

PIPE THREADS WHERE PRESSURE TIGHT JOINTS ARE MADE ON THE THREADS

Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation

Table 1 — Dimensions

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Thread size	Number of threads in 25,4 mm	Pitch	Height of thread	Diameters at gauge plane			Gauge length (external thread)					Assembly length		Length of useful external thread not less than			Tolerance on position of gauge plane on internal thread		
		P	h	Major (gauge diameter) d=D	Pitch d ₂ = D ₂	Minor d ₁ = D ₁	Nominal	Tolerance T ₁ /2		max.	min.	Turns of thread	mm ^b	For nominal gauge length	For maximum gauge length	For minimum gauge length	Tolerance T ₂ /2		Equivalent diametral tolerance ^a on parallel internal threads
								mm	mm								mm	mm	
1/16	28	0,907	0,581	7,723	7,142	6,561	4	+/-0,9	1	4,9	3,1	2,5	2.3/4	6,5	7,4	5,6	+/-1,1	1.1/4	+/- 0,071
1/8	28	0,907	0,581	9,728	9,147	8,566	4	+/-0,9	1	4,9	3,1	2,5	2.3/4	6,5	7,4	5,6	+/-1,1	1.1/4	+/- 0,071
1/4	19	1,337	0,856	13,157	12,301	11,445	6	+/-1,3	1	7,3	4,7	3,7	2.3/4	9,7	11	8,4	+/-1,7	1.1/4	+/- 0,104
3/8	19	1,337	0,856	16,662	15,806	14,950	6,4	+/-1,3	1	7,7	5,1	3,7	2.3/4	10,1	11,4	8,8	+/-1,7	1.1/4	+/- 0,104
1/2	14	1,814	1,162	20,955	19,793	18,631	8,2	+/-1,8	1	10,0	6,4	5,0	2.3/4	13,2	15	11,4	+/-2,3	1.1/4	+/- 0,142
3/4	14	1,814	1,162	26,441	25,279	24,117	9,5	+/-1,8	1	11,3	7,7	5,0	2.3/4	14,5	16,3	12,7	+/-2,3	1.1/4	+/- 0,142
1	11	2,309	1,479	33,249	31,770	30,291	10,4	+/-2,3	1	12,7	8,1	6,4	2.3/4	16,8	19,1	14,5	+/-2,9	1.1/4	+/- 0,180
1 ¼	11	2,309	1,479	41,910	40,431	38,952	12,7	+/-2,3	1	15,0	10,4	6,4	2.3/4	19,1	21,4	16,8	+/-2,9	1.1/4	+/- 0,180
1 ½	11	2,309	1,479	47,803	46,324	44,845	12,7	+/-2,3	1	15,0	10,4	6,4	2.3/4	19,1	21,4	16,8	+/-2,9	1.1/4	+/- 0,180
2	11	2,309	1,479	59,614	58,135	56,656	15,9	+/-2,3	1	18,2	13,6	7,5	3.1/4	23,4	25,7	21,1	+/-2,9	1.1/4	+/- 0,180
2 ½	11	2,309	1,479	75,184	73,705	72,226	17,5	+/-3,5	1.1/2	21,0	14,0	9,2	4	26,7	30,2	23,2	+/-3,5	1.1/2	+/- 0,216
3	11	2,309	1,479	87,884	86,405	84,926	20,6	+/-3,5	1.1/2	24,1	17,1	9,2	4	29,8	33,3	26,3	+/-3,5	1.1/2	+/- 0,216
4	11	2,309	1,479	113,030	111,551	110,072	25,4	+/-3,5	1.1/2	28,9	21,9	10,4	4.1/2	35,8	39,3	32,3	+/-3,5	1.1/2	+/- 0,216
5	11	2,309	1,479	138,430	136,951	135,472	28,6	+/-3,5	1.1/2	32,1	25,1	11,5	5	40,1	43,6	36,6	+/-3,5	1.1/2	+/- 0,216
6	11	2,309	1,479	163,830	162,351	160,872	28,6	+/-3,5	1.1/2	32,1	25,1	11,5	5	40,1	43,6	36,6	+/-3,5	1.1/2	+/- 0,216

NOTE The main dimensions were converted into millimetres on the basis of 1 inch = 25,4 mm, beginning with the number of threads per inch, which determines the pitch P, the formula h (the height of thread) = 0,640 327 P and the major diameter at the gauge plane. Pitch diameter and minor diameter were then compiled by subtracting once or twice respectively the height of thread h from the major diameter. The nominal gauge length, the tolerances and the assembly length were directly computed. The remaining lengths given in table 1 were obtained by subtracting or adding the tolerances or assembly length respectively to the nominal gauge length. Tolerances and assembly lengths are expressed in millimetres and in number of turns of thread.

^a For parallel internally threaded parts the diametral tolerances are derived from the tolerances in column 19 by multiplying with the corresponding pitch in column 3 and with 1/16, the amount of taper.

^b Informative tolerances, in millimetres, are obtained from the mandatory values in turns of threads by multiplying with the corresponding pitch in column 3 and rounding to the nearest 0,1 mm.