

INCH TAP & CLEARANCE DRILL SIZES UNC / UNF / UNEF • DECIMALS IN INCHES				TAP DRILL				CLEARANCE DRILL			
				75% thread for aluminum, brass & plastics		50% thread for steel, stainless & iron		Close fit		Free fit	
Screw size	Major dia.	Threads per inch	Minor dia.	Drill	Dec.	Drill	Dec.	Drill	Dec.	Drill	Dec.
#0	0.0600	80	0.0447	3/64	0.0469	#55	0.0520	#52	0.0635	#50	0.0700
#1	0.0730	64	0.0538	#53	0.0595	1/16	0.0625	#48	0.0760	#46	0.0810
		72	0.0560	#53	0.0595	#52	0.0635				
#2	0.0860	56	0.0641	#50	0.0700	#49	0.0730	#43	0.0890	#41	0.0960
		64	0.0668	#50	0.0700	#48	0.0760				
#3	0.0990	48	0.0734	#47	0.0785	#44	0.0860	#37	0.1040	#35	0.1100
		56	0.0771	#45	0.0820	#43	0.0890				
#4	0.1120	40	0.0813	#43	0.0890	#41	0.0960	#32	0.1160	#30	0.1285
		48	0.0864	#42	0.0935	#40	0.0980				
#5	0.1250	40	0.0943	#38	0.1015	7/64	0.1094	#30	0.1285	#29	0.1360
		44	0.0971	#37	0.1040	#35	0.1100				
#6	0.1380	32	0.0997	#36	0.1065	#32	0.1160	#27	0.1440	#25	0.1495
		40	0.1073	#33	0.1130	#31	0.1200				
#8	0.1640	32	0.1257	#29	0.1360	#27	0.1440	#18	0.1695	#16	0.1770
		36	0.1299	#29	0.1360	#26	0.1470				
#10	0.1900	24	0.1389	#25	0.1495	#20	0.1610	#9	0.1960	#7	0.2010
		32	0.1517	#21	0.1590	#18	0.1695				
#12	0.2160	24	0.1649	#16	0.1770	#12	0.1890	#2	0.2210	#1	0.2280
		28	0.1722	#14	0.1820	#10	0.1935				
		32	0.1777	#13	0.1850	#9	0.1960				
		20	0.1887	#7	0.2010	7/32	0.2188				
1/4"	0.2500	28	0.2062	#3	0.2130	#1	0.2280	F	0.2570	H	0.2660
		32	0.2117	7/32	0.2188	#1	0.2280				
		18	0.2443	F	0.2570	J	0.2770				
5/16"	0.3125	24	0.2614	I	0.2720	9/32	0.2812	P	0.3230	Q	0.3320
		32	0.2742	9/32	0.2812	L	0.2900				
		16	0.2983	5/16	0.3125	Q	0.3320				
3/8"	0.3750	24	0.3239	Q	0.3320	S	0.3480	W	0.3860	X	0.3970
		32	0.3367	11/32	0.3438	T	0.3580				
		14	0.3499	U	0.3680	25/64	0.3906				
7/16"	0.4375	20	0.3762	25/64	0.3906	13/32	0.4062	29/64	0.4531	15/32	0.4687
		28	0.3937	Y	0.4040	Z	0.4130				
		13	0.4056	27/64	0.4219	29/64	0.4531				
1/2"	0.5000	20	0.4387	29/64	0.4531	15/32	0.4688	33/64	0.5156	17/32	0.5312
		28	0.4562	15/32	0.4688	15/32	0.4688				
		12	0.4603	31/64	0.4844	33/64	0.5156				
9/16"	0.5625	18	0.4943	33/64	0.5156	17/32	0.5312	37/64	0.5781	19/32	0.5938
		24	0.5114	33/64	0.5156	17/32	0.5312				
		11	0.5135	17/32	0.5312	9/16	0.5625				
5/8"	0.6250	18	0.5568	37/64	0.5781	19/32	0.5938	41/64	0.6406	21/32	0.6562
		24	0.5739	37/64	0.5781	19/32	0.5938				
		11/16"	0.6875	24	0.6364	41/64	0.6406	21/32	0.6562	45/64	0.7031
3/4"	0.7500	10	0.6273	21/32	0.6562	11/16	0.6875	49/64	0.7656	25/32	0.7812
		16	0.6733	11/16	0.6875	45/64	0.7031				
		20	0.6887	45/64	0.7031	23/32	0.7188				
13/16"	0.8125	20	0.7512	49/64	0.7656	25/32	0.7812	53/64	0.8281	27/32	0.8438
7/8"	0.8750	9	0.7387	49/64	0.7656	51/64	0.7969	57/64	0.8906	29/32	0.9062
		14	0.7874	13/16	0.8125	53/64	0.8281				
		20	0.8137	53/64	0.8281	27/32	0.8438				
15/16"	0.9375	20	0.8762	57/64	0.8906	29/32	0.9062	61/64	0.9531	31/32	0.9688
1"	1.0000	8	0.8466	7/8	0.8750	59/64	0.9219	1-1/64	1.0156	1-1/32	1.0313
		12	0.8978	15/16	0.9375	61/64	0.9531				
		20	0.9387	61/64	0.9531	31/32	0.9688				

TAP & CLEARANCE
tapandclearance.com

75% thread engagement for aluminum, brass & plastics.
50% thread engagement for steel, stainless & cast iron.

Unified threads Class 2B (ASME B1.1); metric threads per ISO 261.
Verify against your tap manufacturer for critical work.



METRIC TAP & CLEARANCE DRILL SIZES ISO 261 COARSE & FINE • DECIMALS IN INCHES				TAP DRILL				CLEARANCE DRILL			
				75% thread for aluminum, brass & plastics		50% thread for steel, stainless & iron		Close fit		Free fit	
Screw size	Major dia.	Pitch (mm)	Minor dia.	Drill	Dec.	Drill	Dec.	Drill	Dec.	Drill	Dec.
M1.5	0.0591	0.35	0.0441	1.15 mm	0.0453	1.25 mm	0.0492	1.6 mm	0.0630	1.65 mm	0.0650
M1.6	0.0630	0.35	0.0481	1.25 mm	0.0492	1.25 mm	0.0492	1.7 mm	0.0669	1.8 mm	0.0709
M1.8	0.0709	0.35	0.0559	1.45 mm	0.0571	1.55 mm	0.0610	1.9 mm	0.0748	2.0 mm	0.0787
M2	0.0787	0.4	0.0617	1.6 mm	0.0630	1.6 mm	0.0630	2.2 mm	0.0866	2.4 mm	0.0945
		0.45	0.0596	1.55 mm	0.0610	1.7 mm	0.0669				
M2.2	0.0866	0.45	0.0674	1.75 mm	0.0689	1.9 mm	0.0748	2.3 mm	0.0906	2.4 mm	0.0945
M2.5	0.0984	0.45	0.0792	2.05 mm	0.0807	2.05 mm	0.0807	2.7 mm	0.1063	2.9 mm	0.1142
M3	0.1181	0.5	0.0968	2.5 mm	0.0984	2.5 mm	0.0984	3.2 mm	0.1260	3.4 mm	0.1339
		0.6	0.0925	2.4 mm	0.0945	2.6 mm	0.1024				
M3.5	0.1378	0.6	0.1122	2.9 mm	0.1142	2.9 mm	0.1142	3.7 mm	0.1457	3.9 mm	0.1535
M4	0.1575	0.7	0.1276	3.3 mm	0.1299	3.3 mm	0.1299	4.3 mm	0.1693	4.5 mm	0.1772
		0.75	0.1255	3.25 mm	0.1280	3.5 mm	0.1378				
M4.5	0.1772	0.75	0.1452	3.75 mm	0.1476	4.0 mm	0.1575	4.75 mm	0.1870	5.0 mm	0.1969
M5	0.1969	0.8	0.1628	4.2 mm	0.1654	4.2 mm	0.1654	5.3 mm	0.2087	5.5 mm	0.2165
		1.0	0.1542	4.0 mm	0.1575	4.4 mm	0.1732				
		0.9	0.1585	4.1 mm	0.1614	4.4 mm	0.1732				
M5.5	0.2165	0.9	0.1782	4.6 mm	0.1811	4.9 mm	0.1929	5.8 mm	0.2283	6.1 mm	0.2402
M6	0.2362	1.0	0.1936	5.0 mm	0.1969	5.0 mm	0.1969	6.4 mm	0.2520	6.6 mm	0.2598
		0.75	0.2043	5.25 mm	0.2067	5.5 mm	0.2165				
M7	0.2756	1.0	0.2330	6.0 mm	0.2362	6.4 mm	0.2520	7.4 mm	0.2913	7.7 mm	0.3031
		0.75	0.2436	6.25 mm	0.2461	6.5 mm	0.2559				
M8	0.3150	1.25	0.2617	6.8 mm	0.2677	6.8 mm	0.2677	8.4 mm	0.3307	9.0 mm	0.3543
		1.0	0.2723	7.0 mm	0.2756	7.4 mm	0.2913				
M9	0.3543	1.25	0.3011	7.8 mm	0.3071	8.2 mm	0.3228	9.5 mm	0.3740	9.9 mm	0.3898
		1.0	0.3117	8.0 mm	0.3150	8.4 mm	0.3307				
M10	0.3937	1.5	0.3298	8.5 mm	0.3346	8.5 mm	0.3346	10.5 mm	0.4134	11.0 mm	0.4331
		1.25	0.3404	8.8 mm	0.3465	9.2 mm	0.3622				
		1.0	0.3511	9.0 mm	0.3543	9.4 mm	0.3701				
M11	0.4331	1.5	0.3691	9.5 mm	0.3740	10.0 mm	0.3937	11.6 mm	0.4567	12.1 mm	0.4764
M12	0.4724	1.75	0.3979	10.2 mm	0.4016	10.2 mm	0.4016	13.0 mm	0.5118	13.5 mm	0.5315
		1.5	0.4085	10.5 mm	0.4134	11.0 mm	0.4331				
		1.25	0.4192	10.8 mm	0.4252	11.2 mm	0.4409				
M14	0.5512	2.0	0.4659	12.1 mm	0.4764	12.7 mm	0.5000	14.75 mm	0.5807	15.5 mm	0.6102
		1.5	0.4873	12.5 mm	0.4921	13.0 mm	0.5118				
		1.25	0.4979	12.8 mm	0.5039	13.2 mm	0.5197				
M15	0.5906	1.5	0.5266	13.5 mm	0.5315	14.0 mm	0.5512	15.75 mm	0.6201	16.5 mm	0.6496
M16	0.6299	2.0	0.5447	14.0 mm	0.5512	14.75 mm	0.5807	16.75 mm	0.6594	17.5 mm	0.6890
		1.5	0.5660	14.5 mm	0.5709	15.0 mm	0.5906				
M17	0.6693	1.5	0.6054	15.5 mm	0.6102	16.0 mm	0.6299	18.0 mm	0.7087	18.5 mm	0.7283
M18	0.7087	2.5	0.6021	15.5 mm	0.6102	16.5 mm	0.6496	19.0 mm	0.7480	20.0 mm	0.7874
		2.0	0.6234	16.0 mm	0.6299	16.75 mm	0.6594				
		1.5	0.6447	16.5 mm	0.6496	17.0 mm	0.6693				
M19	0.7480	2.5	0.6415	16.5 mm	0.6496	17.5 mm	0.6890	20.0 mm	0.7874	21.0 mm	0.8268
M20	0.7874	2.5	0.6809	17.5 mm	0.6890	18.5 mm	0.7283	21.0 mm	0.8268	22.0 mm	0.8661
		2.0	0.7022	18.0 mm	0.7087	18.5 mm	0.7283				
		1.5	0.7235	18.5 mm	0.7283	19.0 mm	0.7480				

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DRILL SIZE DECIMAL EQUIVALENTS

DECIMALS IN INCHES

NUMBER DRILLS						LETTER DRILLS				FRACTIONAL DRILLS			
Drill	Dec.	Drill	Dec.	Drill	Dec.	Drill	Dec.	Drill	Dec.	Drill	Dec.	Drill	Dec.
#1	0.2280	#28	0.1405	#55	0.0520	A	0.2340	N	0.3020	1/64	0.0156	17/64	0.2656
#2	0.2210	#29	0.1360	#56	0.0465	B	0.2380	O	0.3160	1/32	0.0313	9/32	0.2813
#3	0.2130	#30	0.1285	#57	0.0430	C	0.2420	P	0.3230	3/64	0.0469	19/64	0.2969
#4	0.2090	#31	0.1200	#58	0.0420	D	0.2460	Q	0.3320	1/16	0.0625	5/16	0.3125
#5	0.2055	#32	0.1160	#59	0.0410	E	0.2500	R	0.3390	5/64	0.0781	21/64	0.3281
#6	0.2040	#33	0.1130	#60	0.0400	F	0.2570	S	0.3480	3/32	0.0938	11/32	0.3438
#7	0.2010	#34	0.1110	#61	0.0390	G	0.2610	T	0.3580	7/64	0.1094	23/64	0.3594
#8	0.1990	#35	0.1100	#62	0.0380	H	0.2660	U	0.3680	1/8	0.1250	3/8	0.3750
#9	0.1960	#36	0.1065	#63	0.0370	I	0.2720	V	0.3770	9/64	0.1406	25/64	0.3906
#10	0.1935	#37	0.1040	#64	0.0360	J	0.2770	W	0.3860	5/32	0.1563	13/32	0.4063
#11	0.1910	#38	0.1015	#65	0.0350	K	0.2810	X	0.3970	11/64	0.1719	27/64	0.4219
#12	0.1890	#39	0.0995	#66	0.0330	L	0.2900	Y	0.4040	3/16	0.1875	7/16	0.4375
#13	0.1850	#40	0.0980	#67	0.0320	M	0.2950	Z	0.4130	13/64	0.2031	29/64	0.4531
#14	0.1820	#41	0.0960	#68	0.0310					7/32	0.2188	15/32	0.4688
#15	0.1800	#42	0.0935	#69	0.0292					15/64	0.2344	31/64	0.4844
#16	0.1770	#43	0.0890	#70	0.0280					1/4	0.2500	1/2	0.5000
#17	0.1730	#44	0.0860	#71	0.0260								
#18	0.1695	#45	0.0820	#72	0.0250								
#19	0.1660	#46	0.0810	#73	0.0240								
#20	0.1610	#47	0.0785	#74	0.0225								
#21	0.1590	#48	0.0760	#75	0.0210								
#22	0.1570	#49	0.0730	#76	0.0200								
#23	0.1540	#50	0.0700	#77	0.0180								
#24	0.1520	#51	0.0670	#78	0.0160								
#25	0.1495	#52	0.0635	#79	0.0145								
#26	0.1470	#53	0.0595	#80	0.0135								
#27	0.1440	#54	0.0550										

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