

TAP DRILL SIZES AND PERCENTAGE OF THREAD

NATIONAL COARSE THREAD				NATIONAL FINE THREAD			
Tap	90%	75%	50%	Tap	90%	75%	50%
2-56	No. 51.83%	No. 50.70%	No. 49.56%	2-64	No. 50.80%	No. 49.63%	No. 48.50%
3-48	No. 48.85%	No. 47.78%	No. 44.50%	3-56	No. 49.1%	No. 45.74%	No. 44.56%
4-40	No. 44.81%	No. 43.72%	No. 41.50%	4-48	No. 43.85%	No. 42.70%	No. 40.52%
5-40	No. 41.90%	No. 38.75%	No. 34.50%	5-44	No. 40.90%	No. 37.70%	No. 35.50%
6-32	No. 37.83%	No. 36.78%	No. 32.53%	6-40	No. 34.91%	No. 33.78%	No. 31.59%
8-32	No. 30.88%	No. 29.68%	No. 27.49%	8-36	No. 30.100%	No. 29.78%	No. 27.56%
10-24	No. 27.85%	No. 25.76%	No. 20.54%	10-32	No. 23.88%	No. 21.76%	No. 18.51%
12-24	No. 18.87%	No. 16.72%	No. 12.50%	12-28	No. 16.85%	No. 14.74%	No. 11.54%
1/4-20	No. 10.88%	No. 6.71%	No. 4.7%	1/4-28	No. 4.89%	No. 3.80%	No. 2.63%
5/16-18	1/4-86%	1/4-65%	1/4-43%	5/16-24	1/4-87%	1-74%	3/16-57%
3/8-16	N-90%	5/16-78%	Q-53%	3/8-24	2/4-87%	Q-80%	S-30%
7/16-14	2/4-84%	3/8-66%	2/4-58%	7/16-20	1/4-95%	2/4-72%	1/4-57%
1/2-13	Z-87%	7/16-63%	2/4-47%	1/2-20	1/4-97%	2/4-72%	1/4-48%
5/8-12	1/2-87%	3/8-72%	1/2-57%	5/8-18	1/2-86%	3/4-64%	1/2-43%
3/4-11	3/4-92%	3/4-67%	3/4-53%	3/4-18	3/4-87%	3/4-65%	1/2-44%
7/8-9	3/4-87%	4/8-77%	1/2-44%	7/8-16	5/8-96%	1/2-78%	3/4-58%
1-8	5/8-87%	7/8-77%	5/8-48%	7/8-14	5/8-84%	1/2-68%	3/4-51%
			2/4-58%	1-14	5/8-84%	1/2-68%	3/4-51%

PIPE DIAMETERS AND TAP DRILLS

Pipe Size	Threads Per Inch	Outside Diameter	Inside Diameter		Decimal Equivalent of Tap Drill
			Extra Heavy	Double Extra	
1/8	27	.405	.270	.205	.339
1/4	18	.540	.364	.294	.437
3/8	18	.675	.494	.421	.578
1/2	14	.840	.623	.542	.719
3/4	14	1.050	.824	.736	.922
1	11 1/2	1.315	1.048	.951	1.156
1 1/4	11 1/2	1.660	1.380	1.272	1.500
1 1/2	11 1/2	1.900	1.610	1.494	1.734
2	11 1/2	2.375	2.067	1.933	2.219

14" HIGH SPEED
680, 1250, 2400, 4600 R.P.M.

DRILL SPEEDS IN R. P. M.

14" SLOW SPEED
470, 780, 1300, 1950 R.P.M.

Diameter of Drill	Soft Metals 300 F.P.M.	Plastics and Hard Rubber 200 F.P.M.	Annealed Cast Iron 140 F.P.M.	Mild Steel 100 F.P.M.	Malleable Iron 90 F.P.M.	Hard Cast Iron 80 F.P.M.	Tool or Hard Steel 60 F.P.M.	Alloy Steel Cast Steel 40 F.P.M.
1/8 (No. 53 to 80)	18320	12217	8554	6111	5500	4889	3667	2445
3/32 (No. 42 to 52)	12212	8142	5702	4071	3666	3258	2442	1649
1/8 (No. 31 to 41)	9160	6112	4278	3056	2750	2445	1833	1222
5/32 (No. 23 to 30)	7328	4888	3420	2444	2198	1954	1465	977
3/8 (No. 13 to 22)	6106	4075	2852	2037	1833	1630	1222	815
7/32 (No. 1 to 12)	5234	3490	2444	1745	1575	1396	1047	698
1/4 (A to E)	4575	3055	2139	1527	1375	1222	917	611
5/16 (G to K)	4071	2712	1900	1356	1222	1084	814	542
3/8 (L, M, N)	3660	2445	1711	1222	1100	978	733	489
1/2 (O to R)	3330	2220	1554	1110	1000	888	666	444
5/8 (S, T, U)	3050	2037	1426	1018	917	815	611	407
3/4 (V to Z)	2818	1878	1316	939	846	752	563	376
7/8	2614	1746	1222	873	786	698	524	349
1 1/8	2442	1628	1140	814	732	652	488	326
1 1/4	2287	1528	1070	764	688	611	458	306
1 1/2	2035	1357	950	678	611	543	407	271
1 3/4	1830	1222	856	611	550	489	367	244
2	1665	1110	777	555	500	444	333	222
2 1/4	1525	1018	713	509	458	407	306	204

Figures are for High-Speed Drills. The speed of Carbon Drills should be reduced one-half. Use drill speed nearest to figure given.