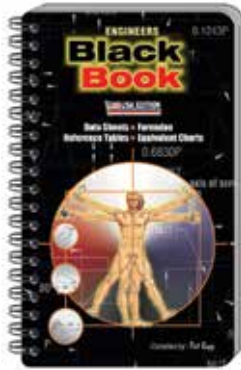


## Black Books

### Engineer's Black Book



A complete reference guide including:

- Data sheets
- Reference tables
- Formulae
- Equivalency charts

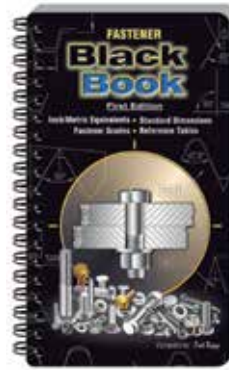


**Includes a Drill Point Sharpening Gage**

Code

284998

### Fastener Black Book



A complete reference guide including:

- Inch/Metric equivalencies
- Fastener grades
- Standard dimensions
- Reference tables



**Includes a Thread Pitch Identification Gage**

Code

284999

## Tap Drill Sizes

### Machine Screw Sizes – NC & NF

Nominal Size Tap	Recommended Tap Drill		Probable Hole Size	Actual % Threaded
	Drill	Decimal		
0 – 80	3/64	0.0469	0.0484	71
1 – 64	53	0.0595	0.0610	59
1 – 72	53	0.0595	0.0610	67
2 – 56	50	0.0700	0.0717	62
2 – 64	50	0.0700	0.0717	70
3 – 48	47	0.0785	0.0804	69
3 – 56	46	0.0810	0.0829	69
4 – 40	43	0.0890	0.0910	65
4 – 48	3/32	0.0938	0.0958	60
5 – 40	38	0.1015	0.1038	65
5 – 44	37	0.1040	0.1063	63
6 – 32	36	0.1065	0.1091	71
6 – 40	33	0.1130	0.1156	69
8 – 32	29	0.1360	0.1389	62
8 – 36	29	0.1360	0.1389	70
10 – 24	26	0.1470	0.1502	74
10 – 32	21	0.1590	0.1622	68
12 – 24	16	0.1770	0.1805	66
12 – 28	15	0.1800	0.1835	70

### Fractional Sizes – NC & NF

Nominal Size Tap	Recommended Tap Drill		Probable Hole Size	Actual % Threaded
	Drill	Decimal		
1/4 – 20	7	0.2010	0.2048	70
1/4 – 28	3	0.2130	0.2168	72
5/16 – 18	F	0.2570	0.2608	72
5/16 – 24	I	0.2720	0.2761	67
3/8 – 16	5/16	0.3125	0.3169	72
3/8 – 24	Q	0.3320	0.3364	71
7/16 – 14	U	0.3680	0.3726	70
7/16 – 20	25/64	0.3906	0.3952	65
1/2 – 13	27/64	0.4219	0.4266	73
1/2 – 20	29/64	0.4531	0.4578	65
9/16 – 12	31/64	0.4844	0.4892	68
9/16 – 18	33/64	0.5156	0.5204	58
5/8 – 11	17/32	0.5313	0.5362	75
5/8 – 18	37/64	0.5781	0.5831	58
3/4 – 10	21/32	0.6563	0.6613	68
3/4 – 16	11/16	0.6875	0.6925	71
7/8 – 9	49/64	0.7656	0.7708	72
7/8 – 14	13/16	0.8125	0.8177	62
1 – 8	7/8	0.8750	0.8809	73
1 – 12	59/64	0.9219	0.9279	67

### Pipe Tap Sizes – NPT, NPTF & NPS

Tap Size	Drill Size NPT & NPTF	Decimal Equivalent	Drill Size NPS Straight	Decimal Equivalent
1/8 – 27	R	0.3390	11/32	0.3438
1/4 – 18	7/16	0.4375	7/16	0.4375
3/8 – 18	37/64	0.5781	37/64	0.5781
1/2 – 14	45/64	0.7031	23/32	0.7188
3/4 – 14	59/64	0.9219	59/64	0.9219
1 – 11-1/2	1-5/32	1.1562	1-5/32	1.1562
1-1/4 – 11-1/2	1-1/2	1.5000	1-1/2	1.5000
1-1/2 – 11-1/2	1-47/64	1.7344	1-3/4	1.7500
2 – 11-1/2	2-7/32	2.2188	2-7/32	2.2188
2-1/2 – 8	2-5/8	2.6250	2-21/32	2.6562
3 – 8	3-1/4	3.2500	–	–

### Metric Sizes

Metric Nominal Size/Pitch mm	Tap Limit No.	Inch Series		Metric Series	
		Nominal Size	Inch Diameter	Size (mm)	Inch Diameter
M1.6 x 0.35	D3	–	–	1.25	0.0492
M2 x 0.04	D3	52	0.0635	1.60	0.0630
M2.5 x 0.45	D3	45	0.0820	2.05	0.0807
M3 x 0.5	D3	39	0.0995	2.50	0.0984
M3.5 x 0.6	D4	32	0.1160	2.90	0.1142
M4 x 0.7	D4	30	0.1285	2.30	0.1299
M5 x 0.8	D4	19	0.1660	4.20	0.1654
M6 x 1	D5	8	0.1990	5.00	0.1968
M8 x 1.25	D5	H	0.2660	6.80	0.2677
M10 x 1.5	D6	Q	0.3320	8.50	0.3346
M12 x 1.75	D6	13/32	0.4062	10.25	0.4035
M14 x 2	D7	15/32	0.4688	12.00	0.4724
M16 x 2	D7	35/64	0.5469	14.00	0.5512
M20 x 2.5	D7	11/16	0.6875	17.50	0.6890
M24 x 3	D8	53/64	0.8281	21.00	0.8268
M30 x 3.5	D9	1-3/64	1.0469	26.50	1.0433
M36 x 4	D9	1-1/4	1.2500	32.00	1.2598