

Metric screw threads

*1: The sizes with non-bold letter have been eliminated from JIS.

*2 The minor dia. shown in () are of 5H (Class 2) for coarse threads and of 4H and 5H (Class 1) for fine threads.

Unit: mm

Size *1	Drill size	JIS 6H (Class 2) internal thread minor dia. *2	
		Min.	Max.
M 1 X 0.25	0.75	(0.729)	(0.785)
1 X 0.2	0.8	(0.783)	(0.821)
1.1X 0.25	0.85	(0.829)	(0.885)
1.1X 0.2	0.9	(0.883)	(0.921)
1.2X 0.25	0.95	(0.929)	(0.985)
1.2X 0.2	1	(0.983)	(1.021)
1.4X 0.3	1.1	(1.075)	(1.142)
1.4X 0.2	1.2	(1.183)	(1.221)
1.6X 0.35	1.25	1.221	1.321
1.6X 0.2	1.4	(1.383)	(1.421)
1.7X 0.35	1.35	1.321	1.421
1.7X 0.2	1.45	1.46	1.5
1.8X 0.35	1.45	1.421	1.521
1.8X 0.2	1.6	(1.583)	(1.621)
2 X 0.4	1.6	1.567	1.679
2 X 0.25	1.75	(1.729)	(1.785)
2.2X 0.45	1.75	1.713	1.838
2.2X 0.25	1.95	(1.929)	(1.985)
2.3X 0.4	1.9	1.867	1.979
2.3X 0.25	2.05	2.001	2.061
2.5X 0.45	2.1	2.013	2.138
2.5X 0.35	2.2	2.121	2.221
2.6X 0.45	2.2	2.113	2.238
2.6X 0.35	2.2	2.186	2.246
3 X 0.5	2.5	2.459	2.599
3 X 0.35	2.7	2.621	2.721
3 X 0.6	2.4	2.28	2.44
3.5X 0.6	2.9	2.85	3.01
3.5X 0.35	3.2	3.121	3.221
4 X 0.7	3.3	3.242	3.422
4 X 0.5	3.5	3.459	3.599
4 X 0.75	3.25	3.106	3.326
4.5X 0.75	3.8	3.688	3.878
4.5X 0.5	4	3.959	4.099
5 X 0.8	4.2	4.134	4.334
5 X 0.5	4.5	4.459	4.599
5 X 0.9	4.1	3.93	4.17
5.5X 0.9	4.6	4.43	4.67
5.5X 0.5	5	4.959	5.099
6 X 1	5	4.917	5.153
6 X 0.75	5.3	5.188	5.378
6 X 0.5	5.5	5.4	5.55
7 X 1	6	5.917	6.153
7 X 0.75	6.3	6.188	6.378

Size *1	Drill size	JIS 6H (Class 2) internal thread minor dia. *2	
		Min.	Max.
7 X 0.5	6.5	6.4	6.55
8 X 1.25	6.8	6.647	6.912
8 X 1	7	6.917	7.153
8 X 0.75	7.3	7.188	7.378
8 X 0.5	7.5	7.4	7.52
9 X 1.25	7.8	7.647	7.912
9 X 1	8	7.917	8.153
9 X 0.75	8.3	8.188	8.378
9 X 0.5	8.5	8.4	8.52
10 X 1.5	8.5	8.376	8.676
10 X 1.25	8.8	8.647	8.912
10 X 1	9	8.917	9.153
10 X 0.75	9.3	9.188	9.378
10 X 0.5	9.5	9.4	9.52
11 X 1.5	9.5	9.376	9.676
11 X 1.25	9.7	9.516	9.796
11 X 1	10	9.917	10.153
11 X 0.75	10.3	10.188	10.378
11 X 0.5	10.5	10.4	10.52
12 X 1.75	10.3	10.106	10.441
12 X 1.5	10.5	10.376	10.676
12 X 1.25	10.8	10.647	10.912
12 X 1	11	10.917	11.153
12 X 0.5	11.5	11.4	11.52
13 X 1.5	11.5	11.212	11.602
13 X 1	11.9	11.81	12.03
13 X 0.5	12.4	12.4	12.52
14 X 2	12	11.835	12.21
14 X 1.5	12.5	12.376	12.676
14 X 1	13	12.917	13.153
14 X 0.5	13.4	13.4	13.52
15 X 1.5	13.5	13.376	13.676
15 X 1	14	13.917	14.153
15 X 0.5	14.4	14.4	14.52
16 X 2	14	13.835	14.21
16 X 1.5	14.5	14.376	14.676
16 X 1	15	14.917	15.153
16 X 0.5	15.4	15.4	15.52
17 X 1.5	15.5	15.376	15.676
17 X 1	16	15.917	16.153
18 X 2.5	15.5	15.294	15.744
18 X 2	16	15.835	16.21
18 X 1.5	16.5	16.376	16.676
18 X 1	17	16.917	17.153
18 X 0.5	17.4	17.4	17.52
20 X 2.5	17.5	17.294	17.744
20 X 2	18	17.835	18.21
20 X 1.5	18.5	18.376	18.676
20 X 1	19	18.917	19.153

Size *1	Drill size	JIS 6H (Class 2) internal thread minor dia. *2	
		Min.	Max.
20 X 0.5	19.4	19.4	19.52
22 X 2.5	19.5	19.294	19.744
22 X 2	20	19.835	20.21
22 X 1.5	20.5	20.376	20.676
22 X 1	21	20.917	21.153
22 X 0.5	21.4	21.4	21.52
24 X 3	21	20.752	21.252
24 X 2	22	21.835	22.21
24 X 1.5	22.5	22.376	22.676
24 X 1	23	22.917	23.153
24 X 0.5	23.4	23.4	23.52
25 X 2	23	22.835	23.21
25 X 1.5	23.5	23.376	23.676
25 X 1	24	23.917	24.153
26 X 2	23.8	23.622	24.082
26 X 1.5	24.5	24.376	24.676
26 X 1	24.8	24.81	25.03
27 X 3	24	23.752	24.252
27 X 2	25	24.835	25.21
27 X 1.5	25.5	25.376	25.676
27 X 1	26	25.917	26.153
28 X 2	26	25.835	26.21
28 X 1.5	26.5	26.376	26.676
28 X 1	27	26.917	27.153
30 X 3.5	26.5	26.211	26.771
30 X 3	27	26.752	27.252
30 X 2	28	27.835	28.21
30 X 1.5	28.5	28.376	28.676
30 X 1	29	28.917	29.153
32 X 2	30	29.835	30.21
32 X 1.5	30.5	30.376	30.676
32 X 1	30.8	30.81	31.03
33 X 3.5	29.5	29.211	29.771
33 X 3	30	29.752	30.252
33 X 2	31	30.835	31.21
33 X 1.5	31.5	31.376	31.676
34 X 2	31.8	31.622	32.082
34 X 1.5	32.4	32.212	32.602
34 X 1	32.8	32.81	33.03
35 X 1.5	33.5	33.376	33.676
36 X 4	32	31.67	32.27
36 X 3	33	32.752	33.252
36 X 2	34	33.835	34.21
36 X 1.5	34.5	34.376	34.676
36 X 1	34.8	34.81	35.03
38 X 2	35.8	35.622	36.082
38 X 1.5	36.5	36.376	36.676
38 X 1	36.8	36.81	37.03
39 X 4	35	34.67	35.27

Size *1	Drill size	JIS 6H (Class 2) internal thread minor dia. *2	
		Min.	Max.
39 X 3	36	35.752	36.252
39 X 2	37	36.835	37.21
39 X 1.5	37.5	37.376	37.676
40 X 3	37	36.752	37.252
40 X 2	38	37.835	38.21
40 X 1.5	38.5	38.376	38.676
40 X 1	38.8	38.81	39.03
42 X 4.5	37.5	37.129	37.799
42 X 4	38	37.67	38.27
42 X 3	39	38.752	39.252
42 X 2	40	39.835	40.21
42 X 1.5	40.5	40.376	40.676
42 X 1	40.8	40.81	41.03
45 X 4.5	40.5	40.129	40.799
45 X 4	41	40.67	41.27
45 X 3	42	41.752	42.252
45 X 2	43	42.835	43.21
45 X 1.5	43.5	43.376	43.676
45 X 1	43.8	43.81	44.03
48 X 5	43	42.587	43.297
48 X 4	44	43.67	44.27
48 X 3	45	44.752	45.252
48 X 2	46	45.835	46.21
48 X 1.5	46.5	46.376	46.676
48 X 1	46.8	46.81	47.03
50 X 3	47	46.752	47.252
50 X 2	48	47.835	48.21
50 X 1.5	48.5	48.376	48.676
50 X 1	48.8	48.81	49.03
52 X 5	47	46.587	47.297
52 X 4	48	47.67	48.27
52 X 3	49	48.752	49.252
52 X 2	50	49.835	50.21
52 X 1.5	50.5	50.376	50.676
55 X 4	51	50.67	51.27
55 X 3	52	51.752	52.252
55 X 2	53	52.835	53.21
55 X 1.5	53.5	53.376	53.676
56 X 5.5	50.5	50.046	50.796
56 X 4	52	51.67	52.27
56 X 3	53	52.752	53.252
56 X 2	54	53.835	54.21
56 X 1.5	54.5	54.376	54.676
58 X 4	54	53.67	54.27
58 X 3	55	54.752	55.252
58 X 2	56	55.835	56.21
58 X 1.5	56.5	56.376	56.676
60 X 5.5	54.5	54.046	54.796
60 X 4	56	55.67	56.27

Size *1	Drill size	JIS 6H (Class 2) internal thread minor dia. *2	
		Min.	Max.
60 X 3	57	56.752	57.252
60 X 2	58	57.835	58.21
60 X 1.5	58.5	58.376	58.676
62 X 4	58	57.67	58.27
62 X 3	59	58.752	59.252
62 X 2	60	59.835	60.21
62 X 1.5	60.5	60.376	60.676
64 X 6	58	57.505	58.305
64 X 4	60	59.67	60.27
64 X 3	61	60.752	61.252
64 X 2	62	61.835	62.21
64 X 1.5	62.5	62.376	62.676
65 X 4	61	60.67	61.27
65 X 3	62	61.752	62.252
65 X 2	63	62.835	63.21
65 X 1.5	63.5	63.376	63.676
68 X 6	62	61.505	62.305
68 X 4	64	63.67	64.27
68 X 3	65	64.752	65.252
68 X 2	66	65.835	66.21
68 X 1.5	66.5	66.376	66.676
70 X 6	64	63.505	64.305
70 X 4	66	65.67	66.27
70 X 3	67	66.752	67.252
70 X 2	68	67.835	68.21
70 X 1.5	68.5	68.376	68.676
72 X 6	66	65.505	66.305
72 X 4	68	67.67	68.27
72 X 3	69	68.752	69.252
72 X 2	70	69.835	70.21
72 X 1.5	70.5	70.376	70.676
75 X 4	71	70.67	71.27
75 X 3	72	71.752	72.252
75 X 2	73	72.835	73.21
75 X 1.5	73.5	73.376	73.676
76 X 6	70	69.505	70.305
76 X 4	72	71.67	72.27
76 X 3	73	72.752	73.252
76 X 2	74	73.835	74.21
76 X 1.5	74.5	74.376	74.676
78 X 2	76	75.835	76.21
80 X 6	74	73.505	74.305
80 X 4	76	75.67	76.27
80 X 3	77	76.752	77.252
80 X 2	78	77.835	78.21
80 X 1.5	78.5	78.376	78.676
82 X 2	80	79.835	80.21
85 X 6	79	78.505	79.305
85 X 4	81	80.67	81.27

Size *1	Drill size	JIS 6H (Class 2) internal thread minor dia. *2	
		Min.	Max.
85 X 3	82	81.752	82.252
85 X 2	83	82.835	83.21
90 X 6	84	83.505	84.305
90 X 4	86	85.67	86.27
90 X 3	87	86.752	87.252
90 X 2	88	87.835	88.21
95 X 6	89	88.505	89.305
95 X 4	91	90.67	91.27
95 X 3	92	91.752	92.252
95 X 2	93	92.835	93.21
100 X 6	94	93.505	94.305
100 X 4	96	95.67	96.27
100 X 3	97	96.752	97.252
100 X 2	98	97.835	98.21

Unified screw threads

*1 Class 2B internal thread minor dia. Of UNEF, UN, and UNS is of ANSI B1.1.

Unit: mm

Size	Drill size	JIS Class 2B internal thread minor dia. *1	
		Min.	Max
No. 0-80UNF	1.25	1.182	1.305
No. 1-64UNC	1.55	1.425	1.582
No. 1-72UNF	1.55	1.474	1.612
No. 2-56UNC	1.8	1.695	1.871
No. 2-64UNF	1.85	1.756	1.912
No. 3-48UNC	2.1	1.941	2.146
No. 3-56UNF	2.1	2.025	2.197
No. 4-40UNC	2.3	2.157	2.385
No. 4-48UNF	2.4	2.271	2.458
No. 5-40UNC	2.6	2.487	2.697
No. 5-44UNF	2.7	2.551	2.74
No. 6-32UNC	2.8	2.642	2.895
No. 6-40UNF	2.9	2.82	3.022
No. 8-32UNC	3.4	3.302	3.53
No. 8-36UNF	3.5	3.404	3.606
No.10-24UNC	3.9	3.683	3.962
No.10-32UNF	4.1	3.963	4.165
No.12-24UNC	4.5	4.344	4.597
No.12-28UNF	4.6	4.496	4.724
No.12-32UNEF	4.7	4.623	4.826
1/4 -20UNC	5.1	4.979	5.257
1/4 -28UNF	5.5	5.36	5.588
1/4 -32UNEF	5.6	5.487	5.689
5/16 -18UNC	6.6	6.401	6.731
5/16 -24UNF	6.9	6.782	7.035
5/16 -32UNEF	7.1	7.087	7.264
3/8 -16UNC	8	7.798	8.153
3/8 -24UNF	8.5	8.382	8.636
3/8 -32UNEF	8.7	8.662	8.864
7/16 -14UNC	9.4	9.144	9.55
7/16 -20UNF	9.9	9.729	10.033
7/16 -24UNS	10.1	9.957	10.21
7/16 -28UNEF	10.2	10.135	10.337
1/2 -13UNC	10.9	10.592	11.023
1/2 -20UNF	11.5	11.329	11.607
1/2 -24UNS	11.7	11.557	11.811
1/2 -28UNEF	11.8	11.71	11.938
1/2 -32UN	11.9	11.837	12.039
9/16 -12UNC	12.2	11.989	12.446
9/16 -18UNF	12.9	12.751	13.081
9/16 -20UN	13	12.904	13.208
9/16 -24UNEF	13.2	13.132	13.385
5/8 -11UNC	13.6	13.386	13.868
5/8 -18UNF	14.5	14.351	14.681
5/8 -20UN	14.6	14.504	14.782

Size	Drill size	JIS Class 2B internal thread minor dia. *1	
		Min.	Max
5/8 - 24UNEF	14.8	14.732	14.986
3/4 - 10UNC	16.6	16.307	16.84
3/4 - 16UNF	17.5	17.323	17.678
3/4 - 20UNEF	17.8	17.679	17.957
7/8 - 9UNC	19.6	19.177	19.761
7/8 - 14UNF	20.5	20.27	20.675
7/8 - 20UNEF	21	20.854	21.132
1 - 8UNC	22.3	21.971	22.606
1 - 12UNF	23.3	23.114	23.571
1 - 14UNS	23.6	23.445	23.825
1 - 20UNEF	24.1	24.029	24.307
1 1/16 - 12UN	24.9	24.689	25.146
1 1/8 - 7UNC	25	24.638	25.349
1 1/8 - 8UN	25.5	25.146	25.781
1 1/8 - 12UNF	26.5	26.289	26.746
1 1/8 - 18UNEF	27.2	27.051	27.381
1 3/16 - 12UN	28	27.864	28.321
1 1/4 - 7UNC	28.2	27.813	28.524
1 1/4 - 8UN	28.6	28.321	28.956
1 1/4 - 12UNF	29.6	29.464	29.921
1 1/4 - 18UNEF	30.3	30.226	30.556
1 5/16 - 12UN	31.2	31.039	31.496
1 3/8 - 6UNC	30.8	30.353	31.115
1 3/8 - 8UN	31.8	31.496	32.131
1 3/8 - 12UNF	32.8	32.639	33.096
1 3/8 - 18UNEF	33.5	33.401	33.731
1 1/2 - 6UNC	34	33.528	34.29
1 1/2 - 8UN	35	34.671	35.306
1 1/2 - 12UNF	36	35.814	36.271
1 1/2 - 18UNEF	36.6	36.576	36.88
1 5/8 - 8UN	38.1	37.846	38.481
1 5/8 - 12UNF	39.1	38.989	39.446
1 5/8 - 18UNEF	39.8	39.751	40.081
1 3/4 - 5UNC	39.5	38.964	39.827
1 3/4 - 8UN	41.3	41.021	41.656
1 3/4 - 12UN	42.3	42.164	42.621
1 7/8 - 8UN	44.5	44.196	44.831
1 7/8 - 12UN	45.4	45.339	45.796
2 - 4 1/2UNC	45.2	44.679	45.593
2 - 8UN	47.8	47.371	48.006
2 - 12UN	48.6	48.514	48.971
2 1/4 - 8UN	54	53.721	54.356
2 1/2 - 8UN	60.3	60.071	60.706
2 3/4 - 8UN	66.6	66.421	67.056
3 - 8UN	73	72.771	73.406

Whitworth coarse screw threads *1

*1: Whitworth coarse screw threads have been eliminated from JIS.

*2: Sizes under W3/16 are of BSW.

Unit: mm

Size *2	Drill size	JIS Class 2 internal thread minor dia.	
		Min.	Max
W 1/8 -40	2.55	2.362	2.591
3/16 -24	3.7	3.406	3.744
1/4 -20	5.1	4.914	5.204
5/16 -18	6.6	6.340	6.670
3/8 -16	8	7.733	8.113
7/16 -14	9.4	9.048	9.508
1/2 -12	10.7	10.310	10.830
9/16 -12	12.3	11.898	12.418
5/8 -11	13.7	13.257	13.817
3/4 -10	16.6	16.178	16.778
7/8 - 9	19.5	19.031	19.691
1 - 8	22.3	21.814	22.514
1 1/8 - 7	24.9	24.469	25.229
1 1/4 - 7	28	27.644	28.404
1 3/8 - 6	30.5	30.123	30.923
1 1/2 - 6	33.6	33.298	34.098
1 5/8 - 5	36	35.529	36.409
1 3/4 - 5	39.1	38.704	39.584
1 7/8 - 4 1/2	41.8	41.237	42.227
2 - 4 1/2	45	44.412	45.402
2 1/4 - 4	50.5	49.958	51.068
2 1/2 - 4	56.5	56.308	57.418
2 3/4 - 3 1/2	62	61.636	62.816
3 - 3 1/2	68.5	67.986	69.166

Whitworth fine screw threads *1

*1: Whitworth fine screw threads have been eliminated from JIS.

Unit: mm

Size	Drill size	JIS Class 2 internal thread minor dia.	
		Min.	Max
W 10 -20	8.6	8.564	8.684
10 -24	8.8	8.804	8.924
11 -20	9.6	9.564	9.694
12 -18	10.4	10.402	10.532
12 -20	10.6	10.564	10.694
13 -16	11.2	11.208	11.348
13 -20	11.6	11.564	11.694
14 -16	12.2	12.208	12.348
14 -18	12.4	12.402	12.542
15 -18	13.4	13.402	13.542
16 -14	14	13.936	14.086
16 -18	14.4	14.402	14.542
17 -14	15	14.936	15.086
18 -14	16	15.936	16.086
18 -16	16.2	16.208	16.348
20 -12	17.6	17.610	17.770
20 -16	18.2	18.208	18.348
22 -12	19.6	19.610	19.770
22 -14	20	19.936	20.096
24 -14	22	21.936	22.096
25 -14	23	22.936	23.096
26 -14	24	23.936	24.096
28 -12	25.6	25.61	25.77
30 -12	27.6	27.61	27.77
32 -12	29.6	29.61	29.77
35 -12	32.6	32.61	32.77
36 -12	33.6	33.61	33.77
38 -12	35.6	35.61	35.77
40 -12	37.6	37.61	37.77

Screw threads for sewing machines

*1 The sizes of SM1/8-32 and SM9/64-32 are not of JIS.

*2: Minor dia. shown in () are equivalent to JIS Class2.

Unit: mm

Size *1	Drill size	JIS Class 2 internal thread minor dia. *2	
		Min.	Max
SM 1/16 - 80	1.25	1.211	1.281
5/64 - 64	1.55	1.513	1.593
3/32 - 56	1.9	1.841	1.936
3/32 - 100	2.1	2.081	2.156
1/8 - 32	2.3	(2.233)	(2.393)
1/8 - 40	2.5	2.421	2.551
1/8 - 44	2.5	2.485	2.605
1/8 - 48	2.6	2.547	2.657
9/64 - 32	2.7	(2.63)	(2.79)
9/64 - 40	2.9	2.818	2.948
11/64 - 32	3.5	3.424	3.584
11/64 - 40	3.7	3.612	3.742
3/16 - 24	3.6	3.498	3.658
3/16 - 28	3.7	3.684	3.844
3/16 - 32	3.9	3.820	3.980
3/16 - 40	4.05	4.008	4.138
7/32 - 32	4.7	4.614	4.774
15/64 - 28	4.9	4.875	5.055
1/4 - 24	5.1	5.086	5.266
1/4 - 28	5.3	5.272	5.452
1/4 - 40	5.6	5.596	5.726
9/32 - 20	5.7	5.634	5.824
9/32 - 28	6.1	6.066	6.256
5/16 - 18	6.3	6.254	6.444
5/16 - 24	6.7	6.674	6.864
5/16 - 28	6.9	6.860	7.050
11/32 - 28	7.7	7.653	7.843
3/8 - 18	7.9	7.843	8.053
3/8 - 28	8.5	8.447	8.637
7/16 - 16	9.3	9.220	9.440
7/16 - 28	10.1	10.034	10.224
1/2 - 12	10.3	10.180	10.420
1/2 - 20	11.3	11.190	11.410
1/2 - 28	11.7	11.622	11.812
9/16 - 20	12.9	12.778	13.018

Taper pipe threads

Unit: mm

Size	JIS B0203		JIS B0203		JIS B2301	
	Taper int. threads (PT)		Parallel int. threads (PS)		Taper internal threads	
	Calculated value	Drill size	Calculated value	Drill size	Calculated value	Drill size
1/16 -28	6.230	6.2	6.490	6.5	—	—
1/8 -28	8.235	8.2	8.495	8.5	8.191	8.2
1/4 -19	10.941	10.9	11.341	11.4	10.945	10.9
3/8 -19	14.428	14.4	14.846	14.9	14.388	14.4
1/2 -14	17.950	18	18.489	18.5	17.943	18
3/4 -14	23.349	23	23.975	24	23.305	23
1 -11	19.423	29	30.111	30	29.353	29
1 1/4 -11	37.940	38	38.772	39	37.890	38
1 1/2 -11	43.833	44	44.565	45	43.720	43
2 -11	55.412	55	56.476	56	55.406	55
2 1/2 -11	70.701	71	72.009	72	70.788	70
3 -11	83.201	83	84.709	85	83.364	83
3 1/2 -11	95.547	96	97.155	97	95.747	95
4 -11	107.834	108	109.855	110	108.322	108
5 -11	133.110	133	135.255	135	133.597	133
6 -11	158.510	159	160.655	161	158.810	158

Parallel pipe threads (G, PF)

Unit: mm

Size	Drill size	Internal thread minor dia. (ref)	
		Min.	Max
G 1/16 -28	6.7	6.843	6.561
G(PF) 1/8 -28	8.7	8.848	8.566
G(PF) 1/4 -19	11.7	11.890	11.445
G(PF) 3/8 -19	15.2	15.395	14.950
G(PF) 1/2 -14	19	19.172	18.631
G(PF) 5/8 -14	21	21.130	20.589
G(PF) 3/4 -14	24.5	24.658	24.117
G(PF) 7/8 -14	28.2	28.418	27.877
G(PF) 1 -11	30.6	30.931	30.291
G(PF) 1 1/8 -11	35.2	35.579	34.939
G(PF) 1 1/4 -11	39.2	39.592	38.952
G(PF) 1 1/2 -11	45	45.485	44.845
G(PF) 1 3/4 -11	51	51.428	50.788
G(PF) 2 -11	57	57.296	56.656
G(PF) 2 1/4 -11	63	63.392	62.752
G(PF) 2 1/2 -11	72	72.866	72.226
G(PF) 2 3/4 -11	78.5	79.216	78.576
G(PF) 3 -11	85	85.566	84.926
G(PF) 3 1/2 -11	97	98.012	97.372
G(PF) 4 -11	—	110.712	110.072
G(PF) 4 1/2 -11	—	123.412	122.772
G(PF) 5 -11	—	136.112	135.472
G(PF) 5 1/2 -11	—	148.812	148.172
G(PF) 6 -11	—	161.512	160.872

American pipe threads (NPT, NPS)

Unit: mm

Size	Taper threads (NPT) Drill size				Parallel threads (NPS) Drill size	
	Where reamer is used		Where reamer is not used		mm	inch
	mm	inch	mm	inch		
1/16 -27	5.94	0.234	6.15	0.246	6.35	0.250
1/8 -27	8.33	0.328	8.43	0.332	8.74	0.344
1/4 -18	10.72	0.422	11.13	0.438	11.13	0.438
3/8 -18	14.27	0.562	14.27	0.562	14.68	0.578
1/2 -14	17.48	0.688	17.86	0.703	18.26	0.719
3/4 -14	22.63	0.891	23.01	0.906	23.42	0.922
1 -11 1/2	28.58	1.125	28.98	1.141	29.36	1.156
1 1/4 -11 1/2	37.31	1.469	37.69	1.484	38.10	1.500
1 1/2 -11 1/2	43.26	1.703	43.66	1.719	44.45	1.750
2 -11 1/2	55.17	2.172	55.58	2.188	56.36	2.219
2 1/2 -8	65.48	2.578	66.27	2.609	67.46	2.656

The drill sizes are quoted from ANSI/ASME B1.20.1-1983 Pipe Threads, General Purpose (inch) Appendix.

American dryseal pipe threads (NPTF, NPSF)

Unit: mm

Size	Taper threads (NPTF) Drill size				Parallel threads (NPSF) Drill size	
	Where reamer is used		Where reamer is not used		mm	inch
	mm	inch	mm	inch		
1/16 -27	5.94	0.234	6.25	0.246	6.35	0.250
1/8 -27	8.33	0.328	8.61	0.339	8.74	0.344
1/4 -18	10.72	0.422	11.13	0.438	11.28	0.444
3/8 -18	14.27	0.562	14.68	0.578	14.68	0.578
1/2 -14	17.48	0.688	17.86	0.703	18.26	0.719
3/4 -14	22.63	0.891	23.42	0.922	23.42	0.922
1 -11 1/2	28.58	1.125	29.36	1.156	29.36	1.156
1 1/4 -11 1/2	37.31	1.469	38.10	1.500	—	—
1 1/2 -11 1/2	43.26	1.703	44.04	1.734	—	—
2 -11 1/2	55.58	2.188	56.36	2.219	—	—
2 1/2 -8	65.89	2.594	67.08	2.641	—	—

The drill sizes are quoted from ANSI/ASME B1.20.3-1976 Dryseal Pipe Threads (inch) Appendix.

Metric screw threads insert

Unit: mm

Size	Suitable Drill size	Drill hole dia.	
		Min.	Max.
M 2 X 0.4	2.1	2.1	2.17
2.2 X 0.45	2.3	2.31	2.39
2.5 X 0.45	2.6	2.6	2.65
2.6 X 0.45	2.7	2.7	2.75
3 X 0.5	3.1	3.12	3.2
3.5 X 0.6	3.7	3.65	3.75
4 X 0.7	4.2	4.17	4.3
5 X 0.8	5.2	5.16	5.33
6 X 1	6.3	6.25	6.42
8 X 1.25	8.4	8.31	8.52
8 X 1	8.3	8.25	8.42
10 X 1.5	10.5	10.37	10.62
10 X 1.25	10.4	10.31	10.52
10 X 1	10.3	10.25	10.42
12 X 1.75	12.5	12.43	12.73
12 X 1.5	12.5	12.37	12.62
12 X 1.25	12.5	12.31	12.52
14 X 2	14.5	14.49	14.83
14 X 1.5	14.5	14.37	14.62
14 X 1.25	14.4	14.31	14.52
16 X 2	16.5	16.49	16.83
16 X 1.5	16.5	16.37	16.62
18 X 2.5	19	18.58	19.04
18 X 1.5	18.5	18.37	18.62
20 X 2.5	21	20.58	21.04
20 X 1.5	20.5	20.37	20.62
22 X 2.5	23	22.58	23.04
22 X 1.5	22.5	22.37	22.62
24 X 3	25	24.7	25.25
24 X 1.5	24.5	24.37	24.62

Unified screw threads insert

Unit: mm

Size	Suitable Drill size	Drill hole dia.	
		Min.	Max.
No. 2-56UNC	2.3	2.29	2.39
No. 3-48UNC	2.7	2.64	2.74
No. 3-56UNF	2.7	2.62	2.72
No. 4-40UNC	3	2.95	3.07
No. 4-48UNF	3	2.97	3.05
No. 5-40UNC	3.3	3.25	3.38
No. 6-32UNC	3.7	3.66	3.81
No. 6-40UNF	3.7	3.66	3.78
No. 8-32UNC	4.4	4.32	4.47
No. 8-36UNF	4.4	4.32	4.44
No. 10-24UNC	5.1	5.05	5.21
No. 10-32UNF	5	4.98	5.13
No. 12-24UNC	5.7	5.61	5.77
1/4-20UNC	6.7	6.63	6.78
1/4-28UNF	6.6	6.53	6.71
5/16-18UNC	8.4	8.33	8.48
5/16-24UNF	8.2	8.2	8.38
3/8-16UNC	10	9.91	10.11
3/8-24UNF	9.8	9.78	9.96
7/16-14UNC	11.5	11.51	11.76
7/16-20UNF	11.5	11.43	11.63
1/2-13UNC	13.1	13.08	13.34
1/2-20UNF	13.1	13.03	13.26
9/16-12UNC	14.7	14.68	14.94
9/16-18UNF	14.7	14.66	14.88
5/8-11UNC	16.5	16.39	16.65
5/8-18UNF	16.3	16.26	16.48
3/4-10UNC	19.8	19.7	19.9
3/4-16UNF	19.5	19.43	19.68