



MARYLAND METRICS

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MARYLAND METRICS THREAD DATA CHARTS

THREAD DATA CHART INDEX

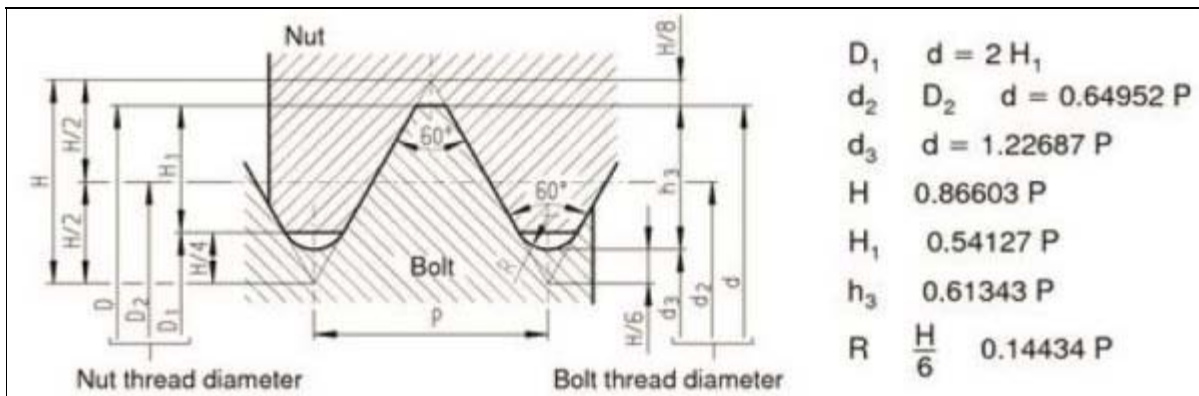
■ = newly added item or revised item

- METRIC THREAD -- COARSE PITCH -- M
- METRIC THREAD -- FINE PITCH -- M (1 mm - 28 mm)
- METRIC THREAD -- FINE PITCH -- M (30 mm - 64 mm)
- METRIC THREAD -- FINE PITCH -- M (65 mm - 100 mm)
- PIPE THREAD -- BRITISH STANDARD PIPE PARALLEL -- BSPP/BSPF
- PIPE THREAD -- JAPANESE PIPE PARALLEL -- PF (see BSPP/BSPF chart)
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- PIPE THREAD -- JAPANESE PIPE TAPER -- PT (see BSPT chart)
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- BRITISH THREAD -- COARSE PITCH -- BSW
- BRITISH THREAD -- FINE PITCH -- BSF
- BRITISH THREAD -- MINIATURE SERIES -- BA
- METRIC THREAD -- COARSE PITCH -- MINIATURE SERIES -- BS 4827 -- S
- METRIC 80 degree Pg form THREAD -- ELECTRICAL THREAD -- Pg
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- METRIC THREAD -- Aerospace threads MJ
- METRIC 30 degree Tr form THREAD -- TRAPEZOIDAL THREAD (~Acme) -- Tr
- METRIC BUTTRESS COARSE THREAD -- DIN 513
- METRIC KNUCKLE THREAD -- DIN 405
- METRIC KNUCKLE THREAD -- DIN 20400
- METRIC SCREW THREAD INSERT THREADS - for HELICAL WIRE INSERTS -- Eg M
- BRITISH ET -- ELECTRICAL THREAD -- (Conduit to BS 31)
- BRITISH STANDARD CYCLE -- BSC
- BRITISH STANDARD BRASS -- BSB
- BRITISH WHITWORTH -- GAS CYLINDER THREAD -- DIN 477
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- CYCLE ENGINEER INSTITUTION THREAD -- CEI
- IMPERIAL WIRE GAUGE -- IWG spoke thread data
- USA THREAD -- UNIFIED COARSE -- UNC
- USA THREAD -- UNIFIED FINE -- UNF
- USA THREAD -- UNIFIED EXTRA FINE -- UNEF
- USA THREAD -- NATIONAL PIPE TAPERED THREAD -- NPT
- METRIC THREAD [coarse & fine] -- Extended Thread Size Range (online only)
- Tapping drill sizes for taps in a multilingual format for thread types: M, MF, EG M, EG MF, G, Rp, Rc/PT, Pg, MJ, W cyl, Tr, W tap, BSW, BSF, BA, NPT, NPTF, UNC, UNF, UNEF, UN, EG UNC(STI), EG UNF(STI), UNJC, UNJF, & NPSM

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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- COARSE PITCH -- M



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[Metric Thread -- Extended Thread Size Range \(online only\)](#)

MARYLAND METRICS -- THREAD DATA CHART: Metric Thread -- Coarse Pitch										
Nominal Size ISO M	Thread Form Type	Major Diameter mm d=D	Pitch mm p	Root Radius mm r	Pitch Diameter mm d2=D2	Minor Diameter Male Thd. d3	Minor Diameter Female Thd. D1	Thread Height Male Thd. h3	Thread Height Female Thd. H1	Tap Drill Diameter mm
1.00	M	1.00	0.25	0.036	0.838	0.693	0.729	0.153	0.135	0.75
1.10	M	1.10	0.25	0.036	0.938	0.793	0.829	0.153	0.135	0.85
1.20	M	1.20	0.25	0.036	1.038	0.893	0.929	0.153	0.135	0.95
1.40	M	1.40	0.30	0.043	1.205	1.032	1.075	0.184	0.162	1.10
1.60	M	1.60	0.35	0.051	1.373	1.171	1.221	0.215	0.189	1.25
1.80	M	1.80	0.35	0.051	1.573	1.371	1.421	0.215	0.189	1.45
2.00	M	2.00	0.40	0.058	1.740	1.509	1.567	0.245	0.217	1.60
2.20	M	2.20	0.45	0.065	1.908	1.648	1.713	0.276	0.244	1.75
2.50	M	2.50	0.45	0.065	2.208	1.948	2.013	0.276	0.244	2.05
3.00	M	3.00	0.50	0.072	2.675	2.387	2.459	0.307	0.271	2.50
3.50	M	3.50	0.60	0.087	3.110	2.764	2.850	0.368	0.325	2.90
4.00	M	4.00	0.70	0.101	3.545	3.141	3.242	0.429	0.379	3.30
4.50	M	4.50	0.75	0.108	4.013	3.580	3.688	0.460	0.406	3.80
5.00	M	5.00	0.80	0.115	4.480	4.019	4.134	0.491	0.433	4.20
6.00	M	6.00	1.00	0.144	5.350	4.773	4.917	0.613	0.541	5.00
7.00	M	7.00	1.00	0.144	6.350	5.773	5.917	0.613	0.541	6.00
8.00	M	8.00	1.25	0.180	7.188	6.466	6.647	0.767	0.677	6.80
9.00	M	9.00	1.25	0.180	8.188	7.466	7.647	0.767	0.677	7.80
10.00	M	10.00	1.50	0.217	9.026	8.160	8.376	0.920	0.812	8.50
11.00	M	11.00	1.50	0.217	10.026	9.160	9.376	0.920	0.812	9.50
12.00	M	12.00	1.75	0.253	10.863	9.853	10.106	1.074	0.947	10.20
14.00	M	14.00	2.00	0.289	12.701	11.546	11.835	1.227	1.083	12.00
16.00	M	16.00	2.00	0.289	14.701	13.546	13.835	1.227	1.083	14.00
18.00	M	18.00	2.50	0.361	16.376	14.933	15.394	1.534	1.353	15.50
20.00	M	20.00	2.50	0.361	18.376	16.933	17.294	1.534	1.353	17.50
22.00	M	22.00	2.50	0.361	20.376	18.933	19.294	1.534	1.353	19.50

24.00	M	24.00	3.00	0.433	22.051	20.319	20.752	1.840	1.624	21.00
27.00	M	27.00	3.00	0.433	25.051	23.319	23.752	1.840	1.624	24.00
30.00	M	30.00	3.50	0.505	27.727	25.706	26.211	2.147	1.894	26.50
33.00	M	33.00	3.50	0.505	30.727	28.706	29.211	2.147	1.894	29.50
36.00	M	36.00	4.00	0.577	33.402	31.093	31.670	2.454	2.165	32.00
39.00	M	39.00	4.00	0.577	36.402	34.093	34.670	2.454	2.165	35.00
42.00	M	42.00	4.50	0.650	39.077	36.479	37.129	2.760	2.436	37.50
45.00	M	45.00	4.50	0.650	42.077	39.479	40.129	2.760	2.436	40.50
48.00	M	48.00	5.00	0.722	44.752	41.866	42.857	3.067	2.706	43.00
52.00	M	52.00	5.00	0.722	48.752	45.866	46.587	3.067	2.706	47.00
56.00	M	56.00	5.50	0.794	52.428	49.252	50.046	3.374	2.977	50.50
60.00	M	60.00	5.50	0.794	56.428	53.252	54.046	3.374	2.977	54.50
64.00	M	64.00	6.00	0.866	60.103	56.639	57.505	3.681	3.248	58.00
68.00	M	68.00	6.00	0.866	64.103	60.639	61.505	3.681	3.248	62.00
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[Metric Thread -- Extended Thread Size Range \(online only\)](#)

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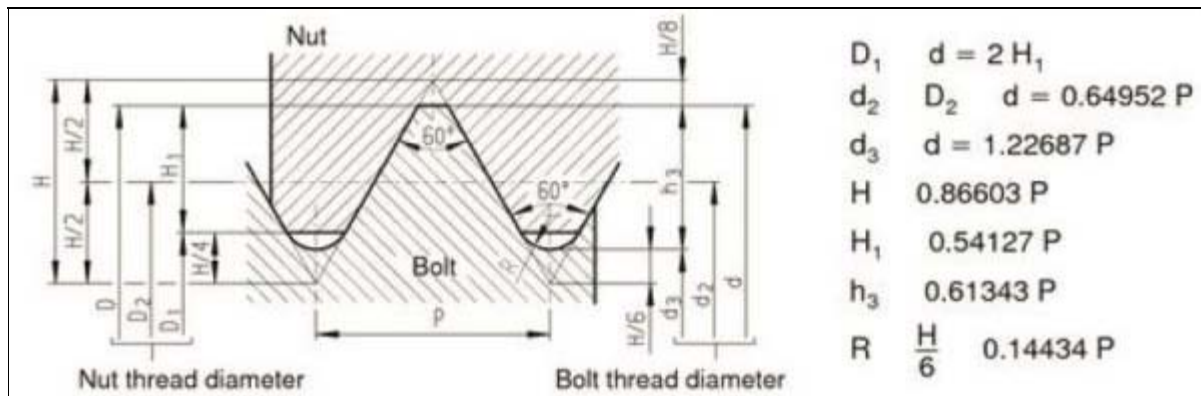
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- FINE PITCH -- M (1 mm - 28 mm)



[Click here to return to the thread data chart page index.](#)

[Metric Thread -- Extended Thread Size Range \(online only\)](#)

MARYLAND METRICS -- THREAD DATA CHART: Metric Thread -- Fine Pitch										
Nominal Size ISO MF	Thread Form Type	Major Diameter mm $d=D$	Pitch mm p	Root Radius mm r	Pitch Diameter mm $d_2=D_2$	Minor Diameter Male Thd. d_3	Minor Diameter Female Thd. D_1	Thread Height Male Thd. h_3	Thread Height Female Thd. H_1	Tap Drill Diameter mm
1.0x0.2	M	1.00	0.20	0.029	0.870	0.755	0.783	0.123	0.108	0.80
1.1x0.2	M	1.10	0.20	0.029	0.970	0.855	0.883	0.123	0.108	0.90
1.2x0.2	M	1.20	0.20	0.029	1.070	0.955	0.983	0.123	0.108	1.00
1.4x0.2	M	1.40	0.20	0.029	1.270	1.155	1.183	0.123	0.108	1.20
1.6x0.2	M	1.60	0.20	0.029	1.470	1.355	1.383	0.123	0.108	1.40
1.8x0.2	M	1.80	0.20	0.029	1.670	1.555	1.583	0.123	0.108	1.60
2x0.25	M	2.00	0.25	0.036	1.838	1.693	1.729	0.153	0.135	1.75
2.2x0.25	M	2.20	0.25	0.036	2.038	1.893	1.929	0.153	0.135	1.95
2.5x0.35	M	2.50	0.35	0.051	2.273	2.071	2.121	0.215	0.189	2.10
3x0.35	M	3.00	0.35	0.051	2.773	2.571	2.621	0.215	0.189	2.60
3.5x0.35	M	3.50	0.35	0.051	3.273	3.071	3.121	0.215	0.189	3.10
4x0.5	M	4.00	0.50	0.072	3.675	3.387	3.459	0.307	0.271	3.50
4.5x0.5	M	4.50	0.50	0.072	4.175	3.887	3.959	0.307	0.271	4.00
5x0.5	M	5.00	0.50	0.072	4.675	4.387	4.459	0.307	0.271	4.50
5.5x0.5	M	5.50	0.50	0.072	5.175	4.887	4.959	0.307	0.271	5.00
6x0.75	M	6.00	0.75	0.108	5.513	5.080	5.188	0.460	0.406	5.20
7x0.75	M	7.00	0.75	0.108	6.513	6.080	6.188	0.460	0.406	6.20
8x0.75	M	8.00	0.75	0.108	7.513	7.080	7.188	0.460	0.406	7.20
8x1.0	M	8.00	1.00	0.144	7.350	6.773	6.917	0.613	0.541	7.00
9x0.75	M	9.00	0.75	0.108	8.513	8.080	8.188	0.460	0.406	8.20
9x 1	M	9.00	1.00	0.144	8.350	7.773	7.917	0.613	0.541	8.00
10x0.75	M	10.00	0.75	0.108	9.513	9.080	9.188	0.460	0.406	9.20
10x1	M	10.00	1.00	0.144	9.350	8.773	8.917	0.613	0.541	9.00
10x1.25	M	10.00	1.25	0.180	9.188	8.466	8.647	0.767	0.677	8.80

11x0.75	M	11.00	0.75	0.108	10.513	10.080	10.188	0.460	0.406	10.20
11x1	M	11.00	1.00	0.144	10.350	9.773	9.917	0.613	0.541	10.00
12x1	M	12.00	1.00	0.144	11.350	10.773	10.917	0.613	0.541	11.00
12x1.25	M	12.00	1.25	0.180	11.188	10.466	10.647	0.767	0.677	10.80
12x1.5	M	12.00	1.50	0.217	11.026	10.160	10.376	0.920	0.812	10.50
14x1.0	M	14.00	1.00	0.144	13.350	12.773	12.917	0.613	0.541	13.00
14x1.25	M	14.00	1.25	0.180	13.188	12.466	12.647	0.767	0.677	12.80
14x1.5	M	14.00	1.50	0.217	13.026	12.160	12.376	0.920	0.812	12.50
15x1	M	15.00	1.00	0.144	14.350	13.773	13.917	0.613	0.541	14.00
15x1.5	M	15.00	1.50	0.217	14.026	13.160	13.376	0.920	0.812	13.50
16x1	M	16.00	1.00	0.144	15.350	14.773	14.917	0.613	0.541	15.00
16x1.5	M	16.00	1.50	0.217	15.026	14.160	14.376	0.920	0.812	14.50
17x1.0	M	17.00	1.00	0.144	16.350	15.773	15.917	0.613	0.541	16.00
17x1.5	M	17.00	1.50	0.217	16.026	15.160	15.376	0.920	0.812	15.50
18x1.0	M	18.00	1.00	0.144	17.350	16.773	16.917	0.613	0.541	17.00
18x1.5	M	18.00	1.50	0.217	17.026	16.160	16.376	0.920	0.812	16.50
18x2.0	M	18.00	2.00	0.289	16.701	15.546	15.835	1.227	1.083	16.00
20x1.0	M	20.00	1.00	0.144	19.350	18.773	18.917	0.613	0.541	19.00
20x1.5	M	20.00	1.50	0.217	19.026	18.160	18.376	0.920	0.812	18.50
20x2.0	M	20.00	2.00	0.289	18.701	17.546	17.835	1.227	1.083	18.00
22x1.0	M	22.00	1.00	0.144	21.350	20.773	20.917	0.613	0.541	21.00
22x1.5	M	22.00	1.50	0.217	21.026	20.160	20.376	0.920	0.812	20.50
22x2.0	M	22.00	2.00	0.289	20.701	19.546	19.835	1.227	1.083	20.00
24x1.0	M	24.00	1.00	0.144	23.350	22.773	22.917	0.613	0.541	23.00
24x1.5	M	24.00	1.50	0.217	23.026	22.160	22.376	0.920	0.812	22.50
24x2.0	M	24.00	2.00	0.289	22.701	21.546	21.835	1.227	1.083	22.00
25x1.0	M	25.00	1.00	0.144	24.350	23.773	23.917	0.613	0.541	24.00
25x1.5	M	25.00	1.50	0.217	24.026	23.160	23.376	0.920	0.812	23.50
25x2.0	M	25.00	2.00	0.289	23.701	22.546	22.835	1.227	1.083	23.00
27x1.0	M	27.00	1.00	0.144	26.350	25.773	25.917	0.613	0.541	26.00
27x1.5	M	27.00	1.50	0.217	26.026	25.160	25.376	0.920	0.812	25.50
27x2.0	M	27.00	2.00	0.289	25.701	24.546	24.835	1.227	1.083	25.00
28x1.0	M	28.00	1.00	0.144	27.350	26.773	26.917	0.613	0.541	27.00
28x1.5	M	28.00	1.50	0.217	27.026	26.160	26.376	0.920	0.812	26.50
28x2.0	M	28.00	2.00	0.289	26.701	25.546	25.835	1.227	1.083	26.00
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[Metric Thread -- Extended Thread Size Range \(online only\)](#)

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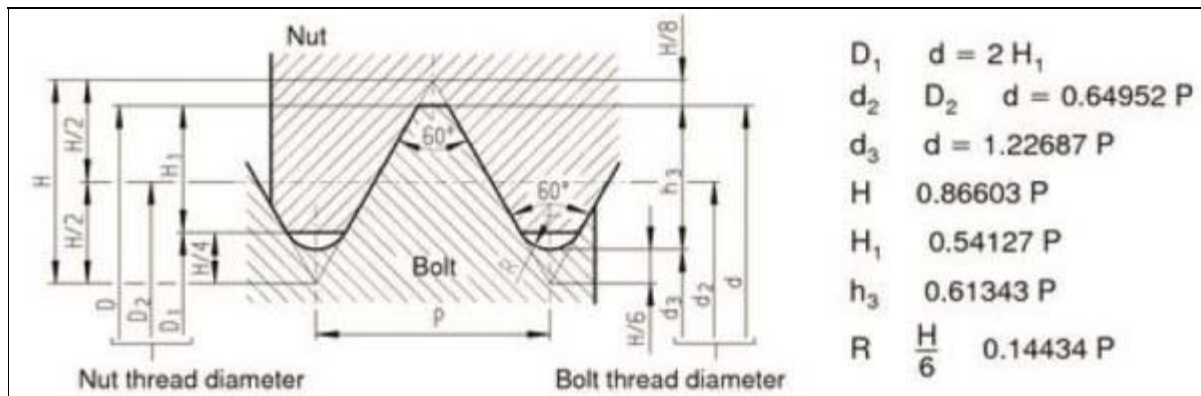
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- FINE PITCH -- M (30 mm - 64 mm)



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[Metric Thread -- Extended Thread Size Range \(online only\)](#)

MARYLAND METRICS -- THREAD DATA CHART: Metric Thread -- Fine Pitch										
Nominal Size ISO MF	Thread Form Type	Major Diameter mm $d=D$	Pitch mm p	Root Radius mm r	Pitch Diameter mm $d_2=D_2$	Minor Diameter Male Thd. d_3	Minor Diameter Female Thd. D_1	Thread Height Male Thd. h_3	Thread Height Female Thd. H_1	Tap Drill Diameter mm
30x1.0	M	30.00	1.00	0.144	29.350	28.773	28.917	0.613	0.541	29.00
30x1.5	M	30.00	1.50	0.217	29.026	28.160	28.376	0.920	0.812	28.50
30x2.0	M	30.00	2.00	0.289	28.701	27.546	27.835	1.227	1.083	28.00
30x3.0	M	30.00	3.00	0.433	28.051	26.319	26.752	1.840	1.624	27.00
32x1.5	M	32.00	1.50	0.217	31.026	30.160	30.376	0.920	0.812	30.50
32x2.0	M	32.00	2.00	0.289	30.701	29.546	29.835	1.227	1.083	30.00
33x1.5	M	33.00	1.50	0.217	32.026	31.160	31.376	0.920	0.812	31.50
33x2.0	M	33.00	2.00	0.289	31.701	30.546	30.835	1.227	1.083	31.00
33x3.0	M	33.00	3.00	0.433	31.051	29.319	29.752	1.840	1.624	30.00
35x1.5	M	35.00	1.50	0.217	34.026	33.160	33.376	0.920	0.812	33.50
35x2.0	M	35.00	2.00	0.289	33.701	32.546	32.835	1.227	1.083	33.00
36x1.5	M	36.00	1.50	0.217	35.026	34.160	34.376	0.920	0.812	34.50
36x2.0	M	36.00	2.00	0.289	34.701	33.546	33.835	1.227	1.083	34.00
36x3.0	M	36.00	3.00	0.433	34.051	32.319	32.752	1.840	1.624	33.00
39x1.5	M	39.00	1.50	0.217	38.026	37.160	37.376	0.920	0.812	37.50
39x2.0	M	39.00	2.00	0.289	37.701	36.546	36.835	1.227	1.083	37.00
39x3.0	M	39.00	3.00	0.433	37.051	35.319	35.752	1.840	1.624	36.00
40x1.5	M	40.00	1.50	0.217	39.026	38.160	38.376	0.920	0.812	38.50
40x2.0	M	40.00	2.00	0.289	38.701	37.546	37.835	1.227	1.083	38.00
40x3.0	M	40.00	3.00	0.433	38.051	36.619	36.752	1.840	1.624	37.00
42x1.5	M	42.00	1.50	0.217	41.026	40.160	40.376	0.920	0.812	40.50
42x2.0	M	42.00	2.00	0.289	40.701	39.546	39.835	1.227	1.083	40.00
42x3.0	M	42.00	3.00	0.433	40.051	38.319	38.752	1.840	1.624	39.00
42x4.0	M	42.00	4.00	0.577	39.402	37.093	37.670	2.454	2.165	38.00

45x1.5	M	45.00	1.50	0.217	44.026	43.160	43.376	0.920	0.812	43.50
45x2.0	M	45.00	2.00	0.289	43.701	42.546	42.835	1.227	1.083	43.00
45x3.0	M	45.00	3.00	0.433	43.051	41.319	41.752	1.840	1.624	42.00
45x4.0	M	45.00	4.00	0.577	42.402	40.093	40.670	2.454	2.165	41.00
48x1.5	M	48.00	1.50	0.217	47.026	46.160	46.376	0.920	0.812	46.50
48x2.0	M	48.00	2.00	0.289	46.701	45.546	45.835	1.227	1.083	46.00
48x3.0	M	48.00	3.00	0.433	46.051	44.319	44.752	1.840	1.624	45.00
48x4.0	M	48.00	4.00	0.577	45.402	43.093	43.670	2.454	2.165	44.00
50x1.5	M	50.00	1.50	0.217	49.026	48.160	48.376	0.920	0.812	48.50
50x2.0	M	50.00	2.00	0.289	48.701	47.546	47.835	1.227	1.083	48.00
50x3.0	M	50.00	3.00	0.433	48.051	46.319	46.752	1.840	1.624	47.00
52x1.5	M	52.00	1.50	0.217	51.026	50.160	50.376	0.920	0.812	50.50
52x2.0	M	52.00	2.00	0.289	50.701	49.546	49.835	1.227	1.083	50.00
52x3.0	M	52.00	3.00	0.433	50.051	48.319	48.752	1.840	1.624	49.00
52x4.0	M	52.00	4.00	0.577	49.402	47.093	47.670	2.454	2.165	48.00
55x1.5	M	55.00	1.50	0.217	54.026	53.160	53.376	0.920	0.812	53.50
55x2.0	M	55.00	2.00	0.289	53.701	52.546	52.835	1.227	1.083	53.00
55x3.0	M	55.00	3.00	0.433	53.051	51.319	51.752	1.840	1.624	52.00
55x4.0	M	55.00	4.00	0.577	52.402	50.093	50.670	2.454	2.165	51.00
56x1.5	M	56.00	1.50	0.217	55.026	54.160	54.376	0.920	0.812	54.50
56x2.0	M	56.00	2.00	0.289	54.701	53.546	53.835	1.227	1.083	54.00
56x3.0	M	56.00	3.00	0.433	54.051	52.319	52.752	1.840	1.624	53.00
56x4.0	M	56.00	4.00	0.577	53.402	51.903	51.670	2.454	2.165	52.00
58x1.5	M	58.00	1.50	0.217	57.026	56.160	56.376	0.920	0.812	56.50
58x2.0	M	58.00	2.00	0.289	56.701	55.546	55.835	1.227	1.083	56.00
58x3.0	M	58.00	3.00	0.433	56.051	54.319	54.752	1.840	1.624	55.00
58x4.0	M	58.00	4.00	0.577	55.402	53.093	53.670	2.454	2.165	54.00
60x1.5	M	60.00	1.50	0.217	59.026	58.160	58.376	0.920	0.812	58.50
60x2.0	M	60.00	2.00	0.289	58.701	57.546	57.835	1.227	1.083	58.00
60x3.0	M	60.00	3.00	0.433	58.051	56.319	56.752	1.840	1.624	57.00
60x4.0	M	60.00	4.00	0.577	57.402	55.093	55.670	2.454	2.165	56.00
62x1.5	M	62.00	1.50	0.217	61.026	60.160	60.376	0.920	0.812	60.50
62x2.0	M	62.00	2.00	0.289	60.701	59.546	59.835	1.227	1.083	60.00
62x3.0	M	62.00	3.00	0.433	60.051	58.319	58.752	1.840	1.624	59.00
62x4.0	M	62.00	4.00	0.577	59.402	57.093	57.670	2.454	2.165	58.00
64x1.5	M	64.00	1.50	0.217	63.026	62.160	62.376	0.920	0.812	62.50
64x2.0	M	64.00	2.00	0.289	62.701	61.546	61.835	1.227	1.083	62.00
64x3.0	M	64.00	3.00	0.433	62.051	60.319	60.752	1.840	1.624	61.00
64x4.0	M	64.00	4.00	0.577	61.402	59.093	59.670	2.454	2.165	60.00
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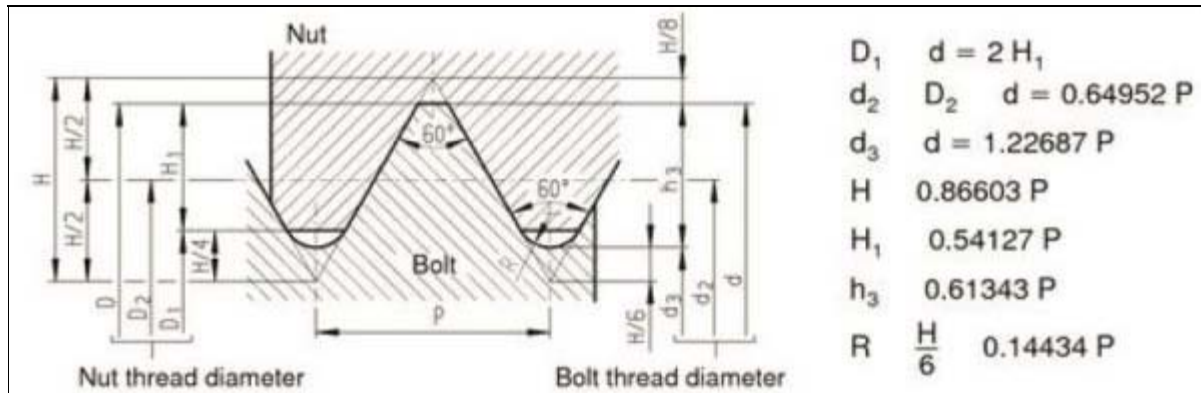
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- FINE PITCH -- M (65 mm - 100 mm)



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[Metric Thread -- Extended Thread Size Range \(online only\)](#)

MARYLAND METRICS -- THREAD DATA CHART: Metric Thread -- Fine Pitch										
Nominal Size ISO MF	Thread Form Type	Major Diameter mm $d=D$	Pitch mm p	Root Radius mm r	Pitch Diameter mm $d_2=D_2$	Minor Diameter Male Thd. d_3	Minor Diameter Female Thd. D_1	Thread Height Male Thd. h_3	Thread Height Female Thd. H_1	Tap Drill Diameter mm
65x1.5	M	65.00	1.50	0.217	64.026	63.160	63.376	0.920	0.812	63.50
65x2.0	M	65.00	2.00	0.289	63.789	62.546	62.835	1.227	1.083	63.00
65x3.0	M	65.00	3.00	0.433	63.051	61.319	61.752	1.840	1.624	62.00
65x4.0	M	65.00	4.00	0.577	62.402	60.093	60.670	2.454	2.165	61.00
68x1.5	M	68.00	1.50	0.217	67.026	66.160	66.376	0.920	0.812	66.50
68x2.0	M	68.00	2.00	0.289	66.701	65.546	65.835	1.227	1.083	66.00
68x3.0	M	68.00	3.00	0.433	66.051	64.319	64.752	1.840	1.624	65.00
68x4.0	M	68.00	4.00	0.577	65.402	63.093	63.670	2.454	2.165	64.00
70x1.5	M	70.00	1.50	0.217	69.026	68.160	68.376	0.920	0.812	68.50
70x2.0	M	70.00	2.00	0.289	68.201	67.546	67.835	1.227	1.083	68.00
70x3.0	M	70.00	3.00	0.433	68.051	66.319	66.752	1.840	1.624	67.00
70x4.0	M	70.00	4.00	0.577	67.402	65.093	65.670	2.454	2.165	66.00
70x6.0	M	70.00	6.00	0.866	66.103	62.639	63.505	3.681	3.248	64.00
72x1.5	M	72.00	1.50	0.217	71.026	70.160	70.376	0.920	0.812	70.50
72x2.0	M	72.00	2.00	0.289	70.701	69.546	69.835	1.227	1.083	70.00
72x3.0	M	72.00	3.00	0.433	70.051	68.319	68.752	1.840	1.624	69.00
72x4.0	M	72.00	4.00	0.577	69.402	67.093	67.670	2.454	2.165	68.00
72x6.0	M	72.00	6.00	0.866	68.103	64.639	65.505	3.681	3.248	66.00
75x1.5	M	75.00	1.50	0.217	74.026	73.160	73.376	0.920	0.812	73.50
75x2.0	M	75.00	2.00	0.289	73.701	72.546	72.835	1.227	1.083	73.00
75x3.0	M	75.00	3.00	0.433	73.051	71.319	71.752	1.840	1.624	72.00
75x4.0	M	75.00	4.00	0.577	72.402	70.093	70.670	2.454	2.165	71.00
75x6.0	M	75.00	6.00	0.866	71.103	67.639	68.505	3.681	3.248	69.00
76x1.5	M	76.00	1.50	0.217	75.026	74.160	74.376	0.920	0.812	74.50

76x2.0	M	76.00	2.00	0.289	74.701	73.546	73.835	1.227	1.083	74.00
76x3.0	M	76.00	3.00	0.433	74.051	72.319	72.752	1.840	1.624	73.00
76x4.0	M	76.00	4.00	0.577	73.402	71.093	71.670	2.454	2.165	72.00
76x6.0	M	76.00	6.00	0.866	72.103	68.639	69.505	3.681	3.248	70.00
80x1.5	M	80.00	1.50	0.217	79.026	78.160	78.376	0.920	0.812	78.50
80x2.0	M	80.00	2.00	0.289	78.701	77.546	77.835	1.227	1.083	78.00
80x3.0	M	80.00	3.00	0.433	78.051	76.319	76.752	1.840	1.624	77.00
80x4.0	M	80.00	4.00	0.577	77.402	75.093	75.670	2.454	2.165	76.00
80x6.0	M	80.00	6.00	0.866	76.103	72.639	73.505	3.681	3.248	74.00
85x2.0	M	85.00	2.00	0.289	83.701	82.546	82.535	1.227	1.083	83.00
85x3.0	M	85.00	3.00	0.433	83.051	81.319	81.752	1.840	1.624	82.00
85x4.0	M	85.00	4.00	0.577	82.402	80.093	80.670	2.454	2.165	81.00
85x6.0	M	85.00	6.00	0.866	81.103	77.639	78.505	3.681	3.248	79.00
90x2.0	M	90.00	2.00	0.289	88.701	87.546	87.835	1.227	1.083	88.00
90x3.0	M	90.00	3.00	0.433	88.051	86.319	86.752	1.840	1.624	87.00
90x4.0	M	90.00	4.00	0.577	87.402	85.093	85.670	2.454	2.165	86.00
90x6.0	M	90.00	6.00	0.866	86.103	82.639	83.505	3.681	0.328	84.00
95x2.0	M	95.00	2.00	0.289	93.701	92.546	92.835	1.227	1.083	93.00
95x3.0	M	95.00	3.00	0.433	93.051	91.319	91.752	1.840	1.624	92.00
95x4.0	M	95.00	4.00	0.577	92.402	90.093	90.670	2.454	2.165	91.00
95x6.0	M	95.00	6.00	0.866	91.103	87.639	88.505	3.681	3.248	89.00
100x2.0	M	100.00	2.00	0.289	98.701	97.546	97.835	1.227	1.083	98.00
100x3.0	M	100.00	3.00	0.433	98.051	96.319	96.752	1.840	1.624	97.00
100x4.0	M	100.00	4.00	0.577	97.402	95.093	95.670	2.454	2.165	96.00
100x6.0	M	100.00	6.00	0.866	96.103	92.639	93.505	3.681	3.248	94.00
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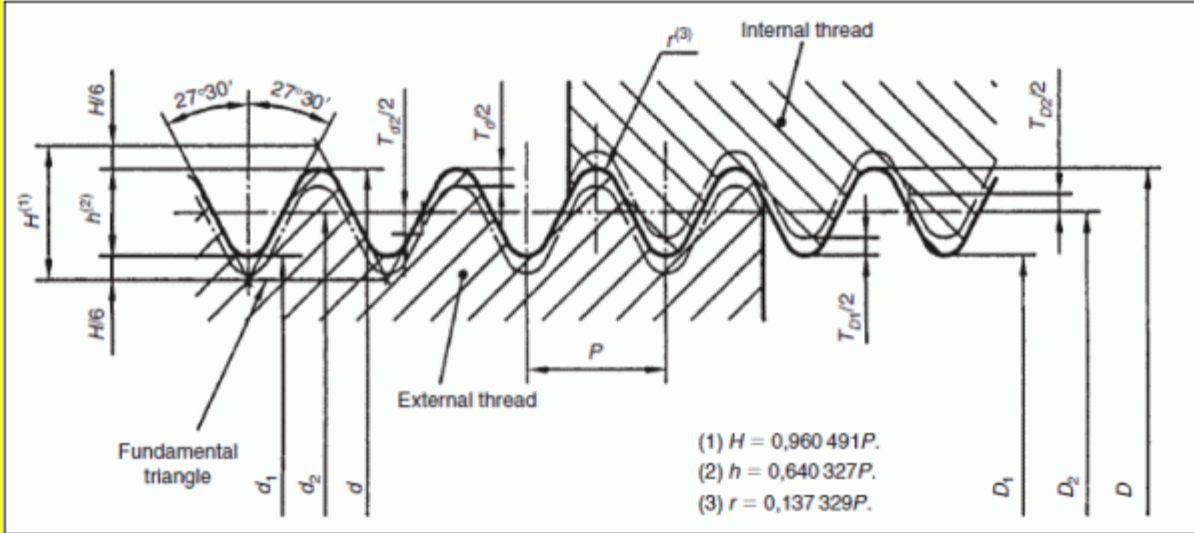
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MARYLAND METRICS THREAD DATA CHARTS

PIPE THREAD -- BRITISH STANDARD PIPE PARALLEL -- BSPP/BSPPF
PIPE THREAD -- JAPANESE PIPE PARALLEL -- PF
British Pipe Thread (Whitworth Form) -- Parallel (BSPP/BSPPF) -- (G)

[Click here to return to the thread data chart page index.](#)

BS EN ISO 228-1: 2003 Table 1 Thread dimensions
British Pipe Thread (Whitworth Form) -- Parallel (BSPP/BSPF) -- (G)

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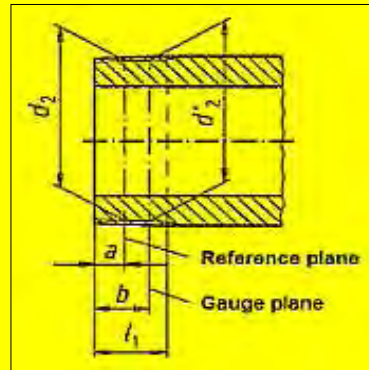
MARYLAND METRICS

THREAD DATA CHARTS

DIN 158

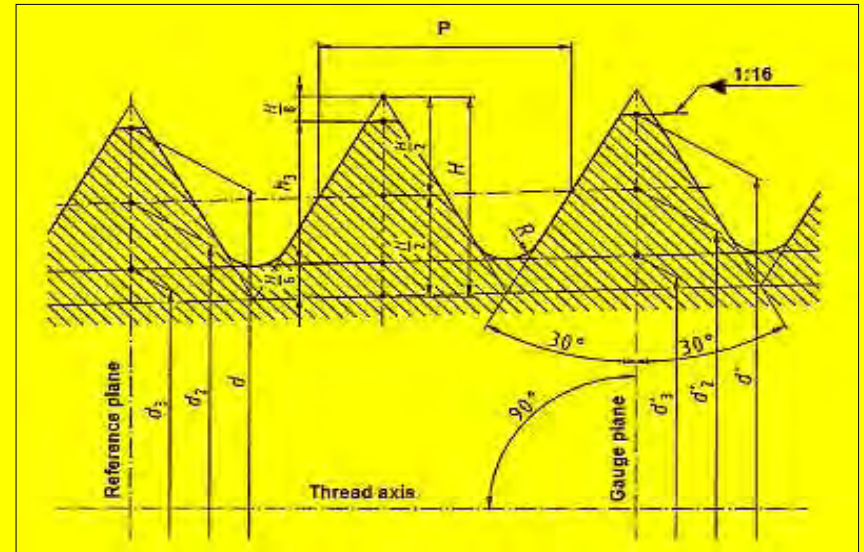
PIPE THREAD -- METRIC TAPER PIPE -- MT

Example Designation: DIN 158 - M 30 x 2 keg



Type of thread: female thread cylindrical (M-thread acc. DIN 13)
male thread thread conical (taper 1:16)

Limits of size for taper external threads at gauge plane



Thread size	Standard design						Short design					
	Major diameter, d'		Pitch diameter, d'2		Minor diameter, d'3		Major diameter, d'		Pitch diameter, d'2		Minor diameter, d'3	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
M 5 keg	5,08	5,02	4,56	4,5	4,099	4,039	-	-	-	-	-	-
M 6 keg	6,108	6,018	5,458	5,368	4,881	4,791	6,093	6,033	5,443	5,383	4,866	4,806
M 8 x 1 keg	8,108	8,018	7,458	7,368	6,881	6,791	8,093	8,033	7,443	7,383	6,866	6,806
M 10 x 1 keg	10,108	10,018	9,458	9,368	8,881	8,791	10,093	10,033	9,443	9,383	8,866	8,806
M 12 x 1 keg	12,108	12,018	11,458	11,368	10,881	10,791	12,093	12,033	11,443	11,383	10,866	10,806
M 10 x 1,25 keg	10,181	10,069	9,369	9,257	8,647	8,535	10,165	10,085	9,353	9,273	8,631	8,551
M 12 x 1,25 keg	12,181	12,069	11,369	11,257	10,647	10,535	12,165	12,085	11,353	11,273	10,631	10,551
M 12 x 1,5 keg	12,251	12,125	11,277	11,151	10,411	10,285	12,235	12,141	11,261	11,167	10,395	10,301
M 14 x 1,5 keg	14,251	14,125	13,277	13,151	12,411	12,285	14,235	14,141	13,261	13,167	12,395	12,301
M 16 x 1,5 keg	16,251	16,125	15,277	15,151	14,411	14,285	16,235	16,141	15,261	15,167	14,395	14,301
M 18 x 1,5 keg	18,251	18,125	17,277	17,151	16,411	16,285	18,235	18,141	17,261	17,167	16,395	16,301
M 20 x 1,5 keg	20,251	20,125	19,277	19,151	18,411	18,285	20,235	20,141	19,261	19,167	18,395	18,301
M 22 x 1,5 keg	22,251	22,125	21,277	21,151	20,411	20,285	22,235	22,141	21,261	21,167	20,395	20,301
M 24 x 1,5 keg	24,251	24,125	23,277	23,151	22,411	22,285	24,235	24,141	23,261	23,167	22,395	22,301
M 26 x 1,5 keg	26,251	26,125	25,277	25,151	24,411	24,285	26,235	26,141	25,261	25,167	24,395	24,301
M 27 x 1,5 keg	27,251	27,125	26,277	26,151	25,411	25,285	27,235	27,141	26,261	26,167	25,395	25,301
M 30 x 1,5 keg	30,251	30,125	29,277	29,151	28,411	28,285	30,235	30,141	29,261	29,167	28,395	28,301

Thread size	Standard design						Short design					
	Major diameter, d'		Pitch diameter, d'2		Minor diameter, d'3		Major diameter, d'		Pitch diameter, d'2		Minor diameter, d'3	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
M 33 x 1,5 keg	33,313	33,125	32,339	32 ,151	31,473	31,285	33,282	33,156	32,308	32 ,182	31,442	31,316
M 36 x 1,5 keg	36,313	36,125	35,339	35,151	34,473	34,285	36,282	36,156	35,308	35,182	34,442	34,316
M 38 x 1,5 keg	38,313	38,125	37,339	37,151	36,473	36,285	38,282	38,156	37,308	37,182	36,442	36,316
M 39 x 1,5 keg	39,313	39,125	38,339	38,151	37,473	37,285	39,282	39,156	38,308	38,182	37,442	37,316
M 42 x 1,5 keg	42,313	42,125	41,339	41 ,151	40,473	40,285	42,282	42,156	41,308	41,182	40,442	40,316
M 45 x 1,5 keg	45,313	45,125	44,339	44,151	43,473	43,285	45,282	45,156	44,308	44,182	43,442	43,316
M 48 x 1,5 keg	48,313	48,125	47,339	47,151	46,473	46,285	48,282	48,156	47,308	47,182	46,442	46,316
M 52 x 1,5 keg	52,313	52,125	51 ,339	51 ,151	50,473	50,285	52,282	52,156	51,308	51,182	50,442	50,316
M 27 x 2 keg	27,344	27,156	26,045	25,857	24,89	24,702	27,313	27,187	26,014	25,888	24,859	24,733
M 30 x 2 keg	30,344	30,156	29,045	28,857	27,89	27,702	30,313	30,187	29,014	28,888	27,859	27,733
M 33 x 2 keg	33,344	33,156	32,045	31 ,857	30,89	30,702	33,313	33,187	32 ,014	31 ,888	30,859	30,733
M 36 x 2 keg	36,365	36,135	35,066	34,836	33,911	33,681	36,325	36,175	35,026	34,876	33,871	33,721
M 39 x 2 keg	39,365	39,135	38,066	37,836	36,911	36,681	39,325	39,175	38,026	37,876	36,871	36,721
M 42 x 2 keg	42,365	42,135	41 ,066	40,836	39,911	39,681	42,325	42,175	41 ,026	40,876	39,871	39,721
M 45 x 2 keg	45,365	45,135	44,066	43,836	42,911	42,681	45,325	45,175	44,026	43,876	42,871	42,721
M 48 x 2 keg	48,365	48,135	47,066	46,836	45,911	45,681	48,325	48,175	47,026	46,876	45,871	45,721
M 52 x 2 keg	52,365	52,135	51,066	50,836	49,911	49,681	52,325	52,175	51,026	50,876	49,871	49,721
M 56 x 2 keg	56,365	56,135	55 ,066	54,836	53 ,911	53,681	56,325	56,175	55,026	54,876	53,871	53,721
M 60 x 2 keg	60,365	60,135	59,066	58,836	57,911	57,681	60,325	60,175	59,026	58,876	57,871	57,721

Nominal sizes for taper external threads

						Dimensions at reference plane					Dimensions at gauge plane				
Thread size	Pitch, P	Useful thread length, l1		Maximum height of thread, h3		Dimension a		Thread dimensions at gauge plane			Gauge length b		Thread dimensions		
		Standard design	Short design	Standard design	Short design	Standard design	Short design	Major diameter, d	Pitch diameter, d'2	Minor diameter, d'3	Standard design	Short design	d'	d'2	d'3
M5 keg	0,8	5	-	0,521	-	2	-	5	4,48	4,019	2,8	-	5,05	4,53	4,069
M6 keg	1	5,5	4	0,659	0,644	2,5	2	6	5,35	4,773	3,5	3	6,063	5,413	4,836
M8 x 1 keg								8	7,35	6,773			8,063	7,413	6,836
M10 x 1 keg								10	9,35	8,773			10,063	9,413	8,836
M12 x 1 keg								12	11,35	10,773			12,063	11,413	10,836
M10x 1,25 keg	1,25	7	6	0,823	0,807	3	2 ,2	10	9,188	8,466	5	4,2	10,125	9,313	8,591
M12 x 1,25 keg								12	11,188	10,466			12,125	11,313	10,591
M12x 1,5 keg	1,5	8,5	7,5	0,983	0,967	3,5	2,5	12	11,026	10,16	6,5	5,5	12,188	11,214	10,348
M14 x 1,5 keg								14	13,026	12,16			14,188	13,214	12,348
M16 x 1,5 keg								16	15,026	14,16			16,188	15,214	14,348
M18 x 1,5 keg								18	17,026	16,16			18,188	17,214	16,348
M20 x 1,5 keg								20	19,026	18,16			20,188	19,214	18,348
M22 x 1,5 keg								22	21,026	20,16			22,188	21,214	20,348
M24 x 1,5 keg								24	23 ,026	22,16			24,188	23,214	22,348
M26 x 1,5 keg								26	25,026	24,16			26,188	25,214	24,348
(M27 x 1,5 keg)								27	26,026	25,16			27,188	26,214	25,348
M30 x 1,5 keg								30	29,026	28,16			30,188	29,214	28,348

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Threads according to this norm are used for pipe connections with conical screw-in plugs or fittings size C, which are to screwed into cylindrical screw-in holes size Z, both according to DIN 3852 part 1. The distance a of the relating level corresponds to DIN 3852 part 1. The conical outside thread of this norm shows at the relating level point the same effective diameter as the relating cylindrical inner thread according DIN 13, so it can be manually screwed in until that relating level.The adjustment power created by using of a suitable tool increases the thread reach and seals the screw connection supported by a suitable sealant (e.g. hemp or Teflon). Outside, effective and core diameter show the same ± tolerance, the tabular form list shows averages only. The cylindrical inner thread according DIN 13 shows the tolerance - 4H5H, to keep the free space between the crest of thread and the leakage space as small as possible.

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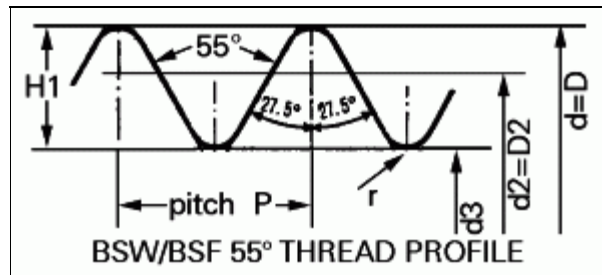
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MARYLAND METRICS THREAD DATA CHARTS

BRITISH THREAD -- COARSE PITCH -- BSW



Whitworth Coarse Thread BS 84

BSW (British Standard Whitworth)

British Standard Whitworth Coarse Thread Series (parallel, cylindrical)

In GB most common Thread. Corresponds to the Metric Thread in its type of use.

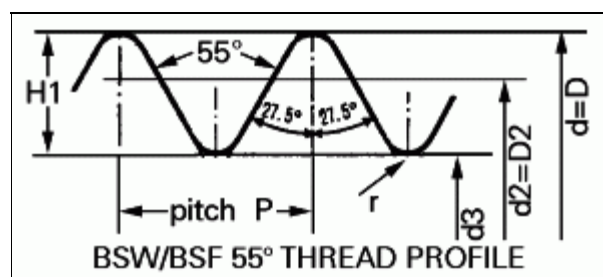
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MARYLAND METRICS -- THREAD DATA CHART:								
British Thread (British Standard Whitworth) -- Coarse Pitch								
Nominal Size Ww	Thread Form Type	Major Diameter mm d=D	Pitch mm p	Threads per inch tpi	Pitch Diameter mm d2=D2	Minor Diameter Male Thd. d3	Thread Height H1	Tap Drill Diameter mm
1/16"	BSW	1.587	0.423	60	1.315	1.050	0.270	1.15
3/32"	BSW	2.381	0.529	48	2.041	1.703	0.338	1.90
1/8"	BSW	3.175	0.635	40	2.768	2.362	0.406	2.50
5/32"	BSW	3.969	0.793	32	3.459	2.952	0.507	3.20
3/16"	BSW	4.762	1.058	24	4.084	3.407	0.677	3.70
7/32"	BSW	5.556	1.058	24	4.878	4.201	0.677	4.50
1/4"	BSW	6.350	1.270	20	5.537	4.724	0.813	5.10
5/16"	BSW	7.938	1.411	18	7.034	6.131	0.904	6.50
3/8"	BSW	9.525	1.588	16	8.509	7.492	1.017	7.90
7/16"	BSW	11.113	1.814	14	9.951	8.789	1.162	9.20
1/2"	BSW	12.700	2.117	12	11.345	9.990	1.355	10.40
9/16"	BSW	14.290	2.117	12	12.930	11.580	1.355	11.89
5/8"	BSW	15.876	2.309	11	14.397	12.918	1.479	13.40
3/4"	BSW	19.051	2.540	10	17.424	15.798	1.627	16.25
7/8"	BSW	22.226	2.822	9	20.419	18.611	1.807	19.25
1"	BSW	25.400	3.175	8	23.368	21.335	2.033	22.00
1 1/8"	BSW	28.576	3.629	7	26.253	23.929	2.324	24.50
1 1/4"	BSW	31.751	3.629	7	29.428	27.104	2.324	27.25
1 3/8"	BSW	34.926	4.233	6	32.215	29.505	2.711	30.25
1 1/2"	BSW	38.100	4.233	6	35.391	32.680	2.711	33.50
1 5/8"	BSW	41.277	5.080	5	38.024	34.771	3.253	35.50
1 3/4"	BSW	44.452	5.080	5	41.199	37.946	3.253	38.50
1 7/8"	BSW	47.627	5.645	4 1/2	44.012	40.398	3.614	41.25
2"	BSW	50.802	5.645	4 1/2	47.187	43.573	3.614	44.50
2 1/4"	BSW	57.152	6.350	4	53.086	49.020	4.066	50.00
2 1/2"	BSW	63.502	6.350	4	59.436	55.370	4.066	56.00

2 3/4"	BSW	69.853	7.257	3 1/2	65.205	60.558	4.647	61.50
3"	BSW	76.203	7.257	3 1/2	71.556	66.909	4.647	68.00
3 1/4"	BSW	82.553	7.816	3 1/4	77.548	72.544	5.005	73.75
3 1/2"	BSW	88.903	7.816	3 1/4	83.899	78.894	5.005	80.00
3 3/4"	BSW	95.254	8.467	3	89.832	84.410	5.422	85.50
4"	BSW	101.604	8.467	3	96.182	90.760	5.422	92.00
4 1/4"	BSW	107.954	8.835	2 7/8	102.297	96.639	5.657	98.00
4 1/2"	BSW	114.304	8.835	2 7/8	108.647	102.990	5.657	104.20
4 3/4"	BSW	120.665	9.237	2 3/4	114.740	108.625	5.915	110.00
5"	BSW	127.005	9.237	2 3/4	121.090	115.176	5.915	116.50
5 1/4"	BSW	133.355	9.677	2 5/8	127.159	120.963	6.196	122.50
5 1/2"	BSW	139.705	9.677	2 5/8	133.509	127.313	6.196	128.50
5 3/4"	BSW	146.055	10.160	2 1/2	139.549	133.043	6.506	134.50
6"	BSW	152.406	10.160	2 1/2	145.900	139.394	6.506	141.00

[Click here to return to the thread data chart page index.](#)

BRITISH THREAD -- FINE PITCH -- BSF



Whitworth Fine Thread BS 84

British Standard Fine Thread Series (parallel, cylindrical)

BSW and BSF are the Thread selections for commercial screws and nuts.

This fine thread, which is widespread in the British machine tool industry, is superseded by the American UNF Thread.

[Click here to return to the thread data chart page index.](#)

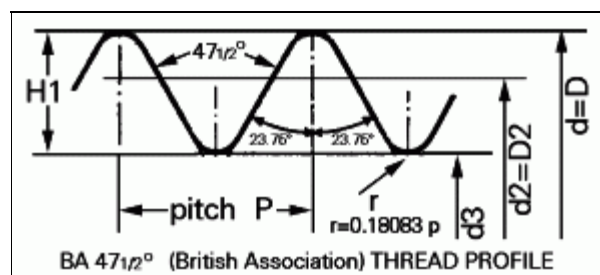
MARYLAND METRICS -- THREAD DATA CHART:								
British Thread (British Standard Fine) -- Fine Pitch								
Nominal Size BSF	Thread Form Type	Major Diameter mm d=D	Pitch mm p	Threads per inch tpi	Pitch Diameter mm d2=D2	Minor Diameter Male Thd. d3	Thread Height H1	Tap Drill Diameter mm
3/16"	BSF	4.763	0.794	32	4.255	3.747	0.508	4.00
7/32"	BSF	5.556	0.907	28	4.975	4.394	0.581	4.60
1/4"	BSF	6.350	0.977	26	5.725	5.100	0.625	5.30
9/32"	BSF	7.142	0.977	26	6.518	5.893	0.625	6.10
5/16"	BSF	7.938	1.156	22	7.199	6.459	0.739	6.80
3/8"	BSF	9.525	1.27	20	8.712	7.899	0.813	8.30
7/16"	BSF	11.113	1.411	18	10.209	9.304	0.904	9.70
1/2"	BSF	12.700	1.588	16	11.684	10.668	1.017	11.10
9/16"	BSF	14.288	1.588	16	13.272	12.256	1.017	12.70
5/8"	BSF	15.875	1.814	14	14.712	13.549	1.162	14.00
11/16"	BSF	17.463	1.814	14	16.300	15.137	1.162	15.50
3/4"	BSF	19.050	2.117	12	17.693	16.336	1.355	16.75
13/16"	BSF	20.638	2.117	12	19.281	17.924	1.355	18.25

7/8"	BSF	22.225	2.309	11	20.747	19.269	1.479	19.75
1"	BSF	25.400	2.54	10	23.774	22.148	1.627	22.75
1 1/8"	BSF	28.575	2.822	9	26.769	24.963	1.807	26.50
1 1/4"	BSF	31.750	2.822	9	29.944	28.138	1.807	28.75
1 3/8"	BSF	34.925	3.175	8	32.893	30.861	2.033	31.50
1 1/2"	BSF	38.100	3.175	8	36.068	34.036	2.033	34.50
1 5/8"	BSF	41.275	3.175	8	39.243	37.211	2.033	38.00
1 3/4"	BSF	44.450	3.629	7	42.126	39.802	2.324	40.50
2"	BSF	50.800	3.629	7	48.476	46.152	2.324	47.00
2 1/4"	BSF	57.150	4.234	6	54.440	51.730	2.711	53.00
2 1/2"	BSF	63.500	4.234	6	60.790	58.080	2.711	59.00
2 3/4"	BSF	69.850	4.234	6	67.140	64.430	2.711	n/a
3"	BSF	76.200	5.08	5	72.946	69.692	3.253	n/a
3 1/4"	BSF	82.550	5.08	5	79.296	76.042	3.253	n/a
3 1/2"	BSF	88.900	5.645	4 1/2	85.285	81.670	3.614	n/a
3 3/4"	BSF	95.250	5.645	4 1/2	91.635	88.020	3.614	n/a
4"	BSF	101.600	5.645	4 1/2	97.985	94.370	3.614	n/a
4 1/4"	BSF	107.950	6.35	4	103.886	99.822	4.066	n/a

BSW & BSF thread notes:	
C = Core diameter = Major Diameter - 1.280654 x P	
d = Actual Depth = 0.640327 x P	
D = Depth of Rounding = 0.073917 x P	
Effective or Pitch Diameter = Major Diameter - .640327 x P	
h = Angular Depth = 0.960491 x P	
h/6 = Shortening = 0.160083 x P	
P = Pitch = 1/Number of threads per inch (tpi)	
r = Radius at the Crest & Root = 0.137329 x P	

[Click here to return to the thread data chart page index.](#)

BRITISH THREAD -- MINIATURE SERIES -- BA



British Association BS 93

(note: only sizes No. 0-16 are covered by BS 93)

British Association Standard Thread.

Used mainly for instruments and clocks.

Replaced by the metric ISO thread and the ISO fine thread.

MARYLAND METRICS -- THREAD DATA CHART:								
British Thread (British Association) -- Miniature Series								
Nominal Size BA	Thread Form Type	Major Diameter mm	Pitch mm p	Threads per Inch tpi	Pitch Diameter mm	Minor Diameter Male Thd. d3	Thread Height H1	Tap Drill Diameter
		d=D			d2=D2	d3		mm
No. 25	BA	0.25	0.07	363	0.205			0.18
No. 24	BA	0.29	0.08	317	0.239			0.21

No. 23	BA	0.33	0.09	282	0.272			0.24
No. 22	BA	0.37	0.10	254	0.307			0.27
No. 21	BA	0.42	0.11	230.91	0.350			0.31
No. 20	BA	0.48	0.13	211.67	0.403			0.36
No. 19	BA	0.54	0.14	181.43	0.450			0.40
No. 18	BA	0.62	0.15	169.33	0.524			0.47
No. 17	BA	0.70	0.17	149.41	0.591			0.53
No. 16	BA	0.79	0.19	133.68	0.668	0.56	0.115	0.60
No. 15	BA	0.90	0.21	120.95	0.766	0.65	0.125	0.70
No. 14	BA	1	0.23	110.4	0.853	0.72	0.14	0.75
No. 13	BA	1.2	0.25	101.6	1.040	0.9	0.15	0.95
No. 12	BA	1.3	0.28	90.71	1.121	0.96	0.17	1.00
No. 11	BA	1.5	0.32	81.93	1.301	1.13	0.185	1.20
No. 10	BA	1.7	0.35	72.57	1.476	1.28	0.21	1.35
No. 9	BA	1.9	0.39	65.12	1.650	1.43	0.235	1.50
No. 8	BA	2.2	0.43	59.07	1.925	1.68	0.26	1.80
No. 7	BA	2.5	0.48	52.92	2.193	1.92	0.29	2.00
No. 6	BA	2.8	0.53	47.92	2.461	2.16	0.32	2.30
No. 5	BA	3.2	0.59	43.05	2.822	2.49	0.355	2.60
No. 4	BA	3.6	0.66	38.48	3.177	2.81	0.395	2.95
No. 3	BA	4.1	0.73	34.79	3.633	3.22	0.44	3.40
No. 2	BA	4.7	0.81	31.35	4.181	3.73	0.485	3.90
No. 1	BA	5.3	0.90	28.22	4.724	4.22	0.54	4.40
No. 0	BA	6	1	25.4	5.360	4.8	0.6	5.00

BA thread notes:
$C = \text{Core diameter} = \text{Major Diameter} - 1.2000 \times P \text{ (2d)}$
$d = \text{Actual Depth} = 0.60000 \times P$
$\text{Effective or Pitch Diameter} = \text{Major Diameter} - 0.6000 \times P \text{ (d)}$
$h = \text{Triangular height} = 1.1363365 \times P$
Nuts and Bolts across flats is nominally $1.75 \times \text{Major Diameter}$
$P = \text{Pitch} = 1/\text{Number of threads per inch (tpi)}$
$r = \text{Radius at the Crest \& Root} = 0.1808346 \times P$
$t = \text{Shortening} = 0.2681688 \times P$

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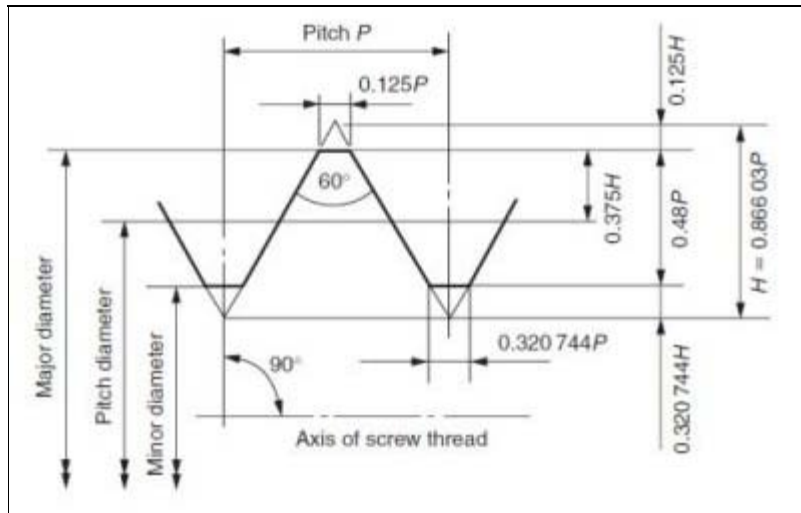
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD BS 4827 ISO metric screw threads miniature series 'S'



Nominal size		Dimensions in mm			
1st choice	2nd choice	Pitch of thread P	Major diameter	Pitch (effective) diameter	Minor diameter
S-0.3		0.08	0.300 000	0.248 038	0.223 200
	S-0.35	0.09	0.350 000	0.291 543	0.263 600
S-0.4		0.1	0.400 000	0.335 048	0.304 000
	S-0.45	0.1	0.450 000	0.385 048	0.354 000
S-0.5		0.125	0.500 000	0.418 810	0.380 000
	S-0.55	0.125	0.550 000	0.468 810	0.430 000
S-0.6		0.15	0.600 000	0.502 572	0.456 000
	S-0.7	0.175	0.700 000	0.586 334	0.532 000
S-0.8		0.2	0.800 000	0.670 096	0.608 000
	S-0.9	0.225	0.900 000	0.753 858	0.684 000
S-1		0.25	1.000 000	0.837 620	0.760 000
	S-1.1	0.25	1.100 000	0.937 620	0.860 000
S-1.2		0.25	1.200 000	1.037 620	0.960 000
	S-1.4	0.3	1.400 000	1.205 144	1.112 000

For full range and further information see BS 4827.

Example Designation: for a thread diameter 0.5 mm by length 2.0 mm = S 0.5x2

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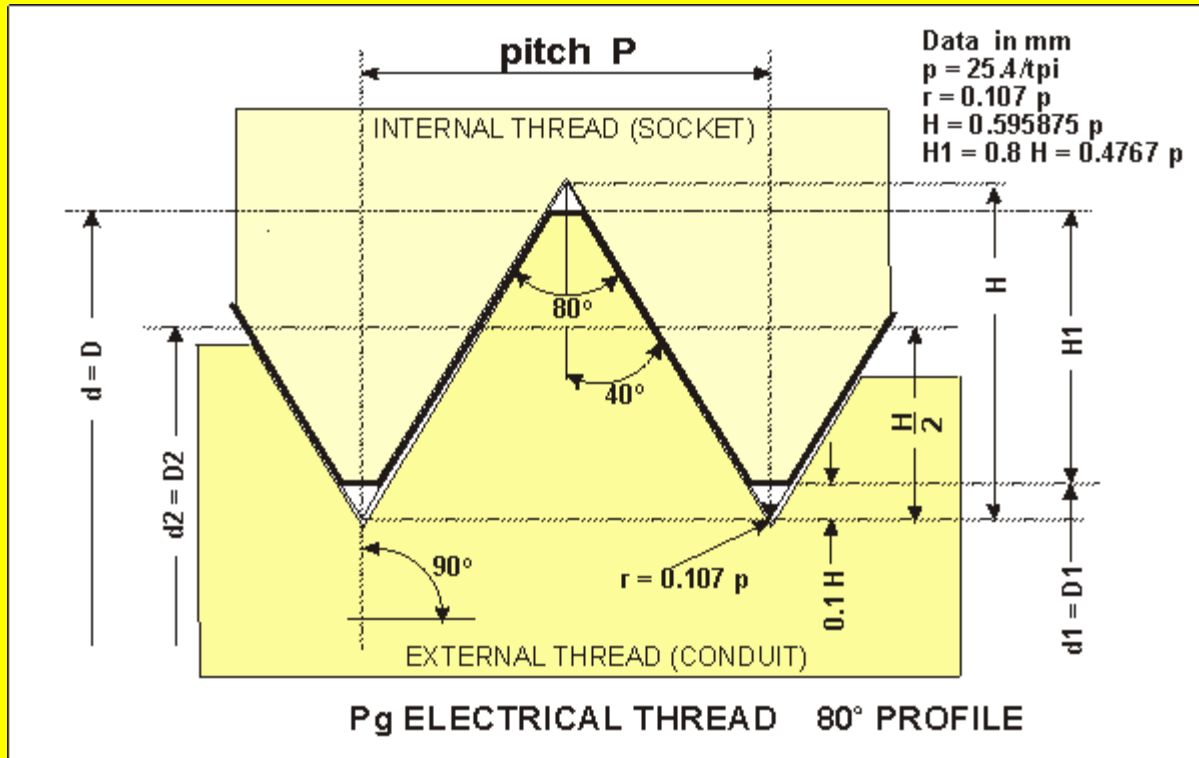
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- ELECTRICAL THREAD -- Pg



[Click here to return to the thread data chart page index.](#)

Pg thread usage will eventually be phased out in continental Europe. A new metric thread standard ([EN 50262](#)) will be phased in as mandatory beginning on March 1, 2001 replacing the Pg thread. Metric electrical threads are already in use in the UK where they have replaced the (now obsolete for electrical use) BSP threads.

PG									
MARYLAND METRICS -- THREAD DATA CHART:									
METRIC Pg ELECTRICAL THREAD DIN 40430 (Stahlpanzerrohr-Gewinde)									
Pg Nominal Size Callout	Thread Form Type	Major Diameter mm $d=D$	Pitch mm p	Threads per inch tpi	Pitch Diameter mm $d_2=D_2$	Minor Diameter Male Thd. d_1	Thread Height H_1	Tap Drill Diameter mm	Radius mm
Pg7	Pg	12.5	1.27	20	11.89	11.28	0.61	11.4	0.14
Pg9	Pg	15.2	1.411	18	14.53	13.86	0.67	14	0.15
Pg11	Pg	18.6	1.411	18	17.93	17.26	0.67	17.25	0.15
Pg13.5	Pg	20.4	1.411	18	19.73	19.06	0.67	19	0.15
Pg16	Pg	22.5	1.411	18	21.83	21.16	0.67	21.25	0.15
Pg21	Pg	28.3	1.588	16	27.54	26.78	0.76	26.75	0.17
Pg29	Pg	37	1.588	16	36.24	35.48	0.76	35.5	0.17
Pg36	Pg	47	1.588	16	46.24	45.48	0.76	45.5	0.17
Pg42	Pg	54	1.588	16	53.24	52.48	0.76	52.5	0.17
Pg48	Pg	59.3	1.588	16	58.54	57.78	0.76	57.75	0.17

FOR CLEARANCE DRILL DIAMETER: (Pg 7 THRU Pg 13.5 ADD 0.1 MM TO MAJOR DIAMETER)

FOR CLEARANCE DRILL DIAMETER: (Pg 16 THRU Pg 48 ADD 0.25 MM TO MAJOR DIAMETER)

[Click here to return to the thread data chart page index.](#)

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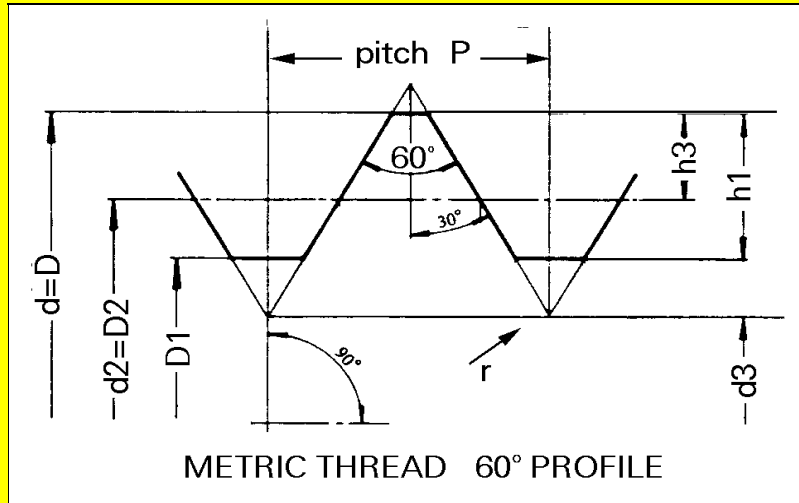
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MARYLAND METRICS THREAD DATA CHARTS

METRIC ELECTRICAL THREAD FINE PITCH -- (M12x1.5 - M75x1.5) for EN 50262 threaded fittings



[Click here to return to the thread data chart page index.](#)

MARYLAND METRICS -- THREAD DATA CHART: Metric Electrical Thread Fine Pitch (EN 60423 table 1) + Some Electrical Industry Proprietary Threads

Nominal Size ISO MF	Thread Form Type	Major Diameter mm d=D	Pitch mm p	Root Radius mm r	Pitch Diameter mm d2=D2	Minor Diameter Male Thd. d3	Minor Diameter Female Thd. D1	Thread Height Male Thd. h3	Thread Height Female Thd. H1	Tap Drill Diameter mm	Clearance Drill Diameter mm
12x1.5	M	12.00	1.50	0.217	11.026	10.160	10.376	0.920	0.812	10.50	12.500
16x1.5	M	16.00	1.50	0.217	15.026	14.160	14.376	0.920	0.812	14.50	16.500
20x1.5	M	20.00	1.50	0.217	19.026	18.160	18.376	0.920	0.812	18.50	20.500
25x1.5	M	25.00	1.50	0.217	24.026	23.160	23.376	0.920	0.812	23.50	25.500
32x1.5	M	32.00	1.50	0.217	31.026	30.160	30.376	0.920	0.812	30.50	32.500
40x1.5	M	40.00	1.50	0.217	39.026	38.160	38.376	0.920	0.812	38.50	40.500
50x1.5	M	50.00	1.50	0.217	49.026	48.160	48.376	0.920	0.812	48.50	50.500
63x1.5	M	63.00	1.50	0.217	62.026	61.160	61.376	0.920	0.812	61.50	63.500
75x1.5	M	75.00	1.50	0.217	74.026	73.160	73.376	0.920	0.812	73.50	75.500
80x2	M	80.00	2.00							78.00	80.50
85x2	M	85.00	2.00							83.00	85.50
90x2	M	90.00	2.00							88.00	90.50
100x2	M	100.00	2.00							98.00	100.50
100x3	M	100.00	3.00							97.00	100.50
110x3	M	110.00	3.00							107.00	110.50

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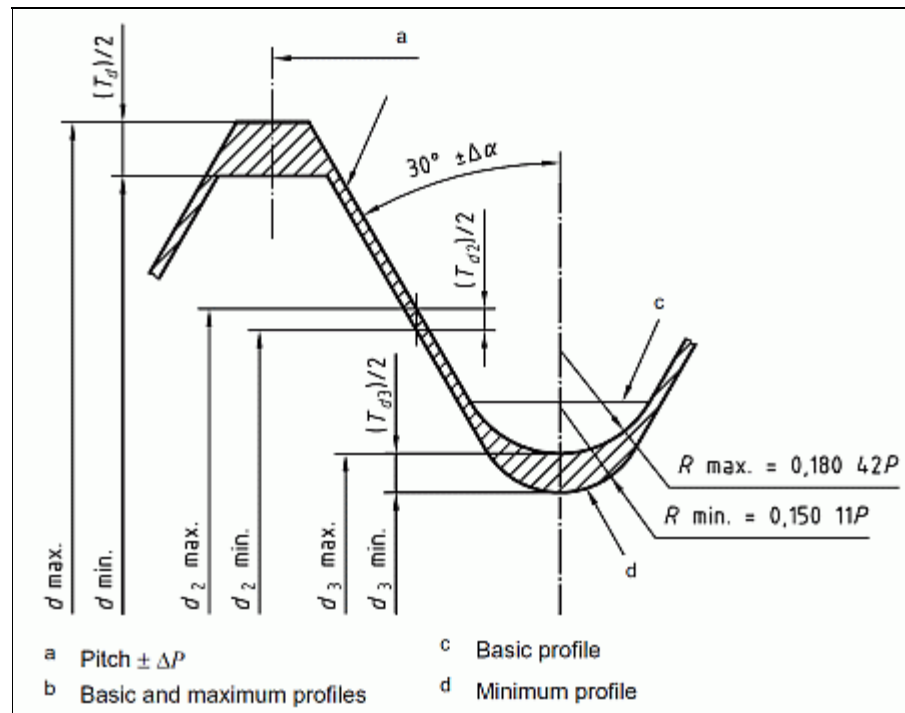
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- Aerospace threads MJ

BOLT Figure 1



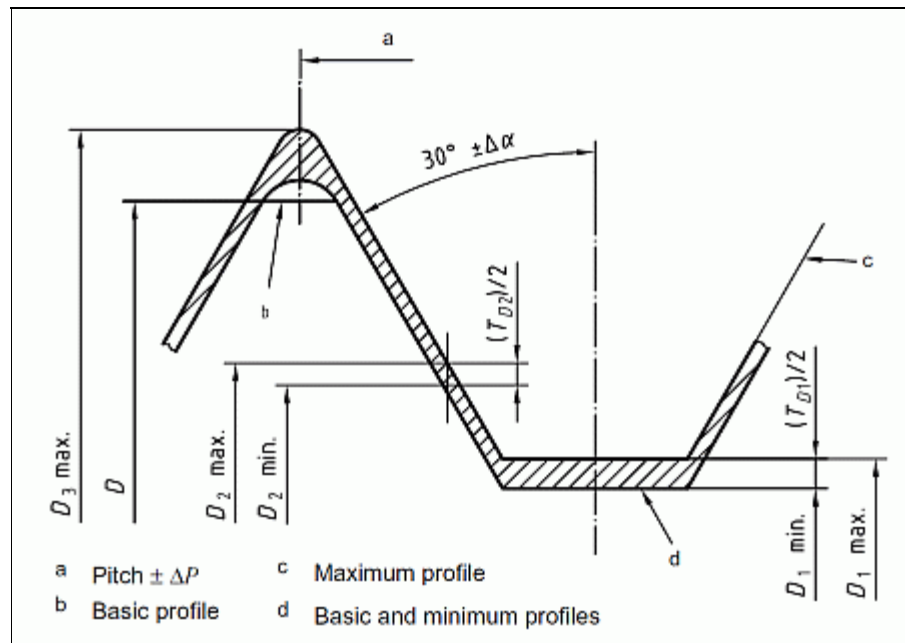
Limit dimensions for 4h6h threads for bolts

Dimensions in millimetres

Thread designation	Major diameter			Pitch diameter			Minor diameter		
	d			d2			d3		
	max.	min.	Td	max.	min.	Td2	max.	min.	Td3
			(6h) a			(4h) a			
MJ1,6 x 0,35-4h6h	1,600	1,515	0,085	1,373	1,333	0,04	1,196	1,135	0,061
MJ2 x 0,4-4h6h	2,000	1,905	0,095	1,740	1,698	0,042	1,538	1,472	0,066
MJ2,5 x 0,45-4h6h	2,5	2,4	0,1	2,208	2,163	0,045	1,980	1,908	0,072
MJ3 x 0,5-4h6h	3,000	2,894	0,106	2,675	2,627	0,048	2,423	2,345	0,078
MJ3,5 x 0,6-4h6h	3,500	3,375	0,125	3,110	3,057	0,053	2,807	2,718	0,089
MJ4 x 0,7-4h6h	4,00	3,86	0,14	3,545	3,489	0,056	3,192	3,094	0,098
MJ5 x 0,8-4h6h	5,00	4,85	0,15	4,48	4,42	0,06	4,076	3,968	0,108
MJ6 x 1-4h6h	6,00	5,82	0,18	5,350	5,279	0,071	4,845	4,713	0,132
MJ7 x 1-4h6h	7,00	6,82	0,18	6,350	6,279	0,071	5,845	5,713	0,132
MJ8 x 1-4h6h	8,00	7,82	0,18	7,350	7,279	0,071	6,845	6,713	0,132
MJ10 x 1,25-4h6h	10,000	9,788	0,212	9,188	9,113	0,075	8,557	8,406	0,151
MJ12 x 1,25-4h6h	12,000	11,788	0,212	11,188	11,103	0,085	10,557	10,396	0,161
MJ14 x 1,5-4h6h	14,000	13,764	0,236	13,026	12,936	0,09	12,268	12,087	0,181
MJ16 x 1,5-4h6h	16,000	15,764	0,236	15,026	14,936	0,09	14,268	14,087	0,181
MJ18 x 1,5-4h6h	18,000	17,764	0,236	17,026	16,936	0,09	16,268	16,087	0,181
MJ20 x 1,5-4h6h	20,000	19,764	0,236	19,026	18,936	0,09	18,268	18,087	0,181
MJ22 x 1,5-4h6h	22,000	21,764	0,236	21,026	20,936	0,09	20,268	20,087	0,181
MJ24 x 2-4h6h	24,00	23,72	0,28	22,701	22,595	0,106	21,691	21,464	0,227
MJ27 x 2-4h6h	27,00	26,72	0,28	25,701	25,595	0,106	24,691	24,464	0,227
MJ30 x 2-4h6h	30,00	29,72	0,28	28,701	28,595	0,106	27,691	27,464	0,227

MJ33 x 2-4h6h	33,00	32,72	0,28	31,701	31,595	0,106	30,691	30,464	0,227
MJ36 x 2-4h6h	36,00	35,72	0,28	34,701	34,595	0,106	33,691	33,464	0,227
MJ39 x 2-4h6h	39,00	38,72	0,28	37,701	37,595	0,106	36,691	36,464	0,227
a In accordance with ISO 965-1									

NUT Figure 2



Limit dimensions of 4H6H threads for nuts of diameter MJ1,6 to MJ5
and limit dimensions of 4H5H threads for nuts of diameter MJ6 to MJ39

Dimensions in millimetres

	Major	Pitch diameter			Minor diameter			
	D3 a	D2			D1			
Thread designation				TD2			TD1	
	max.	max.	min.	(4H) b	max.	min.	(6H) b	(5H) b
MJ1,6 x 0,35-4H6H	1,704	1,426	1,373	0,053	1,359	1,259	0,1	
MJ2 x 0,4-4H6H	2,114	1,796	1,740	0,056	1,722	1,610	0,112	
MJ2,5 x 0,45-4H6H	2,625	2,268	2,208	0,06	2,187	2,062	0,125	
MJ3 x 0,5-4H6H	3,135	2,738	2,675	0,063	2,653	2,513	0,14	
MJ3,5 x 0,6-4H6H	3,658	3,181	3,110	0,071	3,075	2,915	0,16	
MJ4 x 0,7-4H6H	4,176	3,620	3,545	0,075	3,498	3,318	0,18	
MJ5 x 0,8-4H6H	5,195	4,56	4,48	0,08	4,421	4,221	0,2	
MJ6 x 1-4H5H	6,239	5,445	5,350	0,095	5,216	5,026		0,19
MJ7 x 1-4H5H	7,239	6,445	6,350	0,095	6,216	6,026		0,19
MJ8 x 1-4H5H	8,239	7,445	7,350	0,095	7,216	7,026		0,19
MJ10 x 1,25-4H5H	10,28	9,288	9,188	0,1	8,994	8,782		0,212
MJ12 x 1,25-4H5H	12,292	11,300	11,188	0,112	10,994	10,782		0,212
MJ14 x 1,5-4H5H	14,335	13,144	13,026	0,118	12,775	12,539		0,236
MJ16 x 1,5-4H5H	16,335	15,144	15,026	0,118	14,775	14,539		0,236
MJ18 x 1,5-4H5H	18,335	17,144	17,026	0,118	16,775	16,539		0,236
MJ20 x 1,5-4H5H	20,335	19,144	19,026	0,118	18,775	18,539		0,236
MJ22 x 1,5-4H5H	22,335	21,144	21,026	0,118	20,775	20,539		0,236
MJ24 x 2-4H5H	24,429	22,841	22,701	0,14	22,351	22,051		0,3
MJ27 x 2-4H5H	27,429	25,841	25,701	0,14	25,351	25,051		0,3
MJ30 x 2-4H5H	30,429	28,841	28,701	0,14	28,351	28,051		0,3
MJ33 x 2-4H5H	33,429	31,841	31,701	0,14	31,351	31,051		0,3
MJ36 x 2-4H5H	36,429	34,841	34,701	0,14	34,351	34,051		0,3

MJ39 x 2-4H5H	39,429	37,841	37,701	0,14	37,351	37,051	0,3
a D3 min. is not specified. However, it shall be greater than D (see Figure 2).							
b In accordance with ISO 965-1							

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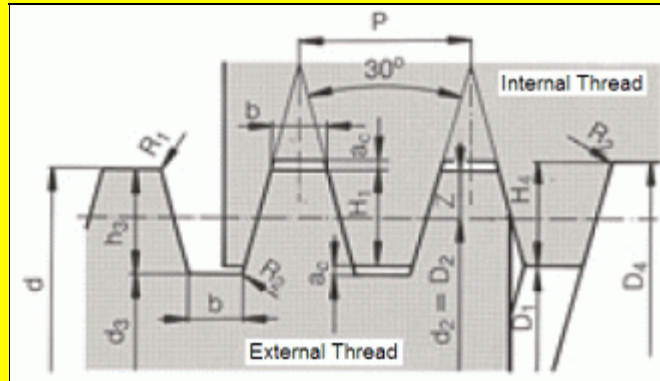
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MARYLAND METRICS THREAD DATA CHARTS

METRIC TRAPEZOIDAL THREAD



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ISO Metric Trapezoidal Threads DIN 103 & ISO 2904 excerpts															
			External							Internal					
				Major Dia		Pitch Dia		Minor Dia			Minor Dia		Pitch Dia		Major Dia
Size mm	Thread Designation	Pitch mm	Class	Max	Min	Max	Min	Max	Min	Class	Min	Max	Min	Max	Min
8	TR8x1.5	1.5	7e	8.000	7.850	7.183	7.013	6.200	5.921	7H	6.500	6.690	7.250	7.474	8.300
9	TR9x1.5	1.5	7e	9.000	8.850	8.183	8.013	7.200	6.921	7H	7.500	7.690	8.250	8.474	9.300
9	TR9x2	2	7e	9.000	8.820	7.929	7.739	6.500	6.191	7H	7.000	7.236	8.000	8.250	9.500
10	TR10x1.5	1.5	7e	10.000	9.850	9.183	9.013	8.200	7.921	7H	8.500	8.690	9.250	9.474	10.300
10	TR10x2	2	7e	10.000	9.820	8.929	8.739	7.500	7.191	7H	8.000	8.236	9.000	9.250	10.500
11	TR11x2	2	7e	11.000	10.820	9.929	9.739	8.500	8.191	7H	9.000	9.236	10.000	10.250	11.500
11	TR11x3	3	7e	11.000	10.764	9.415	9.203	7.500	7.150	7H	8.000	8.315	9.500	9.780	11.500
12	TR12x2	2	7e	12.000	11.820	10.929	10.729	9.500	9.179	7H	10.000	10.236	11.000	11.265	12.500
12	TR12x3	3	7e	12.000	11.764	10.415	10.191	8.500	8.135	7H	9.000	9.315	10.500	10.800	12.500
14	TR14x2	2	7e	14.000	13.820	12.929	12.729	11.500	11.179	7H	12.000	12.236	13.000	13.265	14.500
14	TR14x3	3	7e	14.000	13.764	12.415	12.191	10.500	10.135	7H	11.000	11.315	12.500	12.800	14.500
16	TR16x2	2	7e	16.000	15.820	14.929	14.729	13.500	13.179	7H	14.000	14.236	15.000	15.265	16.500
16	TR16x3	3	7e	16.000	15.764	14.415	14.191	12.500	12.135	7H	13.000	13.315	14.500	14.800	16.500
16	TR16x4	4	7e	16.000	15.700	13.905	13.640	11.500	11.074	7H	12.000	12.375	14.000	14.355	16.500
18	TR18x2	2	7e	18.000	17.820	16.929	16.729	15.500	15.179	7H	16.000	16.236	17.000	17.265	18.500
18	TR18x3	3	7e	18.000	17.764	16.415	16.191	14.500	14.135	7H	15.000	15.315	16.500	16.800	18.500
18	TR18x4	4	7e	18.000	17.700	15.905	15.640	13.500	13.074	7H	14.000	14.375	16.000	16.355	18.500
20	TR20x2	2	7e	20.000	19.820	18.929	18.729	17.500	17.179	7H	18.000	18.236	19.000	19.265	20.500
20	TR20x3	3	7e	20.000	19.764	18.415	18.191	16.500	16.135	7H	17.000	17.315	18.500	18.800	20.500
20	TR20x4	4	7e	20.000	19.700	17.905	17.640	15.500	15.074	7H	16.000	16.375	18.000	18.355	20.500
22	TR22x3	3	7e	22.000	21.764	20.415	20.191	18.500	18.135	7H	19.000	19.315	20.500	20.800	22.500
22	TR22x5	5	7e	22.000	21.665	19.394	19.114	16.500	16.044	7H	17.000	17.450	19.500	19.875	22.500
22	TR22x8	8	7e	22.000	21.550	17.868	17.513	13.500	12.924	7H	14.000	14.630	18.000	18.475	22.500
24	TR24x3	3	7e	24.000	23.764	22.415	22.165	20.500	20.103	7H	21.000	21.315	22.500	22.835	24.500
24	TR24x5	5	7e	24.000	23.665	21.394	21.094	18.500	18.019	7H	19.000	19.450	21.500	21.900	24.500
24	TR24x8	8	7e	24.000	23.550	19.868	19.493	15.500	14.899	7H	16.000	16.630	20.000	20.500	24.500
26	TR26x3	3	7e	26.000	25.764	24.415	24.165	22.500	22.103	7H	23.000	23.315	24.500	24.835	26.500
26	TR26x5	5	7e	26.000	25.665	23.394	23.094	20.500	20.019	7H	21.000	21.450	23.500	23.900	26.500
26	TR26x8	8	7e	26.000	25.550	21.868	21.493	17.500	16.899	7H	18.000	18.630	22.000	22.500	26.500
28	TR28x3	3	7e	28.000	27.764	26.415	26.165	24.500	24.103	7H	25.000	25.315	26.500	26.835	28.500
28	TR28x5	5	7e	28.000	27.665	25.394	25.094	22.500	22.019	7H	23.000	23.450	25.500	25.900	28.500

900	TR900x44	44	7e	900.000	898.600	877.685	876.625	854.000	852.360	7H	856.000	858.000	878.000	879.400	902.000
950	TR950x8	8	7e	950.000	949.550	945.868	945.368	941.000	940.243	7H	942.000	942.630	946.000	946.710	951.000
950	TR950x12	12	7e	950.000	949.400	943.830	943.200	937.000	936.043	7H	938.000	938.800	944.000	1029.000	951.000
950	TR950x24	24	7e	950.000	949.050	937.764	936.964	924.000	922.764	7H	926.000	927.320	938.000	939.120	952.000
950	TR950x44	44	7e	950.000	948.600	927.685	926.625	904.000	902.360	7H	906.000	908.000	928.000	929.400	952.000
1000	TR1000x8	8	7e	1000.000	999.550	995.868	995.368	991.000	990.243	7H	992.000	992.630	996.000	996.710	1001.000
1000	TR1000x12	12	7e	1000.000	999.400	993.830	993.200	987.000	986.043	7H	988.000	988.800	994.000	1079.000	1001.000
1000	TR1000x24	24	7e	1000.000	999.050	987.764	986.964	974.000	972.764	7H	976.000	977.320	988.000	989.120	1002.000
1000	TR1000x44	44	7e	1000.000	998.600	977.685	976.625	954.000	952.360	7H	956.000	958.000	978.000	979.400	1002.000
1060	TR1060x8	8	7e	1060.000	1059.550	1055.868	1055.368	1051.000	1050.243	7H	1052.000	1052.630	1056.000	1056.710	1061.000
1060	TR1060x12	12	7e	1060.000	1059.400	1053.830	1053.200	1047.000	1046.043	7H	1048.000	1048.800	1054.000	1139.000	1061.000
1060	TR1060x24	24	7e	1060.000	1059.050	1047.764	1046.964	1034.000	1032.764	7H	1036.000	1037.320	1048.000	1049.120	1062.000
1060	TR1060x44	44	7e	1060.000	1058.600	1037.685	1036.625	1014.000	1012.360	7H	1016.000	1018.000	1038.000	1039.400	1062.000
1120	TR1120x8	8	7e	1120.000	1119.550	1115.868	1115.368	1111.000	1110.243	7H	1112.000	1112.630	1116.000	1116.710	1121.000
1120	TR1120x12	12	7e	1120.000	1119.400	1113.830	1113.200	1107.000	1106.043	7H	1108.000	1108.800	1114.000	1199.000	1121.000
1120	TR1120x24	24	7e	1120.000	1119.050	1107.764	1106.964	1094.000	1092.764	7H	1096.000	1097.320	1108.000	1109.120	1122.000
1120	TR1120x44	44	7e	1120.000	1118.600	1097.685	1096.625	1074.000	1072.360	7H	1076.000	1078.000	1098.000	1099.400	1122.000

p	1.5	2/3/4/5	6/7/8/9/10/12	14 - 44
ac	0.150	0.250	0.500	1.000
R1	0.075	0.125	0.25	0.5
R2	0.15	0.25	0.5	1

Formula for tap drill (round to closest available drill size): $D1 + (0.05 \cdot p)$

D1 = minimum internal thread minor diameter, p = pitch

DIN 103 is similar to: JIS B 0217 Tolerance system for metric trapezoidal screw threads;

ISO 2902/3/4; Chinese Standard GB/T5796

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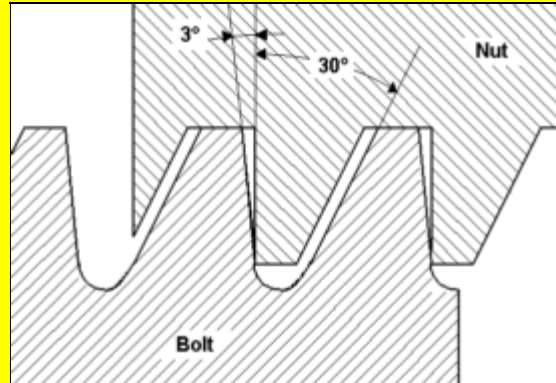
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6119 Oakleaf Avenue Baltimore, MD 21215 USA

MARYLAND METRICS THREAD DATA CHARTS

Buttress Coarse Thread DIN 513



Nominal Diameter	Bolt Thread Minor Diameter mm	Tapping Drill Size mm
S 10 x 2	6,528	7,000
S 12 x 3	6,794	7,500
S 14 x 3	8,794	9,500
S 16 x 4	9,058	10,000
S 18 x 4	11,058	12,000
S 20 x 4	13,058	14,000
S 22 x 5	13,322	14,500
S 24 x 5	15,322	16,500
S 26 x 5	17,322	18,500
S 28 x 5	19,322	20,500
S 30 x 6	19,586	21,000
S 32 x 6	21,586	23,000
S 34 x 6	23,586	25,000
S 36 x 6	25,586	27,000
S 38 x 7	25,852	27,500
S 40 x 7	27,825	29,500
S 42 x 7	39,825	31,500
S 44 x 7	31,825	33,500
S 46 x 8	32,116	34,000
S 48 x 8	34,116	36,000
S 50 x 8	36,116	38,000
S 52 x 8	38,116	40,000

S 55 x 9	39,380	41,500
S 60 x 9	44,380	46,500
S 65 x 10	47,644	50,000
S 70 x 10	52,644	55,000
S 75 x 10	57,644	60,00
S 80 x 10	62,644	65,000
S 85 x 12	64,174	67,000
S 90 x 12	69,174	72,000
S 95 x 12	74,174	77,000
S 100 x 12	79,174	82,000
Buttress Coarse Thread		

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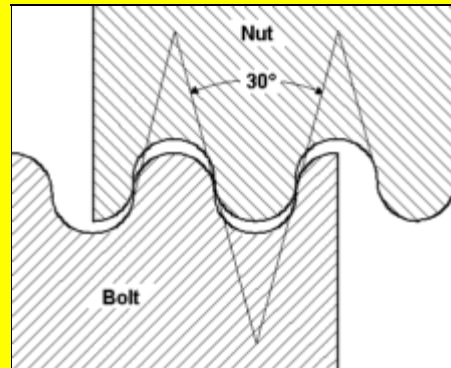
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MARYLAND METRICS THREAD DATA CHARTS

Knuckle Thread DIN 405



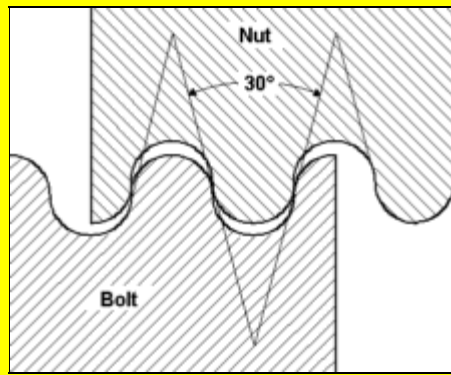
This thread is used by fire departments and for fittings.

Thread Size	Nominal Diameter	Bolt Thread Minor Diameter mm	Nut Thread Minor Diameter mm	Pitch mm	TPI
Rd 8 x 1/10"	8,254	5,460	5,714	2,540	10
Rd 9 x 1/10"	9,254	6,460	6,714	2,540	10
Rd 10 x 1/10"	10,254	7,460	7,714	2,540	10
Rd 11 x 1/10"	11,254	8,460	8,714	2,540	10
Rd 12 x 1/10"	12,254	9,460	9,714	2,540	10
Rd 14 x 1/8"	14,318	10,825	11,142	3,175	8
Rd 16 x 1/8"	16,318	11,166	12,825	3,175	8
Rd 18 x 1/8"	18,318	14,825	15,142	3,175	8
Rd 20 x 1/8"	20,318	16,825	17,142	3,175	8
Rd 22 x 1/8"	22,318	18,825	19,142	3,175	8
Rd 24 x 1/8"	24,318	20,825	21,142	3,175	8
Rd 28 x 1/8"	28,318	24,825	25,142	3,175	8
Rd 30 x 1/8"	30,318	26,825	27,142	3,175	8
Rd 32 x 1/8"	32,318	28,825	29,142	3,175	8
Rd 34 x 1/8"	34,318	30,825	31,142	3,175	8
Rd 36 x 1/8"	36,318	32,825	33,142	3,175	8
Rd 38 x 1/8"	38,318	34,825	35,142	3,175	8
Rd 40 x 1/6"	40,423	35,767	36,190	4,233	6
Rd 42 x 1/6"	42,423	37,767	38,190	4,233	6
Rd 44 x 1/6"	44,423	39,767	40,190	4,233	6
Rd 46 x 1/6"	46,423	41,767	42,190	4,233	6
Rd 48 x 1/6"	48,423	43,767	44,190	4,233	6

Rd 50 x 1/6"	50,423	45,767	46,190	4,233	6
Rd 52 x 1/6"	52,423	47,767	48,100	4,233	6
Rd 55 x 1/6"	55,423	50,767	51,190	4,233	6
Rd 58 x 1/6"	58,423	53,767	54,190	4,233	6
Rd 60 x 1/6"	60,423	55,767	56,190	4,233	6
Rd 62 x 1/6"	62,423	57,767	58,190	4,233	6
Rd 65 x 1/6"	65,423	60,767	61,190	4,233	6
Rd 68 x 1/6"	68,423	63,767	64,190	4,233	6
Rd 70 x 1/6"	70,423	65,767	66,190	4,233	6
Rd 72 x 1/6"	72,423	67,767	68,190	4,233	6
Rd 75 x 1/6"	75,423	70,767	71,190	4,233	6
Rd 78 x 1/6"	78,423	73,767	74,190	4,233	6
Rd 80 x 1/6"	80,423	75,767	76,190	4,233	6
Rd 82 x 1/6"	82,423	77,767	78,190	4,233	6
Rd 85 x 1/6"	85,423	80,767	81,190	4,233	6
Rd 88 x 1/6"	88,423	83,767	84,190	4,233	6
Rd 90 x 1/6"	90,423	85,767	86,190	4,233	6
Rd 92 x 1/6"	92,423	87,767	88,190	4,233	6
Rd 95 x 1/6"	95,423	90,767	91,190	4,233	6
Rd 98 x 1/6"	98,423	93,767	94,190	4,233	6
Rd 100 x 1/6"	100,423	95,767	96,190	4,233	6
Rd 105 x 1/4"	105,635	98,650	99,285	6,350	4
Rd 110 x 1/4"	110,635	103,650	104,285	6,350	4
Rd 115 x 1/4"	115,635	108,650	109,285	6,350	4
Rd 120 x 1/4"	120,635	113,650	114,285	6,350	4
Rd 120 x 1/4"	120,635	113,650	114,285	6,350	4
Rd 125 x 1/4"	125,635	118,650	119,285	6,350	4
Rd 130 x 1/4"	130,635	123,650	124,285	6,350	4
Rd 135 x 1/4"	135,635	128,650	129,285	6,350	4
Rd 140 x 1/4"	140,635	133,650	134,285	6,350	4
Rd 145 x 1/4"	145,635	138,650	139,285	6,350	4
Rd 150 x 1/4"	150,635	143,650	144,285	6,350	4
Rd 155 x 1/4"	155,635	148,650	149,285	6,350	4
Rd 160 x 1/4"	160,635	153,650	154,285	6,350	4
Rd 165 x 1/4"	165,635	158,650	159,285	6,350	4
Rd 170 x 1/4"	170,635	163,650	164,285	6,350	4
Rd 175 x 1/4"	175,635	168,650	169,285	6,350	4
Rd 180 x 1/4"	180,635	173,650	174,285	6,350	4
Rd 185 x 1/4"	185,635	178,650	179,285	6,350	4
Rd 190 x 1/4"	190,635	183,650	184,285	6,350	4
Rd 195 x 1/4"	195,635	188,650	189,285	6,350	4
Rd 200 x 1/4"	200,635	193,650	194,285	6,350	4
Knuckle Thread DIN 405					

[Click here to return to the thread data chart page index.](#)

Knuckle Thread DIN 20400



This thread is used in the mining industry for increased bearing depth.

Bolt Thread Minor Diameter mm	Bolt Tapping Drill Size mm	Pitch mm	Nut Thread Minor Diameter mm	Nut Tapping Drill Size mm
Rd 10	6,700	3,000	10,300	7,000
Rd 12	8,700	3,000	12,300	9,000
Rd 14	10,700	3,000	14,300	11,000
Rd 16	11,600	4,000	16,400	12,000
Rd 18	13,600	4,000	18,400	14,000
Rd 20	15,600	4,000	20,400	16,000
Rd 22	17,600	4,000	22,400	18,000
Rd 25	20,600	4,000	25,400	21,000
Rd 28	23,600	4,000	28,400	24,000
Rd 32	27,600	4,000	32,400	28,000
Rd 36	30,500	5,000	36,500	31,000
Rd 40	34,500	5,000	40,500	35,000
Rd 42	36,500	5,000	42,500	37,000
Rd 45	39,500	5,000	45,500	40,000
Rd 48	42,500	5,000	48,500	43,000
Rd 50	44,500	5,000	50,500	45,000
Rd 53	47,500	5,000	53,500	48,000
Rd 56	50,500	5,000	56,500	51,000
Rd 60	53,400	6,000	60,600	54,000
Rd 63	56,400	6,000	63,600	57,000
Rd 67	60,400	6,000	67,600	61,000
Rd 70	63,400	6,000	70,600	64,000
Rd 75	68,400	6,000	75,600	69,000
Rd 80	73,400	6,000	80,600	74,000
Rd 85	78,400	6,000	85,600	79,000
Rd 90	81,200	8,000	90,800	82,000
Rd 95	86,200	8,000	95,800	87,000
Rd 100	91,200	8,000	100,800	92,000
Rd 106	97,200	8,000	106,800	98,000
Rd 112	103,200	8,000	112,800	104,000
Rd 118	109,200	8,000	118,800	110,000

Rd 125	116,200	8,000	125,800	117,000
Rd 123	121,000	10,000	133,000	122,000
Rd 140	129,000	10,000	141,000	130,000
Rd 150	139,000	10,000	151,000	140,000
Rd 160	149,000	10,000	161,000	150,000
Rd 170	159,000	10,000	171,000	160,000
Rd 180	166,800	12,000	181,200	168,000
Rd 190	176,800	12,000	191,200	178,000
Rd 200	186,800	12,000	201,200	188,000
Rd 212	189,800	12,000	213,200	200,000
Rd 224	210,800	12,000	225,200	212,000
Rd 236	218,400	16,000	237,600	220,000
Rd 250	232,400	16,000	251,600	234,000
Rd 265	247,400	16,000	266,600	249,000
Rd 280	262,400	16,000	281,600	264,000
Rd 300	282,400	16,000	301,600	284,000
Knuckle Thread DIN 20400				

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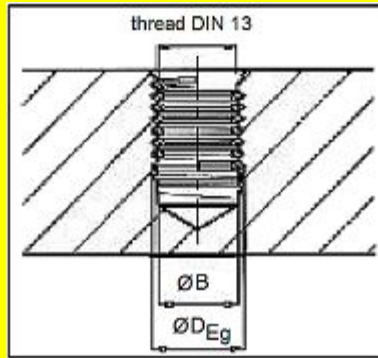
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MARYLAND METRICS THREAD DATA CHARTS

Eg M Metric Insert Thread - for Helical Wire Inserts ⁴⁾



Thread call out Ø	P [mm]	Outside- Ø Min.	Nut Thread Drill-Ø ØB	Minor- Ø Min.	Minor- Ø Max.	Thread call out Ø x P [mm]	Outside- Ø Min.	Nut Thread Drill-Ø ØB	Minor- Ø Min.	Minor- Ø Max.	Thread call out Ø x P [mm]	Outside- Ø Min.	Nut Thread Drill-Ø ØB	Minor- Ø Min.	Minor- Ø Max.
Eg M 2	0,4	2,520	2,10	2,087	2,177	Eg M 8 x 1	9,300	8,30	8,217	8,407	Eg M 26 x 1,5	27,948	26,50	26,324	26,560
Eg M 2,5	0,45	3,084	2,65	2,597	2,697	Eg M 9 x 1	10,300	9,30	9,217	9,407	Eg M 27 x 1,5	28,948	27,50	27,324	27,560
Eg M 3	0,5	3,650	3,15	3,108	3,220	Eg M 10 x 1	11,300	10,30	10,217	10,407	Eg M 27 x 2	29,598	27,50	27,433	27,733
Eg M 3,5	0,6	4,280	3,70	3,630	3,755	Eg M 10 x 1,25	11,624	10,40	10,271	10,483	Eg M 28 x 1,5	29,948	28,50	28,324	28,560
Eg M 4	0,7	4,910	4,20	4,152	4,292	Eg M 11 x 1	12,300	11,30	11,217	11,407	Eg M 30 x 1,5	31,948	30,50	30,324	30,560
Eg M 5	0,8	6,040	5,25	5,174	5,334	Eg M 12 x 1	13,300	12,30	12,217	12,407	Eg M 30 x 2	32,598	30,50	30,433	30,733
Eg M 6	1	7,300	6,30	6,217	6,407	Eg M 12 x 1,25	13,624	12,40	12,271	12,483	Eg M 30 x 3	33,897	31,00	30,649	31,049
Eg M 7	1	8,300	7,30	7,217	7,407	Eg M 12 x 1,5	13,948	12,50	12,324	12,560	Eg M 33 x 2	35,598	33,50	33,433	33,733
Eg M 8	1,25	9,624	8,40	8,271	8,483	Eg M 14 x 1	15,300	14,30	14,217	14,407	Eg M 33 x 3	36,897	34,00	33,649	34,049
Eg M 10	1,5	11,948	10,50	10,324	10,560	Eg M 14 x 1,25	15,624	14,40	14,217	14,483	Eg M 36 x 2	38,598	36,50	36,433	36,733
Eg M						Eg M 14 x					Eg M				

12	1,75	14,274	12,50	12,379	12,644	1,5	15,948	14,50	14,324	14,560	36 x 3	39,897	37,00	36,649	37,049
Eg M 14	2	16,598	14,50	14,433	14,733	Eg M 15 x 1,5	16,948	15,50	15,324	15,560	Eg M 39 x 2	41,598	39,50	39,433	39,733
Eg M 16	2	18,598	16,50	16,433	16,733	Eg M 16 x 1,5	17,948	16,50	16,324	16,560	Eg M 39 x 3	42,897	40,00	39,649	40,049
Eg M 18	2,5	21,248	18,75	18,541	18,896	Eg M 18 x 1,5	19,948	18,50	18,324	18,560	Eg M 42 x 2	44,598	42,50	42,433	42,733
Eg M 20	2,5	23,248	20,75	20,541	20,896	Eg M 18 x 2	20,598	18,50	18,433	18,733	Eg M 42 x 3	45,897	43,00	42,649	43,049
Eg M 22	2,5	25,248	22,75	22,541	22,896	Eg M 20 x 1,5	21,948	20,50	20,234	20,560	Eg M 42 x 4	47,196	43,00	42,866	43,341
Eg M 24	3	27,897	24,75	24,649	25,049	Eg M 20 x 2	22,598	20,50	20,433	20,733	Eg M 45 x 2	47,598	45,50	45,433	45,733
Eg M 27	3	30,897	27,75	27,649	28,049	Eg M 22 x 1,5	23,948	22,50	22,234	22,560	Eg M 45 x 3	48,897	46,00	45,649	46,049
Eg M 30	3,5	34,546	31,00	30,757	31,207	Eg M 22 x 2	24,598	22,50	22,433	22,733	Eg M 48 x 2	50,598	48,50	48,433	48,733
Eg M 33	3,5	37,546	34,00	33,757	34,207	Eg M 24 x 1,5	25,948	24,50	24,324	24,560	Eg M 48 x 3	51,897	49,00	48,649	49,049
Eg M 36	4	41,196	37,00	36,866	37,341	Eg M 24 x 2	26,598	24,50	24,433	24,733					
Eg M 39	4	44,196	40,00	39,866	40,431										
Eg M 42	4,5	47,846	43,25	42,975	43,505										
Eg M 45	4,5	50,846	46,25	45,975	46,505										
Eg M 48	5	54,495	49,50	49,082	49,642										
Eg M 52	5	58,495	53,50	53,082	53,642										

4) Sizes of nut thread accord. to DIN 8140 part 2

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MARYLAND METRICS THREAD DATA CHARTS

MARYLAND METRICS -- THREAD DATA CHART:
ELECTRICAL THREAD -- BRITISH ET (Conduit to BS
31)

Imperial Conduit (ET) to BS 31

Thread	Nominal	Major	Threads
Designation	Size	Diameter	per
		mm	inch
ET	ET	d=D	tpi
ET 5/8	5/8	15.88	18
ET 3/4	3/4	19.05	16
ET 1	1	25.40	16
ET 1 1/4	1 1/4	31.75	16
ET 1 1/2	1 1/2	38.10	14
ET 2	2	50.80	14
ET 2 1/2	2 1/2	63.50	14
ET 3	3	76.20	14

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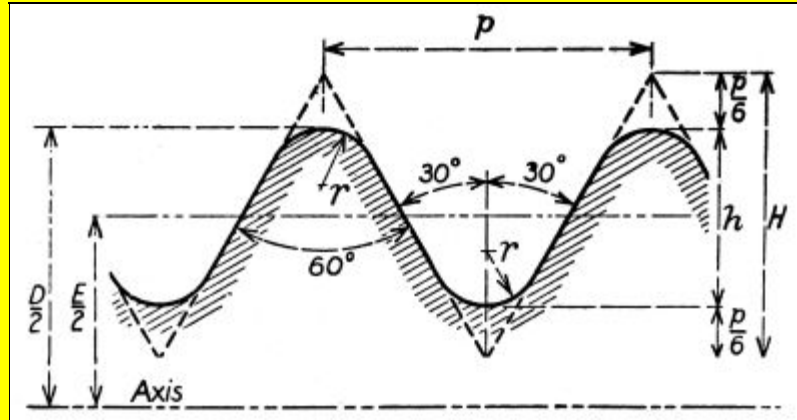
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MARYLAND METRICS THREAD DATA CHARTS

BRITISH STANDARD CYCLE THREAD (BSC)



Size	Threads per inch	Outside Dia.	Core Dia.	Pitch	Depth	Radius	Tapping drill	Clearance drill
		inch	inch	inch	inch	inch	mm	mm
				p		r		
16	56 RH	0.0735	0.0545	0.0179	0.0095	0.0030	1.5 mm	2 mm
15	56 RH	0.0825	0.0635	0.0179	0.0095	0.0030	1.7 mm	2.2 mm
14	56 RH	0.0905	0.0715	0.0179	0.0095	0.0030	1.9 mm	2.4 mm
13	56 RH	0.1025	0.0835	0.0179	0.0095	0.0030	2.2 mm	2.7 mm
12	56 RH	0.1145	0.0955	0.0179	0.0095	0.0030	2.55 mm	3 mm
1/8"	40 RH	0.1250	0.0984	0.0250	0.0133	0.0041	2.65 mm	3.4 mm
11	44 RH	0.1291	0.1049	0.0227	0.0121	0.0038	2.8 mm	3.5 mm
10	40 RH	0.1423	0.1157	0.0260	0.0133	0.0041	3.1 mm	3.8 mm
5/32"	32 RH	0.1563	0.1231	0.0312	0.0166	0.0052	3.4 mm	4.2 mm
9	40 RH	0.1583	0.1317	0.0250	0.0133	0.0041	3.5 mm	4.3 mm
8	32 RH	0.1776	0.1444	0.0312	0.0168	0.0052	3.9 mm	4.7 mm
3/16"	32 RH	0.1875	0.1543	0.0312	0.0166	0.0052	4.1 mm	5.0 mm
7/32"	26 RH	0.2188	0.1778	0.0385	0.0205	0.0064	4.8 mm	5.8 mm
1/4"	26 RH	0.2500	0.2090	0.0385	0.0205	0.0064	5.5 mm	6.6 mm
17/64"	26 RH	0.2656	0.2246	0.0385	0.0205	0.0064	5.0 mm	7.0 mm
9/32"	26 RH	0.2813	0.2403	0.0385	0.0205	0.0064	6.4 mm	7.4 mm
5/16"	26 RH	0.3125	0.2715	0.0385	0.0205	0.0064	7.2 mm	8.3 mm
3/8"	26 RH	0.3750	0.3340	0.0385	0.0205	0.0064	8.8 mm	9.9 mm
7/16"	26 RH	0.4375	0.3965	0.0385	0.0205	0.0064	10.4 mm	11.5 mm
7/16"	20 RH	0.4375	0.3843	0.5000	0.0266	0.0083	10.3 mm	11.5 mm
1/2"	26 RH	0.5000	0.4590	0.0385	0.0205	0.0064	12.0 mm	33/64"
1/2"	20 RH	0.5000	0.4590	0.0500	0.0266	0.0083	11.9 mm	33/64"
9/16"	26 RH	0.5625	0.5215	0.0385	0.0205	0.0064	13.5 mm	37/64"
9/16"	20 RH	0.5625	0.5093	0.0500	0.0266	0.0083	13.4 mm	37/64"

5/8"	26 RH	0.6250	0.5840	0.0385	0.0205	0.0064	15.0 mm	41/64"
5/8"	20 RH	0.6250	0.5719	0.0500	0.0266	0.0083	14.75 mm	41/64"
11/16"	26 RH	0.6875	0.6465	0.0385	0.0205	0.0064	21/32"	18 mm
11/16"	20 RH	0.6875	0.6343	0.0500	0.0266	0.0083	16.5 mm	18 mm
3/4"	26 RH	0.7500	0.7090	0.0385	0.0205	0.0064	23/32"	19.5 mm
3/4"	20 RH	0.7500	0.6968	0.0500	0.0266	0.0083	18.0 mm	19.5 mm
7/8"	24 RH	0.8750	0.8306	0.0417	0.0222	0.0070	21.5 mm	23 mm
31/32"	30 RH	0.9688	0.9332	0.0333	0.0178	0.0066	24 mm	25 mm
1"	24 RH	1.0000	0.9556	0.0417	0.0222	0.0070	31/32"	26 mm
1 1/8"	26 RH	1.1250	1.0840	0.0385	0.0205	0.0064	1 3/32"	29 mm
1.29"	24 LH	1.2900	1.2456	0.0417	0.0222	0.0070	32 mm	1 5/16"
1.37"	24 RH	1.3700	1.3256	0.0417	0.0222	0.0070	34 mm	35.5 mm
1.37"	24 LH	1.3700	1.3256	0.0417	0.0222	0.0070	34 mm	35.5 mm
1.45"	26 RH	1.4500	1.4090	0.0385	0.0205	0.0064	1 27/64"	37.5 mm
1.45"	26 LH	1.4500	1.4090	0.0385	0.0205	0.0064	1 27/64"	37.5 mm
1 9/16"	24 LH	1.5620	1.5181	0.0417	0.0222	0.0070	1 17/32"	1 19/32"
1 5/8"	24 RH	1.6250	1.5805	0.0417	0.0222	0.0070	40.5 mm	42 mm

Notes: RH = Right Hand LH = Left Hand r = p x 0.1666 D = p x 0.5327

IMPERIAL WIRE GAUGE (IWG) spoke thread data

No picture currently available

Size	Threads per inch	Outside Dia.	Core Dia.	Pitch	Depth	Radius	Tapping drill
		inch	inch	inch	inch	inch	
				p		r	
17 IWG	62	0.056	0.0388	0.01613	0.0086	0.002687	No 61
16 IWG	62	0.064	0.0468	0.01613	0.0086	0.002687	3/64"
15 IWG	62	0.072	0.0548	0.01613	0.0086	0.002687	No 54
14 IWG	62	0.08	0.0628	0.01613	0.0086	0.002687	1.60mm
13 IWG	56	0.092	0.073	0.0179	0.0095	0.002982	No 49
12 IWG	44	0.104	0.0798	0.0227	0.0121	0.00378	No 46

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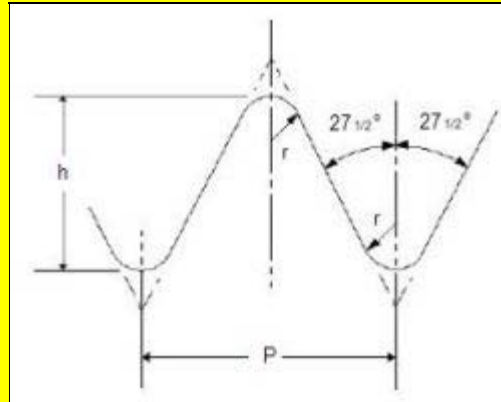
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MARYLAND METRICS THREAD DATA CHARTS

BRITISH STANDARD BRASS (BSB)



Brass Pipe Screw Threads (Whitworth Form 55 Deg Thread Angle)
Thread Form Data

Diameter	Outside Diameter inch	Core	Pitch	Depth	Radius	Effective Dia	T.P.I.	Double depth thread	Root Diameter	Tapping drill
1/8"	0.125	0.0757	0.03846	0.0246	--	0.102	26	0.0493	0.0757	# 47
1/4"	0.250	0.2007	0.03846	0.0246	--	0.2254	26	0.0493	0.2007	# 6
3/8"	0.375	0.3257	0.03846	0.0246	--	0.3504	26	0.0493	0.3257	Letter Q
1/2"	0.500	0.4507	0.03846	0.0246	--	0.4754	26	0.0493	0.4507	29/64"
5/8"	0.625	0.5657	0.03846	0.0246	--	0.6004	26	0.0493	0.5657	37/64"
3/4"	0.750	0.7007	0.03846	0.0246	--	0.7254	26	0.0493	0.7007	45/64"
7/8"	0.875	0.8257	0.03846	0.0246	--	0.8504	26	0.0493	0.8257	53/64"
1"	1.000	0.9507	0.03846	0.0246	--	0.9754	26	0.0493	0.9507	61/64"
1-1/8"	1.125	1.0757	0.03846	0.0246	--	1.1004	26	0.0493	1.0757	1-5/64"
1-1/4"	1.250	1.2007	0.03846	0.0246	--	1.2254	26	0.0493	1.2007	1-13/64"
1-1/2"	1.500	1.4507	0.03846	0.0246	--	1.4754	26	0.0493	1.4507	1-29/64"

Dimensions in Inches except where stated

Notes: Because brass tubing has a uniform wall thickness, regardless of the tube diameter, any threading (external or internal), would have to have the same thread depth, so 26 TPI is standard on all diameters.

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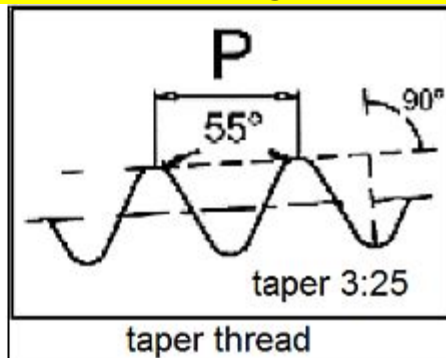
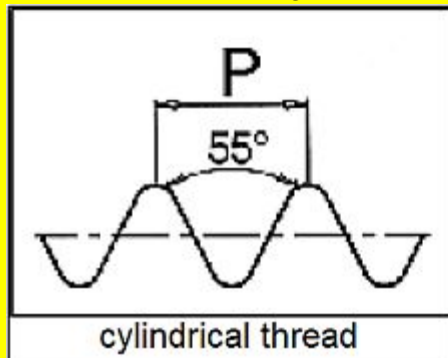
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MARYLAND METRICS THREAD DATA CHARTS

Whitworth Gas Cylinder Thread according to DIN 477



W Cylindrical Whitworth Thread according to DIN 477				
Thread call out	P Gg/1" / TPI	Core-Ø Min.4)	Nut Thread Minor- Ø Max.	Drill-Ø ØB
W 21,8 x 1/14	14	19,496	20,066	19,75
W 24,32 x 1/14	14	22,016	22,586	22,25
W 1 x 1/8	8	21,339	22,152	22,00

W Taper Whitworth Thread according to DIN 477				
Thread call out	P Gg/1" / TPI	Gauge plane of tap Lm	Drill-Ø cylindrical Max.	Drill-Ø taper 5) ØB
W 19,8 x 1/14 keg.	14	24,2	14,7	16,8
W 28,8 x 1/14 keg.	14	29,2	22,7	25,4
W 31,3 x 1/14 keg.	14	29,2	25,2	27,9

4) Minor-Ø of nut thread accord. to DIN 477 part 1

5) For mass production preparation of a taper core hole is recommended. (BK)

Notes: DIN 477 is similar to ISO 11116-1

The Ø symbol = diameter

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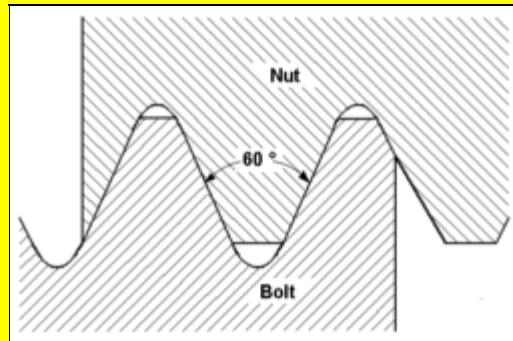
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MARYLAND METRICS THREAD DATA CHARTS

Tire Valve Screw Thread DIN 7756



Nominal Diameter	Bolt				Nut					
	Major Diameter mm		Minor Diameter mm		Major Diameter mm		Minor Diameter mm		Pitch mm	TPI
	max.	min.	max.	min.	max.	min.	max.	min.		
Vg 5	5,200	5,100	4,400	4,300					0,706	36
Vg 5,2	5,280	5,180	3,900	3,800					1,058	24
Vg 6	6,030	5,930	5,130	5,030					0,794	32
Vg 7,8										30
Vg 8	7,747	7,620	6,630	6,503	8,062	7,935	6,945	6,818	0,794	32
Vg 9,6	9,650	9,550	8,670	8,552;					1,000	25
Vg 10	10,338	10,211	9,063	8,936	10,665	10,538	9,388	9,261	0,907	28
Vg 12	12,243	120,917	10,869	10,717	12,601	12,449	11,227	11,075	0,977	26
Tire Valve Thread										

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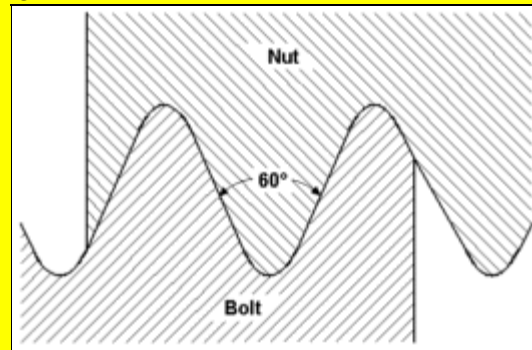
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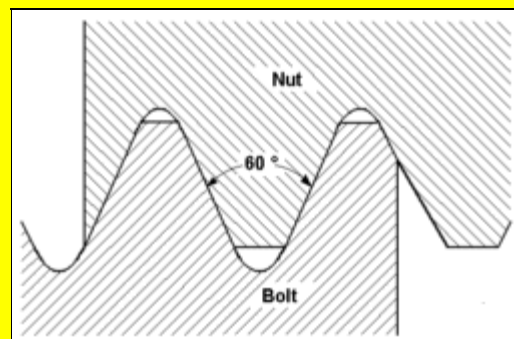
MARYLAND METRICS THREAD DATA CHARTS

Bicycle Screw Thread DIN 79012



For cycles and motor scooters				
Thread Size mm	Major Diameter mm	Tapping Drill Size mm	TPI	Pitch mm
Fg 2	2,096	1,613	56	0,454
Fg 2,3	2,299	1,816	56	0,454
Fg 2,6	2,604	2,121	56	0,454
Fg 6,35	6,350	5,310	26	0,977
Fg 7,9	7,938	6,898	26	0,977
Fg 9,5	9,525	8,485	26	0,977
Fg 14,3	14,288	12,934	20	1,270
Fg 25,4	25,400	24,272	24	1,058
Fg 32,8	32,766	31,638	24	1,058
Fg 34,8	34,798	33,670	24	1,058
Cycle Thread				

C.E.I.-Thread



Cycle Engineer Institution Thread, used in the British bicycle industry.

Major Diameter Inch	Major Diameter mm	Tapping Drill Size mm	TPI	Pitch mm
0,056	1,422	0,965	62	0,409
0,064	1,626	1,190	62	0,409
0,072	1,829	1,393	62	0,409
0,080	2,032	1,596	62	0,409
0,092	2,337	1,854	56	0,453
0,104	2,642	2,642	44	0,577
0,125	3,175	2,499	40	0,635
0,154	3,912	3,236	40	0,635
0,175	4,445	3,600	32	0,794
0,187	4,762	3,917	32	0,794
0,250	6,350	5,309	26	0,977
0,266	6,756	5,715	26	0,977
0,281	7,137	6,096	26	0,977
0,312	7,937	6,896	26	0,977
0,375	9,525	8,484	26	0,977
0,562	14,287	12,287	20	1,270
1,000	25,400	24,359	26	0,977
1,290	32,766	31,639	24	1,058
1,370	34,797	33,670	24	1,058
1,437	36,512	35,385	24	1,058
1,500	38,100	36,973	24	1,058
CEI Thread				

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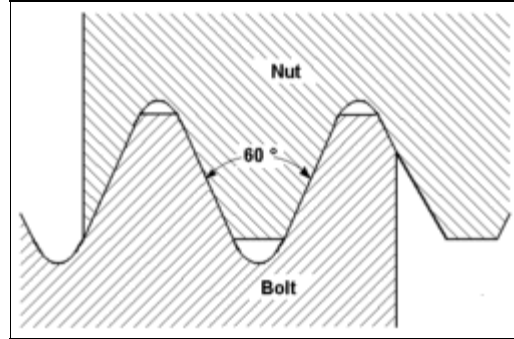
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MARYLAND METRICS THREAD DATA CHARTS

UNC, UNF, & UNEF Thread ANSI B1.1

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UNC Thread ANSI B1.1

UNC - Unified Coarse Thread. The old definition NC - National Coarse is comparable with the metric thread. The new term UNC is comparable with the ISO metric thread. NC and UNC threads are interchangeable, in a similar manner to the metric and the ISO metric thread.

Nominal	Major	Major	Tapping	TPI	Pitch
Diameter	Diameter	Diameter	Drill Size		mm
	Inch	mm	mm		
1 - 64 UNC	0,073	1,854	1,50	64	0,397
2 - 56 UNC	0,086	2,184	1,80	56	0,453
3 - 48 UNC	0,099	2,515	2,10	48	0,529
4 - 40 UNC	0,112	2,845	2,35	40	0,635
5 - 40 UNC	0,125	3,175	2,65	40	0,635
6 - 32 UNC	0,138	3,505	2,85	32	0,794
8 - 32 UNC	0,164	4,166	3,50	32	0,794
10 - 24 UNC	0,190	4,826	4,00	24	1,058
12 - 24 UNC	0,216	5,486	4,65	24	1,058
1/4" - 20 UNC	0,250	6,350	5,35	20	1,270
5/16" - 18 UNC	0,313	7,938	6,80	18	1,411
3/8" - 16 UNC	0,375	9,525	8,25	16	1,587
7/16" - 14 UNC	0,438	11,112	9,65	14	1,814
1/2" - 13 UNC	0,500	12,700	11,15	13	1,954
9/16" - 12 UNC	0,563	14,288	12,60	12	2,117
5/8" - 11 UNC	0,625	15,875	14,05	11	2,309
3/4" - 10 UNC	0,750	19,050	17,00	10	2,540
7/8" - 9 UNC	0,875	22,225	20,00	9	2,822
1" - 8 UNC	1,000	25,400	22,85	8	3,175
1 1/8" - 7 UNC	1,125	28,575	25,65	7	3,628

1 1/4" - 7 UNC	1,250	31,750	28,85	7	3,628
1 3/8" - 6 UNC	1,375	43,925	31,55	6	4,233
1 1/2" - 6 UNC	1,500	38,100	34,70	6	4,233
1 3/4" - 5 UNC	1,750	44,450	40,40	5	5,080
2" - 4 1/2 UNC	2,000	50,800	46,30	4,5	5,644
2 1/4" - 4 1/2 UNC	2,250	57,150	52,65	4,5	5,644
2 1/2" - 4 UNC	2,500	63,500	58,50	4	6,350
2 3/4" - 4 UNC	2,750	69,850	64,75	4	6,350
3" - 4 UNC	3,000	63,500	71,10	4	6,350
3 1/4" - 4 UNC	3,250	82,550	77,45	4	6,350
3 1/2" - 4 UNC	3,500	88,900	83,80	4	6,350
3 3/4" - 4 UNC	3,750	95,250	90,15	4	6,350
4" - 4 UNC	4,000	101,600	96,50	4	6,350
UNC Thread					

[Click here to return to the thread data chart page index.](#)

UNF Thread ANSI B1.1

UNF - Unified National Fine Thread. Similar to UNC. UNC and UNF threads are the choices for the customary Unified screws and nuts.

Nominal Diameter	Major Diameter Inch	Major Diameter mm	Tapping Drill Size mm	TPI	Pitch mm
0 - 80 UNF	0,060	1,524	1,25	80	0,317
1 - 72 UNF	0,073	1,854	1,55	72	0,353
2 - 64 UNF	0,068	2,184	1,90	64	0,397
3 - 56 UNF	0,099	2,515	2,15	56	0,453
4 - 48 UNF	0,112	2,845	2,40	48	0,529
5 - 44 UNF	0,125	3,175	2,70	44	0,577
6 - 40 UNF	0,138	3,505	2,95	40	0,635
8 - 36 UNF	0,164	4,166	3,50	36	0,705
10 - 32 UNF	0,190	4,826	4,10	32	0,794
12 - 28 UNF	0,216	5,486	4,70	28	0,907
1/4" - 28 UNF	0,250	6,350	5,50	28	0,907
5/16" - 24 UNF	0,313	7,938	6,90	24	1,058
3/8" - 24 UNF	0,375	9,525	8,50	24	1,058
7/16" - 20 UNF	0,438	11,112	9,90	20	1,270
1/2" - 20 UNF	0,500	12,700	11,50	20	1,270
9/16" - 18 UNF	0,563	14,288	12,90	18	1,411
5/8" - 18 UNF	0,625	15,875	14,50	18	1,411
3/4" - 16 UNF	0,750	19,050	17,50	16	1,587
7/8" - 14 UNF	0,875	22,225	20,40	14	1,814
1" - 12 UNF	1,000	25,400	23,25	12	2,117
1 1/8" - 12 UNF	1,125	28,575	26,50	12	2,117

1 1/4" - 12 UNF	1,250	31,750	29,50	12	2,117
1 3/8" - 12 UNF	1,375	43,925	32,75	12	2,117
1 1/2" - 12 UNF	1,500	38,100	36,00	12	2,117
UNF Thread					

[Click here to return to the thread data chart page index.](#)

UNEF Thread ANSI B1.1					
UNEF - Unified Extra Fine Thread, which is used for special purposes.					
Nominal Diameter	Major Diameter Inch	Major Diameter mm	Tapping Drill Size mm	TPI	Pitch mm
12 - 80 UNEF	0,216	5,486	4,80	32	0,794
1/4" - 32 UNEF	0,250	6,350	5,70	32	0,794
5/16" - 32 UNEF	0,313	7,938	7,25	32	0,794
3/8" - 32 UNEF	0,375	9,525	8,85	32	0,794
7/16" - 28 UNEF	0,438	11,112	10,35	28	0,907
1/2" - 28 UNEF	0,500	12,700	11,80	28	0,907
9/16" - 24 UNEF	0,563	14,288	13,40	24	1,058
5/8" - 24 UNEF	0,625	15,875	15,00	24	1,058
11/16" - 24 UNEF	0,688	17,462	16,60	24	1,058
3/4" - 20 UNEF	0,750	19,050	18,00	20	1,270
13/16" - 20 UNEF	0,813	20,638	19,60	20	1,270
7/8" - 20 UNEF	0,875	22,225	21,15	20	1,270
15/16" - 20 UNEF	0,938	23,812	22,70	20	1,270
1" - 20 UNEF	1,000	25,400	24,30	20	1,270
1 1/16" - 18 UNEF	1,063	26,988	25,80	18	1,411
1 1/8" - 18 UNEF	1,125	28,575	27,35	18	1,411
1 1/4" - 18 UNEF	1,250	31,750	30,55	18	1,411
1 5/16" - 18 UNEF	1,313	33,338	32,10	18	1,411
1 3/8" - 18 UNEF	1,375	34,925	33,70	18	1,411
1 7/16" - 18 UNEF	1,438	36,512	35,30	18	1,411
1 1/2" - 18 UNEF	1,500	38,100	36,90	18	1,411
1 9/16" - 18 UNEF	1,563	39,688	38,55	18	1,411
1 5/8" - 18 UNEF	1,625	41,275	40,10	18	1,411
1 11/16" - 18 UNEF	1,688	42,862	41,60	18	1,411
UNEF Thread					

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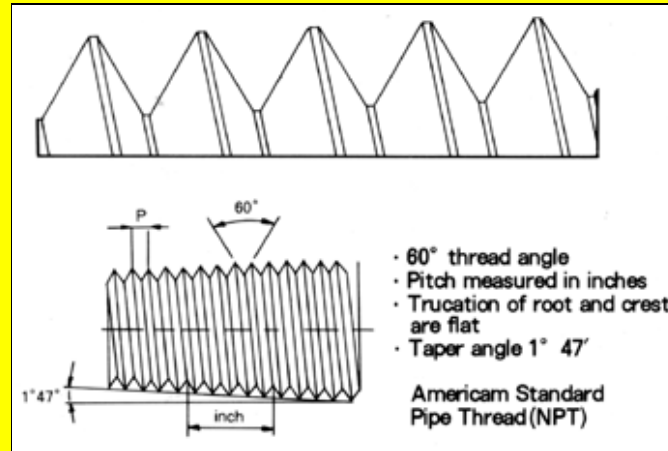
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MARYLAND METRICS THREAD DATA CHARTS

NATIONAL PIPE TAPERED THREAD (NPT)

NPT Thread - American Standard Taper Pipe Thread (ANSI/ASME B1.20.1), Taper 1:16

Thread Form Data - Basic Dimensions of American National Standard Taper Threads, NPT (National Pipe Tapered)



Nominal Pipe Size (inch)	Number of threads per inch	Outside Diameter (inch)	Outside Diameter (mm)	Pitch of thread		Depth of thread		Truncation, max.***		Pitch diameter at plane of hand- tight engagement		Length from end of pipe to plane of hand- tight engagement		Length of useful thread		Length of washout thread		Pitch Diameter at Beginning of External Thread Start (inch)	Effective Thread, External Diameter (inch)
				P		h		I		E		L1		L2					
				in	mm	in	mm	in	mm	in	mm	in	Threads	in	Threads	in	Threads		
1/16	27	0.3125	7.938	0.03704	0.941	0.02963	0.753			0.28118		0.16		0.2611		0.1285	3.47	0.27118	0.28750
1/8"	27	0.405	10.287	0.03704	0.941	0.02963	0.753	0.00360	0.091	0.37360	9.489	0.162	4.36	0.2639	7.12	0.1285	3.47	0.36351	0.38000
1/4"	18	0.540	13.716	0.05556	1.411	0.04444	1.129	0.00490	0.124	0.49163	12.487	0.228	4.10	0.4018	7.23	0.1928	3.47	0.47739	0.50250
3/8"	18	0.675	17.145	0.05556	1.411	0.04444	1.129	0.00490	0.124	0.62701	15.926	0.240	4.32	0.0478	7.34	0.1928	3.47	0.61201	0.63750
1/2"	14	0.840	21.336	0.07143	1.814	0.05714	1.451	0.00560	0.142	0.77843	19.772	0.320	4.48	0.5337	7.47	0.2478	3.47	0.75843	0.79179
3/4"	14	1.050	26.670	0.07143	1.814	0.05714	1.451	0.00560	0.142	0.98887	25.117	0.339	4.75	0.5457	7.64	0.2478	3.47	0.96768	1.00179
1"	11.5	1.315	33.401	0.08696	2.209	0.06957	1.767	0.00630	0.160	1.23863	31.461	0.400	4.60	0.6828	7.85	0.3017	3.47	1.21363	1.25630
1-1/4"	11.5	1.660	42.164	0.08696	2.209	0.06957	1.767	0.00630	0.160	1.58338	40.218	0.420	4.83	0.7068	8.13	0.3017	3.47	1.55713	1.60130
1-1/2"	11.5	1.900	48.260	0.08696	2.209	0.06957	1.767	0.00630	0.160	1.82234	46.287	0.402	4.83	0.7235	8.32	0.3017	3.47	1.79609	1.84130
2"	11.5	2.375	60.325	0.08696	2.209	0.06957	1.767	0.00630	0.160	2.29627	58.325	0.436	5.01	0.7565	8.70	0.3017	3.47	2.26902	2.31630
2-1/2"	8	2.875	73.025	0.12500	3.175	0.10000	2.540	0.00780	0.198	2.76215	70.159	0.682	5.46	1.1375	9.10	0.4337	3.47	2.71953	2.79062
3"	8	3.500	88.900	0.12500	3.175	0.10000	2.540	0.00780	0.198	3.38850	86.068	0.766	6.13	1.2000	9.60	0.4337	3.47	3.34062	3.41562
3-1/2"	8	4	101.600	0.12500	3.175	0.10000	2.540	0.00780	0.198	3.88881	98.776	0.821	6.57	1.2500	10.00	0.4337	3.47	3.83750	3.91562
4"	8	4.5	114.300	0.12500	3.175	0.10000	2.540	0.00780	0.198	4.38712	111.433	0.844	6.75	1.3000	10.40	0.4337	3.47	4.33438	4.41562
5"	8	5.563	141.300	0.12500	3.175	0.10000	2.540	0.00780	0.198	5.44929	138.412	0.937	7.50	1.4063	11.25	0.4337	3.47	5.39073	5.47862
6"	8	6.625	168.275	0.12500	3.175	0.10000	2.540	0.00780	0.198	6.50597	165.252	0.958	7.66	1.5125	12.10	0.4337	3.47	6.44609	6.54062
8"	8	8.625	219.075	0.12500	3.175	0.10000	2.540	0.00780	0.198	8.50003	215.901	1.630	8.50	1.7125	13.70	0.4337	3.47	8.43359	8.54062
10"	8	10.750	273.050	0.12500	3.175	0.10000	2.540	0.00780	0.198	10.62094	296.772	1.210	9.58	1.9250	15.40	0.4337	3.47	10.54531	10.66562

12"	8	12.750	323.850	0.12500	3.175	0.10000	2.540	0.00780	0.198	12.61781	320.493	1.360	10.88	2.1250	17.00	0.4337	3.47	12.53281	12.66562
14"	8	14	355.600	0.12500	3.175	0.10000	2.540	0.00780	0.198	13.87262	352.365	1.562	12.50	2.2500	18.00	0.4337	3.47	13.77500	13.91562
16"	8	16	406.400	0.12500	3.175	0.10000	2.540	0.00780	0.198	15.87575	403.244	1.812	14.50	2.4500	19.60	0.4337	3.47	15.76250	15.91562
18"	8	18	457.200	0.12500	3.175	0.10000	2.540	0.00780	0.198	17.87500	454.025	2.000	16.00	2.6500	21.20	0.4337	3.47	17.75000	17.91562
20"	8	20	508.000	0.12500	3.175	0.10000	2.540	0.00780	0.198	19.87031	504.706	2.125	17.00	2.8500	22.80	0.4337	3.47	19.73750	19.91562
24"	8	24	609.600	0.12500	3.175	0.10000	2.540	0.00780	0.198	23.68094	606.066	2.375	19.00	3.2500	26.00	0.4337	3.47	23.71250	23.91562

Nominal Pipe Size (inch)	Number of threads per inch	Tapping Drills: Taper NPT with Reamer *			Tapping Drills: Taper NPT without Reamer			Tapping Drills: Straight NPS		
		Drill Size	Equivalents (in)	Equivalents (mm)	Drill Size	Equivalents (in)	Equivalents (mm)	Drill Size	Equivalents (in)	Equivalents (mm)
1/16	27	15/64"	0.2344	5.9531	C	0.242	6.1468	1/4"	0.25	6.35
1/8"	27	21/64"	0.3281	8.3344	Q	0.332	8.4328	11/32"	0.3438	8.7313
1/4"	18	27/64"	0.4219	10.7156	7/16"	0.4375	11.1125	7/16"	0.4375	11.1125
3/8"	18	9/16"	0.5625	14.2875	37/64"	0.5781	14.6844	19/32"	0.5938	15.0813
1/2"	14	11/16"	0.6875	17.4625	45/64"	0.7031	17.8594	23/32"	0.7188	18.2563
3/4"	14	57/64"	0.8906	22.6219	29/32"	0.9063	23.0188	15/16"	0.9375	23.8125
1"	11.5	1-1/8"	1.125	28.575	1-9/32"	1.2813	32.5438	1-5/32"	1.1563	29.3688
1-1/4"	11.5	1-15/32"	1.4688	37.3063	1-31/64"	1.4844	37.7031	1-1/2"	1.5	38.1
1-1/2"	11.5	1-23/32"	1.7188	43.6563	1-23/32"	1.7188	43.6563	1-3/4"	1.75	44.45
2"	11.5	2-5/32"	2.1563	54.7688	2-3/16"	2.1875	55.5625	2-3/16"	2.1875	55.5625
2-1/2"	8	2-25/32"	2.7813	70.6438	2-5/8"	2.625	66.675	2-5/8"	2.625	66.675
3"	8	3-9/32"	3.2813	83.3438	3-1/4"	3.25	82.55	3-1/4"	3.25	82.55
3-1/2"	8	3-3/4"	3.75	95.25	3-3/4"	3.75	95.25	3-3/4"	3.75	95.25
4"	8	4-1/4"	4.25	107.95	4-1/4"	4.25	107.95	4-1/4"	4.25	107.95
5"	8	5-1/4"	5.25	133.35	5-9/32"	5.2813	134.1438	5-5/16"	5.3125	134.9375
6"	8	6-1/4"	6.25	158.75	6-11/32"	6.3438	161.1313	6-3/8"	6.375	161.925

Notes:

* Ream the hole before tapping with a reamer having a taper of 3/4 inch per foot. Pipe Size is the accepted industry designation and does not refer to either the inside or the outside diameter (ID or OD) of a pipe or a fitting. Dimensions in Inches except where stated

E= Pitch diameter at hand-tight plane. This is also the pitch diameter at the gauge plane.

**= Truncation from point of thread triangle to flat (not shown in diagram). Minimum = 0.033P for all pitches. See table for maximum.

Tolerances:

When using L1 gauges to check threads, the thread is within permissible tolerance if the ring gauge face, or plug gauge notch, is +/- 1 turn from being flush with the end of the thread.

Example designation:

3/8 - 18 NPT where

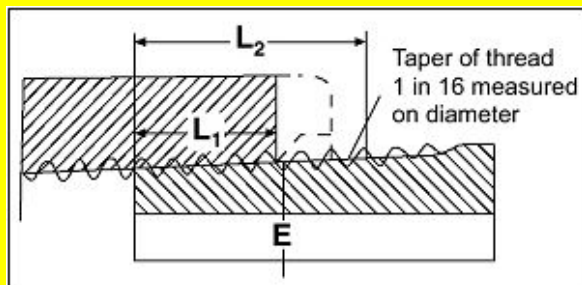
3/8 = nominal pipe size

18 = number of threads per inch

NPT = symbol for the thread series and

form (i.e., National (American)Standard Pipe, Taper)

Note- Basic dimensions are given to four or five decimal places to eliminate errors when calculating gauge dimensions, they do not imply a greater degree of precision than is normally obtainable.



L1= Length of normal hand-tight engagement. This is also the L1 gauge length.
(Longer thread engagement may be used in special applications, such as flanges for high pressure use. In such cases the pitch diameter, E, remains as specified and the diameter at the end of the pipe is proportionally smaller.)

L2= Effective Length of thread

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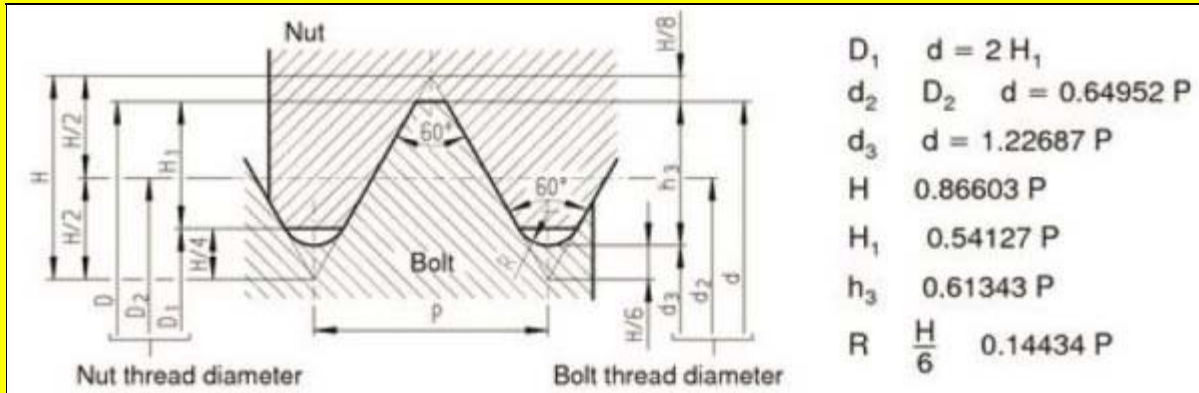
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MARYLAND METRICS THREAD DATA CHARTS

METRIC THREAD -- EXTENDED THREAD SIZE RANGE (ISO)



Thread Height Male Thread = h_3 Thread Height Female Thread = H_1

Sorted by thread class

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	ISO Metric profile				External (bolt thread)						Internal (nut thread)							Basic mm
		Simple			Major Dia d=D		Pitch Dia d2=D2		Minor Dia d3			Minor Dia D1		Pitch Dia d2=D2		Major Dia d=D		
Size mm	Thread Designation	Thread Designation	Pitch mm	Class	max.	min.	max.	min.	max.	min.	Class	min.	max.	min.	max.	min.	max.	Tap Drill
0.25	M0.25x0.075	M0.25x0.075	0.075	6g	0.25	0.235	0.201	0.187	0.16	0.14	6H	0.172	0.208	0.201	0.215	0.255	0.276	0.175
0.3	M0.3x0.08	M0.3x0.08	0.08	6g	0.3	0.284	0.248	0.234	0.204	0.183	6H	0.217	0.254	0.248	0.262	0.306	0.327	0.22
0.3	M0.3x0.09	M0.3x0.09	0.09	6g	0.3	0.283	0.242	0.226	0.192	0.17	6H	0.206	0.247	0.242	0.257	0.306	0.33	0.21
0.35	M0.35x0.09	M0.35x0.09	0.09	6g	0.35	0.333	0.292	0.277	0.242	0.22	6H	0.256	0.297	0.292	0.307	0.356	0.38	0.26
0.4	M0.4x0.1	M0.4x0.1	0.1	6g	0.4	0.382	0.335	0.319	0.28	0.256	6H	0.296	0.34	0.335	0.351	0.407	0.432	0.3
0.45	M0.45x0.1	M0.45x0.1	0.1	6g	0.45	0.432	0.385	0.369	0.33	0.306	6H	0.346	0.39	0.385	0.401	0.457	0.482	0.35
0.5	M0.5x0.125	M0.5x0.125	0.125	6g	0.5	0.479	0.419	0.401	0.35	0.322	6H	0.37	0.422	0.419	0.437	0.509	0.538	0.375
0.55	M0.55x0.125	M0.55x0.125	0.125	6g	0.55	0.529	0.469	0.451	0.4	0.372	6H	0.42	0.472	0.469	0.487	0.559	0.588	0.425
0.6	M0.6x0.15	M0.6x0.15	0.15	6g	0.6	0.576	0.503	0.483	0.42	0.388	6H	0.444	0.504	0.503	0.523	0.611	0.644	0.45
0.7	M0.7x0.175	M0.7x0.175	0.175	6g	0.7	0.673	0.586	0.564	0.49	0.454	6H	0.518	0.586	0.586	0.608	0.713	0.75	0.525
0.8	M0.8x0.2	M0.8x0.2	0.2	6g	0.8	0.77	0.67	0.646	0.56	0.52	6H	0.592	0.668	0.67	0.694	0.814	0.856	0.6
0.9	M0.9x0.225	M0.9x0.225	0.225	6g	0.9	0.867	0.754	0.728	0.63	0.586	6H	0.666	0.75	0.754	0.78	0.916	0.962	0.675
1	M1x0.25	M1	0.25	6g	0.982	0.915	0.82	0.767	0.711	0.613	6H	0.729	0.809	0.838	0.909	1	1.107	0.75
1	M1x0.2	M1x0.2	0.2	6g	0.983	0.927	0.853	0.805	0.766	0.682	6H	0.783	0.858	0.87	0.933	1	1.092	0.8
1.1	M1.1x0.25	M1.1x0.25	0.25	6g	1.082	1.015	0.92	0.867	0.811	0.713	6H	0.829	0.909	0.938	1.009	1.1	1.207	0.85
1.1	M1.1x0.2	M1.1x0.2	0.2	6g	1.083	1.027	0.953	0.905	0.866	0.782	6H	0.883	0.958	0.97	1.033	1.1	1.192	0.9
1.2	M1.2x0.25	M1.2	0.25	6g	1.182	1.115	1.02	0.967	0.911	0.813	6H	0.929	1.009	1.038	1.109	1.2	1.307	0.95
1.2	M1.2x0.2	M1.2x0.2	0.2	6g	1.183	1.127	1.053	1.005	0.966	0.882	6H	0.983	1.058	1.07	1.133	1.2	1.292	1
1.4	M1.4x0.3	M1.4	0.3	6g	1.383	1.308	1.253	1.193	1.166	1.07	6H	1.183	1.258	1.27	1.35	1.4	1.509	1.1
1.4	M1.4x0.2	M1.4x0.2	0.2	6g	1.383	1.327	1.253	1.205	1.166	1.082	6H	1.183	1.258	1.27	1.333	1.4	1.492	1.2
1.6	M1.6x0.35	M1.6	0.35	6g	1.581	1.496	1.354	1.291	1.202	1.075	6H	1.221	1.321	1.373	1.458	1.6	1.736	1.25
1.6	M1.6x0.3	M1.6x0.3	0.3	6g	1.582	1.507	1.387	1.342	1.257	1.157	6H	1.275	1.36	1.405	1.465	1.6	1.703	1.3
1.6	M1.6x0.2	M1.6x0.2	0.2	6g	1.583	1.527	1.453	1.403	1.366	1.28	6H	1.383	1.458	1.47	1.537	1.6	1.696	1.4
1.7	M1.7x0.35	M1.7x0.35	0.35	6g	1.681	1.596	1.454	1.391	1.302	1.175	6H	1.321	1.421	1.473	1.558	1.7	1.836	1.35
1.8	M1.8x0.35	M1.8	0.35	6g	1.781	1.696	1.554	1.491	1.402	1.275	6H	1.421	1.521	1.573	1.658	1.8	1.936	1.45
1.8	M1.8x0.2	M1.8x0.2	0.2	6g	1.783	1.727	1.653	1.603	1.566	1.48	6H	1.583	1.658	1.67	1.737	1.8	1.896	1.6
2	M2x0.4	M2	0.4	6g	1.981	1.886	1.721	1.654	1.548	1.408	6H	1.567	1.679	1.74	1.83	2	2.148	1.6
2	M2x0.25	M2x0.25	0.25	6g	1.982	1.915	1.82	1.764	1.711	1.61	6H	1.729	1.809	1.838	1.913	2	2.111	1.75
2.2	M2.2x0.45	M2.2	0.45	6g	2.18	2.08	1.888	1.817	1.693	1.54	6H	1.713	1.838	1.908	2.003	2.2	2.36	1.75
2.2	M2.2x0.25	M2.2x0.25	0.25	6g	2.182	2.115	2.02	1.964	1.911	1.81	6H	1.929	2.009	2.038	2.113	2.2	2.311	1.95

580	M580x6	M580x6	6	6g	579.9	579.3	576	575.7	573.43	571.97	6H	573.51	574.31	576.1	576.58	580	581.34	574
590	M590x6	M590x6	6	6g	589.9	589.3	586	585.7	583.43	581.97	6H	583.51	584.31	586.1	586.58	590	591.34	584
600	M600x6	M600x6	6	6g	599.9	599.3	596	595.7	593.43	591.97	6H	593.51	594.31	596.1	596.58	600	601.34	594

Sorted by thread class

	ISO Metric profile			External (bolt thread)						
Size mm	Thread Designation	Simple Thread Designation	Pitch mm	Class	Major Dia d=D		Pitch Dia d2=D2		Minor Dia d3	
					max.	min.	max.	min.	max.	min.
0.25	M0.25x0.075	M0.25x0.075	0.075	4g6g	0.250	0.235	0.201	0.193	0.160	0.152
0.3	M0.3x0.08	M0.3x0.08	0.08	4g6g	0.300	0.284	0.248	0.239	0.204	0.195
0.3	M0.3x0.09	M0.3x0.09	0.09	4g6g	0.300	0.283	0.242	0.233	0.192	0.183
0.35	M0.35x0.09	M0.35x0.09	0.09	4g6g	0.350	0.333	0.292	0.283	0.242	0.233
0.4	M0.4x0.1	M0.4x0.1	0.1	4g6g	0.400	0.382	0.335	0.325	0.280	0.270
0.45	M0.45x0.1	M0.45x0.1	0.1	4g6g	0.450	0.432	0.385	0.375	0.330	0.320
0.5	M0.5x0.125	M0.5x0.125	0.125	4g6g	0.500	0.479	0.419	0.408	0.350	0.339
0.55	M0.55x0.125	M0.55x0.125	0.125	4g6g	0.550	0.529	0.469	0.458	0.400	0.389
0.6	M0.6x0.15	M0.6x0.15	0.15	4g6g	0.600	0.576	0.503	0.490	0.420	0.407
0.7	M0.7x0.175	M0.7x0.175	0.175	4g6g	0.700	0.673	0.586	0.572	0.490	0.476
0.8	M0.8x0.2	M0.8x0.2	0.2	4g6g	0.800	0.770	0.670	0.655	0.560	0.545
0.9	M0.9x0.225	M0.9x0.225	0.225	4g6g	0.900	0.867	0.754	0.738	0.630	0.614
1	M1x0.25	M1	0.25	4g6g	0.982	0.915	0.820	0.787	0.711	0.633
1	M1x0.2	M1x0.2	0.2	4g6g	0.983	0.927	0.853	0.823	0.766	0.700
1.1	M1.1x0.25	M1.1x0.25	0.25	4g6g	1.082	1.015	0.920	0.888	0.811	0.734
1.1	M1.1x0.2	M1.1x0.2	0.2	4g6g	1.083	1.027	0.953	0.923	0.866	0.800
1.2	M1.2x0.25	M1.2	0.25	4g6g	1.182	1.115	1.020	0.987	0.911	0.833
1.2	M1.2x0.2	M1.2x0.2	0.2	4g6g	1.183	1.127	1.053	1.023	0.966	0.900
1.4	M1.4x0.3	M1.4	0.3	4g6g	1.383	1.308	1.253	1.215	1.166	1.092
1.4	M1.4x0.2	M1.4x0.2	0.2	4g6g	1.383	1.327	1.253	1.223	1.166	1.100
1.6	M1.6x0.35	M1.6	0.35	4g6g	1.581	1.496	1.354	1.314	1.202	1.098
1.6	M1.6x0.3	M1.6x0.3	0.3	4g6g	1.582	1.507	1.387	1.359	1.257	1.174
1.6	M1.6x0.2	M1.6x0.2	0.2	4g6g	1.583	1.527	1.453	1.421	1.366	1.298
1.7	M1.7x0.35	M1.7x0.35	0.35	4g6g	1.681	1.596	1.454	1.414	1.302	1.198
1.8	M1.8x0.35	M1.8	0.35	4g6g	1.781	1.696	1.554	1.514	1.402	1.298
1.8	M1.8x0.2	M1.8x0.2	0.2	4g6g	1.783	1.727	1.653	1.621	1.566	1.498
2	M2x0.4	M2	0.4	4g6g	1.981	1.886	1.721	1.679	1.548	1.433
2	M2x0.25	M2x0.25	0.25	4g6g	1.982	1.915	1.820	1.784	1.711	1.630
2.2	M2.2x0.45	M2.2	0.45	4g6g	2.180	2.080	1.888	1.843	1.693	1.566
2.2	M2.2x0.25	M2.2x0.25	0.25	4g6g	2.182	2.115	2.020	1.984	1.911	1.830
2.3	M2.3x0.45	M2.3x0.45	0.45	4g6g	2.280	2.180	1.988	1.943	1.793	1.666
2.3	M2.3x0.4	M2.3x0.4	0.4	4g6g	2.281	2.186	2.021	1.979	1.848	1.733
2.5	M2.5x0.45	M2.5	0.45	4g6g	2.480	2.380	2.188	2.143	1.993	1.866
2.5	M2.5x0.35	M2.5x0.35	0.35	4g6g	2.481	2.396	2.254	2.214	2.102	1.998
2.6	M2.6x0.45	M2.6x0.45	0.45	4g6g	2.580	2.480	2.288	2.243	2.093	1.966
3	M3x0.5	M3	0.5	4g6g	2.980	2.874	2.655	2.607	2.439	2.299
3	M3x0.35	M3x0.35	0.35	4g6g	2.981	2.896	2.754	2.712	2.602	2.496
3.5	M3.5x0.6	M3.5	0.6	4g6g	3.479	3.354	3.089	3.036	2.829	2.667
3.5	M3.5x0.35	M3.5x0.35	0.35	4g6g	3.481	3.396	3.254	3.212	3.102	2.996
4	M4x0.7	M4	0.7	4g6g	3.978	3.838	3.523	3.467	3.220	3.036
4	M4x0.5	M4x0.5	0.5	4g6g	3.980	3.874	3.655	3.607	3.439	3.299
4.5	M4.5x0.75	M4.5x0.75	0.75	4g6g	4.478	4.338	3.991	3.935	3.666	3.473
4.5	M4.5x0.5	M4.5x0.5	0.5	4g6g	4.480	4.374	4.155	4.107	3.939	3.799
5	M5x0.8	M5	0.8	4g6g	4.976	4.826	4.456	4.396	4.110	3.904
5	M5x0.5	M5x0.5	0.5	4g6g	4.980	4.874	4.655	4.607	4.439	4.299
5.5	M5.5x0.5	M5.5x0.5	0.5	4g6g	5.480	5.374	5.155	5.099	4.939	4.791
6	M6x1	M6	1	4g6g	5.974	5.794	5.324	5.253	4.891	4.637
6	M6x0.8	M6x0.8	0.8	4g6g	5.976	5.826	5.456	5.406	5.110	4.914
6	M6x0.75	M6x0.75	0.75	4g6g	5.978	5.838	5.491	5.428	5.166	4.966

300	M300x3	M300x3	3	4g6g	299.952	299.577	298.003	297.843	296.704	295.995
310	M310x6	M310x6	6	4g6g	309.920	309.320	306.023	305.823	303.425	302.127
310	M310x4	M310x4	4	4g6g	309.940	309.465	307.342	307.162	305.610	304.698
320	M320x6	M320x6	6	4g6g	319.920	319.320	316.023	315.823	313.425	312.127
320	M320x4	M320x4	4	4g6g	319.940	319.465	317.342	317.162	315.610	314.698
330	M330x6	M330x6	6	4g6g	329.920	329.320	326.023	325.823	323.425	322.127
330	M330x4	M330x4	4	4g6g	329.940	329.465	327.342	327.162	325.610	324.698
340	M340x6	M340x6	6	4g6g	339.920	339.320	336.023	335.823	333.425	332.127
340	M340x4	M340x4	4	4g6g	339.940	339.465	337.342	337.162	335.610	334.698
350	M350x6	M350x6	6	4g6g	349.920	349.320	346.023	345.823	343.425	342.127
350	M350x4	M350x4	4	4g6g	349.940	349.465	347.342	347.162	345.610	344.698
360	M360x6	M360x6	6	4g6g	359.920	359.320	356.023	355.799	353.425	352.103
360	M360x4	M360x4	4	4g6g	359.940	359.465	357.342	357.152	355.610	354.688
370	M370x6	M370x6	6	4g6g	369.920	369.320	366.023	365.799	363.425	362.103
370	M370x4	M370x4	4	4g6g	369.940	369.465	367.342	367.152	365.610	364.688
380	M380x6	M380x6	6	4g6g	379.920	379.320	376.023	375.799	373.425	372.103
380	M380x4	M380x4	4	4g6g	379.940	379.465	377.342	377.152	375.610	374.688
390	M390x6	M390x6	6	4g6g	389.920	389.320	386.023	385.799	383.425	382.103
390	M390x4	M390x4	4	4g6g	389.940	389.465	387.342	387.152	385.610	384.688
400	M400x6	M400x6	6	4g6g	399.920	399.320	396.023	395.799	393.425	392.103
400	M400x4	M400x4	4	4g6g	399.940	399.465	397.342	397.152	395.610	394.688
410	M410x6	M410x6	6	4g6g	409.920	409.320	406.023	405.799	403.425	402.103
420	M420x6	M420x6	6	4g6g	419.920	419.320	416.023	415.799	413.425	412.103
430	M430x6	M430x6	6	4g6g	429.920	429.320	426.023	425.799	423.425	422.103
440	M440x6	M440x6	6	4g6g	439.920	439.320	436.023	435.799	433.425	432.103
450	M450x6	M450x6	6	4g6g	449.920	449.320	446.023	445.799	443.425	442.103
460	M460x6	M460x6	6	4g6g	459.920	459.320	456.023	455.799	453.425	452.103
470	M470x6	M470x6	6	4g6g	469.920	469.320	466.023	465.799	463.425	462.103
480	M480x6	M480x6	6	4g6g	479.920	479.320	476.023	475.799	473.425	472.103
490	M490x6	M490x6	6	4g6g	489.920	489.320	486.023	485.799	483.425	482.103
500	M500x6	M500x6	6	4g6g	499.920	499.320	496.023	495.799	493.425	492.103
510	M510x6	M510x6	6	4g6g	509.920	509.320	506.023	505.799	503.425	502.103
520	M520x6	M520x6	6	4g6g	519.920	519.320	516.023	515.799	513.425	512.103
530	M530x6	M530x6	6	4g6g	529.920	529.320	526.023	525.799	523.425	522.103
540	M540x6	M540x6	6	4g6g	539.920	539.320	536.023	535.799	533.425	532.103
550	M550x6	M550x6	6	4g6g	549.920	549.320	546.023	545.799	543.425	542.103
560	M560x6	M560x6	6	4g6g	559.920	559.320	556.023	555.799	553.425	552.103
570	M570x6	M570x6	6	4g6g	569.920	569.320	566.023	565.799	563.425	562.103
580	M580x6	M580x6	6	4g6g	579.920	579.320	576.023	575.799	573.425	572.103
590	M590x6	M590x6	6	4g6g	589.920	589.320	586.023	585.799	583.425	582.103
600	M600x6	M600x6	6	4g6g	599.920	599.320	596.023	595.799	593.425	592.103

[Click here to return to the thread data chart page index.](#)

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MARYLAND METRICS Technical Data Chart:

A collection of Tapping drill sizes for taps in a multilingual format

Gewindekernlöcher für Gewindebohrer

Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos

M

Metrisches ISO Regelgewinde / Metric ISO thread / Filetage métrique ISO standard / Filettatura metrica ISO / Rosca Métrica ISO

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 13)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	6H max
M 1	0,75	0,729	0,785*
M 1,2	0,95	0,929	0,985*
M 1,4	1,1	1,075	1,142*
M 1,6	1,25	1,221	1,321
M 1,7	1,35	1,321	1,421
M 1,8	1,45	1,421	1,521
M 2	1,6	1,567	1,679
M 2,2	1,75	1,713	1,838
M 2,3	1,85	1,813	1,938
M 2,5	2,05	2,013	2,138
M 2,6	2,15	2,113	2,238
M 3	2,5	2,459	2,599
M 3,5	2,9	2,850	3,010
M 4	3,3	3,242	3,422
M 4,5	3,7	3,688	3,878
M 5	4,2	4,134	4,334
M 6	5	4,917	5,153
M 7	6	5,917	6,153
M 8	6,8	6,647	6,912
M 9	7,8	7,647	7,912
M 10	8,5	8,376	8,676
M 11	9,5	9,376	9,676
M 12	10,2	10,106	10,441
M 14	12	11,835	12,210
M 16	14	13,835	14,210
M 18	15,5	15,294	15,744
M 20	17,5	17,294	17,744
M 22	19,5	19,294	19,744
M 24	21	20,752	21,252
M 27	24	23,752	24,252
M 30	26,5	26,211	26,771
M 33	29,5	29,211	29,771
M 36	32	31,670	32,270
M 39	35	34,670	35,270
M 42	37,5	37,129	37,799
M 45	40,5	40,129	40,799
M 48	43	42,587	43,297
M 52	47	46,587	47,297
M 56	50,5	50,046	50,796

* 5H max

MF

Metrisches ISO Feingewinde / Metric ISO Fine thread / Filetage métrique fin ISO / Filettatura metrica ISO fine / Rosca Métrica ISO Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 13)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	6H max
M 2 x 0,25	1,75	1,729	1,785
M 2,2 x 0,25	1,95	1,929	1,985
M 2,3 x 0,25	2,05	2,029	2,085
M 2,5 x 0,35	2,15	2,121	2,221
M 3 x 0,25	2,75	2,729	2,785
M 3 x 0,35	2,65	2,621	2,721
M 3,5 x 0,35	3,15	3,121	3,221
M 4 x 0,35	3,65	3,621	3,721
M 4 x 0,5	3,5	3,459	3,599
M 4,5 x 0,5	4	3,959	4,099
M 5 x 0,35	4,65	4,621	4,721
M 5 x 0,5	4,5	4,459	4,599
M 5 x 0,75	4,2	4,188	4,378
M 6 x 0,5	5,5	5,459	5,599
M 6 x 0,75	5,25	5,188	5,378
M 7 x 0,5	6,5	6,459	6,599
M 7 x 0,75	6,25	6,188	6,378
M 8 x 0,5	7,5	7,459	7,599
M 8 x 0,75	7,25	7,188	7,378
M 8 x 1	7	6,917	7,153
M 9 x 0,75	8,25	8,188	8,378
M 9 x 1	8	7,917	8,153
M 10 x 0,5	9,5	9,459	9,599
M 10 x 0,75	9,25	9,188	9,378
M 10 x 1	9	8,917	9,153
M 10 x 1,25	8,75	8,647	8,912
M 11 x 1	10	9,917	10,153
M 12 x 0,5	11,5	11,459	11,599
M 12 x 1	11	10,917	11,153
M 12 x 1,25	10,75	10,647	10,912
M 12 x 1,5	10,5	10,376	10,676
M 13 x 1	12	11,917	12,153
M 14 x 0,75	13,2	13,188	13,378
M 14 x 1	13	12,917	13,153
M 14 x 1,25	12,75	12,647	12,912
M 14 x 1,5	12,5	12,376	12,676
M 15 x 1	14	13,917	14,153
M 15 x 1,5	13,5	13,376	13,676
M 16 x 0,75	15,2	15,188	15,378
M 16 x 1	15	14,917	15,153
M 16 x 1,25	14,8	14,647	14,912
M 16 x 1,5	14,5	14,376	14,676
M 17 x 1	16	15,917	16,153
M 18 x 1	17	16,917	17,153
M 18 x 1,5	16,5	16,376	16,676
M 18 x 2	16	15,835	16,210
M 20 x 1	19	18,917	19,153
M 20 x 1,5	18,5	18,376	18,676
M 20 x 2	18	17,835	18,210
M 22 x 1	21	20,917	21,153
M 22 x 1,5	20,5	20,376	20,676

Gewindekernlöcher für Gewindebohrer

Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos



MF

Metrisches ISO Feingewinde / Metric ISO Fine thread / Filetage métrique fin ISO / Filettatura metrica ISO fine / Rosca Métrica ISO Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 13)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	6H max
M 22 x 2	20	19,835	20,210
M 24 x 1	23	22,917	23,153
M 24 x 1,5	22,5	22,376	22,676
M 24 x 2	22	21,835	22,210
M 25 x 1	23	22,917	23,153
M 25 x 1,5	23,5	23,376	23,676
M 26 x 1,5	24,5	24,376	24,676
M 27 x 1	26	25,917	26,153
M 27 x 1,5	25,5	25,376	25,676
M 27 x 2	25	24,835	25,210
M 28 x 1,5	26,5	26,376	26,676
M 28 x 2	26	25,835	26,210
M 30 x 1	29	28,917	29,153
M 30 x 1,5	28,5	28,376	28,676
M 30 x 2	28	27,835	28,210
M 32 x 1,5	30,5	30,376	30,676
M 32 x 2	30	29,835	30,210
M 33 x 1,5	31,5	31,376	31,676
M 33 x 2	31	30,835	31,210
M 34 x 1,5	32,5	32,376	32,676
M 35 x 1,5	33,5	33,376	33,676
M 36 x 1,5	34,5	34,376	34,676
M 36 x 2	34	33,835	34,210
M 36 x 3	33	32,752	33,252
M 38 x 1,5	36,5	36,376	36,676
M 39 x 1,5	37,5	37,376	37,676
M 39 x 2	37	36,835	37,210
M 39 x 3	36	35,752	36,252
M 40 x 1,5	38,5	38,376	38,676
M 40 x 2	38	37,835	38,210
M 40 x 3	37	36,752	37,252
M 42 x 1,5	40,5	40,376	40,676
M 42 x 2	40	39,835	40,210
M 42 x 3	39	38,752	39,252
M 45 x 1,5	43,5	43,376	43,676
M 45 x 2	43	42,835	43,210
M 45 x 3	42	41,752	42,252
M 48 x 1,5	46,5	46,376	46,676
M 48 x 2	46	45,835	46,210
M 48 x 3	45	44,752	45,252
M 50 x 1,5	48,5	48,376	48,676
M 50 x 2	48	47,835	48,210
M 50 x 3	47	46,752	47,252
M 52 x 1,5	50,5	50,376	50,676
M 52 x 2	50	49,835	50,210
M 52 x 3	47	46,587	47,087
M 56 x 1,5	54,5	54,376	54,676
M 56 x 2	54	53,835	54,210
M 56 x 3	53	52,752	53,252
M 58 x 1,5	56,5	56,376	56,676
M 60 x 1,5	66,5	66,376	66,676
M 60 x 2	58	57,835	58,210
M 60 x 3	57	56,752	57,252

UNC

Unified Coarse Gewinde / Unified Coarse thread / Filetage Unified
Coarse Filettatura grossa unificata / Rosca Unificada Gruesap

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B 1.1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	2B max
Nr. 1-64	1,55	1,425	1,582
Nr. 2-56	1,85	1,694	1,872
Nr. 3-48	2,35	1,941	2,146
Nr. 4-40	2,35	2,156	2,385
Nr. 5-40	2,65	2,487	2,697
Nr. 6-32	2,85	2,642	2,896
Nr. 8-32	3,5	3,302	3,531
Nr. 10-24	3,9	3,683	3,962
Nr. 12-24	4,5	4,343	4,597
1/4-20	5,1	4,976	5,268
5/16-18	6,6	6,411	6,734
3/8-16	8	7,805	8,164
7/16-14	9,4	9,149	9,550
1/2-13	10,8	10,584	11,013
9/16-12	12,2	11,996	12,456
5/8-11	13,5	13,376	13,868
3/4-10	16,5	16,299	16,833
7/8-9	19,5	19,169	19,748
1-8	22,25	21,963	22,598
1 1/8-7	25	24,648	25,348
1 1/4-6	28	27,823	28,524
1 1/2-6	34	33,518	34,295

UNF

Unified Fine Gewinde / Unified Fine thread / Filetage Unified Fine
Filettatura fine unificata / Rosca Unificada Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B 1.1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	2B max
Nr. 0-80	1,25	1,181	1,306
Nr. 1-72	1,55	1,473	1,613
Nr. 2-64	1,85	1,755	1,913
Nr. 3-56	2,15	2,024	2,197
Nr. 4-48	2,4	2,271	2,459
Nr. 5-44	2,7	2,550	2,741
Nr. 6-40	2,95	2,819	3,023
Nr. 8-36	3,5	3,404	3,607
Nr. 10-32	4,1	3,962	4,166
Nr. 12-28	4,6	4,496	4,724
1/4-28	5,5	5,367	5,580
5/16-24	6,9	6,792	7,038
3/8-24	8,5	8,379	8,626
7/16-20	9,9	9,738	10,030
1/2-20	11,5	11,326	11,618
9/16-18	12,9	12,761	13,084
5/8-18	14,5	14,348	14,671

Gewindekernlöcher für Gewindebohrer

Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos

UNF

Unified Fine Gewinde / Unified Fine thread / Filetage Unified Fine
Filettatura fine unificata / Rosca Unificada Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B 1.1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	2B max
3/16-16	17,5	17,330	17,689
7/8-14	20,4	20,262	20,663
1-12	23,25	23,109	23,569
1 1/8-12	26,5	26,284	26,744
1 1/4-12	29,5	29,459	29,919
1 3/8-12	33	32,634	33,094
1 1/2-12		35,809	36,269

UNEF

Unified Extra Fine Gewinde / Unified Extra Fine thread / Filetage Unified Extra-fine
Filettatura extra fine unificata / Rosca Unificada Extra Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B 1.1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	2B max
1/4-32	5,55	5,491	5,679
5/16-32	7,1	7,079	7,267
3/8-32	8,8	8,666	8,854
7/16-28	10,2	10,130	10,343
1/2-28	11,8	11,718	11,931
9/16-24	13,2	13,142	13,388
5/8-24	14,8	14,729	14,976
11/16-24	16,4	16,317	16,563
3/4-20	17,8	17,675	17,967
7/8-20	21	20,850	21,142
1-20	24,2	24,025	24,317

UN

Unified Coarse Gewinde (8 Gang Reihe) / Unified Coarse thread (8 thread series) / Filetage
Unified Coarse (8 filets) / Filettatura grossa unificata (serie di 8 filetti) / Rosca Unificada
Gruesa (series 8 hilos)

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B 1.1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm) (acc. to DIN 336)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	2B max
1 1/8-8	25,4	25,138	25,962
1 1/4-8	28,5	28,313	29,126
1 3/8-8	32	31,488	32,123
1 1/2-8	35	34,663	35,456
1 5/8-8	38,1	37,838	38,623
1 3/4-8	41,5	41,013	41,790
1 7/8-8	44,45	44,188	44,957
2-8	48	47,363	48,125
2 1/4-8	54	53,713	54,462

EG UNC (STI)

Unified Coarse Gewinde für Gewindeeinsätze aus Draht / Unified Coarse thread for
screw thread inserts / Filetage Unified Coarse / Filettatura grossa unificata per
inserti filettati / Rosca Unificada Gruesa para montaje de insertos

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (NASM 33537)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	3B max
EG Nr. 2-56	2,35	2,282	2,441
EG Nr. 3-48	2,7	2,630	2,804
EG Nr. 4-40	3,05	2,982	3,180
EG Nr. 5-40	3,4	3,312	3,487
EG Nr. 6-32	3,7	3,677	3,879
EG Nr. 8-32	4,4	4,338	4,524
EG Nr. 10-24	5,1	5,055	5,283
EG Nr. 12-24	5,8	5,715	5,944
EG 1/4-20	6,7	6,625	6,868
EG 5/16-18	8,4	8,244	8,489
EG 3/8-16	10	9,869	10,127
EG 7/16-14	11,7	11,505	11,783
EG 1/2-13	13,3	13,123	13,393

EG UNF (STI)

Unified Fine Gewinde für Gewindeeinsätze aus Draht / Unified Fine thread for screw
thread inserts / Filetage Unified Fine / Filettatura fina unificata per inserti filettati
Rosca Unificada Fina para montaje de insertos

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (NASM 33537)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	3B max
EG Nr. 2-64	2,3	2,270	2,405
EG Nr. 3-56	2,65	2,614	2,758
EG Nr. 4-48	3	2,962	3,122
EG Nr. 5-44	3,3	3,300	3,467
EG Nr. 6-40	3,7	3,644	3,818
EG Nr. 8-36	4,4	4,321	4,498
EG Nr. 10-32	5,1	4,999	5,184
EG 1/4-28	6,6	6,545	6,721
EG 5/16-24	8,2	8,166	8,351
EG 3/8-24	9,8	9,754	9,931
EG 7/16-20	11,4	11,387	11,585
EG 1/2-20	13	12,970	13,172

Gewindekernlöcher für Gewindebohrer



Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos

EG M

Metrisches ISO Regelgewinde für Gewindeeinsätze aus Draht / Metric ISO thread for screw thread inserts / Filetage métrique ISO standard / Filettatura metrica ISO per inserti filettati / Rosca Métrica ISO para montaje de insertos

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 8140)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	6H mod max
EG M 2,5	2,65	2,597	2,697
EG M 3	3,15	3,109	3,221
EG M 3,5	3,7	3,630	3,755
EG M 4	4,2	4,152	4,292
EG M 5	5,25	5,174	5,334
EG M 6	6,3	6,217	6,407
EG M 8	8,4	8,271	8,483
EG M 10	10,5	10,324	10,560
EG M 12	12,5	12,380	12,645
EG M 14	14,5	14,433	14,733
EG M 16	16,5	16,433	16,733
EG M 18	18,8	18,542	18,897
EG M 20	20,8	20,542	20,897
EG M 22	22,8	22,542	22,897
EG M 24	24,75	24,649	25,049

G

Rohrgewinde / British Standard pipe thread / Filetage tube / Filettatura Whitworth a Gas cilindrica / Rosca para tubos, Norma Británica

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN EN ISO 228)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	max
G 1/16	6,8	6,561	6,843
G 1/8	8,8	8,566	8,848
G 1/4	11,8	11,445	11,890
G 3/8	15,25	14,950	15,395
G 1/2	19	18,632	19,173
G 5/8	21	20,588	21,129
G 3/4	24,5	24,118	24,659
G 7/8	28,25	27,878	28,419
G 1	30,75	30,292	30,932
G 1 1/8	35,5	34,940	35,580
G 1 1/4	39,5	38,953	39,593
G 1 3/8	41,9	41,366	42,006
G 1 1/2	45,25	44,846	45,486
G 1 3/4	51	50,789	51,429
G 2	57	56,657	57,297
G 2 1/4	63	62,753	63,393
G 2 1/2	72,6	72,227	72,867
G 3	85	84,927	85,567

EG MF

Metrisches ISO Feingewinde für Gewindeeinsätze aus Draht / Metric ISO Fine thread for screw thread inserts / Filetage métrique ISO fin / Filettatura metrica ISO fine per inserti filettati / Rosca Métrica ISO fina para montaje de insertos

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 8140)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	6H mod max
EG M 8 x 1	8,3	8,217	8,407
EG M 10 x 1	10,3	10,217	10,407
EG M 10 x 1,25	10,4	10,271	10,483
EG M 12 x 1,25	12,4	12,271	12,483
EG M 12 x 1,5	12,5	12,324	12,560
EG M 14 x 1,5	14,5	14,324	14,560
EG M 16 x 1,5	16,5	16,324	16,560
EG M 18 x 1,5	18,5	18,324	18,560
EG M 18 x 2	18,5	18,433	18,733
EG M 20 x 1,5	20,5	20,324	20,560

Rp

Whitworth Rohrgewinde / Whitworth Standard parallel internal pipe thread / Filetage Whitworth pour tubes / Filettatura Whitworth / Rosca cilíndrica interna para tubos, norma Whitworth

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN EN 10226-1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	max
Rp 1/16	6,55	6,490	6,632
Rp 1/8	8,6	8,495	8,637
Rp 1/4	11,5	11,341	11,549
Rp 3/8	15	14,846	15,054
Rp 1/2	18,5	18,490	18,774
Rp 5/8	20,5	20,446	20,730
Rp 3/4	24	23,976	24,260
Rp 1	30,25	30,112	30,472
Rp 1 1/4	39	38,773	39,133
Rp 1 1/2	45	44,629	45,063
Rp 2	56,5	56,440	56,874
Rp 2 1/2	72,2	72,010	72,444
Rp 3	85	84,710	85,144

Gewindekernlöcher für Gewindebohrer

Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos

BSW

British Standard Whitworth-Gewinde / British Standard Whitworth thread / Filetage British Standard Whitworth / Filettatura Whitworth standard inglese / Rosca Whitworth Norma Británica

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (B.S. 84)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	max
1/16-60	1,2	1,045	1,231
3/32-48	1,9	1,703	1,911
1/8-40	2,5	2,362	2,590
5/32-32	3,1	2,952	3,213
3/16-24	3,6	3,407	3,745
7/32-24	4,5	4,201	4,539
1/4-20	5	4,724	5,155
5/16-18	6,5	6,131	6,591
3/8-16	7,9	7,493	7,988
7/16-14	9,2	8,790	9,330
1/2-12	10,5	9,989	10,590
5/8-12	12	11,577	12,178
3/4-11	13,4	12,919	13,558
7/8-10	16,4	15,798	16,484
1-8	19,25	18,612	19,354
1-8	22	21,335	22,148
1 1/8-7	24,75	23,929	24,833
1 1/4-7	27,5	27,104	28,008
1 3/8-6	30	29,505	30,529
1 1/2-6	33,5	32,680	33,704
1 5/8-5	35,5	34,771	35,965
1 3/4-5	39	37,946	39,140
1 7/8-4 1/2	41,5	40,398	41,705
2-4 1/2	44,5	43,573	44,880
2 1/4-4	50	49,020	50,468
2 1/2-4	56	55,370	56,818
2 3/4-3 1/2	61	60,559	62,188
3-3 1/2	68	66,909	68,538

Pg

Stahlpanzer Rohrgewinde DIN 40 430 / Steel conduit thread DIN 40 430 / Filetage pour raccords de tubes électriques DIN 40 430 / Filettatura tubo corazzato / Rosca para tubos blindados DIN 40 430

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 40430)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	max
Pg 7	11,4	11,29	11,43
Pg 9	14	13,85	14,01
Pg 11	17,25	17,25	17,41
Pg 13,5	19	19,05	19,21
Pg 16	21,25	21,15	21,31
Pg 21	27	26,79	27,03
Pg 29	35,5	35,49	35,73
Pg 36	45,5	45,49	45,73
Pg 42	52,5	52,49	52,73
Pg 48	58	57,79	58,03

BSF

British Standard Fine Gewinde / British Standard Fine thread / Filetage British Standard Fine / Filettatura fine standard inglese / Rosca Fina, Norma Británica

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (B.S. 84)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	max
3/16-32	4	3,745	4,006
7/32-28	4,6	4,394	4,677
1/4-26	5,3	5,099	5,396
5/16-22	6,7	6,459	6,817
3/8-20	8,2	7,900	8,331
7/16-18	9,6	9,306	9,766
1/2-16	11	10,667	11,162
9/16-16	12,6	12,255	12,750
5/8-14	14	13,553	14,093
3/4-12	16,8	16,340	16,941
7/8-12	19,8	19,269	19,909
1-10	22,7	22,148	22,834
1 1/8-9	25,5	24,962	25,704
1 1/4-9	28,5	28,137	28,879
1 3/8-8	31,5	30,860	31,673
1 1/2-8	34,5	34,035	34,848
1 5/8-8	37,5	37,211	38,024

MJ

Luft- und Raumfahrt / Aerospace / Industrie aéronautique / Aeronautica e Aerospaziale / aero-espacial

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN ISO 5855)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	6H max
MJ 3 x 0,5	2,6	2,513	2,653*
MJ 4 x 0,7	3,4	3,318	3,498*
MJ 5 x 0,8	4,3	4,221	4,421*
MJ 6 x 1	5,1	5,026	5,215
MJ 8 x 1,25	6,9	6,782	6,994
MJ 10 x 1,5	8,7	8,539	8,779
MJ 12 x 1,75	10,5	10,295	10,563
MJ 16 x 2	14,3	14,051	14,351

* 5H max

Additional MJ sizes	
Thread size	Nominal size
MJ 2 x 0,4	1,65
MJ 2,5 x 0,45	2,1
MJ 3,5 x 0,6	3
MJ 7 x 1	6,1
MJ 8 x 1	7,1
MJ 10 x 1,25	8,9
MJ 12 x 1,25	10,9
MJ 14 x 1,5	12,6
MJ 16 x 1,5	14,6
MJ 18 x 1,5	16,6
MJ 20 x 1,5	18,6

Data source additional MJ sizes: FERGO

Gewindekernlöcher für Gewindebohrer

Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos



UNJC

Unified Coarse Gewinde (modifiziert) / Unified Coarse thread (modified) / Filetage Unified Coarse (modifié) / Filettatura grossa unificata (modificata) / Rosca Unificada Gruesa (modificada)

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B1.15)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	3B max
Nr. 1-64	1,5	1,467	1,570
Nr. 2-56	1,8	1,742	1,860
Nr. 3-48	2,05	1,999	2,137
Nr. 4-40	2,3	2,226	2,391
Nr. 5-40	2,65	2,556	2,721
Nr. 6-32	2,8	2,732	2,938
Nr. 8-32	3,5	3,393	3,599
Nr. 10-24	3,9	3,795	4,064
Nr. 12-24	4,6	4,455	4,704
1/4-20	5,2	5,113	5,387
5/16-18	6,7	6,563	6,833
3/8-16	8,1	7,978	8,255
7/16-14	9,5	9,344	9,637
1/2-13	10,9	10,796	11,093
9/16-12	12,3	12,226	12,480
5/8-11	13,7	13,625	13,902
3/4-10	16,75	16,575	16,880

BA

British Association Standard Gewinde / British Association Standard thread
Filetage standard British Association / Filettatura associazione British standard
Rosca estándar British Association

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (B.S. 949: Part 2)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	max
BA 0	5,1	4,800	5,175
BA 1	4,5	4,220	4,560
BA 2	4	3,728	4,033
BA 3	3,4	3,224	3,499
BA 4	3	2,808	3,058
BA 5	2,6	2,492	2,712
BA 6	2,3	2,164	2,364
BA 7	2	1,924	2,104
BA 8	1,8	1,684	1,844
BA 9	1,5	1,432	1,577
BA 10	1,3	1,280	1,410
BA 11	1,2	1,128	1,243
BA 12	1	0,964	1,069
BA 13	0,95	0,900	0,995
BA 14	0,75	0,724	0,809

UNJF

Unified Fine Gewinde (modifiziert) / Unified Fine thread (modified) / Filetage Unified Fine (modifié) / Filettatura fine unificata (modificata) / Rosca Unificada Fina (modificada)

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B1.15)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior (mm)	
		min	3B max
Nr. 0-80	1,25	1,215	1,297
Nr. 1-72	1,55	1,510	1,602
Nr. 2-64	1,85	1,797	1,900
Nr. 3-56	2,1	2,073	2,191
Nr. 4-48	2,4	2,329	2,467
Nr. 5-44	2,7	2,613	2,763
Nr. 6-40	2,95	2,886	3,051
Nr. 8-36	3,6	3,479	3,662
Nr. 10-32	4,15	4,053	4,253
Nr. 12-28	4,7	4,602	4,815
1/4-28	5,6	5,466	5,662
5/16-24	7	6,907	7,110
3/8-24	8,6	8,494	8,680
7/16-20	10	9,875	10,083
1/2-20	11,5	11,463	11,660
9/16-18	13	12,913	13,123
5/8-18	14,5	14,500	14,702

NPSM

Amerikanisches zylindrisches Rohrgewinde / American standard straight pipe thread

Filetage standard américain pour tubes cylindriques / Filettatura cilindrica americana / Rosca americana para tubo

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (ASME B1.20.1)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior max (mm)
1/8-27	9,1	9,246
1/4-18	12	12,217
3/8-18	15,5	15,545
1/2-14	19	19,279
3/4-14	24,5	24,639
1 - 11 1/2	30,5	30,759
1 1/4-11 1/2	39,5	39,497
1 1/2-11 1/2	45,5	45,568
2-11 1/2	57,5	57,607
2 1/2-8	69	69,266
3 - 8	85	85,166

W zyl / par / cyl / cil / cilínd.

Zylindrisches Whitworth Gewinde / Whitworth Gas cylinder thread / Filetage Whitworth, cylindrique / Filettatura Whitworth, filetto cilindrico / Rosca Whitworth cilíndrica para botellas de gas

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 477)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-nucleo de rosca interior max (mm)
W 21,80-14	19,75	20,066
W 24,32-14	22,25	22,586

Gewindekernlöcher für Gewindebohrer

Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos

Tr

Metrisches ISO Trapez Gewinde

Metric ISO trapezoidal thread / Filetage métrique ISO trapézoidal

Filettatura trapezoidale ISO / Rosca trapezoidal métrica ISO

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 103)	Steigung Pitch Pas Passo Paso P (mm)	Bohrer-Ø Nominal size diamètre du foret Diametro nominale Ø-Taladro (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo / Ø-nucleo de rosca interior max (mm)
8	1,5	6,60	6,690
10	1,5	8,60	8,690
10	2	8,20	8,236
*10	3	7,50	7,500
12	2	10,20	10,236
12	3	9,2	9,315
14	2	12,20	12,236
14	3	11,25	11,315
*14	4	10,50	10,500
16	4	12,25	12,375
18	4	14,25	14,375
20	4	16,25	16,375
22	5	17,25	17,450
24	5	19,25	19,450
26	5	21,25	21,450
28	5	23,25	23,450
30	6	24,25	24,500
32	6	26,25	26,500
36	6	30,25	30,500
38	7	31,50	31,560
40	7	33,50	33,560
44	7	37,50	37,560
48	8	40,50	40,630
50	8	42,50	42,630
52	8	44,50	44,630

NPT

Amerikanisches kegeliges Rohrgewinde, Kegel 1:16 / American standard pipe taper thread, taper 1:16 / Filetage standard américain conicité 1:16 pour tube conique avec perçage cylindrique / Filettatura conica americana, conicità 1:16 / Rosca cónica para tubo norma americana, conicidad 1:16

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca ASME B1.20.1	Vorbohr-Ø zylindrisch Tapping drill size parallel Ø de l'avant trou cylindrique Diam. del preforo cilíndrico Dimensión broca cilín. d1 (mm)	Vorbohr-Ø konisch Tapping drill size tapered Ø de l'avant trou conique Diam. del preforo conico Dimensión broca cónica D1 (mm)	Einschneidtiefe Thread depth Profondeur de taraudage Profondità di filettatura Profundidad rosca ET (mm)	Bohrtiefe Drill depth BT Profondità di foratura Profundidad broca min BT (mm)	Flanken-Ø pitch diameter dia. sur flancs diametro medio dia. medio E ₁ (mm)
1/16-27	6,15	6,39	9,29	10,7	7,142
1/8-27	8,4	8,74	9,32	10,8	9,489
1/4-18	11,1	11,36	13,52	15,6	12,487
3/8-18	14,3	14,8	13,83	16	15,926
1/2-14	17,9	18,32	18,07	20,8	19,772
3/4-14	23,3	23,67	18,55	21,3	25,117
1-11 1/2	29	29,69	22,29	25,6	31,461
1 1/4-11 1/2	37,7	38,45	22,8	26,1	40,218
1 1/2-11 1/2	43,7	44,52	22,8	26,1	46,287
2-11 1/2	55,6	56,56	23,2	26,5	58,325
2 1/2-8	66,3	67,62	31,57	36,3	70,158
3 - 8	82,3	83,52	33,74	38,5	86,068

Gewindekernlöcher für Gewindebohrer



Tapping drill sizes for taps / Avant-trous de taraudage

Prefori per maschi / Dimensiones de la broca previa para machos

NPTF

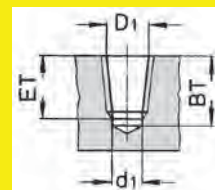
Amerikanisches kegeliges Rohrgewinde, Kegel 1:16 / American standard pipe taper thread, taper 1:16 / Filetage standard américain conicité 1:16 pour tube conique avec perçage cylindrique / Filettatura conica americana, conicità 1:16 / Rosca cónica para tubo norma americana, conicidad 1:16

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca ASME B1.20.3	Vorbohr-Ø zylindrisch Tapping drill size parallel Ø de l'avant trou cylindrique Diam. del preforo cilíndrico Dimensión broca cilín. d1 (mm)	Vorbohr-Ø konisch Tapping drill size tapered Ø de l'avant trou conique Diam. del preforo conico Dimensión broca cónica D1 (mm)	Einschneidtiefe Thread depth Profondeur de taraudage Profondità di filettatura Profundidad rosca ET (mm)	Bohrtiefe Drill depth BT Profondità di foratura Profundidad broca min BT (mm)	Flanken-Ø pitch diameter dia. sur flancs diametro medio dia. medio E ₁ (mm)
1/16-27	6,10	6,41	9,29	10,3	7,142
1/8-27	8,4	8,77	9,32	10,3	9,489
1/4-18	11,0	11,4	13,52	15	12,487
3/8-18	14,5	14,84	13,83	15,3	15,926
1/2-14	17,5	18,33	18,07	19,9	19,772
3/4-14	23,0	23,72	18,55	20,4	25,117
1-11 1/2	29,0	29,76	22,29	24,5	31,461
1 1/4-11 1/2	37,5	38,52	22,8	25	40,218
1 1/2-11 1/2	43,5	44,59	22,8	25	46,287
2-11 1/2	56,0	56,62	23,2	25,4	58,325
2 1/2-8	66,0	67,71	34,75	38	70,158
3-8	82,0	83,62	36,88	40	86,068

Rc = PT

Kegeliges Rohrgewinde, Kegel 1:16 / British Standard taper pipe thread, taper 1:16 / Filetage pour tubes coniques, conicité 1:16 / Filettatura Whitworth, filetto conico interno, conicità 1:16 / Rosca cónica para tubo norma británica, conicidad 1:16

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN EN 10226/2)	Vorbohr-Ø zylindrisch Tapping drill size parallel Ø de l'avant trou cylindrique Diam. del preforo cilíndrico Dimensión broca cilín. d1 (mm)	Vorbohr-Ø konisch Tapping drill size tapered Ø de l'avant trou conique Diam. del preforo conico Dimensión broca cónica D1 (mm)	Einschneidtiefe Thread depth Profondeur de taraudage Profondità di filettatura Profundidad rosca ET (mm)	Bohrtiefe Drill depth BT Profondità di foratura Profundidad broca min BT (mm)
Rc 1/16-28	6,3	6,49	8,31	10,1
Rc 1/8-28	8,3	8,50	8,31	10,1
Rc 1/4-19	11	11,35	12,37	15
Rc 3/8-19	14,5	14,85	12,77	15,4
Rc 1/2-14	18,1	18,49	16,83	20,5
Rc 3/4-14	23,5	23,98	18,13	21,8
Rc 1-11	29,6	30,11	21,42	26
Rc 1 1/4-11	38,1	38,78	23,72	28,3
Rc 1 1/2-11	44	44,67	23,72	28,3
Rc 2-11	55,6	56,48	28,02	32,6
Rc 2 1/2-11	71,1	72	31,32	37,1
Rc 3-11	83,6	84,71	34,42	40,2



W keg / tap / con / cón

Kegeliges Whitworth-Gewinde, Kegel 3:25 / Whitworth Gas cylinder thread, taper 3:25 / Filetage Whitworth conique, conicité 3:25 / Filettatura Whitworth, filetto conico, conicità 3:25 / Rosca Whitworth cónica botellas de gas

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 477)	Vorbohr-Ø zylindrisch Tapping drill size parallel Ø de l'avant trou cylindrique Diam. del preforo cilíndrico Dimensión broca cilín. d1 (mm)	Vorbohr-Ø konisch Tapping drill size tapered Ø de l'avant trou conique Diam. del preforo conico Dimensión broca cónica D1 (mm)	Einschneidtiefe Thread depth Profondeur de taraudage Profondità di filettatura Profundidad rosca ET (mm)	Bohrtiefe Drill depth BT Profondità di foratura Profundidad broca min BT (mm)
W 19,80-14	14,6	16,8	24,2	27,8
W 28,80-14	22,6	25,4	29,2	32,8
W 31,30-14	25,1	27,9	29,2	32,8

Gewindekernlöcher für Gewindeformer Tapping drill sizes for Internal thread formers / Avant-trous de tarauds travaillant par déformation / Prefori per maschi rullatori / Dimensiones de la broca previa para machos laminadores

M

Metrisches ISO Regelgewinde / Metric ISO thread

Filetage métrique ISO standard / Filettatura metrica ISO / Rosca Métrica ISO

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 13)	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-núcleo de rosca interior (DIN 13-50) (mm)	
		min	7H max
M 1	0,88	0,729	-
M 1,2	1,08	0,929	-
M 1,4	1,26	1,075	-
M 1,6	1,45	1,221	-
M 1,7	1,55	1,321	-
M 1,8	1,65	1,421	-
M 2	1,82	1,567	1,707
M 2,2	2	1,713	1,873
M 2,3	2,1	1,813	2,007
M 2,5	2,3	2,013	2,173
M 2,6	2,4	2,113	2,273
M 3	2,8	2,459	2,639
M 3,5	3,25	2,850	3,050
M 4	3,7	3,242	3,466
M 5	4,65	4,134	4,384
M 6	5,55	4,917	5,217
M 8	7,4	6,647	6,982
M 10	9,3	8,376	8,751
M 12	11,2	10,106	10,106
M 14	13,1	11,835	12,310
M 16	15,1	13,835	14,310
M 18	16,9	15,294	15,854
M 20	18,9	17,294	17,854
M 22	20,9	19,294	19,854
M 24	22,7	20,752	21,382

MF

Metrisches ISO Feingewinde / Metric ISO Fine thread

Filetage métrique fin ISO / Filettatura metrica ISO fine Rosca Métrica ISO Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca (DIN 13)	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)	Innengewindekern-Ø Minor diameter / Diamètre du noyau fileté / Diametro del nocciolo Ø-núcleo de rosca interior (DIN 13-50) (mm)	
		min	7H max
M 4 x 0,5	3,8	3,459	3,639
M 5 x 0,5	4,8	4,459	4,639
M 6 x 0,5	5,8	5,459	5,639
M 6 x 0,75	5,65	5,188	5,424
M 7 x 0,75	6,65	6,188	6,424
M 8 x 0,75	7,65	7,188	7,424
M 10 x 0,75	9,65	9,188	9,424
M 8 x 1	7,55	6,917	7,217
M 10 x 1	9,55	8,917	9,217
M 12 x 1	11,55	10,917	11,217
M 14 x 1	13,55	12,917	13,217
M 16 x 1	15,55	14,917	15,217
M 18 x 1	17,55	16,917	17,217
M 10 x 1,25	9,4	8,647	8,982
M 12 x 1,25	11,4	10,647	10,982
M 12 x 1,5	11,3	10,376	10,751
M 14 x 1,5	13,3	12,376	12,751
M 16 x 1,5	15,3	14,376	14,751
M 18 x 1,5	17,3	16,376	16,751
M 20 x 1,5	19,3	18,376	18,751
M 22 x 1,5	21,3	20,376	20,751
M 24 x 1,5	23,3	22,376	22,751
M 20 x 2	19,1	17,835	18,310
M 22 x 2	21,1	19,835	20,310
M 24 x 2	23,1	21,835	22,310

Gewindekernlöcher für Gewindeformer



Tapping drill sizes for Internal thread formers / Avant-trous de tarauds travaillant par déformation / Prefori per maschi rullatori / Dimensiones de la broca previa para machos laminadores

UNC

Unified Coarse Gewinde / Unified Coarse thread
Filetage Unified Coarse / Filettatura grossa unificata
Rosca Unificada Gruesa

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca ASME B1.1	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)
Nr. 2-56	1,97
Nr. 3-48	2,26
Nr. 4-40	2,55
Nr. 5-40	2,87
Nr. 6-32	3,15
Nr. 8-32	3,8
Nr. 10-24	4,3
Nr. 12-24	5
1/4-20	5,75
5/16-18	7,25
3/8-16	8,75
7/16-14	10,3
1/2-13	11,8
9/16-12	13,3
5/8-11	14,8
3/4-10	17,9

UNF

Unified Fine Gewinde / Unified Fine thread / Filetage
Unified Fine / Filettatura fine unificata / Rosca
Unificada Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca ASME B1.1	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)
Nr. 2-64	2
Nr. 3-56	2,3
Nr. 4-48	2,6
Nr. 5-44	2,9
Nr. 6-40	3,2
Nr. 8-36	3,85
Nr. 10-32	4,45
Nr. 12-28	5,05
1/4-28	5,9
5/16-24	7,45
3/8-24	9
7/16-20	10,5
1/2-20	12,1
9/16-18	13,7
5/8-18	15,25
3/4-16	18,4
7/8-14	21,4
1-12	24,45

UNEF

Unified Extra Fine Gewinde / Unified Extra Fine thread
Filetage Unified Extra-fine / Filettatura extra fine
unificata / Rosca Unificada Extra Fina

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca ASME B1.1	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)
1/4-32	6
5/16-32	7,6
3/8-32	9,1
7/16-28	10,7
1/2-28	12,3
9/16-24	13,8
5/8-24	15,4
3/4-20	18,5
7/8-20	21,6
1-20	24,8

BSW

British Standard Whitworth-Gewinde / British
Standard Whitworth thread / Filetage British Standard
Whitworth / Filettatura Whitworth standard inglese
Rosca Whitworth Norma Británica

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca B.S. 84	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)
3/32-48	2,1
1/8-40	2,85
5/32-32	3,55
3/16-24	4,2
1/4-20	5,7
5/16-18	7,2
3/8-16	8,7
7/16-14	10,2
1/2-12	11,6
9/16-12	13,2
5/8-11	14,8
11/16-11	16,25
3/4-10	17,7
7/8-9	20,75
1-8	23,75

EG M

Metrisches ISO Regelgewinde für Gewindeeinsätze
aus Draht / Metric ISO thread for screw thread inserts
Filetage métrique ISO standard / Filettatura metrica
ISO per inserti filettati / Rosca Métrica ISO para
montaje de insertos

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca DIN 8140	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)
EG M 3	3,4
EG M 4	4,6
EG M 5	5,65
EG M 6	6,85
EG M 8	9,05
EG M 10	11,3
EG M 12	13,5

G

Rohrgewinde DIN ISO 228-1 / British Standard pipe
thread DIN ISO 228-1 / Filetage tube DIN ISO 228-1
Filettatura Whitworth a Gas cilindrica, DIN ISO 228-1
Rosca para tubos DIN ISO 228-1, Norma Británica

Kurzzeichen Thread size Désignation Diametro del filetto Dimensión rosca DIN EN ISO 228	Vorbohr-Ø Tapping drill size Ø de l'avant trou Diam. del preforo Dimensión broca (mm)
G 1/16	7,25
G 1/8	9,25
G 1/4	12,5
G 3/8	16
G 1/2	20
G 5/8	22
G 3/4	25,5
G 7/8	29,25
G 1	32