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Tap Drill Sizes

Probable percentage of full thread produced in tapped hole using stock sizes of drill.

TAP	TAP DRILL	DECIMAL EQUIV.	THEO. % OF THRD.	PROBABLE OVERSIZE	PROBABLE HOLE SIZE	% OF THIRD	TAP	TAP DRILL	DECIMAL EQUIV.	THEO. % OF THRD.	PROBABLE OVERSIZE	PROBABLE HOLE SIZE	% OF THIRD		
0-80	56	.0465	83	.0015	.0480	74		8	.1990	79	.0038	.2028	73		
	3/64	.0469	81	.0015	.0484	71		7	.2010	75	.0038	.2048	70		
1-64	54	.0550	89	.0015	.0565	81	13/64		.2031	72	.0038	.2069	66		
	53	.0595	67	.0015	.0610	59		1/4-28	3	.2130	80	.0038	.2168	72	
1-72	53	.0595	75	.0015	.0610	67	5/16-18	F	.2570	77	.0038	.2608	72		
	1/16	.0625	58	.0015	.0640	50		G	.2610	71	.0041	.2651	66		
2-56	51	.0670	82	.0017	.0687	74	5/16-24	H	.2660	86	.0041	.2701	78		
	50	.0700	69	.0017	.0717	62		I	.2720	75	.0041	.2761	67		
2-64	50	.0700	79	.0017	.0717	70	3/8-16	5/16	.3125	77	.0044	.3169	72		
	49	.0730	64	.0017	.0747	56		O	.3160	73	.0044	.3204	68		
3-48	48	.0760	85	.0019	.0779	78	3/8-24	21/64	.3281	87	.0044	.3325	79		
	5/64	.0781	77	.0019	.0800	70		Q	.3320	79	.0044	.3364	71		
	47	.0785	76	.0019	.0804	69	7/16-14	T	.3580	86	.0046	.3626	81		
	46	.0810	67	.0019	.0829	60		23/64	.3594	84	.0046	.3640	79		
	45	.0820	63	.0019	.0839	56		U	.3680	75	.0046	.3726	70		
3-56	46	.0810	78	.0019	.0829	69	7/16-20	W	.3860	79	.0046	.3906	72		
	45	.0820	73	.0019	.0839	65		25/64	.3906	72	.0046	.3952	65		
4-40	44	.0860	80	.0020	.0880	74	1/2-13	27/64	.4219	78	.0047	.4266	73		
	43	.0890	71	.0020	.0910	65		1/2-20	29/64	.4531	72	.0047	.4578	65	
4-48	42	.0935	68	.0020	.0955	61	9/16-12	15/32	.4688	87	.0048	.4736	82		
	3/32	.0938	68	.0020	.0958	60		31/64	.4844	72	.0048	.4892	68		
5-40	40	.0980	83	.0023	.1003	76	9/16-18	1/2	.500	87	.0048	.5048	80		
	39	.0995	79	.0023	.1018	71		5/8-11	17/32	.5313	79	.0049	.5362	75	
	38	.1015	72	.0023	.1038	65		5/8-18	9/16	.5625	87	.0049	.5674	80	
5-44	38	.1015	79	.0023	.1038	72	3/4-10	41/64	.6406	84	.0050	.6456	82		
	37	.1040	71	.0023	.1063	63		21/32	.6563	72	.0050	.6613	68		
6-32	37	.1040	84	.0023	.1063	78	3/4-16	11/16	.6875	77	.0050	.6925	71		
	36	.1065	78	.0023	.1088	72		7/8-9	49/64	.7656	76	.0052	.7708	72	
	7/64	.1094	70	.0023	.1120	64	7/8-14	51/64	.7969	84	.0052	.8021	79		
	35	.1100	69	.0026	.1126	63		1-8	55/64	.8594	87	.0059	.8653	83	
	34	.1110	67	.0026	.1136	60			7/8	.875	77	.0059	.8809	73	
6-40	34	.1110	83	.0026	.1136	75	1-12	29/32	.9063	87	.0059	.9122	81		
	33	.1130	77	.0026	.1156	69		59/64	.9219	72	.0060	.9279	67		
	32	.1160	68	.0026	.1186	60		1-14	59/64	.9219	84	.0060	.9279	78	
8-32	29	.1360	69	.0029	.1389	62	1-1/8-7	31/32	.9688	84	.0062	.9750	81		
	8-36	29	.1360	78	.0029	.1389		70	63/64	.9844	76	.0067	.9911	72	
		10-24	27	.1140	85	.0032		.1472	79	1-1/64	1.0156	59	.0070	1.0226	55
			26	.1470	79	.0032		.1502	74	1-1/8-12	1-1/32	1.0313	87	.0071	1.0384
10-32	25	.1495	75	.0032	.1527	69	1-1/4-7	1-3/32	1.0938	84	REAMING RECOMMENDED				
	24	.1520	70	.0032	.1152	64		1-7/64	1.1094	76					
10-32	5/32	.1653	83	.0032	.1595	75	1-1/4-12	1-11/64	1.1719	72					
	22	.1570	81	.0032	.1602	73		1-3/8-6	1-13/64	1.2031		79			
12-24	21	.1590	76	.0032	.1622	68	1-3/8-12		1-7/32	1.2188		72			
	11/64	.1719	82	.0035	.1754	75		1-19/64	1.2969	72					
12-28	17	.1730	79	.0035	.1765	73	1-1/2-6	1-21/64	1.3281	79					
	16	.1770	72	.0035	.1805	66		1-11/32	1.3438	72					
	16	.1770	84	.0035	.1805	77		1-1/2-12	1.4219	72					
1/4-20	15	.1800	78	.0035	.1835	70	1-1/2-12	27/64	1.4219	72					
	14	.1820	73	.0035	.1855	66									

**REAMING
RECOMMENDED**

**SUGGESTED
PIPE TAP
DRILL SIZES**

**DRILL
SIZE**

**TAP SIZE
TAPER PIPE TAP
STRAIGHT PIPE TAP**

1/16	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3		
C	Q	7/16	9/16	45/64	29/32	1-9/64	1-31/64	1-23/32	2-3/16	2-39/64	3-15/64		
1/4	11/32	7/16	37/64	23/32	59/64	1-5/32	1-1/2	1-3/4	2-7/32	2-21/32			

* For dryseal straight pipe threads, suggest drill size as shown, except 1/4" pipe, .444 drill size.

Thread Forming Tap Drill Sizes

TAP SIZE	T.P.I NC NF	75% THREAD NEAREST			65% THREAD NEAREST			55% THREAD NEAREST		
		THEO. HOLE SIZE	DRILL SIZE	DECIMAL EQUIV.	THEO. HOLE SIZE	DRILL SIZE	DECIMAL EQUIV.	THEO. HOLE SIZE	DRILL SIZE	DECIMAL EQUIV.
0	80	.0536	1.35mm	.0531	.0545	54	.0550	.0553	54	.0500
1	64	.0650	1.65mm	.0650	.0661	1.65mm	.0650	.0672	51	.0670
	72	.0659	1.65mm	.0650	.0669	1.7mm	.0669	.0678	51	.0670
2	56	.0769	1.95mm	.0768	.0781	5/64	.0781	.0793	2mm	.0787
	64	.0780	5/64	.0781	.0791	2mm	.0787	.0802	2.05mm	.0807
3	48	.0884	2.25mm	.0886	.0898	43	.0890	.0912	2.3mm	.0906
	56	.0899	43	.0890	.0911	2.3mm	.0906	.0923	2.35mm	.0925
4	40	.0992	39	.0995	.1009	39	.0995	.1026	2.6mm	.1024
	48	.1014	38	.1015	.1028	2.6mm	.1024	.1042	28	.1045
5	40	.1122	34	.1100	.1139	33	.1130	.1156	32	.1160
	44	.1134	33	.1130	.1150	2.9mm	.1142	.1165	32	.1160
6	32	.1221	3.10mm	.1220	.1242	1/8	.1250	.1263	3.2mm	.1260
	40	.1252	1/8	.1250	.1269	3.2mm	.1260	.1288	30	.1285
8	32	.1481	3.75mm	.1476	.1502	3.8mm	.1496	.1523	24	.1520
	36	.1498	25	.1495	.1517	24	.1520	.1536	3.9mm	.1535
10	24	.1687	4.3mm	.1693	.1716	11/64	.1719	.1744	17	.1730
	32	.1741	4.4mm	.1732	.1762	16	.1770	.1783	15	.1800
12	24	.1947	10	.1935	.1976	5mm	.1968	.2004	5.1mm	.2008
	28	.1978	5mm	.1968	.2002	8	.1990	.2026	13/64	.2031
1/4	20	.2245	5.7mm	.2244	.2279	1	.2280	.2313	5.9mm	.2323
	28	.2318	5.8mm	.2323	.2342	A	.2340	.2366	6mm	.2362
5/16	18	.2842	7.2mm	.2835	.2879	7.3mm	.2874	.2917	7.4mm	.2913
	24	.2912	7.4mm	.2913	.2941	M	.2950	.2969	19/64	.2969
3/8	16	.3431	8.7mm	.3425	.3474	S	.3480	.3516	8.9mm	.3504
	24	.3537	9mm	.3543	.3566	9mm	.3543	.3594	23/64	.3594
7/16	14	.4011	X	.3970	.4059	Y	.4040	.4108	13/32	.4062
	20	.4120	Z	.4130	.4154	10.5mm	.4134	.4188	-	-
1/2	13	.4608	-	-	.4660	-	-	.4712	15/32	.4688
	20	.4745	12mm	.4724	.4779	-	-	.4813	-	-
9/16	12	.5200	33/64	.5156	.5257	-	-	.5313	17/32	.5312
	18	.5342	13.5mm	.5315	.5379	-	-	.5417	-	-
5/8	11	.5786	37/64	.5781	.5848	-	-	.5910	15mm	.5906
	18	.5967	19/32	.5938	.6004	-	-	.6042	-	-
3/4	10	.6990	-	-	.7058	45/64	.7031	.7126	-	-
	16	.7181	23/32	.7188	.7224	-	-	.7266	-	-

Tap Drill Sizes- Metric

NOMINAL SIZE MM	PITCH MM	BASIC MAJOR DIAM. INCHES	TAP DRILL SIZE	THEO. DECIMAL EQUIV.	PROB. % OF THIRD	PROB. OVERSIZE INCHES	PROB. HOLE SIZE	PROB. % OF THIRD	NOMINAL SIZE MM	PITCH MM	BASIC MAJOR DIAM. INCHES	TAP DRILL SIZE	THEO. DECIMAL EQUIV.	PROB. % OF THIRD	PROB. OVERSIZE INCHES	PROB. HOLE SIZE	PROB. % OF THIRD
1.6	.035	.0630	1.20mm	.0472	88	.0014	.0486	80	7	1	.2756	"A"	.2340	81	.0038	.2378	74
			1.25mm	.0492	77	.0014	.0506	69				6mm	.2362	77	.0038	.2400	70
2	0.4	.0787	1/16	.0625	79	.0015	.0640	72	8	1.25	.3150	"B"	.2380	74	.0038	.2418	66
			1.60mm	.0630	77	.0017	.0647	69				6.7mm	.2638	80	.0041	.2679	74
2.5	0.45	.0984	#52	.0635	74	.0017	.0652	66	10	1.5	.3937	17/64	.2656	77	.0041	.2697	71
			2.05mm	.0807	77	.0019	.0826	69				"H"	.2660	77	.0041	.2701	70
3	0.5	.1181	#45	.0820	71	.0019	.0839	63	12	1.75	.4724	6.8mm	.2677	74	.0041	.2718	68
			2.5mm	.0984	77	.0023	.1007	68				8.4mm	.3307	82	.0044	.3351	76
3.5	0.6	.1378	#40	.0980	79	.0023	.1003	70	14	2	.5512	"Q"	.3320	80	.0044	.3364	75
			#39	.0995	73	.0023	.1018	64				8.5mm	.3346	77	.0044	.3390	71
4	0.7	.1574	10.25mm	.2035	77	.0047	.4082	72	16	2	.6299	"Y"	.4040	76	.0047	.4087	71
			#33	.1130	81	.0026	.1156	72				13/32	.4062	74	.0047	.4109	69
4.5	0.75	.1772	2.9mm	.1142	77	.0026	.1168	68	20	2.5	.7874	15/32	.4688	81	.0048	.4736	76
			#32	.1160	71	.0026	.1186	63				12mm	.4724	77	.0048	.4772	72
5	.08	.1968	3.2mm	.1280	82	.0029	.1309	74	24	3	.9449	35/64	.5469	81	.0049	.5518	76
			#30	.1285	81	.0029	.1314	73				14mm	.5512	77	.0049	.5561	72
6	1	.2362	3.3mm	.1299	77	.0029	.1328	69	30	3.5	1.1811	11/16	.6875	78	.0050	.6925	74
			3.7mm	.1457	82	.0032	.1489	74				17.5mm	.6890	77	.0052	.6942	73
7	1.1811	1.1811	#26	.1470	79	.0032	.1502	70	36	4	1.4173	13/16	.8125	86	.0052	.8177	82
			#25	.1495	72	.0032	.1527	64				21mm	.8268	77	.0059	.8327	73
8	1.1811	1.1811	#19	.1660	75	.0032	.1692	68	30	3.5	1.1811	53/64	.8281	76	.0059	.8340	72
			#10	.1935	84	.0038	.1973	76				1-1/32	1.0312	83	.0071	1.0383	80
9	1.1811	1.1811	#9	.1960	79	.0038	.1998	71	30	3.5	1.1811	26.5mm	1.0433	77	.0071	1.0504	73
			5mm	.1968	77	.0038	.2006	70				1-3/64	1.0469	75	.0072	1.0541	70
10	1.1811	1.1811	#8	.1990	73	.0038	.2028	65	36	4	1.4173	1-17/64	1.2656	74	REAMING RECOMMENDED		

No Liability is assumed resulting from the use of the information contained herein.

DECIMAL EQUIVALENTS

SIZES	DECIMAL INCHES	SIZES	DECIMAL INCHES	SIZES	DECIMAL INCHES	SIZES	DECIMAL INCHES	SIZES	DECIMAL INCHES	SIZES	DECIMAL INCHES
97	.0059	57	.0430	2.9mm	.1142	5.3mm	.2087	8.3mm	.3268	41/64	.6406
96	.0063	1.1mm	.0433	32	.1160	4	.2090	21/64	.3281	16.5mm	.6496
95	.0067	1.15mm	.0453	3mm	.1181	5.4mm	.2126	8.4mm	.3307	21/32	.6562
94	.0071	56	.0465	31	.1200	3	.2130	Q	.3320	17mm	.6693
93	.0075	3/64	.0469	3.1mm	.1220	5.5mm	.2165	8.5mm	.3346	43/64	.6719
92	.0079	1.2mm	.0472	1/8	.1250	7/32	.2188	8.6mm	.3386	11/16	.6875
.2mm	.0079	1.25mm	.0492	3.2mm	.1260	5.6mm	.2205	R	.3390	17.5mm	.6890
91	.0083	1.3mm	.0512	3.25mm	.1280	2	.2210	8.7mm	.3425	45/64	.7031
90	.0087	55	.0520	30	.1285	5.7mm	.2244	11/32	.3438	18mm	.7087
.22mm	.0087	1.35mm	.0531	3.3mm	.1299	5.75mm	.2264	8.75mm	.3445	23/32	.7188
89	.0091	54	.0550	3.4mm	.1339	1	.2280	8.8mm	.3465	18.5mm	.7283
88	.0095	1.4mm	.0551	29	.1360	5.8mm	.2283	S	.3480	47/64	.7344
.25mm	.0098	1.45mm	.0571	3.5mm	.1378	5.9mm	.2323	8.9mm	.3504	19mm	.7480
87	.0100	1.5mm	.0591	28	.1405	A	.2340	9mm	.3543	3/4	.7500
86	.0105	53	.0595	9/64	.1406	15/64	.2344	T	.3580	49/64	.7656
85	.0110	1.55mm	.0610	3.6mm	.1417	6mm	.2362	9.1mm	.3583	19.5mm	.7677
.28mm	.0110	1/16	.0625	27	.1440	B	.2380	23/64	.3594	25/32	.7812
84	.0115	1.6mm	.0630	3.7mm	.1457	6.1mm	.2402	9.2mm	.3622	20mm	.7874
.3mm	.0118	52	.0635	26	.1470	C	.2420	9.25mm	.3642	51/64	.7969
83	.0120	1.65mm	.0650	3.75mm	.1476	6.2mm	.2441	9.3mm	.3661	20.5mm	.8071
82	.0125	1.7mm	.0669	25	.1495	D	.2460	U	.3680	13/16	.8125
.32mm	.0126	51	.0670	3.8mm	.1496	6.25mm	.2461	9.4mm	.3701	21mm	.8268
81	.0130	1.75mm	.0689	24	.1520	6.3mm	.2480	9.5mm	.3740	53/64	.8281
80	.0135	50	.0700	3.9mm	.1535	E	.2500	3/8	.3750	27/32	.8438
.35mm	.0138	1.8mm	.0709	23	.1540	1/4	.2500	V	.3770	21.5mm	.8465
79	.0145	1.85mm	.0728	5/32	.1562	6.4mm	.2520	9.6mm	.3780	55/64	.8594
1/64	.0156	49	.0730	22	.1570	6.5mm	.2559	9.7mm	.3819	22mm	.8661
.4mm	.0157	1.9mm	.0748	4mm	.1575	F	.2570	9.75mm	.3839	7/8	.8750
78	.0160	48	.0760	21	.1590	6.6mm	.2598	9.8mm	.3858	22.5mm	.8858
.45mm	.0177	1.95mm	.0768	20	.1610	G	.2610	W	.3860	57/64	.8906
77	.0180	5/64	.0781	4.1mm	.1614	6.7mm	.2638	9.9mm	.3898	23mm	.9055
.5mm	.0197	47	.0785	4.2mm	.1654	17/64	.2656	25/64	.3906	29/32	.9062
76	.0200	2mm	.0787	19	.1660	6.75mm	.2657	10mm	.3937	59/64	.9219
75	.0210	2.05mm	.0807	4.25mm	.1673	H	.2660	X	.3970	23.5mm	.9252
.55mm	.0217	46	.0810	4.3mm	.1693	6.8mm	.2677	Y	.4040	15/16	.9375
74	.0225	45	.0820	18	.1695	6.9mm	.2717	13/32	.4062	24mm	.9449
.6mm	.0236	2.1mm	.0827	11/64	.1719	I	.2720	Z	.4130	61/64	.9531
73	.0240	2.15mm	.0846	17	.1730	7mm	.2756	10.5mm	.4134	24.5mm	.9646
72	.0250	44	.0860	4.4mm	.1732	J	.2770	27/64	.4219	31/32	.9688
.65mm	.0256	2.2mm	.0866	16	.1770	7.1mm	.2795	11mm	.4331	25mm	.9843
71	.0260	2.25mm	.0886	4.5mm	.1772	K	.2810	7/16	.4375	63/64	.9844
.7mm	.0276	43	.0890	15	.1800	9/32	.2812	11.5mm	.4528	1	1.0000
70	.0280	2.3mm	.0906	4.6mm	.1811	7.2mm	.2835	29/64	.4531		
69	.0292	2.35mm	.0925	14	.1820	7.25mm	.2854	15/32	.4688		
.75mm	.0295	42	.0935	13	.1850	7.3mm	.2874	12mm	.4724		
68	.0310	3/32	.0938	4.7mm	.1850	L	.2900	31/64	.4844		
1/32	.0312	2.4mm	.0945	4.75mm	.1870	7.4mm	.2913	12.5mm	.4921		
.8mm	.0315	41	.0960	3/16	.1875	M	.2950	1/2	.5000		
67	.0320	2.45mm	.0965	4.8mm	.1890	7.5mm	.2953	13mm	.5118		
66	.0330	40	.0980	12	.1890	19/64	.2969	33/64	.5156		
.85mm	.0335	2.5mm	.0984	11	.1910	7.6mm	.2992	17/32	.5312		
65	.0350	39	.0995	4.9mm	.1929	N	.3020	13.5mm	.5315		
.9mm	.0354	38	.1015	10	.1935	7.7mm	.3031	35/64	.5469		
64	.0360	2.6mm	.1024	9	.1960	7.75mm	.3051	14mm	.5512		
63	.0370	37	.1040	5mm	.1969	7.8mm	.3071	9/16	.5625		
.95mm	.0374	2.7mm	.1063	8	.1990	7.9mm	.3110	14.5mm	.5709		
62	.0380	36	.1065	5	.2008	5/16	.3125	37/64	.5781		
61	.0390	2.75mm	.1083	7	.2010	8mm	.3150	15mm	.5906		
.00mm	.0394	7/64	.1094	13/64	.2031	O	.3160	19/32	.5938		
60	.0400	35	.1100	6	.2040	8.1mm	.3189	39/64	.6094		
59	.0410	2.8mm	.1102	5.2mm	.2047	8.2mm	.3228	15.5mm	.6102		
1.05m	.0413	34	.1110	5	.2055	P	.3230	5/8	.6250		
58	.0420	33	.1130	5.25mm	.2067	8.25mm	.3248	16mm	.6299		

No Liability is assumed resulting from the use of the information contained herein.