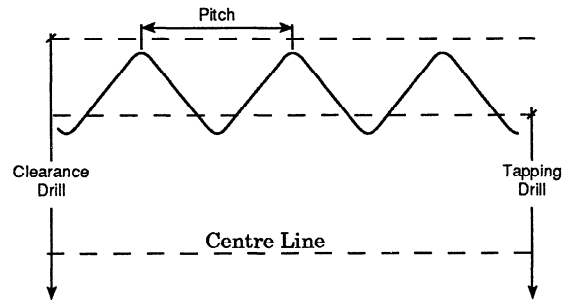


Screw Threads

The distance from the tip of one screw thread to the next is called the pitch (see sketch) and this is the figure normally quoted in Metric tables. Imperial tables generally use the number of threads per inch (Tpi) and to convert pitch to Tpi for comparison purposes:



$$\text{Pitch (ins)} = \frac{1}{\text{Tpi}} \text{ and } \text{Pitch (mm)} = \text{Pitch (ins)} \times 25.4$$

Screw Thread - Imperial Sizes

Model Engineer Threads (ME)			
Diameter ins	Tapping Tpi	Clearance Drill mm	Clearance Drill mm
1/8	40	2.55	3.2
5/32	40	3.25	4.0
3/16	40	4.0	4.8
7/32	40	4.8	5.6
1/4	40	5.5	6.4
5/16	40	7.1	8.0
3/8	40	8.7	9.6
7/16	40	10.3	11.2
1/2	40	11.9	12.8

British Standard Fine (BSF)			
Diameter	Tapping Tpi	Clearance Drill mm	Clearance Drill mm
3/16	32	4.0	4.9
7/32	28	4.6	5.7
1/4	26	5.3	6.5
5/16	22	6.8	8.1
3/8	20	8.3	9.7
7/16	18	9.7	11.3
1/2	16	11.1	13.0

British Standard Whitworth (BSW)			
Diameter	Tapping Tpi	Clearance Drill mm	Clearance Drill mm
1/16	60	1.20	1.65
3/32	48	1.85	2.50
1/8	40	2.55	3.30
5/32	32	3.20	4.10
3/16	24	3.70	4.90
7/32	24	4.50	5.70
1/4	20	5.10	6.50
5/16	18	6.50	8.10
3/8	16	7.90	9.70
7/16	14	9.30	11.30
1/2	12	10.50	13.00

Screw Thread - Metric Sizes

British Association (BA)			
Number	Pitch mm	Tapping Drill mm	Clearance Drill mm
0	1.0	5.10	6.10
1	0.9	4.50	5.40
2	0.81	4.00	4.80
3	0.73	3.40	4.20
4	0.66	3.00	3.70
5	0.59	2.65	3.30
6	0.53	2.30	2.90
7	0.48	2.05	2.60
8	0.43	1.80	2.25
9	0.39	1.55	1.95
10	0.35	1.40	1.7
11	0.31	1.20	1.60
12	0.28	1.05	1.40
13	0.25	0.98	1.30
14	0.23	0.80	1.10
15	0.21	0.70	0.98
16	0.19	0.60	0.88

ISO Metric Coarse Thread			
Dia.	Pitch	Tapping Drill mm	Clearance Drill mm
1.0	0.25	0.75	1.05
1.1	0.25	0.85	1.15
1.2	0.25	0.95	1.25
1.4	0.30	1.10	1.45
1.6	0.35	1.25	1.65
1.8	0.35	1.45	1.85
2.0	0.40	1.60	2.05
2.2	0.45	1.75	2.25
2.5	0.45	2.05	2.60
3.0	0.50	2.50	3.10
3.5	0.60	2.90	3.60
4.0	0.70	3.30	4.10
4.5	0.75	3.70	4.60
5.0	0.80	4.20	5.10
6.0	1.00	5.00	6.10

ISO Metric Coarse Thread contd.			
Dia. mm	Pitch mm	Tapping Drill mm	Clearance Drill mm
7.0	1.00	6.00	7.20
8.0	1.25	6.80	8.20
9.0	1.25	7.80	9.20
10.0	1.50	8.50	10.20
11.0	1.50	9.50	11.20
12.0	1.75	10.20	12.20

ISO Metric Fine Thread			
Dia. mm	Pitch mm	Tapping Drill mm	Clearance Drill mm
1.7	0.35	1.35	1.80
2.0	0.45	1.55	2.10
2.3	0.40	1.90	2.40
2.6	0.45	2.15	2.70
3.0	0.35	2.65	3.10
3.0	0.60	2.40	3.10
4.0	0.50	3.50	4.10
4.0	0.75	3.20	4.10
5.0	0.50	4.50	5.10
5.0	0.90	4.10	5.10
5.5	0.90	4.60	5.60
6.0	0.75	5.20	6.10
8.0	0.75	7.20	8.20
8.0	1.00	7.00	8.20
9.0	1.00	8.00	9.20
10.0	0.75	9.20	10.20
10.0	1.25	8.80	10.20
12.0	1.00	11.00	12.20
12.0	1.50	10.50	12.20