

TAP DRILL SIZES

THREAD SIZE	TAP DRILL	DRILL DECIM.	THREAD SIZE	TAP DRILL	DRILL DECIM.
0.80 NF	3/64	0.0469	3/8-16 NC	5/16	0.3125
1-64 NC	53	0.0595	3/8-24 NF	Q	0.3320
1-72 NF	53	0.0595	7/16-14 NC	U	0.3680
2-56 NC	50	0.0700	7/16-20 NF	25/64	0.3906
2-64 NF	50	0.0700			
			1/2-13 NC	27/64	0.4219
3-48 NC	47	0.0785	1/2-20 NF	29/64	0.4531
3-56 NF	45	0.0820	9/16-12 NC	31/64	0.4844
4-40 NC	43	0.0890	9/16-18 NF	33/64	0.5156
4-48 NF	42	0.0935			
			5/8-11 NC	17/32	0.5312
5-40 NC	38	0.1015	5/8-18 NF	37/64	0.5781
5-44 NF	37	.01040	3/4-10 NC	21/32	0.6562
6-32 NC	36	0.1065	3/4-16 NF	11/16	0.6875
6-40 NF	33	0.1130			
			7/8-9 NC	49/64	0.7656
8-32 NC	29	0.1360	7/8-14 NF	13/16	0.8125
8-36 NF	29	0.1360	1-8 NC	7/8	0.8750
10-24 NC	25	0.1495	1-12 NF	59/64	0.9219
10-32 NF	21	0.1590			
12-24 NC	16	0.1770			
12-28 NF	14	0.1820			
1/4-20 NC	7	0.2010			
1/4-28 NF	3	0.2130			
5/16-18 NC	F	0.2570			
5/16-24 NF	I	0.2720			

Fluid Power Data

PIPE SIZE	BELOW 3,000 PSI		ABOVE 3,000 PSI		STD. DRILL DEPTH	SHORT TAP DEPTH	DIAMETER COUNTER-SINK	LENGTH OF MALE THREAD
	TAP DRILL	DRILL DECIM.	TAP DRILL	DRILL DECIM.				
1/8-27 NPT	11/32	.339	27/64	0.4219	0.73	0.30	0.42	
1/4-18 NPT	7/16	.437	9/16	0.5625	0.73	0.60	0.55	0.472
3/8-18 NPT	37/64	.578	45/64	0.7031	0.94	0.60	0.69	0.475
1/2-14 NPT	23/32	.719	39/32	0.9062	0.94	0.78	0.85	0.640
3/4-14 NPT	59/64	.921	1-9/64	1.1406	1.14	0.78	1.06	0.640
1-11 1/2 NPT	1-5/32	1.156				1.10	1.33	0.810
1 1/4-11 1/2 NPT	1-1/2	1.500					1.67	
1 1/2-11 1/2 NPT	1-47/64	1.734					1.91	
2-11 1/2 NPT	2-7/32	2.218					2.42	

CUTTING SPEEDS*

MATERIAL	TURNING	CUT OFF	FORM TOOL	DRILL	TAP	DIE HEAD	REAM
PLAIN CARON STEEL	1910	1528	549	420	191	76	267
303 STAINLESS	1528	1222	439	344	152	57	325
304/316 STAINLESS	1165	764	209	229	115	49	267
416 STAINLESS	1948	1394	603	420	172	95	477
440C/17-4 STAINLESS	1203	781	263	180	115	38	218
ALUMINUM	4584	2976	1221	955	363	151	955
BRASS	2292	1633	601	668	239	99	668

*DEPTH OF CUT = .125, FEED = .012 IN/REV

V FACTOR

TURNING SPEED

RPM = V/DIA
 RPM = SPINDLE SPEED
 V = V FACTOR
 DIA = STOCK DIAMETER FOR TURNING
 OR TOOL DIAMETER FOR DRILLING, REAMING & TAPPING

TAPPING FEED RATE

SEC/IN* = 60 X TPI/RPM TPI = THREADS/IN
 * NUMBER OF SECONDS TO MOVE ONE INCH