

Tapping and Clearance Drills for **NUMBER** Machine Screws

Screw Size				Tapping Drills			Clearance Drills			
Number	Threads/ Inch	Series	Nominal Diam. (in)	Drill Size (65-75% thread)	Equivalents		Close Fit		Free Fit	
					(decimal)	(mm)	Drill Size	Dec. Equiv.	Drill Size	Dec. Equiv.
000	120		0.0340	71	0.0260	0.6604	65	0.0350	62	0.0380
00	90		0.0470	65	0.0350	0.8890	3/64"	0.0469	55	0.0520
0	80	NF	0.0600	3/64"	0.0469	1.1913	52	0.0635	50	0.0700
1	56	NS	0.0730	54	0.0550	1.3970	48	0.0760	46	0.0810
	64	NC		53	0.0595	1.5113				
	72	NF		53	0.0595	1.5113				
2	56	NC	0.0860	50	0.0700	1.7780	43	0.0890	41	0.0960
	64	NF		50	0.0700	1.7780				
3	48	NC	0.0990	47	0.0785	1.9939	37	0.1040	35	0.1100
	56	NF		45	0.0820	2.0828				
4	36	NS	0.1120	44	0.0860	2.1844	32	0.1160	30	0.1285
	40	NC		43	0.0890	2.2606				
	48	NF		42	0.0935	2.3749				
5	40	NC	0.1250	38	0.1015	2.5781	30	0.1285	29	0.1360
	44	NF		37	0.1040	2.6416				
6	32	NC	0.1380	36	0.1065	2.7051	27	0.1440	25	0.1495
	36	NS		34	0.1110	2.8194				
	40	NF		33	0.1130	2.8702				
8	32	NC	0.1640	29	0.1360	3.4544	18	0.1695	16	0.1770
	36	NF		29	0.1360	3.4544				
	40	NS		28	0.1405	3.5687				
10	24	NC	0.1900	25	0.1495	3.7973	9	0.1960	7	0.2010
	30	NS		22	0.1570	3.9878				
	32	NF		21	0.1590	4.0386				
12	24	NC	0.2160	16	0.1770	4.4958	2	0.2210	1	0.2280
	28	NF		14	0.1820	4.6228				
	32	NEF		13	0.1850	4.6990				
14	20	NS	0.2420	10	0.1935	4.9149	D	0.2460	F	0.2570
	24	NS		7	0.2010	5.1054				

1 inch = 25.4 millimeters

Tap Drill Size (65-75% thread) = Nominal Diameter - One Pitch Length

example: Tap Drill for #6-32 NC screw is #36, closest drill to 0.1067 inches [0.1067 = 0.1380 - (0.0313)]

example: Tap Drill for 1/4-20 NC screw is #7, closest drill to 0.2000 inches [0.2000 = (1/4) - (0.0500)]

example: Tap Drill for M1.4x0.3 is 1.1 mm (1.1 = 1.4 - 0.3)

Nominal Diameter of Number Screw (in.) = (Screw Number x 0.0130) + 0.0600

example: Nominal Diameter of #6 screw is 0.1380 inches [0.1380 = (6 x 0.0130) + 0.0600]

Pitch (in.) = 1 / (Threads per Inch)

example: Pitch of 32 threads per inch is 0.0313 inches (0.0313 = 1/32)