

# Thread tables

## Taper Pipe Threads

Whitworth Pipe Thread ISO 7-1, EN 10226 (DIN 2999, BSPT) External thread taper 1:16 Flank angle 55°		
Nominal Size R BSPT	Outside Ø of thread mm	T.P.I.
1/16	7.723	28
1/8	9.728	28
1/4	13.157	19
3/8	16.662	19
1/2	20.955	14
3/4	26.441	14
1	33.249	11
1 1/4	41.910	11
1 1/2	47.803	11
2	59.614	11
2 1/2	75.184	11
3	87.884	11
4	113.030	11

Standard Taper Pipe Thread NPT, ASME B 1.20.1 External thread taper 1:16 Flank angle 60°		
Nominal Size NPT	Outside Ø of thread mm	T.P.I.
1/16	7.938	27
1/8	10.287	27
1/4	13.716	18
3/8	17.145	18
1/2	21.336	14
3/4	26.670	14
1	33.401	11.5
1 1/4	42.164	11.5
1 1/2	48.260	11.5
2	60.325	11.5
2 1/2	73.025	8
3	88.900	8
3 1/2	101.600	8
4	114.300	8

## Parallel Pipe Threads

Whitworth Pipe Thread ISO 228-1 (DIN 259, BSPP) External thread parallel Flank angle 55°		
Nominal Size G BSPP	Outside Ø of thread mm	T.P.I.
1/16	7.723	28
1/8	9.728	28
1/4	13.157	19
3/8	16.662	19
1/2	20.955	14
3/4	26.441	14
1	33.249	11
1 1/4	41.910	11
1 1/2	47.803	11
2	59.614	11
2 1/2	75.184	11
3	87.884	11
3 1/2	100.330	11
4	113.030	11

Straight Pipe Thread for Fixtures NPSM, ASME B 1.20.1 External thread parallel Flank angle 60°		
Nominal Size NPSM	Outside Ø of thread mm	T.P.I.
1/8	10.083	27
1/4	13.360	18
3/8	16.815	18
1/2	20.904	14
3/4	26.264	14
1	32.842	11.5
1 1/4	41.605	11.5
1 1/2	47.676	11.5
2	59.715	11.5
2 1/2	72.161	8
3	88.062	8
3 1/2	100.787	8
4	113.436	8

## Metric Bolt Thread

Metric ISO Thread ISO 261 (DIN 13) External thread Flank angle 60°		
Nominal Size M	Outside Ø of thread mm	Pitch mm
6	5.974	1
8	7.972	1.25
10	9.968	1.5
12	11.966	1.75
14	13.962	2
16	15.962	2
18	17.958	2.5
20	19.958	2.5
22	21.958	2.5
24	23.952	3
27	26.952	3
30	29.947	3.5
33	32.947	3.5
36	35.940	4
39	38.940	4
42	41.937	4.5
45	44.937	4.5
48	47.929	5
52	51.929	5
56	55.925	5.5
60	59.925	5.5
64	63.920	6
68	67.920	6
72	71.920	6

## American and British Bolt Threads

Unified Inch Screw Thread UNC, ASME B 1.1 External thread Flank angle 60°		
Nominal Size UNC	Outside Ø of thread mm	T.P.I.
1/4	6.322	20
5/16	7.907	18
3/8	9.491	16
7/16	11.076	14
1/2	12.661	13
9/16	14.246	12
5/8	15.834	11
3/4	19.004	10
7/8	22.176	9
1	25.349	8
1 1/8	28.519	7
1 1/4	31.694	7
1 3/8	34.864	6
1 1/2	38.039	6
1 3/4	44.381	5
2	50.726	4.5
2 1/4	57.076	4.5
2 1/2	63.421	4
2 3/4	69.768	4

British Standard Parallel Screw Thread of Whitworth Form B.S.W. BS 84 (obsolete): External thread Flank angle 55°		
Nominal Size BSW	Outside Ø of thread mm	T.P.I.
1/4	6.350	20
5/16	7.937	18
3/8	9.525	16
7/16	11.112	14
1/2	12.700	12
5/8	15.875	11
3/4	19.050	10
7/8	22.225	9
1	25.400	8
1 1/8	28.575	7
1 1/4	31.750	7
1 1/2	38.100	6
1 3/4	44.450	5
2	50.800	4.5
2 1/4	57.150	4
2 1/2	63.500	4
2 3/4	69.850	3.5

## Threads for Electric Conduit

Conduit Thread DIN 40 430 External thread parallel Flank angle 80°		
Nominal Size Pg	Outside Ø of thread mm	T.P.I.
7	12.5	20
9	15.2	18
11	18.6	18
13.5	20.4	18
16	22.5	18
21	28.3	16
29	37	16
36	47	16
42	54	16
48	59.3	16

Conduit Thread EN 60423 External thread parallel Flank angle 60°		
Nominal Size M	Outside Ø of thread mm	Pitch mm
16	15.968	1.5
20	19.968	1.5
25	24.968	1.5
32	31.968	1.5
40	39.968	1.5
50	49.968	1.5
63	62.968	1.5

Outside diameter of thread is always the maximum diameter, for taper pipe threads this is measured at the scale line.