

Thread tables

Taper Pipe Threads

Whitworth Pipe Thread ISO 7-1, EN 10226 (DIN 2999, BSPT) External thread taper 1:16 Flank angle 55°			Standard Taper Pipe Thread NPT, ASME B 1.20.1 External thread taper 1:16 Flank angle 60°		
Nominal Size R BSPT	Outside Ø of thread mm	T.P.I.	Nominal Size NPT	Outside Ø of thread mm	T.P.I.
1/16	7.723	28	1/16	7.938	27
1/8	9.728	28	1/8	10.287	27
1/4	13.157	19	1/4	13.716	18
3/8	16.662	19	3/8	17.145	18
1/2	20.955	14	1/2	21.336	14
3/4	26.441	14	3/4	26.670	14
1	33.249	11	1	33.401	11.5
1 1/4	41.910	11	1 1/4	42.164	11.5
1 1/2	47.803	11	1 1/2	48.260	11.5
2	59.614	11	2	60.325	11.5
2 1/2	75.184	11	2 1/2	73.025	8
3	87.884	11	3	88.900	8
4	113.030	11	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°			Straight Pipe Thread for Fixtures NPSM, ASME B 1.20.1 External thread parallel Flank angle 60°		
Nominal Size G BSPP	Outside Ø of thread mm	T.P.I.	Nominal Size NPSM	Outside Ø of thread mm	T.P.I.
1/16	7.723	28	1/8	10.083	27
1/8	9.728	28	1/4	13.360	18
1/4	13.157	19	3/8	16.815	18
3/8	16.662	19	1/2	20.904	14
1/2	20.955	14	3/4	26.264	14
3/4	26.441	14	1	32.842	11.5
1	33.249	11	1 1/4	41.605	11.5
1 1/4	41.910	11	1 1/2	47.676	11.5
1 1/2	47.803	11	2	59.715	11.5
2	59.614	11	2 1/2	72.161	8
2 1/2	75.184	11	3	88.062	8
3	87.884	11	3 1/2	100.787	8
3 1/2	100.330	11	4	113.436	8
4	113.030	11			

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°			British Standard Parallel Screw Thread of Whitworth Form B.S.W. BS 84 (obsolete): External thread Flank angle 55°		
Nominal Size UNC	Outside Ø of thread mm	T.P.I.	Nominal Size BSW	Outside Ø of thread mm	T.P.I.
1/4	6.322	20	1/4	6.350	20
5/16	7.907	18	5/16	7.937	18
3/8	9.491	16	3/8	9.525	16
7/16	11.076	14	7/16	11.112	14
1/2	12.661	13	1/2	12.700	12
9/16	14.246	12	5/8	15.875	11
5/8	15.834	11	3/4	19.050	10
3/4	19.004	10	7/8	22.225	9
7/8	22.176	9	1	25.400	8
1	25.349	8	1 1/8	28.575	7
1 1/8	28.519	7	1 1/4	31.750	7
1 1/4	31.694	7	1 1/2	38.100	6
1 3/8	34.864	6	1 3/4	44.450	5
1 1/2	38.039	6	2	50.800	4.5
1 3/4	44.381	5	2 1/4	57.150	4
2	50.726	4.5	2 1/2	63.500	4
2 1/4	57.076	4.5	2 3/4	69.850	3.5
2 1/2	63.421	4			
2 3/4	69.768	4			

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	T.P.I.
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.