1437
10 24	.1900	.1359	.1386	.1413	.1440	.1467	.1494	.1521	.1548	.1575	.1602	.1629
10 32	.1900	.1494	.1514	.1535	.1555	.1575	.1596	.1616	.1636	.1656	.1677	.1697
12 24	.2160	.1619	.1646	.1673	.1700	.1727	.1754	.1781	.1808	.1835	.1862	.1889
12 28	.2160	.1696	.1719	.1742	.1766	.1789	.1812	.1835	.1858	.1882	.1905	.1928
1/ 4 20	.2500	.1850	.1883	.1915	.1948	.1980	.2013	.2045	.2078	.2110	.2143	.2175
1/ 4 28	.2500	.2036	.2059	.2082	.2106	.2129	.2152	.2175	.2198	.2222	.2245	.2268
5/16 18	.3125	.2403	.2439	.2475	.2512	.2548	.2584	.2620	.2656	.2692	.2728	.2764
5/16 24	.3125	.2584	.2611	.2638	.2665	.2692	.2719	.2746	.2773	.2800	.2827	.2854
3/ 8 16	.3750	.2938	.2979	.3019	.3060	.3100	.3141	.3182	.3222	.3263	.3303	.3344
3/ 8 24	.3750	.3209	.3236	.3263	.3290	.3317	.3344	.3371	.3398	.3425	.3452	.3479
7/16 14	.4375	.3447	.3494	.3540	.3586	.3633	.3679	.3725	.3772	.3818	.3865	.3911
7/16 20	.4375	.3725	.3758	.3790	.3823	.3855	.3888	.3920	.3953	.3985	.4018	.4050
1/ 2 13	.5000	.4001	.4051	.4101	.4151	.4201	.4251	.4301	.4350	.4400	.4450	.4500
1/ 2 20	.5000	.4350	.4383	.4415	.4448	.4480	.4513	.4545	.4578	.4610	.4643	.4675
5/ 8 11	.6250	.5069	.5128	.5187	.5246	.5305	.5364	.5423	.5482	.5541	.5600	.5660
5/ 8 18	.6250	.5528	.5564	.5600	.5637	.5673	.5709	.5745	.5781	.5817	.5853	.5889
M 2 0.40	.0787	.0583	.0593	.0603	.0614	.0624	.0634	.0644	.0654	.0665	.0675	.0685
M 2 0.25	.0787	.0660	.0666	.0672	.0679	.0685	.0692	.0698	.0704	.0711	.0717	.0723
M 3 0.50	.1181	.0925	.0938	.0951	.0964	.0977	.0989	.1002	.1015	.1028	.1040	.1053
M 3 0.35	.1181	.1002	.1011	.1020	.1029	.1038	.1047	.1056	.1065	.1074	.1083	.1092
M 4 0.70	.1575	.1217	.1235	.1253	.1271	.1288	.1306	.1324	.1342	.1360	.1378	.1396
M 4 0.50	.1575	.1319	.1332	.1345	.1357	.1370	.1383	.1396	.1409	.1421	.1434	.1447
M 5 0.80	.1969	.1559	.1580	.1600	.1621	.1641	.1662	.1682	.1703	.1723	.1743	.1764
M 5 0.50	.1969	.1713	.1726	.1738	.1751	.1764	.1777	.1790	.1802	.1815	.1828	.1841
M 6 1.00	.2362	.1851	.1876	.1902	.1927	.1953	.1979	.2004	.2030	.2055	.2081	.2106
M 6 0.75	.2362	.1979	.1998	.2017	.2036	.2055	.2075	.2094	.2113	.2132	.2151	.2170
M 7 1.00	.2756	.2244	.2270	.2296	.2321	.2347	.2372	.2398	.2423	.2449	.2475	.2500
M 7 0.75	.2756	.2372	.2392	.2411	.2430	.2449	.2468	.2487	.2507	.2526	.2545	.2564
M 8 1.25	.3150	.2510	.2542	.2574	.2606	.2638	.2670	.2702	.2734	.2766	.2798	.2830
M 8 1.00	.3150	.2638	.2664	.2689	.2715	.2740	.2766	.2792	.2817	.2843	.2868	.2894
M 8 0.75	.3150	.2766	.2785	.2804	.2824	.2843	.2862	.2881	.2900	.2919	.2939	.2958
M 10 1.50	.3937	.3170	.3208	.3247	.3285	.3323	.3362	.3400	.3438	.3477	.3515	.3553
M 10 1.25	.3937	.3298	.3330	.3362	.3394	.3426	.3458	.3490	.3521	.3553	.3585	.3617
M 10 1.00	.3937	.3426	.3451	.3477	.3502	.3528	.3553	.3579	.3605	.3630	.3656	.3681
M 10 0.75	.3937	.3553	.3573	.3592	.3611	.3630	.3649	.3669	.3688	.3707	.3726	.3745
M 12 1.75	.4724	.3829	.3874	.3919	.3964	.4008	.4053	.4098	.4143	.4187	.4232	.4277
M 12 1.50	.4724	.3957	.3996	.4034	.4072	.4111	.4149	.4187	.4226	.4264	.4302	.4341
M 12 1.25	.4724	.4085	.4117	.4149	.4181	.4213	.4245	.4277	.4309	.4341	.4373	.4405
M 12 1.00	.4724	.4213	.4239	.4264	.4290	.4315	.4341	.4366	.4392	.4418	.4443	.4469

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is 75%. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use 75% to 80%. For mild steel, aluminum, cast iron, and cast brass use 70% to 75%. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use 65% to 70%. This table lists the next available American drill except for the letter drills use the next larger size.

Size	diam.	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%
00 90	.0470	#66	#65	#65	#65	#64	#64	#63	#62	#61	#61	#60
0 80	.0600	#56	#56	#56	#56	#55	#55	#55	#55	#55	#55	#55
1 72	.0730	#54	#53	#53	#53	#53	#53	1/16	1/16	1/16	#52	#51
2 64	.0860	#51	#51	#50	#50	#50	#49	#49	#49	#48	#48	#48
3 56	.0990	#48	5/64	5/64	#46	#46	#45	#44	#44	#44	#44	#43
4 40	.1120	#46	#46	#44	#44	#44	#43	#43	#42	#42	3/32	#41
6 32	.1380	#40	#39	#38	#37	#36	7/64	7/64	#34	#33	#32	#31
8 32	.1640	1/ 8	1/ 8	#30	#29	#29	#29	#29	#28	#28	#27	#27
10 24	.1900	#29	#28	#28	#27	#26	#25	#24	#23	#22	#20	#19
10 32	.1900	#25	#24	#23	5/32	#22	#21	#20	#19	#19	#18	#18
12 24	.2160	#20	#19	#18	#18	11/64	#16	#15	#15	#13	3/16	#12
12 28	.2160	#18	11/64	#16	#16	#15	#14	#13	#13	3/16	#11	#10
1/ 4 20	.2500	#13	3/16	#11	# 9	# 8	# 7	# 6	# 4	# 3	7/32	7/32
1/ 4 28	.2500	13/64	# 5	# 4	# 3	# 3	7/32	7/32	7/32	# 2	# 1	# 1
5/16 18	.3125	C	D	D	1/ 4	F	F	G	17/64	I	I	J
5/16 24	.3125	F	G	17/64	17/64	I	I	J	J	K	9/32	L
3/ 8 16	.3750	M	19/64	N	5/16	5/16	5/16	P	P	21/64	Q	R
3/ 8 24	.3750	P	P	21/64	21/64	Q	R	R	R	11/32	11/32	S
7/16 14	.4375	11/32	S	T	T	U	U	3/ 8	V	W	W	25/64
7/16 20	.4375	3/ 8	3/ 8	V	W	W	25/64	25/64	X	X	Y	Y
1/ 2 13	.5000	Y	Y	Z	Z	27/64	7/16	7/16	7/16	29/64	29/64	29/64
1/ 2 20	.5000	7/16	7/16	29/64	29/64	29/64	29/64	29/64	15/32	15/32	15/32	15/32
5/ 8 11	.6250	33/64	33/64	33/64	17/32	17/32	35/64	35/64	35/64	9/16	9/16	37/64
5/ 8 18	.6250	9/16	9/16	9/16	9/16	37/64	37/64	37/64	37/64	19/32	19/32	19/32
M 2 0.40	.0787	#53	#53	1/16	1/16	1/16	#52	#51	#51	#51	#50	#50
M 2 0.25	.0787	#51	#51	#51	#50	#50	#50	#50	#49	#49	#49	#49
M 3 0.50	.1181	#42	#42	#41	#41	#40	#39	#38	#38	#37	#37	#36
M 3 0.35	.1181	#38	#38	#38	#37	#37	#36	#36	#36	7/64	7/64	7/64
M 4 0.70	.1575	1/ 8	1/ 8	1/ 8	#30	#30	#29	#29	#29	#29	#28	#28
M 4 0.50	.1575	#29	#29	#29	#29	#28	#28	#28	#28	#27	#27	#27
M 5 0.80	.1969	5/32	#22	#20	#19	#19	#19	#18	#18	11/64	#16	#16
M 5 0.50	.1969	11/64	11/64	#17	#16	#16	#16	#15	#15	#14	#14	#13
M 6 1.00	.2362	#13	3/16	#11	#10	# 9	# 8	# 7	13/64	# 5	# 4	# 3
M 6 0.75	.2362	# 8	# 8	# 7	13/64	# 5	# 4	# 4	# 3	# 3	7/32	7/32
M 7 1.00	.2756	# 1	# 1	A	A	A	B	C	C	D	1/ 4	1/ 4
M 7 0.75	.2756	B	B	C	C	D	D	1/ 4	1/ 4	F	F	F
M 8 1.25	.3150	1/ 4	F	F	G	17/64	17/64	I	I	J	K	L
M 8 1.00	.3150	17/64	17/64	I	I	J	J	K	K	L	L	L
M 8 0.75	.3150	J	J	K	K	L	L	L	L	M	M	M
M 10 1.50	.3937	O	P	P	21/64	Q	R	R	11/32	S	T	T
M 10 1.25	.3937	21/64	Q	R	R	11/32	11/32	S	T	T	T	U
M 10 1.00	.3937	11/32	11/32	S	T	T	T	T	23/64	U	U	U
M 10 0.75	.3937	T	T	T	23/64	U	U	U	U	3/ 8	3/ 8	3/ 8
M 12 1.75	.4724	W	W	25/64	X	Y	Y	Z	Z	27/64	27/64	7/16
M 12 1.50	.4724	X	Y	Y	13/32	Z	Z	27/64	27/64	7/16	7/16	7/16
M 12 1.25	.4724	13/32	Z	Z	27/64	27/64	7/16	7/16	7/16	7/16	7/16	29/64
M 12 1.00	.4724	27/64	27/64	7/16	7/16	7/16	7/16	7/16	7/16	29/64	29/64	29/64

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is 75%. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use 75% to 80%. For mild steel, aluminum, cast iron, and cast brass use 70% to 75%. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use 65% to 70%. This table lists the next available American drill except for the letter drills use the next larger size.

Size	diam.	drill size and percent thread
00 90	.0470	#65-83%, #64-76%, #63-69%, #62-62%, #61-55%,
0 80	.0600	#56-83%,
1 72	.0730	#53-75%, 1/16-58%, #52-53%,
2 64	.0860	#50-79%, #49-64%,
3 56	.0990	#47-88%, #46-78%, #45-73%, #44-56%,
4 40	.1120	#44-80%, #43-71%, #42-57%, 3/32-56%,
6 32	.1380	#38-90%, #37-84%, #36-78%, 7/64-70%, #35-69%, #34-67%, #33-62%, #32-54%,
8 32	.1640	#30-87%, #29-69%, #28-58%, 9/64-58%,
10 24	.1900	#27-85%, #26-79%, #25-75%, #24-70%, #23-67%, 5/32-62%, #22-61%, #21-57%, #20-54%,
10 32	.1900	#23-89%, 5/32-83%, #22-81%, #21-76%, #20-71%, #19-59%, #18-50%,
12 24	.2160	#18-86%, 11/64-81%, #17-79%, #16-72%, #15-67%, #14-63%, #13-57%, 3/16-53%,
12 28	.2160	#16-84%, #15-78%, #14-73%, #13-67%, 3/16-61%, #12-58%, #11-54%,
1/ 4 20	.2500	#10-87%, #9-83%, #8-79%, #7-75%, 13/64-72%, #6-71%, #5-69%, #4-63%, #3-57%,
1/ 4 28	.2500	#4-88%, #3-80%, 7/32-67%, #2-63%,
5/16 18	.3125	1/ 4-87%, E-87%, F-77%, G-71%, 17/64-65%, H-64%, I-56%,
5/16 24	.3125	17/64-87%, H-86%, I-75%, J-66%, K-58%, 9/32-58%,
3/ 8 16	.3750	N-90%, 5/16-77%, O-73%, P-64%, 21/64-58%, Q-53%,
3/ 8 24	.3750	21/64-87%, Q-79%, R-67%, 11/32-58%,
7/16 14	.4375	T-86%, 23/64-84%, U-75%, 3/ 8-67%, V-65%, W-56%, 25/64-51%,
7/16 20	.4375	W-79%, 25/64-72%, X-62%, Y-52%,
1/ 2 13	.5000	Z-87%, 27/64-78%, 7/16-63%,
1/ 2 20	.5000	29/64-72%,
5/ 8 11	.6250	17/32-79%, 35/64-66%, 9/16-53%, 9/16-53%,
5/ 8 18	.6250	9/16-87%, 37/64-65%, 9/16-87%,
M 2 0.40	.0787	1/16-79%, #52-74%, #51-57%,
M 2 0.25	.0787	#50-68%,
M 3 0.50	.1181	#41-86%, #40-79%, #39-73%, #38-65%, #37-55%,
M 3 0.35	.1181	#37-79%, #36-65%,
M 4 0.70	.1575	#30-81%, #29-60%,
M 4 0.50	.1575	#29-84%, #28-66%, 9/64-66%, #27-53%,
M 5 0.80	.1969	#20-88%, #19-75%, #18-67%, 11/64-61%, #17-58%,
M 5 0.50	.1969	#16-78%, #15-66%, #14-58%,
M 6 1.00	.2362	#11-88%, #10-84%, #9-79%, #8-73%, #7-69%, 13/64-65%, #6-63%, #5-60%, #4-53%,
M 6 0.75	.2362	13/64-86%, #6-84%, #5-80%, #4-71%, #3-61%,
M 7 1.00	.2756	A-81%, 15/64-81%, B-74%, C-66%, D-58%, 1/ 4-50%, E-50%,
M 7 0.75	.2756	C-88%, D-77%, 1/ 4-67%, E-67%,
M 8 1.25	.3150	G-84%, 17/64-77%, H-77%, I-67%, J-59%, K-53%, 9/32-53%,
M 8 1.00	.3150	I-84%, J-74%, K-66%, 9/32-66%,
M 8 0.75	.3150	K-89%, 9/32-88%, L-65%, M-52%,
M 10 1.50	.3937	21/64-86%, Q-80%, R-71%, 11/32-65%, S-60%,
M 10 1.25	.3937	R-86%, 11/32-78%, S-71%, T-56%, 23/64-54%,
M 10 1.00	.3937	S-89%, T-70%, 23/64-67%, U-50%,
M 10 0.75	.3937	23/64-89%, U-67%,
M 12 1.75	.4724	X-84%, Y-76%, 13/32-74%, Z-66%, 27/64-56%,
M 12 1.50	.4724	Y-89%, 13/32-86%, Z-77%, 27/64-66%,
M 12 1.25	.4724	27/64-79%, 7/16-55%,
M 12 1.00	.4724	7/16-68%,

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is 75%. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use 75% to 80%. For mild steel, aluminum, cast iron, and cast brass use 70% to 75%. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use 65% to 70%. This table lists the next available American drill except for the letter drills use the next larger size. The percent values after the drill size are the correct values for that drill.

Size		diam.	100%	95%	90%	85%	80%	75%
00	90	.0470	#66	97% #65	83% #65	83% #65	83% #64	76% #64	76%
0	80	.0600	#56	83% #56	83% #56	83% #56	83% #55	49% #55	49%
1	72	.0730	#54	100% #53	75% #53	75% #53	75% #53	75% #53	75%
2	64	.0860	#51	94% #51	94% #50	79% #50	79% #50	79% #49	64%
3	56	.0990	#48	99% 5/64	90% 5/64	90% #46	78% #46	78% #45	73%
4	40	.1120	#46	95% #46	95% #44	80% #44	80% #44	80% #43	71%
6	32	.1380	#40	99% #39	95% #38	90% #37	84% #36	78% 7/64	70%
8	32	.1640	1/ 8	96% 1/ 8	96% #30	87% #29	69% #29	69% #29	69%
10	24	.1900	#29	100% #28	91% #28	91% #27	85% #26	79% #25	75%
10	32	.1900	#25	100% #24	94% #23	89% 5/32	83% #22	81% #21	76%
12	24	.2160	#20	102% #19	92% #18	86% #18	86% 11/64	81% #16	72%
12	28	.2160	#18	100% 11/64	95% #16	84% #16	84% #15	78% #14	73%
1/ 4	20	.2500	#13	100% 3/16	96% #11	91% # 9	83% # 8	79% # 7	75%
1/ 4	28	.2500	13/64	101% # 5	96% # 4	88% # 3	80% # 3	80% 7/32	67%
5/16	18	.3125	C	98% D	92% D	92% 1/ 4	87% F	77% F	77%
5/16	24	.3125	F	103% G	95% 17/64	87% 17/64	87% I	75% I	75%
3/ 8	16	.3750	M	99% 19/64	96% N	90% 5/16	77% 5/16	77% 5/16	77%
3/ 8	24	.3750	P	96% P	96% 21/64	87% 21/64	87% Q	79% R	67%
7/16	14	.4375	11/32	101% S	96% T	86% T	86% U	75% U	75%
7/16	20	.4375	3/ 8	96% 3/ 8	96% V	93% W	79% W	79% 25/64	72%
1/ 2	13	.5000	Y	96% Y	96% Z	87% Z	87% 27/64	78% 7/16	63%
1/ 2	20	.5000	7/16	96% 7/16	96% 29/64	72% 29/64	72% 29/64	72% 29/64	72%
5/ 8	11	.6250	33/64	93% 33/64	93% 33/64	93% 17/32	79% 17/32	79% 35/64	66%
5/ 8	18	.6250	9/16	87% 9/16	87% 9/16	87% 9/16	87% 37/64	65% 37/64	65%
M	2	0.40 .0787	#53	94% #53	94% 1/16	79% 1/16	79% 1/16	79% #52	74%
M	2	0.25 .0787	#51	92% #51	92% #51	92% #50	68% #50	68% #50	68%
M	3	0.50 .1181	#42	96% #42	96% #41	86% #41	86% #40	79% #39	73%
M	3	0.35 .1181	#38	93% #38	93% #38	93% #37	79% #37	79% #36	65%
M	4	0.70 .1575	1/ 8	91% 1/ 8	91% 1/ 8	91% #30	81% #30	81% #29	60%
M	4	0.50 .1575	#29	84% #29	84% #29	84% #29	84% #28	66% #28	66%
M	5	0.80 .1969	5/32	99% #22	97% #20	88% #19	75% #19	75% #19	75%
M	5	0.50 .1969	11/64	98% 11/64	98% #17	93% #16	78% #16	78% #16	78%
M	6	1.00 .2362	#13	100% 3/16	95% #11	88% #10	84% # 9	79% # 8	73%
M	6	0.75 .2362	# 8	97% # 8	97% # 7	92% 13/64	86% # 5	80% # 4	71%
M	7	1.00 .2756	# 1	93% # 1	93% A	81% A	81% A	81% B	74%
M	7	0.75 .2756	B	98% B	98% C	88% C	88% D	77% D	77%
M	8	1.25 .3150	1/ 4	102% F	91% F	91% G	84% 17/64	77% 17/64	77%
M	8	1.00 .3150	17/64	97% 17/64	97% I	84% I	84% J	74% J	74%
M	8	0.75 .3150	J	99% J	99% K	89% K	89% L	65% L	65%
M	10	1.50 .3937	O	101% P	92% P	92% 21/64	86% Q	80% R	71%
M	10	1.25 .3937	21/64	103% Q	97% R	86% R	86% 11/32	78% 11/32	78%
M	10	1.00 .3937	11/32	98% 11/32	98% S	89% T	70% T	70% T	70%
M	10	0.75 .3937	T	93% T	93% T	93% 23/64	89% U	67% U	67%
M	12	1.75 .4724	W	97% W	97% 25/64	91% X	84% Y	76% Y	76%
M	12	1.50 .4724	X	98% Y	89% Y	89% 13/32	86% Z	77% Z	77%
M	12	1.25 .4724	13/32	103% Z	93% Z	93% 27/64	79% 27/64	79% 7/16	55%
M	12	1.00 .4724	27/64	99% 27/64	99% 7/16	68% 7/16	68% 7/16	68% 7/16	68%

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Size		diam.	75%	70%	65%	60%	55%	50%
00	90	.0470	#64	76% #63	69% #62	62% #61	55% #61	55% #60	48%
0	80	.0600	#55	49% #55	49% #55	49% #55	49% #55	49% #55	49%
1	72	.0730	#53	75% 1/16	58% 1/16	58% 1/16	58% #52	53% #51	33%
2	64	.0860	#49	64% #49	64% #49	64% #48	49% #48	49% #48	49%
3	56	.0990	#45	73% #44	56% #44	56% #44	56% #44	56% #43	43%
4	40	.1120	#43	71% #43	71% #42	57% #42	57% 3/32	56% #41	49%
6	32	.1380	7/64	70% 7/64	70% #34	67% #33	62% #32	54% #31	44%
8	32	.1640	#29	69% #29	69% #28	58% #28	58% #27	49% #27	49%
10	24	.1900	#25	75% #24	70% #23	67% #22	61% #20	54% #19	44%
10	32	.1900	#21	76% #20	71% #19	59% #19	59% #18	50% #18	50%
12	24	.2160	#16	72% #15	67% #15	67% #13	57% 3/16	53% #12	50%
12	28	.2160	#14	73% #13	67% #13	67% 3/16	61% #11	54% #10	48%
1/ 4	20	.2500	# 7	75% # 6	71% # 4	63% # 3	57% 7/32	48% 7/32	48%
1/ 4	28	.2500	7/32	67% 7/32	67% 7/32	67% # 2	63% # 1	47% # 1	47%
5/16	18	.3125	F	77% G	71% 17/64	65% I	56% I	56% J	49%
5/16	24	.3125	I	75% J	66% J	66% K	58% 9/32	58% L	42%
3/ 8	16	.3750	5/16	77% P	64% P	64% 21/64	58% Q	53% R	44%
3/ 8	24	.3750	R	67% R	67% R	67% 11/32	58% 11/32	58% S	50%
7/16	14	.4375	U	75% 3/ 8	67% V	65% W	56% W	56% 25/64	51%
7/16	20	.4375	25/64	72% 25/64	72% X	62% X	62% Y	52% Y	52%
1/ 2	13	.5000	7/16	63% 7/16	63% 7/16	63% 29/64	47% 29/64	47% 29/64	47%
1/ 2	20	.5000	29/64	72% 29/64	72% 15/32	48% 15/32	48% 15/32	48% 15/32	48%
5/ 8	11	.6250	35/64	66% 35/64	66% 35/64	66% 9/16	53% 9/16	53% 37/64	40%
5/ 8	18	.6250	37/64	65% 37/64	65% 37/64	65% 19/32	43% 19/32	43% 19/32	43%
M	2	0.40 .0787	#52	74% #51	57% #51	57% #51	57% #50	43% #50	43%
M	2	0.25 .0787	#50	68% #50	68% #49	45% #49	45% #49	45% #49	45%
M	3	0.50 .1181	#39	73% #38	65% #38	65% #37	55% #37	55% #36	45%
M	3	0.35 .1181	#36	65% #36	65% #36	65% 7/64	49% 7/64	49% 7/64	49%
M	4	0.70 .1575	#29	60% #29	60% #29	60% #29	60% #28	47% #28	47%
M	4	0.50 .1575	#28	66% #28	66% #28	66% #27	53% #27	53% #27	53%
M	5	0.80 .1969	#19	75% #18	67% #18	67% 11/64	61% #16	49% #16	49%
M	5	0.50 .1969	#16	78% #15	66% #15	66% #14	58% #14	58% #13	46%
M	6	1.00 .2362	# 8	73% # 7	69% 13/64	65% # 5	60% # 4	53% # 3	45%
M	6	0.75 .2362	# 4	71% # 4	71% # 3	61% # 3	61% 7/32	45% 7/32	45%
M	7	1.00 .2756	B	74% C	66% C	66% D	58% 1/ 4	50% 1/ 4	50%
M	7	0.75 .2756	D	77% 1/ 4	67% 1/ 4	67% F	48% F	48% F	48%
M	8	1.25 .3150	17/64	77% I	67% I	67% J	59% K	53% L	39%
M	8	1.00 .3150	J	74% K	66% K	66% L	49% L	49% L	49%
M	8	0.75 .3150	L	65% L	65% L	65% M	52% M	52% M	52%
M	10	1.50 .3937	R	71% R	71% 11/32	65% S	60% T	47% T	47%
M	10	1.25 .3937	11/32	78% S	71% T	56% T	56% T	56% U	40%
M	10	1.00 .3937	T	70% T	70% 23/64	67% U	50% U	50% U	50%
M	10	0.75 .3937	U	67% U	67% U	67% 3/ 8	49% 3/ 8	49% 3/ 8	49%
M	12	1.75 .4724	Y	76% Z	66% Z	66% 27/64	56% 27/64	56% 7/16	39%
M	12	1.50 .4724	Z	77% 27/64	66% 27/64	66% 7/16	46% 7/16	46% 7/16	46%
M	12	1.25 .4724	7/16	55% 7/16	55% 7/16	55% 7/16	55% 7/16	55% 29/64	30%
M	12	1.00 .4724	7/16	68% 7/16	68% 7/16	68% 29/64	38% 29/64	38% 29/64	38%

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is group 2. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use group 1. For mild steel, aluminum, cast iron, and cast brass use group 2. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use group 3. This table lists the next available American drill except for the letter drills use the next larger size. Pick the group best suited for you work pick either drill listed. Metric drills have been add as they will become more available. The percent values after the drill size are the correct values for that drill.

Size	diam.		80%		75%		70%		65%	
00	90 .0470	#64	0.0005	76% #64	-.0002	76% #63	0.0001	69% #62	0.0004	62%
0	80 .0600	#55	0.0050	49% #55	0.0042	49% #55	0.0034	49% #55	0.0026	49%
1	72 .0730	#53	0.0009	75% #53	0.0000	75% 1/16	0.0021	58% 1/16	0.0012	58%
2	64 .0860	#50	0.0002	79% #49	0.0022	64% #49	0.0012	64% #49	0.0002	64%
3	56 .0990	#46	0.0006	78% #45	0.0004	73% #44	0.0032	56% #44	0.0021	56%
4	40 .1120	#44	-.0000	80% #43	0.0014	71% #43	-.0003	71% #42	0.0026	57%
6	32 .1380	#36	0.0010	78% 7/64	0.0018	70% 7/64	-.0002	70% #34	-.0006	67%
8	32 .1640	#29	0.0045	69% #29	0.0024	69% #29	0.0004	69% #28	0.0029	58%
10	24 .1900	#26	0.0003	79% #25	0.0001	75% #24	-.0001	70% #23	-.0008	67%
10	32 .1900	#22	-.0005	81% #21	-.0006	76% #20	-.0006	71% #19	0.0024	59%
12	24 .2160	11/64	-.0008	81% #16	0.0016	72% #15	0.0019	67% #15	-.0008	67%
12	28 .2160	#15	0.0011	78% #14	0.0008	73% #13	0.0015	67% #13	-.0008	67%
1/ 4	20 .2500	# 8	0.0010	79% # 7	-.0003	75% # 6	-.0005	71% # 4	0.0012	63%
1/ 4	28 .2500	# 3	0.0001	80% 7/32	0.0036	67% 7/32	0.0013	67% 7/32	-.0010	67%
5/16	18 .3125	F	0.0022	77% F	-.0014	77% G	-.0010	71% 17/64	0.0000	65%
5/16	24 .3125	I	0.0028	75% I	0.0001	75% J	0.0024	66% J	-.0003	66%
3/ 8	16 .3750	5/16	0.0025	77% 5/16	-.0016	77% P	0.0048	64% P	0.0008	64%
3/ 8	24 .3750	Q	0.0003	79% R	0.0046	67% R	0.0019	67% R	-.0008	67%
7/16	14 .4375	U	0.0047	75% U	0.0001	75% 3/ 8	0.0025	67% V	-.0002	65%
7/16	20 .4375	W	0.0005	79% 25/64	0.0018	72% 25/64	-.0014	72% X	0.0017	62%
1/ 2	13 .5000	27/64	0.0018	78% 7/16	0.0124	63% 7/16	0.0074	63% 7/16	0.0025	63%
1/ 2	20 .5000	29/64	0.0051	72% 29/64	0.0018	72% 29/64	-.0014	72% 15/32	0.0110	48%
5/ 8	11 .6250	17/32	0.0008	79% 35/64	0.0105	66% 35/64	0.0046	66% 35/64	-.0013	66%
5/ 8	18 .6250	37/64	0.0108	65% 37/64	0.0072	65% 37/64	0.0036	65% 37/64	0.0000	65%
M 2	0.40 .0787	1/16	0.0001	79% #52	0.0001	74% #51	0.0026	57% #51	0.0016	57%
M 2	0.25 .0787	#50	0.0015	68% #50	0.0008	68% #50	0.0002	68% #49	0.0026	45%
M 3	0.50 .1181	#40	0.0003	79% #39	0.0006	73% #38	0.0013	65% #38	0.0000	65%
M 3	0.35 .1181	#37	0.0002	79% #36	0.0018	65% #36	0.0009	65% #36	0.0000	65%
M 4	0.70 .1575	#30	-.0003	81% #29	0.0054	60% #29	0.0036	60% #29	0.0018	60%
M 4	0.50 .1575	#28	0.0035	66% #28	0.0022	66% #28	0.0009	66% #28	-.0004	66%
M 5	0.80 .1969	#19	0.0019	75% #19	-.0002	75% #18	0.0013	67% #18	-.0008	67%
M 5	0.50 .1969	#16	0.0006	78% #16	-.0007	78% #15	0.0010	66% #15	-.0002	66%
M 6	1.00 .2362	# 9	0.0007	79% # 8	0.0011	73% # 7	0.0006	69% 13/64	0.0001	65%
M 6	0.75 .2362	# 5	-.0000	80% # 4	0.0015	71% # 4	-.0004	71% # 3	0.0017	61%
M 7	1.00 .2756	A	-.0007	81% B	0.0008	74% C	0.0022	66% C	-.0003	66%
M 7	0.75 .2756	D	0.0011	77% D	-.0008	77% 1/ 4	0.0013	67% 1/ 4	-.0007	67%
M 8	1.25 .3150	17/64	0.0018	77% 17/64	-.0014	77% I	0.0018	67% I	-.0014	67%
M 8	1.00 .3150	J	0.0030	74% J	0.0004	74% K	0.0018	66% K	-.0007	66%
M 8	0.75 .3150	L	0.0057	65% L	0.0038	65% L	0.0019	65% L	-.0000	65%
M 10	1.50 .3937	Q	-.0003	80% R	0.0028	71% R	-.0010	71% 11/32	-.0000	65%
M 10	1.25 .3937	11/32	0.0012	78% 11/32	-.0020	78% S	-.0010	71% T	0.0059	56%
M 10	1.00 .3937	T	0.0052	70% T	0.0027	70% T	0.0001	70% 23/64	-.0011	67%
M 10	0.75 .3937	U	0.0050	67% U	0.0031	67% U	0.0011	67% U	-.0008	67%
M 12	1.75 .4724	Y	0.0032	76% Y	-.0013	76% Z	0.0032	66% Z	-.0013	66%
M 12	1.50 .4724	Z	0.0019	77% Z	-.0019	77% 27/64	0.0032	66% 27/64	-.0007	66%
M 12	1.25 .4724	27/64	0.0006	79% 7/16	0.0130	55% 7/16	0.0098	55% 7/16	0.0066	55%
M 12	1.00 .4724	7/16	0.0060	68% 7/16	0.0034	68% 7/16	0.0009	68% 7/16	-.0017	68%

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is group 2. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use group 1. For mild steel, aluminum, cast iron, and cast brass use group 2. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use group 3. This table lists the next available American drill except for the letter drills use the next larger size. Pick the group best suited for you work pick either drill listed. Metric drills have been add as they will become more available. Note letter drills have been substituted for the next larger fractional drill.The percent values after the drill size are the correct values for that drill.

Size	diam.		80%		75%		70%		65%	
00	90 .0470	#64	0.0005	76% #64	-.0002	76% #63	0.0001	69% #62	0.0004	62%
0	80 .0600	#55	0.0050	49% #55	0.0042	49% #55	0.0034	49% #55	0.0026	49%
1	72 .0730	#53	0.0009	75% #53	0.0000	75% 1/16	0.0021	58% 1/16	0.0012	58%
2	64 .0860	#50	0.0002	79% #49	0.0022	64% #49	0.0012	64% #49	0.0002	64%
3	56 .0990	#46	0.0006	78% #45	0.0004	73% #44	0.0032	56% #44	0.0021	56%
4	40 .1120	#44	-.0000	80% #43	0.0014	71% #43	-.0003	71% #42	0.0026	57%
6	32 .1380	#36	0.0010	78% 7/64	0.0018	70% 7/64	-.0002	70% #34	-.0006	67%
8	32 .1640	#29	0.0045	69% #29	0.0024	69% #29	0.0004	69% #28	0.0029	58%
10	24 .1900	#26	0.0003	79% #25	0.0001	75% #24	-.0001	70% #23	-.0008	67%
10	32 .1900	#22	-.0005	81% #21	-.0006	76% #20	-.0006	71% #19	0.0024	59%
12	24 .2160	11/64	-.0008	81% #16	0.0016	72% #15	0.0019	67% #15	-.0008	67%
12	28 .2160	#15	0.0011	78% #14	0.0008	73% #13	0.0015	67% #13	-.0008	67%
1/ 4	20 .2500	# 8	0.0010	79% # 7	-.0003	75% # 6	-.0005	71% # 4	0.0012	63%
1/ 4	28 .2500	# 3	0.0001	80% 7/32	0.0036	67% 7/32	0.0013	67% 7/32	-.0010	67%
5/16	18 .3125	17/64	0.0108	65% 17/64	0.0072	65% 17/64	0.0036	65% 17/64	0.0000	65%
5/16	24 .3125	9/32	0.0121	58% 9/32	0.0094	58% 9/32	0.0067	58% 9/32	0.0040	58%
3/ 8	16 .3750	5/16	0.0025	77% 5/16	-.0016	77% 21/64	0.0099	58% 21/64	0.0059	58%
3/ 8	24 .3750	11/32	0.0121	58% 11/32	0.0094	58% 11/32	0.0067	58% 11/32	0.0040	58%
7/16	14 .4375	3/ 8	0.0117	67% 3/ 8	0.0071	67% 3/ 8	0.0025	67% 25/64	0.0134	51%
7/16	20 .4375	25/64	0.0051	72% 25/64	0.0018	72% 25/64	-.0014	72% 13/32	0.0110	48%
1/ 2	13 .5000	27/64	0.0018	78% 7/16	0.0124	63% 7/16	0.0074	63% 7/16	0.0025	63%
1/ 2	20 .5000	29/64	0.0051	72% 29/64	0.0018	72% 29/64	-.0014	72% 15/32	0.0110	48%
5/ 8	11 .6250	17/32	0.0008	79% 35/64	0.0105	66% 35/64	0.0046	66% 35/64	-.0013	66%
5/ 8	18 .6250	37/64	0.0108	65% 37/64	0.0072	65% 37/64	0.0036	65% 37/64	0.0000	65%
M 2	0.40 .0787	1/16	0.0001	79% #52	0.0001	74% #51	0.0026	57% #51	0.0016	57%
M 2	0.25 .0787	#50	0.0015	68% #50	0.0008	68% #50	0.0002	68% #49	0.0026	45%
M 3	0.50 .1181	#40	0.0003	79% #39	0.0006	73% #38	0.0013	65% #38	0.0000	65%
M 3	0.35 .1181	#37	0.0002	79% #36	0.0018	65% #36	0.0009	65% #36	0.0000	65%
M 4	0.70 .1575	#30	-.0003	81% #29	0.0054	60% #29	0.0036	60% #29	0.0018	60%
M 4	0.50 .1575	#28	0.0035	66% #28	0.0022	66% #28	0.0009	66% #28	-.0004	66%
M 5	0.80 .1969	#19	0.0019	75% #19	-.0002	75% #18	0.0013	67% #18	-.0008	67%
M 5	0.50 .1969	#16	0.0006	78% #16	-.0007	78% #15	0.0010	66% #15	-.0002	66%
M 6	1.00 .2362	# 9	0.0007	79% # 8	0.0011	73% # 7	0.0006	69% 13/64	0.0001	65%
M 6	0.75 .2362	# 5	-.0000	80% # 4	0.0015	71% # 4	-.0004	71% # 3	0.0017	61%
M 7	1.00 .2756	15/64	-.0003	81% 1/ 4	0.0128	50% 1/ 4	0.0102	50% 1/ 4	0.0077	50%
M 7	0.75 .2756	1/ 4	0.0051	67% 1/ 4	0.0032	67% 1/ 4	0.0013	67% 1/ 4	-.0007	67%
M 8	1.25 .3150	17/64	0.0018	77% 17/64	-.0014	77% 9/32	0.0111	53% 9/32	0.0079	53%
M 8	1.00 .3150	9/32	0.0073	66% 9/32	0.0047	66% 9/32	0.0021	66% 9/32	-.0004	66%
M 8	0.75 .3150	19/64	0.0126	47% 19/64	0.0107	47% 19/64	0.0088	47% 19/64	0.0069	47%
M 10	1.50 .3937	11/32	0.0115	65% 11/32	0.0076	65% 11/32	0.0038	65% 11/32	-.0000	65%
M 10	1.25 .3937	11/32	0.0012	78% 11/32	-.0020	78% 23/64	0.0104	54% 23/64	0.0073	54%
M 10	1.00 .3937	23/64	0.0066	67% 23/64	0.0041	67% 23/64	0.0015	67% 23/64	-.0011	67%
M 10	0.75 .3937	3/ 8	0.0120	49% 3/ 8	0.0101	49% 3/ 8	0.0081	49% 3/ 8	0.0062	49%
M 12	1.75 .4724	13/32	0.0055	74% 13/32	0.0010	74% 27/64	0.0121	56% 27/64	0.0076	56%
M 12	1.50 .4724	27/64	0.0108	66% 27/64	0.0070	66% 27/64	0.0032	66% 27/64	-.0007	66%
M 12	1.25 .4724	27/64	0.0006	79% 7/16	0.0130	55% 7/16	0.0098	55% 7/16	0.0066	55%
M 12	1.00 .4724	7/16	0.0060	68% 7/16	0.0034	68% 7/16	0.0009	68% 7/16	-.0017	68%

Here are the sizes of drill required to produce the required size for tapping the required thread. For each line the first part is the size of screw followed by the threads per inch or in metric the pitch. For example 4 40 is a size 4 screw with 40 threads per inch. While M 2 0.40 is a metric 2mm with a 0.40mm pitch, the distances between one peak to the next. Depending on what kind of material being tapped the size of hole will vary. When taping by hand use 90% to 50% and when using power tools use 80% through 50%. The most common used size drill is group 2. For sheet brass, sheet nickel, babbitt, white metal, hard rubber use group 1. For mild steel, aluminum, cast iron, and cast brass use group 2. For bronze, tool steel, drop forging, stainless steel, cast steel, nickel, and copper use group 3. This table lists the next available American drill except for the letter drills use the next larger size. Pick the group best suited for you work pick either drill listed. Metric drills have been add as they will become more available. Note letter drills have been substituted for the next larger fractional drill.

Size	diam.	group 1		group 2		group 3			
00 90	.0470	#64	76%	#64	76%	#63	69%	#62	62%
0 80	.0600	#55	49%	#55	49%	#55	49%	#55	49%
1 72	.0730	#53	75%	#53	75%	1/16	58%	1/16	58%
2 64	.0860	#50	79%	#49	64%	#49	64%	#49	64%
3 56	.0990	#46	78%	#45	73%	#44	56%	#44	56%
4 40	.1120	#44	80%	#43	71%	#43	71%	#42	57%
6 32	.1380	#36	78%	7/64	70%	7/64	70%	#34	67%
8 32	.1640	#29	69%	#29	69%	#29	69%	#28	58%
10 24	.1900	#26	79%	#25	75%	#24	70%	#23	67%
10 32	.1900	#22	81%	#21	76%	#20	71%	#19	59%
12 24	.2160	11/64	81%	#16	72%	#15	67%	#15	67%
12 28	.2160	#15	78%	#14	73%	#13	67%	#13	67%
1/ 4 20	.2500	# 8	79%	# 7	75%	# 6	71%	# 4	63%
1/ 4 28	.2500	# 3	80%	7/32	67%	7/32	67%	7/32	67%
5/16 18	.3125	17/64	65%	17/64	65%	17/64	65%	17/64	65%
5/16 24	.3125	9/32	58%	9/32	58%	9/32	58%	9/32	58%
3/ 8 16	.3750	5/16	77%	5/16	77%	21/64	58%	21/64	58%
3/ 8 24	.3750	11/32	58%	11/32	58%	11/32	58%	11/32	58%
7/16 14	.4375	3/ 8	67%	3/ 8	67%	3/ 8	67%	25/64	51%
7/16 20	.4375	25/64	72%	25/64	72%	25/64	72%	13/32	48%
1/ 2 13	.5000	27/64	78%	7/16	63%	7/16	63%	7/16	63%
1/ 2 20	.5000	29/64	72%	29/64	72%	29/64	72%	15/32	48%
5/ 8 11	.6250	17/32	79%	35/64	66%	35/64	66%	35/64	66%
5/ 8 18	.6250	37/64	65%	37/64	65%	37/64	65%	37/64	65%
M 2 0.40	.0787	1/16	79%	#52	74%	#51	57%	#51	57%
M 2 0.25	.0787	#50	68%	#50	68%	#50	68%	#49	45%
M 3 0.50	.1181	#40	79%	#39	73%	#38	65%	#38	65%
M 3 0.35	.1181	#37	79%	#36	65%	#36	65%	#36	65%
M 4 0.70	.1575	#30	81%	#29	60%	#29	60%	#29	60%
M 4 0.50	.1575	#28	66%	#28	66%	#28	66%	#28	66%
M 5 0.80	.1969	#19	75%	#19	75%	#18	67%	#18	67%
M 5 0.50	.1969	#16	78%	#16	78%	#15	66%	#15	66%
M 6 1.00	.2362	# 9	79%	# 8	73%	# 7	69%	13/64	65%
M 6 0.75	.2362	# 5	80%	# 4	71%	# 4	71%	# 3	61%
M 7 1.00	.2756	15/64	81%	1/ 4	50%	1/ 4	50%	1/ 4	50%
M 7 0.75	.2756	1/ 4	67%	1/ 4	67%	1/ 4	67%	1/ 4	67%
M 8 1.25	.3150	17/64	77%	17/64	77%	9/32	53%	9/32	53%
M 8 1.00	.3150	9/32	66%	9/32	66%	9/32	66%	9/32	66%
M 8 0.75	.3150	19/64	47%	19/64	47%	19/64	47%	19/64	47%
M 10 1.50	.3937	11/32	65%	11/32	65%	11/32	65%	11/32	65%
M 10 1.25	.3937	11/32	78%	11/32	78%	23/64	54%	23/64	54%
M 10 1.00	.3937	23/64	67%	23/64	67%	23/64	67%	23/64	67%
M 10 0.75	.3937	3/ 8	49%	3/ 8	49%	3/ 8	49%	3/ 8	49%
M 12 1.75	.4724	13/32	74%	13/32	74%	27/64	56%	27/64	56%
M 12 1.50	.4724	27/64	66%	27/64	66%	27/64	66%	27/64	66%
M 12 1.25	.4724	27/64	79%	7/16	55%	7/16	55%	7/16	55%
M 12 1.00	.4724	7/16	68%	7/16	68%	7/16	68%	7/16	68%

This is a table of US and metric drills for comparison. For each entry there is the drill size followed by the US decimal equivalence.

#80	0.0135	2.6mm	0.1024	# 7	0.2010	8.3mm	0.3268	12.4mm	0.4882
#79	0.0145	#37	0.1040	13/64	0.2031	21/64	0.3281	12.5mm	0.4921
#78	0.0160	2.7mm	0.1063	# 6	0.2040	8.4mm	0.3307	12.6mm	0.4961
#77	0.0180	#36	0.1065	5.2mm	0.2047	Q	0.3320	1/ 2	0.5000
#76	0.0200	7/64	0.1094	# 5	0.2055	8.5mm	0.3346	12.7mm	0.5000
#75	0.0210	#35	0.1100	5.3mm	0.2087	8.6mm	0.3386	12.8mm	0.5039
#74	0.0225	2.8mm	0.1102	# 4	0.2090	R	0.3390	12.9mm	0.5079
#73	0.0240	#34	0.1110	5.4mm	0.2126	8.7mm	0.3425	13.0mm	0.5118
#72	0.0250	#33	0.1130	# 3	0.2130	11/32	0.3438	33/64	0.5156
#71	0.0260	2.9mm	0.1142	5.5mm	0.2165	8.8mm	0.3465	17/32	0.5313
#70	0.0280	#32	0.1160	7/32	0.2188	S	0.3480	35/64	0.5469
#69	0.0292	3.0mm	0.1181	5.6mm	0.2205	8.9mm	0.3504	14.0mm	0.5512
#68	0.0310	#31	0.1200	# 2	0.2210	9.0mm	0.3543	9/16	0.5625
#67	0.0320	3.1mm	0.1220	5.7mm	0.2244	T	0.3580	9/16	0.5625
#66	0.0330	1/ 8	0.1250	# 1	0.2280	9.1mm	0.3583	37/64	0.5781
#65	0.0350	3.2mm	0.1260	5.8mm	0.2283	23/64	0.3594	15.0mm	0.5906
#64	0.0360	#30	0.1285	5.9mm	0.2323	9.2mm	0.3622	19/32	0.5938
#63	0.0370	3.3mm	0.1299	A	0.2340	9.3mm	0.3661	5/8	0.6250
#62	0.0380	3.4mm	0.1339	15/64	0.2344	U	0.3680	16.0mm	0.6299
#61	0.0390	#29	0.1360	6.0mm	0.2362	9.4mm	0.3701	17.0mm	0.6693
1.0mm	0.0394	3.5mm	0.1378	B	0.2380	9.5mm	0.3740	11/16	0.6875
#60	0.0400	#28	0.1405	6.1mm	0.2402	3/ 8	0.3750	18.0mm	0.7087
#59	0.0410	9/64	0.1406	C	0.2420	V	0.3770	19.0mm	0.7480
#58	0.0420	3.6mm	0.1417	6.2mm	0.2441	9.6mm	0.3780	3/4	0.7500
#57	0.0430	#27	0.1440	D	0.2460	9.7mm	0.3819	49/64	0.7656
1.1mm	0.0433	3.7mm	0.1457	6.3mm	0.2480	9.8mm	0.3858	19.5mm	0.7677
#56	0.0465	#26	0.1470	1/ 4	0.2500	W	0.3860	25/32	0.7812
1.2mm	0.0472	#25	0.1495	E	0.2500	9.9mm	0.3898	20mm	0.7874
1.3mm	0.0512	3.8mm	0.1496	6.4mm	0.2520	25/64	0.3906	51/64	0.7969
#55	0.0520	#24	0.1520	6.5mm	0.2559	10.0mm	0.3937	20.5mm	0.8071
#54	0.0550	3.9mm	0.1535	F	0.2570	X	0.3970	13/16	0.8125
1.4mm	0.0551	#23	0.1540	6.6mm	0.2598	10.1mm	0.3976	21mm	0.8268
1.5mm	0.0591	5/32	0.1563	G	0.2610	10.2mm	0.4016	53/64	0.8281
#53	0.0595	#22	0.1570	6.7mm	0.2638	Y	0.4040	27/32	0.8438
1/16	0.0625	4.0mm	0.1575	17/64	0.2656	10.3mm	0.4055	21.5mm	0.8465
1.6mm	0.0630	#21	0.1590	H	0.2660	13/32	0.4063	55/64	0.8594
#52	0.0635	#20	0.1610	6.8mm	0.2677	10.4mm	0.4094	22mm	0.8661
1.7mm	0.0669	4.1mm	0.1614	6.9mm	0.2717	Z	0.4130	7/8	0.8750
#51	0.0670	4.2mm	0.1654	I	0.2720	10.5mm	0.4134	22.5mm	0.8858
#50	0.0700	#19	0.1660	7.0mm	0.2756	10.6mm	0.4173	57/64	0.8906
1.8mm	0.0709	4.3mm	0.1693	J	0.2770	10.7mm	0.4213	23mm	0.9055
#49	0.0730	#18	0.1695	7.1mm	0.2795	27/64	0.4219	29/32	0.9062
1.9mm	0.0748	11/64	0.1719	K	0.2810	10.8mm	0.4252	59/64	0.9219
#48	0.0760	#17	0.1730	9/32	0.2813	10.9mm	0.4291	23.5mm	0.9252
5/64	0.0781	4.4mm	0.1732	7.2mm	0.2835	11.0mm	0.4331	15/16	0.9375
#47	0.0785	#16	0.1770	7.3mm	0.2874	11.1mm	0.4370	24mm	0.9449
2.0mm	0.0787	4.5mm	0.1772	L	0.2900	7/16	0.4375	61/64	0.9531
#46	0.0810	#15	0.1800	7.4mm	0.2913	11.2mm	0.4409	24.5mm	0.9646
#45	0.0820	4.6mm	0.1811	M	0.2950	11.3mm	0.4449	31/32	0.9688
2.1mm	0.0827	#14	0.1820	7.5mm	0.2953	11.4mm	0.4488	25mm	0.9843
#44	0.0860	#13	0.1850	19/64	0.2969	11.5mm	0.4528	63/64	0.9844
2.2mm	0.0866	4.7mm	0.1850	7.6mm	0.2992	29/64	0.4531	1	1.0000
#43	0.0890	3/16	0.1875	N	0.3020	11.6mm	0.4567	25.4	1.0000
2.3mm	0.0906	#12	0.1890	7.7mm	0.3031	11.7mm	0.4606		
#42	0.0935	4.8mm	0.1890	7.8mm	0.3071	11.8mm	0.4646		
3/32	0.0938	#11	0.1910	7.9mm	0.3110	11.9mm	0.4685		
2.4mm	0.0945	4.9mm	0.1929	5/16	0.3125	15/32	0.4688		
#41	0.0960	#10	0.1935	8.0mm	0.3150	12.0mm	0.4724		
#40	0.0980	# 9	0.1960	O	0.3160	12.1mm	0.4764		
2.5mm	0.0984	5.0mm	0.1969	8.1mm	0.3189	12.2mm	0.4803		
#39	0.0995	# 8	0.1990	8.2mm	0.3228	12.3mm	0.4843		
#38	0.1015	5.1mm	0.2008	P	0.3230	31/64	0.4844		

Extended table of drill sizes

107	0.0019	.85mm	0.0335	40	0.0980	12	0.1890	M	0.2950
106	0.0023	65	0.0350	2.5mm	0.0984	11	0.1910	7.5mm	0.2953
105	0.0027	.9mm	0.0354	39	0.0995	4.9mm	0.1929	19/64	0.2969
104	0.0031	64	0.0360	38	0.1015	10	0.1935	7.6mm	0.2992
103	0.0035	63	0.0370	2.6mm	0.1024	9	0.1960	N	0.3020
102	0.0039	.95mm	0.0374	37	0.1040	5.mm	0.1969	7.7mm	0.3031
.1mm	0.0039	62	0.0380	2.7mm	0.1063	8	0.1990	7.75mm	0.3051
101	0.0043	61	0.0390	36	0.1065	5.1mm	0.2008	7.8mm	0.3071
100	0.0047	1mm	0.0394	2.75mm	0.1083	7	0.2010	7.9mm	0.3110
99	0.0051	60	0.0400	7/64	0.1094	13/64	0.2031	5/16	0.3125
98	0.0055	59	0.0410	35	0.1100	6	0.2040	8mm	0.3150
97	0.0059	1.05mm	0.0413	2.8mm	0.1102	5.2mm	0.2047	O	0.3160
96	0.0063	58	0.0420	34	0.1110	5	0.2055	8.1mm	0.3189
95	0.0067	57	0.0430	33	0.1130	5.25mm	0.2067	8.2mm	0.3228
94	0.0071	1.1mm	0.0433	2.9mm	0.1142	5.3mm	0.2087	P	0.3230
93	0.0075	1.15mm	0.0453	32	0.1160	4	0.2090	8.25mm	0.3248
92	0.0079	56	0.0465	3mm	0.1181	5.4mm	0.2126	8.3mm	0.3268
.2mm	0.0079	3/64	0.0469	31	0.1200	3	0.2130	21/64	0.3281
91	0.0083	1.2mm	0.0472	3.1mm	0.1181	5.5mm	0.2165	8.4mm	0.3307
90	0.0087	1.25mm	0.0492	1/8	0.1250	7/32	0.2188	Q	0.3320
.22mm	0.0087	1.3mm	0.0512	30	0.1285	5.6mm	0.2205	8.5mm	0.3346
89	0.0091	55	0.0520	3.3mm	0.1299	2	0.2211	8.6mm	0.3386
88	0.0095	1.35mm	0.0531	3.4mm	0.1339	5.7mm	0.2244	R	0.3390
.25mm	0.0098	54	0.0550	29	0.1360	5.75mm	0.2264	8.7mm	0.3425
87	0.0100	1.4mm	0.0551	3.5mm	0.1378	1	0.2280	11/32	0.3438
86	0.0105	1.45mm	0.0571	28	0.1405	5.8mm	0.2283	8.75mm	0.3445
85	0.0110	1.5mm	0.0591	9/64	0.1406	5.9mm	0.2323	8.8mm	0.3465
.28mm	0.0110	53	0.0595	3.6mm	0.1417	A	0.2340	S	0.3480
84	0.0115	1.55mm	0.0610	27	0.1440	15/64	0.2344	8.9mm	0.3504
.3mm	0.0118	1/16	0.0625	3.7mm	0.1457	6mm	0.2362	9mm	0.3543
83	0.0120	52	0.0635	26	0.1470	B	0.2380	T	0.3580
82	0.0125	1.65mm	0.0650	3.75mm	0.1476	6.1mm	0.2402	9.1mm	0.3583
.32mm	0.0126	1.7mm	0.0669	25	0.1495	C	0.2420	23/64	0.3594
81	0.0130	51	0.0670	3.8mm	0.1535	6.2mm	0.2441	9.2mm	0.3622
80	0.0135	1.75mm	0.0689	24	0.1520	D	0.2460	9.25mm	0.3642
.35mm	0.0138	50	0.0700	3.9mm	0.1535	6.25mm	0.2461	9.3mm	0.3661
79	0.0145	1.8mm	0.0709	23	0.1540	6.3mm	0.2480	U	0.3680
1/64	0.0156	1.85mm	0.0728	5/32	0.1562	1/4	0.2500	9.4mm	0.3701
.4mm	0.0157	49	0.0730	22	0.1570	E	0.2500	9.5mm	0.3740
78	0.0160	1.9mm	0.0748	4mm	0.1575	6.4mm	0.2520	3/8	0.3750
.45mm	0.0177	48	0.0760	21	0.1590	6.5mm	0.2559	V	0.3770
77	0.0180	1.95mm	0.0768	20	0.1610	F	0.2570	9.6mm	0.3780
.5mm	0.0197	5/64	0.0781	4.1mm	0.1614	6.6mm	0.2598	9.7mm	0.3819
76	0.0200	2mm	0.0787	4.2mm	0.1654	G	0.2610	9.75mm	0.3839
75	0.0210	2.05mm	0.0807	19	0.1660	6.7mm	0.2638	9.8mm	0.3858
.55mm	0.0217	47	0.0785	4.25mm	0.1673	17/64	0.2656	W	0.3860
74	0.0225	46	0.0810	4.3mm	0.1693	6.75mm	0.2657	9.9mm	0.3898
.6mm	0.0236	45	0.0820	18	0.1695	H	0.2660	25/64	0.3906
73	0.0240	2.1mm	0.0827	11/64	0.1719	6.8mm	0.2677	10mm	0.3937
72	0.0250	2.15mm	0.0846	17	0.1730	6.9mm	0.2717	X	0.3970
.65mm	0.0256	44	0.0860	4.4mm	0.1732	I	0.2720	10.1mm	0.3976
71	0.0260	2.2mm	0.0866	16	0.1770	7mm	0.2756	10.2mm	0.4016
.7mm	0.0276	2.25mm	0.0886	4.5mm	0.1772	J	0.2770	Y	0.4040
70	0.0280	43	0.0890	15	0.1800	7.1mm	0.2795	10.3mm	0.4055
69	0.0292	2.3mm	0.0906	4.6mm	0.1811	K	0.2810	13/32	0.4062
.75mm	0.0295	2.35mm	0.0925	14	0.1820	9/32	0.2812	10.4mm	0.4094
68	0.0310	42	0.0935	13	0.1850	7.2mm	0.2835	Z	0.4130
1/32	0.0312	3/32	0.0938	4.7mm	0.1850	7.25mm	0.2854	10.5mm	0.4134
.8mm	0.0315	2.4mm	0.0945	4.75mm	0.1870	7.3mm	0.2874	10.6mm	0.4173
67	0.0320	41	0.0960	3/16	0.1875	L	0.2900	10.7mm	0.4213
66	0.0330	2.45mm	0.0965	4.8mm	0.1890	7.4mm	0.2913	27/64	0.4219

10.8mm	0.4252	16mm	0.6299	21.2mm	0.8346
10.9mm	0.4291	16.1mm	0.6339	21.3mm	0.8386
11mm	0.4331	16.2mm	0.6378	21.4mm	0.8425
11.1mm	0.4370	41/64	0.6406	27/32	0.8438
7/16	0.4375	16.3mm	0.6417	21.5mm	0.8465
11.2mm	0.4409	16.4mm	0.6457	21.6mm	0.8504
11.3mm	0.4449	16.5mm	0.6496	21.7mm	0.8543
11.4mm	0.4488	16.6mm	0.6535	21.8mm	0.8583
11.5mm	0.4528	21/32	0.6562	55/64	0.8594
29/64	0.4531	16.7mm	0.6575	21.9mm	0.8622
11.6mm	0.4567	16.8mm	0.6614	22mm	0.8661
11.7mm	0.4606	16.9mm	0.6654	22.1mm	0.8701
11.8mm	0.4646	17mm	0.6693	22.2mm	0.8740
11.9mm	0.4685	43/64	0.6719	7/8	0.8750
15/32	0.4688	17.1mm	0.6732	22.3mm	0.8780
12mm	0.4724	17.2mm	0.6772	22.4mm	0.8819
12.1mm	0.4764	17.3mm	0.6811	22.5mm	0.8858
12.2mm	0.4803	17.4mm	0.6850	22.6mm	0.8898
12.3mm	0.4843	11/16	0.6875	57/64	0.8906
31/64	0.4844	17.5mm	0.6890	22.7mm	0.8937
12.4mm	0.4882	17.6mm	0.6929	22.8mm	0.8976
12.5mm	0.4921	17.7mm	0.6969	22.9mm	0.9016
12.6mm	0.4961	17.8mm	0.7008	23mm	0.9055
1/2	0.5000	45/64	0.7031	29/32	0.9062
12.7mm	0.5000	17.9mm	0.7047	23.1mm	0.9094
12.8mm	0.5039	18mm	0.7087	23.2mm	0.9134
12.9mm	0.5079	18.1mm	0.7126	23.3mm	0.9173
13mm	0.5118	18.2mm	0.7165	23.4mm	0.9213
33/64	0.5156	23/32	0.7188	59/64	0.9219
13.1mm	0.5157	18.3mm	0.7205	23.5mm	0.9252
13.2mm	0.5197	18.4mm	0.7244	23.6mm	0.9291
13.3mm	0.5236	18.5mm	0.7283	23.7mm	0.9331
13.4mm	0.5276	18.6mm	0.7323	23.8mm	0.9370
17/32	0.5312	47/64	0.7344	15/16	0.9375
13.5mm	0.5315	18.7mm	0.7362	23.9mm	0.9409
13.6mm	0.5354	18.8mm	0.7402	24mm	0.9449
13.7mm	0.5394	18.9mm	0.7441	24.1mm	0.9488
13.8mm	0.5433	19mm	0.7480	24.2mm	0.9528
35/64	0.5469	3/4	0.7500	61/64	0.9531
13.9mm	0.5472	19.1mm	0.7520	24.3mm	0.9567
14mm	0.5512	19.2mm	0.7559	24.4mm	0.9606
14.1mm	0.5551	19.3mm	0.7598	24.5mm	0.9646
14.2mm	0.5591	19.4mm	0.7638	24.6mm	0.9685
9/16	0.5625	49/64	0.7656	31/32	0.9688
14.3mm	0.5630	19.5mm	0.7677	24.7mm	0.9724
14.4mm	0.5669	19.6mm	0.7717	24.8mm	0.9764
14.5mm	0.5709	19.7mm	0.7756	24.9mm	0.9803
14.6mm	0.5748	19.8mm	0.7795	25mm	0.9843
37/64	0.5781	25/32	0.7812	63/64	0.9844
14.7mm	0.5787	19.9mm	0.7835	25.1	0.9882
14.8mm	0.5827	20mm	0.7874	25.2	0.9921
14.9mm	0.5866	20.1mm	0.7913	25.3	0.9961
15mm	0.5906	20.2mm	0.7953	1	1.0000
19/32	0.5938	51/64	0.7969	25.4	1.0000
15.1mm	0.5945	20.3mm	0.7992		
15.2mm	0.5984	20.4mm	0.8031		
15.3mm	0.6024	20.5mm	0.8071		
15.4mm	0.6063	20.6mm	0.8110		
39/64	0.6094	13/16	0.8125		
15.5mm	0.6102	20.7mm	0.8150		
15.6mm	0.6142	20.8mm	0.8189		
15.7mm	0.6181	20.9mm	0.8228		
15.8mm	0.6220	21mm	0.8268		
5/8	0.6250	53/64	0.8281		
15.9mm	0.6260	21.1mm	0.8307		