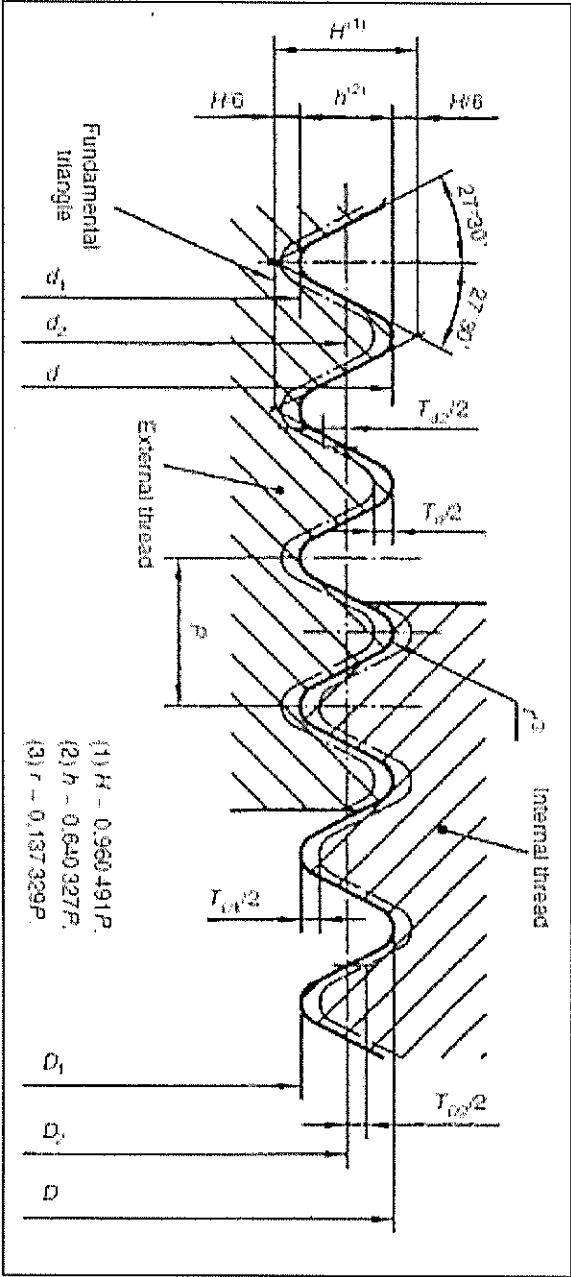


MARYLAND METRICS THREAD DATA CHARTS

PIPE THREAD -- BRITISH STANDARD PIPE PARALLEL -- BSPP/BSPPF
PIPE THREAD -- JAPANESE PIPE PARALLEL -- PJF
JAPANESE CONDUIT THREAD CTG (from 1/2" to 4")
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/BSPPF) -- (G)



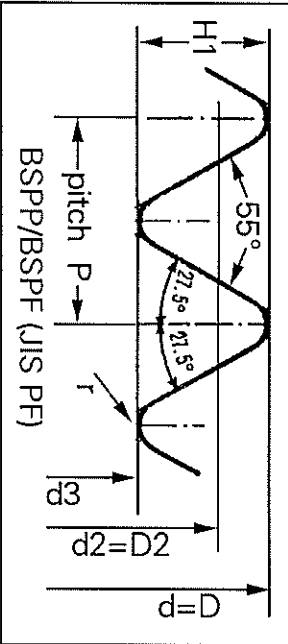
Tolerances on pitch diameter										Tolerance on minor diameter		Tolerance on major diameter			
Diameters						Internal thread TD2		External thread Td2		Internal thread TD1		External thread Td			
Designation of thread	Number of threads in 25.4 mm	Pitch P	Height of thread h	major d = D	pitch d2 = D2	minor d1 = D1	Lower deviation	Upper deviation	Lower deviation Class A	Lower deviation Class B	Upper deviation	Lower deviation	Upper deviation	Lower deviation	Upper deviation
1/16	28	0.907	0.581	7.723	7.142	6.561	0	0.107	-0.107	-0.214	0	0	0.282	-0.214	0

MARYLAND METRICS -- THREAD DATA CHARTS (7)

1/8	28	0.907	0.581	9.728	9.147	8.566	0	0.107	-0.107	-0.214	0	0	0.282	-0.214	0
1/4	19	1.337	0.856	13.157	12.301	11.445	0	0.125	-0.125	-0.25	0	0	0.445	-0.25	0
3/8	19	1.337	0.856	16.662	15.806	14.95	0	0.125	-0.125	-0.25	0	0	0.445	-0.25	0
1/2	14	1.814	1.162	20.955	19.793	18.631	0	0.142	-0.142	-0.284	0	0	0.541	-0.284	0
5/8	14	1.814	1.162	22.911	21.749	20.587	0	0.142	-0.142	-0.284	0	0	0.541	-0.284	0
3/4	14	1.814	1.162	26.441	25.279	24.117	0	0.142	-0.142	-0.284	0	0	0.541	-0.284	0
7/8	14	1.814	1.162	30.201	29.039	27.877	0	0.142	-0.142	-0.284	0	0	0.541	-0.284	0
1	11	2.309	1.479	33.249	31.77	30.291	0	0.18	-0.18	-0.36	0	0	0.64	-0.36	0
1 1/8	11	2.309	1.479	37.897	36.418	34.939	0	0.18	-0.18	-0.36	0	0	0.64	-0.36	0
1 1/4	11	2.309	1.479	41.91	40.431	38.952	0	0.18	-0.18	-0.36	0	0	0.64	-0.36	0
1 1/2	11	2.309	1.479	47.803	46.324	44.845	0	0.18	-0.18	-0.36	0	0	0.64	-0.36	0
1 3/4	11	2.309	1.479	53.746	52.267	50.788	0	0.18	-0.18	-0.36	0	0	0.64	-0.36	0
2	11	2.309	1.479	59.614	58.135	56.656	0	0.18	-0.18	-0.36	0	0	0.64	-0.36	0
2 1/4	11	2.309	1.479	65.71	64.231	62.752	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
2 1/2	11	2.309	1.479	75.184	73.705	72.226	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
2 3/4	11	2.309	1.479	81.534	80.055	78.576	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
3	11	2.309	1.479	87.884	86.405	84.926	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
3 1/2	11	2.309	1.479	100.33	98.851	97.372	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
4	11	2.309	1.479	113.03	111.551	110.072	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
4 1/2	11	2.309	1.479	125.73	124.251	122.772	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
5	11	2.309	1.479	138.43	136.951	135.472	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
5 1/2	11	2.309	1.479	151.13	149.651	148.172	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0
6	11	2.309	1.479	163.83	162.351	160.872	0	0.217	-0.217	-0.434	0	0	0.64	-0.434	0

Note: Class B applies only to external threads. Internal threads are Class A.
BS EN ISO 228-1: 2003 data chart above revised and updated 12/20/11

British Pipe Thread (Whitworth Form) -- Parallel (BSPP/BSPPF) -- (G)



MARYLAND METRICS -- THREAD DATA CHARTS (7)

Size	Size	pitch		Major Dia		Pitch Dia		Minor Dia		Minor Dia		Pitch Dia		Major Dia		Tap Drill
Thread Designation	mm	mm TPI	Class	Max	Min	Max	Min	Max	Min	Class	Min	Max	Min	Max	Min	Max
G 1/16	7.723	0.907 28	A	7.723	7.509	7.142	7.035	6.561			6.561	6.834	7.142	7.249	7.723	6.8
G 1/16	7.723	0.907 28	B	7.723	7.509	7.142	6.928	6.561								
G 1/8	9.728	0.907 28	A	9.728	9.514	9.147	9.040	8.566			8.566	8.848	9.147	9.254	9.728	8.8
G 1/8	9.728	0.907 28	B	9.728	9.514	9.147	8.933	8.566								
G 1/4	13.157	1.337 19	A	13.157	12.907	12.301	12.176	11.445			11.445	11.89	12.301	12.426	13.157	11.8
G 1/4	13.157	1.337 19	B	13.157	12.907	12.301	12.051	11.445								
G 3/8	16.662	1.337 19	A	16.662	16.412	15.806	15.681	14.950			14.95	15.395	15.806	15.931	16.662	15.25
G 3/8	16.662	1.337 19	B	16.662	16.412	15.806	15.556	14.950								
G 1/2	20.955	1.814 14	A	20.955	20.671	19.793	19.651	18.631			18.631	19.172	19.793	19.935	20.955	19
G 1/2	20.955	1.814 14	B	20.955	20.671	19.793	19.509	18.631								
G 5/8	22.911	1.814 14	A	22.911	22.627	21.749	21.607	20.587			20.587	21.128	21.749	21.891	22.911	21
G 5/8	22.911	1.814 14	B	22.911	22.627	21.749	21.465	20.587								
G 3/4	26.441	1.814 14	A	26.441	26.157	25.279	25.137	24.117			24.117	24.658	25.279	25.421	26.441	24.5
G 3/4	26.441	1.814 14	B	26.441	26.157	25.279	24.995	24.117								
G 7/8	30.201	1.814 14	A	30.201	29.917	29.039	28.897	27.877			27.877	28.418	29.039	29.181	30.201	28.25
G 7/8	30.201	1.814 14	B	30.201	29.917	29.039	28.755	27.877								
G 1	33.249	2.309 11	A	33.249	32.889	31.770	31.590	30.291			30.291	30.931	31.77	31.95	33.249	30.75
G 1	33.249	2.309 11	B	33.249	32.889	31.770	31.410	30.291								
G 1 1/8	37.897	2.309 11	A	37.897	37.537	36.418	36.238	34.939			34.939	35.579	36.418	36.598	37.897	35.5
G 1 1/8	37.897	2.309 11	B	37.897	37.537	36.418	36.058	34.939								
G 1 1/4	41.910	2.309 11	A	41.910	41.550	40.431	40.251	38.952			38.952	39.592	40.431	40.611	41.910	39.5
G 1 1/4	41.910	2.309 11	B	41.910	41.550	40.431	40.071	38.952								
G 1 3/8	44.323	2.309 11		44.323	limited data available						41.365	42.005	limited data available			41.75
G 1 1/2	47.803	2.309 11	A	47.803	47.443	46.324	46.144	44.845			44.845	45.485	46.324	46.504	47.803	45.25
G 1 1/2	47.803	2.309 11	B	47.803	47.443	46.324	45.964	44.845								
G 1 5/8	52.000	2.309 11		52.000	limited data available						49.030	49.670	limited data available			49.5
G 1 3/4	53.746	2.309 11	A	53.746	53.386	52.267	52.087	50.788			50.788	51.428	52.267	52.447	53.746	51
G 1 3/4	53.746	2.309 11	B	53.746	53.386	52.267	51.907	50.788								
G 2	59.614	2.309 11	A	59.614	59.254	58.135	57.955	56.656			56.656	57.296	58.135	58.315	59.614	57
G 2	59.614	2.309 11	B	59.614	59.254	58.135	57.775	56.656								
G 2 1/4	65.710	2.309 11	A	65.710	65.276	64.231	64.014	62.752			62.752	63.392	64.231	64.448	65.710	63.3
G 2 1/4	65.710	2.309 11	B	65.710	65.276	64.231	63.797	62.752								
G 2 1/2	75.184	2.309 11	A	75.184	74.750	73.705	73.488	72.226			72.226	72.866	73.705	73.922	75.184	72.8
G 2 1/2	75.184	2.309 11	B	75.184	74.750	73.705	73.271	72.226								
G 2 3/4	81.534	2.309 11	A	81.534	81.100	80.055	79.838	78.576			78.576	79.216	80.055	80.272	81.534	79.1
G 2 3/4	81.534	2.309 11	B	81.534	81.100	80.055	79.621	78.576								
G 3	87.884	2.309 11	A	87.884	87.450	86.405	86.188	84.926			84.926	85.566	86.405	86.622	87.884	85.5
G 3	87.884	2.309 11	B	87.884	87.450	86.405	85.971	84.926								
G 3 1/4	93.980	2.309 11		93.984	limited data available						91.022	91.660	limited data available			91

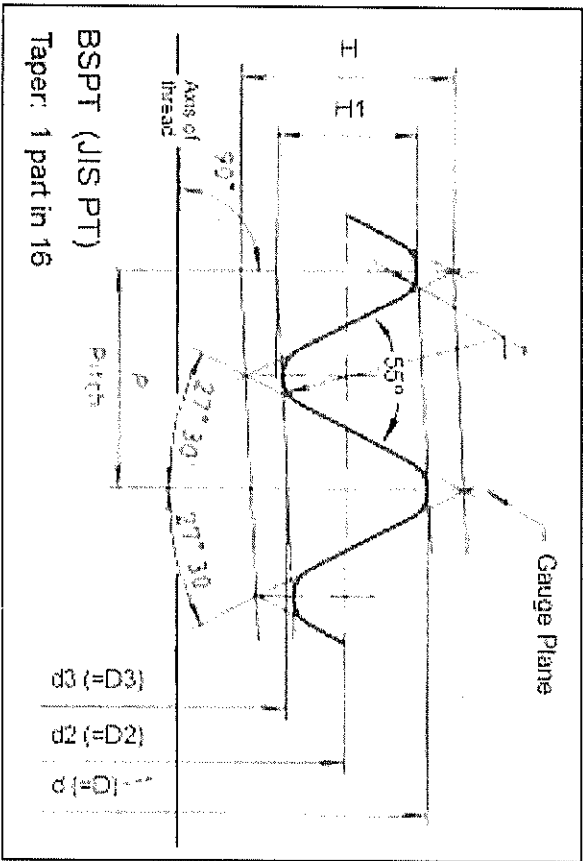
MARYLAND METRICS -- THREAD DATA CHARTS (7)

G 3 1/2	100.330	2.309	11	A	100.330	99.896	98.851	98.634	97.372			97.372	98.012	98.851	99.068	100.330		97.75
G 3 1/2	100.330	2.309	11	B	100.330	99.896	98.851	98.417	97.372									
G 3 3/4	106.680	2.309	11		106.680	limited data available						103.722	104.300	limited data available			104	
G 4	113.030	2.309	11	A	113.030	112.596	111.551	111.334	110.072			110.072	110.712	111.551	111.768	113.030		110.5
G 4	113.030	2.309	11	B	113.030	112.596	111.551	111.117	110.072									
G 4 1/2	125.730	2.309	11	A	125.730	125.296	124.251	124.034	122.772			122.772	123.412	124.251	124.468	125.730		123
G 4 1/2	125.730	2.309	11	B	125.730	125.296	124.251	123.817	122.772									
G 5	138.430	2.309	11	A	138.430	137.996	136.951	136.734	135.472			135.472	136.112	136.951	137.168	138.430		136
G 5	138.430	2.309	11	B	138.430	137.996	136.951	136.517	135.472									
G 5 1/2	151.130	2.309	11	A	151.130	150.696	149.651	149.434	148.172			148.172	148.812	149.651	149.868	151.130		148.5
G 5 1/2	151.130	2.309	11	B	151.130	150.696	149.651	149.217	148.172									
G 6	163.830	2.309	11	A	163.830	163.396	162.351	162.134	160.872			160.872	161.512	162.351	162.568	163.830		161.5
G 6	163.830	2.309	11	B	163.830	163.396	162.351	161.917	160.872									

Note: Class B applies only to external threads. Internal threads are Class A.
data chart above revised and updated 9/28/09

PIPE THREAD -- BRITISH STANDARD PIPE TAPER -- BSPT

PIPE THREAD -- JAPANESE PIPE TAPER -- PT



MARYLAND METRICS -- THREAD DATA CHART:

British Pipe Thread (Whitworth Form) -- Taper (BSPT) -- (R)

MARYLAND METRICS -- THREAD DATA CHARTS (7)

Thread	Nominal	Thread	Major	Pitch	Threads	Pitch	Minor	Thread	Rounding	Effective	Tap
Designation	Size	Form	Diameter	mm	per	Diameter	Diameter	Height	r	Thread	Drill
		Type	mm	p	inch	mm	Male Thd.	H1		Length mm	Diameter
BSPT	BSPT		d=D		tpi	d2=D2	d3=D3			External	mm
R 1/16	1/16"	BSPT	7.723	0.907	28	7.142	6.561	0.581	0.125	2.5	6.4
R 1/8	1/8"	BSPT	9.728	0.907	28	9.147	8.566	0.581	0.125	2.5	8.4
R 1/4	1/4"	BSPT	13.157	1.337	19	12.301	11.445	0.856	0.184	3.7	11.2
R 3/8	3/8"	BSPT	16.662	1.337	19	15.806	14.95	0.856	0.184	3.7	14.75
R 1/2	1/2"	BSPT	20.955	1.814	14	19.793	18.631	1.162	0.249	5	18.25
R 3/4	3/4"	BSPT	26.441	1.814	14	25.279	24.117	1.162	0.249	5	23.75
R 1	1"	BSPT	33.249	2.309	11	31.77	30.291	1.479	0.317	6.4	30
R 1 1/4	1 1/4"	BSPT	41.91	2.309	11	40.431	38.952	1.479	0.317	6.4	38.5
R 1 1/2	1 1/2"	BSPT	47.803	2.309	11	46.324	44.845	1.479	0.317	6.4	44.5
R 2	2"	BSPT	59.614	2.309	11	58.135	56.656	1.479	0.317	7.5	56
R 2 1/2	2 1/2"	BSPT	75.184	2.309	11	73.705	72.226	1.479	0.317	9.2	71
R 3	3"	BSPT	87.884	2.309	11	86.405	84.926	1.479	0.317	9.2	85.5
R 4	4"	BSPT	113.03	2.309	11	111.551	110.072	1.479	0.317	10.4	110.5
R 5	5"	BSPT	138.43	2.309	11	136.951	135.472	1.479	0.317	11.5	136
R 6	6"	BSPT	163.83	2.309	11	162.351	160.872	1.479	0.317	11.5	161.5

Reference: DIN 2999, ISO 7, JIS B 0203

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