



Details of Standard Thread Forms

BRITISH STANDARD PIPE THREAD FORM (BSPP, BSPF)

$r = \text{Basic Radius} = \cdot 137329 p$

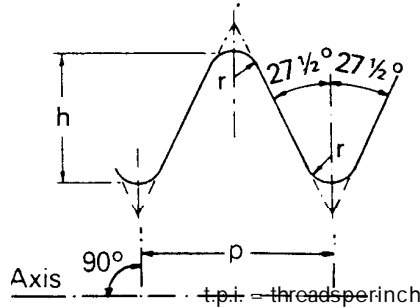
$h = \text{Basic Depth of Thread} = \cdot 640327 p$

$p = \text{Pitch} = \frac{1}{\text{t.p.i.}}$

In Japan this thread is known as (PF)

Use prefix G for parallel thread.
example: G1/2

ISO 228
DIN 259
BS 2779
JIS B0202



nom. size	t.p.i.	basic depth of thread inches	basic major diameter inches	basic effective diameter inches	basic minor diameter inches	recommended tap drill size	
						size Rp mm	size G mm
1/16	28	0.0229	0.304	0.2812	0.2583	6.60	6.80
1/8	28	0.0229	0.383	0.3601	0.3372	8.60	8.80
1/4	19	0.0337	0.518	0.4843	0.4506	11.50	11.80
3/8	19	0.0337	0.656	0.6223	0.5886	15.00	15.25
1/2	14	0.0457	0.825	0.7793	0.7336	18.50	19.00
5/8	14	0.0457	0.902	0.8563	0.8106		21.00
3/4	14	0.0457	1.041	0.9953	0.9496	24.00	24.50
7/8	14	0.0457	1.189	1.1433	1.0976		23.25
1	11	0.0582	1.309	1.2508	1.1926	30.25	30.75
1 1/4	11	0.0582	1.650	1.5918	1.5336	39.00	39.50
1 1/2	11	0.0582	1.882	1.8238	1.7656	45.00	45.00
1 3/4	11	0.0582	2.116	2.0578	1.9996		51.00
2	11	0.0582	2.347	2.2888	2.2306	56.50	57.00
2 1/4	11	0.0582	2.587	2.5288	2.4706		
2 1/2	11	0.0582	2.960	2.9018	2.8436		
2 3/4	11	0.0582	3.210	3.1518	3.0936		
3	11	0.0582	3.460	3.4018	3.3436		
3 1/4	11	0.0582	3.700	3.6418	3.5836		
3 1/2	11	0.0582	3.950	3.8918	3.8336		
3 3/4	11	0.0582	4.200	4.1418	4.0836		
4	11	0.0582	4.450	4.3918	4.3336		

NO SIZES OF B.S. (BRITISH STANDARD) DRILLS ARE RECOMMENDED IN B.S. 1157:1975 FOR THIS RANGE

BRITISH STANDARD TAPER PIPE (Rc Series)

THREAD FORM (BSPT)

$r = \text{Basic Radius} = \cdot 137278 p$

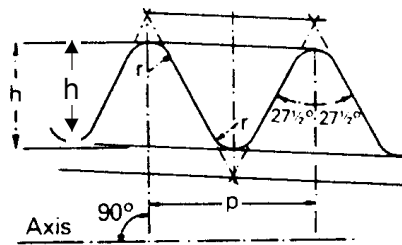
$h = \text{Basic Depth of Thread} = \cdot 640327 p$

$p = \text{Pitch} = \frac{1}{\text{t.p.i.}}$

In Japan this thread is known as (PT)

Use prefix R for tapered thread.
example: R1/2

ISO 7
DIN 2999
BS 21
JIS B0203



Taper 1 in 16 on diameter (shown exaggerated in diagram)

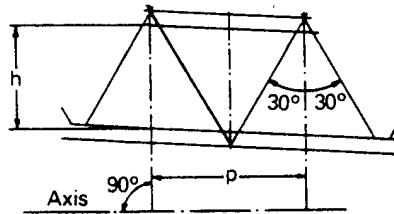
nom. size	t.p.i.	basic depth of thread inches	basic diameters at gauge plane*			reccmd. tap drill size mm
			major diameter inches	effective diameter inches	minor diameter inches	
1/16	28	0.0229	0.304	0.2812	0.2583	6.40
1/8	28	0.0229	0.383	0.3601	0.3372	8.40
1/4	19	0.0337	0.518	0.4843	0.4506	11.20
3/8	19	0.0337	0.656	0.6223	0.5886	14.75
1/2	14	0.0457	0.825	0.7793	0.7336	18.25
3/4	14	0.0457	1.041	0.9953	0.9496	23.75
1	11	0.0582	1.309	1.2508	1.1926	30.00
1 1/4	11	0.0582	1.650	1.5918	1.5336	38.50
1 1/2	11	0.0582	1.882	1.8238	1.7656	44.50
2	11	0.0582	2.347	2.2888	2.2306	56.00
2 1/2	11	0.0582	2.960	2.9018	2.8436	71.00

AMERICAN NATIONAL TAPER PIPE (N.P.T.)

THREAD FORM

$h = \text{Basic Depth of Thread} = \cdot 8 p$

$p = \text{Pitch} = \frac{1}{\text{t.p.i.}}$



Taper 1 in 16 on diameter (shown exaggerated in diagram)

nom. size	t.p.i.	basic depth of thread inches	outside diameter of pipe inches	effective diameter at small end of external thread inches	basic minor diameter inches	reccmd. tap drill size mm
1/16	27	0.0296	0.3125	0.2712	0.2812	6.30
1/8	27	0.0296	0.405	0.3635	0.3736	8.70
1/4	18	0.0444	0.540	0.4774	0.4916	11.10
3/8	18	0.0444	0.675	0.6120	0.6270	14.50
1/2	14	0.0571	0.840	0.7584	0.7784	18.00
3/4	14	0.0571	1.050	0.9677	0.9889	23.25
1	11 1/2	0.0696	1.315	1.2136	1.2386	29.00
1 1/4	11 1/2	0.0696	1.660	1.5571	1.5834	38.00
1 1/2	11 1/2	0.0696	1.900	1.7961	1.8223	44.00
2	11 1/2	0.0696	2.375	2.2690	2.2963	56.00
2 1/2	8	0.1000	2.875	2.7195	2.7622	67.00

STEEL CONDUIT THREAD (Pg) (DIN 40430) (PANZERROHR-GEWINDE)

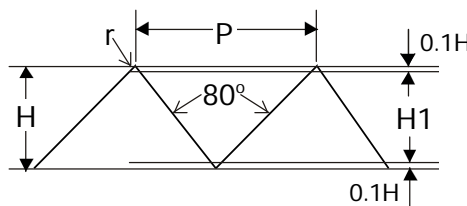
Pg is the Continental European electrical conduit thread. (For the UK, the electrical thread now in use is I.S.O. Metric fine.)

Metric Pitch $P = \frac{25.4}{\text{tpi}}$

$H_1 = 0.767 H$

$H = 0.595875 P$

$r = 0.107 P$



designation	t.p.i.	basic major diameter mm	basic pitch diameter mm	basic minor diameter mm	reccmd. tap drill size mm	clearance drill size mm
Pg7	20	12.50	11.89	11.28	11.30	12.60
Pg9	18	15.20	14.53	13.86	13.90	15.30
Pg11	18	18.60	17.93	17.26	17.30	18.70
Pg13.5	18	20.40	19.73	19.06	19.10	20.50
Pg16	18	22.50	21.83	21.16	21.20	22.75
Pg21	15	28.30	27.54	26.78	26.80	28.75
Pg29	16	37.00	36.24	35.48	35.50	37.25
Pg36	16	47.00	46.24	45.48	45.50	47.25
Pg42	16	54.00	53.24	52.48	52.50	54.25
Pg48	16	59.30	58.54	57.78	57.80	59.55