

ISO metric screw threads
 0,2 mm, 0,25 mm and 0,35 mm fine pitch threads
 with diameters from 1 mm to 50 mm
 Nominal sizes

DIN
13
 Part 2

Metrisches ISO-Gewinde; Feingewinde mit Steigungen
 0,2 mm, 0,25 mm und 0,35 mm von 1 bis 50 mm Gewinde-
 Nenndurchmesser; Nennmaße

Supersedes March 1970
 edition.

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

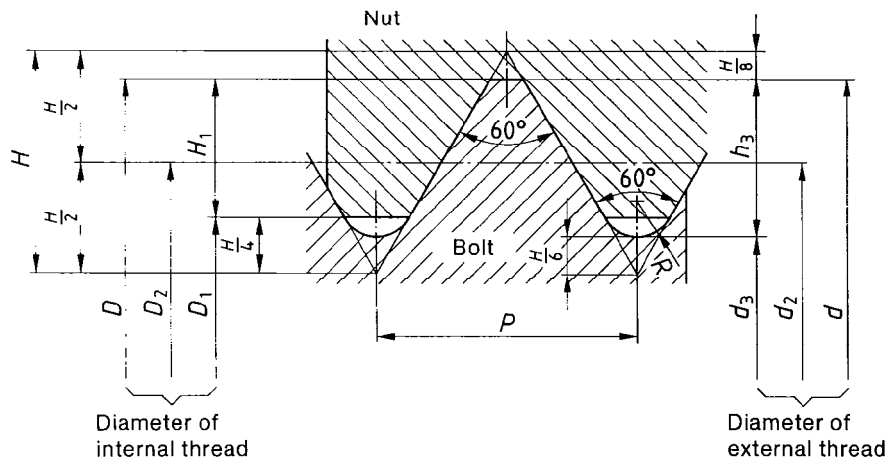
1 Scope and field of application

This standard applies to ISO metric screw threads having the basic profile specified in DIN 13 Part 19. It specifies the nominal sizes for 0,2 mm, 0,25 mm and 0,35 mm fine pitch threads with diameters from 1 mm to 50 mm. See DIN 13 Part 15 for fundamental deviations and tolerances and DIN 13 Parts 21 and 22 for limits of size. See DIN 2244 for terminology relating to screw threads.

2 Dimensions, designation

The formulae indicated adjacent to the illustration are only intended to show how the thread parameters have been calculated and are not to be used for calculating more accurate values than those given in the table. Use of the tabulated values is mandatory.

Choose series 1 diameters in preference to series 2 diameters and series 2 diameters in preference to series 3 diameters.



$$D_1 = d - 2 H_1$$

$$d_2 = D_2 = d - 0,64952 P$$

$$d_3 = d - 1,22687 P$$

$$H = 0,86603 P$$

$$H_1 = 0,54127 P$$

$$h_3 = 0,61343 P$$

$$R = \frac{H}{6} = 0,14434 P$$

P	H ₁	h ₃	R
0,2	0,108	0,123	0,029
0,25	0,135	0,153	0,036
0,35	0,189	0,215	0,051

Designation of an ISO metric (M) fine pitch thread with $d = D = 16$ mm and pitch, $P = 0,35$ mm, accuracy grade medium¹⁾, thread engagement group N,

- without tolerance indication: M 16 × 0,35;
- with tolerance indication: see DIN 13 Part 14.

¹⁾ For M 1 to M 1,4 internal threads, tolerance zone 5H, for sizes over M 1,4, tolerance zone 6H shall apply; for M 1 to M 1,4 external threads, tolerance zone 6h and for sizes over M 1,4, tolerance zone 6g (see DIN 13 Part 14) shall apply.

Continued on pages 2 to 4

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Nominal thread diameter $d = D$			Pitch P	Pitch diameter $d_2 = D_2$	Minor diameter	
Series 1	Series 2	Series 3			d_3	D_1
1	1,1		0,2	0,870	0,755	0,783
1,2			0,2	0,970	0,855	0,883
			0,2	1,070	0,955	0,983
1,6	1,4		0,2	1,270	1,155	1,183
	1,4		0,25	1,238	1,093	1,129
			0,2	1,470	1,355	1,383
1,6	1,8		0,25	1,438	1,293	1,329
			0,2	1,670	1,555	1,583
			0,25	1,638	1,493	1,529
2			0,2	1,870	1,755	1,783
2			0,25	1,838	1,693	1,729
2			0,35	1,773	1,571	1,621
	2,2		0,2	2,070	1,955	1,983
	2,2		0,25	2,038	1,893	1,929
	2,2		0,35	1,973	1,771	1,821
2,5			0,2	2,370	2,255	2,283
2,5			0,25	2,338	2,193	2,229
2,5			0,35	2,273	2,071	2,121
3			0,2	2,870	2,755	2,783
3			0,25	2,838	2,693	2,729
3			0,35	2,773	2,571	2,621
	3,5		0,2	3,370	3,255	3,283
	3,5		0,25	3,338	3,193	3,229
	3,5		0,35	3,273	3,071	3,121
4			0,2	3,870	3,755	3,783
			0,25	3,838	3,693	3,729
			0,35	3,773	3,571	3,621
	4,5		0,2	4,370	4,255	4,283
			0,25	4,338	4,193	4,229
			0,35	4,273	4,071	4,121
5			0,2	4,870	4,755	4,783
			0,25	4,838	4,693	4,729
			0,35	4,773	4,571	4,621
		5,5	0,2	5,370	5,255	5,283
		0,25	5,338	5,193	5,229	
		0,35	5,273	5,071	5,121	
6			0,2	5,870	5,755	5,783
			0,25	5,838	5,693	5,729
			0,35	5,773	5,571	5,621
		6,5	0,2	6,370	6,255	6,283
		0,25	6,338	6,193	6,229	
		0,35	6,273	6,071	6,121	
		7	0,2	6,870	6,755	6,783
		0,25	6,838	6,693	6,729	
		0,35	6,773	6,571	6,621	
		7,5	0,2	7,370	7,255	7,283
		0,25	7,338	7,193	7,229	
		0,35	7,273	7,071	7,121	
8			0,2	7,870	7,755	7,783
			0,25	7,838	7,693	7,729
			0,35	7,773	7,571	7,621
		8,5	0,2	8,370	8,255	8,283
		0,25	8,338	8,193	8,229	
		0,35	8,273	8,071	8,121	
		9	0,2	8,870	8,755	8,783
		0,25	8,838	8,693	8,729	
		0,35	8,773	8,571	8,621	

Nominal thread diameter $d = D$			Pitch P	Pitch diameter $d_2 = D_2$	Minor diameter	
Series 1	Series 2	Series 3			d_3	D_1
		9,5	0,2 0,25 0,35	9,370 9,338 9,273	9,255 9,193 9,071	9,283 9,229 9,121
10			0,2 0,25 0,35	9,870 9,838 9,773	9,755 9,693 9,571	9,783 9,729 9,621
		10,5 11 11,5	0,35 0,35 0,35	10,273 10,773 11,273	10,071 10,571 11,071	10,121 10,621 11,121
12		12,5 13	0,35 0,35 0,35	11,773 12,273 12,773	11,571 12,071 12,571	11,621 12,121 12,621
	14	13,5 14,5	0,35 0,35 0,35	13,273 13,773 14,273	13,071 13,571 14,071	13,121 13,621 14,121
16		15 15,5	0,35 0,35 0,35	14,773 15,273 15,773	14,571 15,071 15,571	14,621 15,121 15,621
	18	17 19	0,35 0,35 0,35	16,773 17,773 18,773	16,571 17,571 18,571	16,621 17,621 18,621
20		21	0,35 0,35 0,35	19,773 20,773 21,773	19,571 20,571 21,571	19,621 20,621 21,621
	22	23	0,35 0,35 0,35	22,773 23,773 24,773	22,571 23,571 24,571	22,621 23,621 24,621
24		25	0,35 0,35 0,35	25,773 26,773 27,773	25,571 26,571 27,571	25,621 26,621 27,621
	27	26 28	0,35 0,35 0,35	28,773 29,773 30,773	28,571 29,571 30,571	28,621 29,621 30,621
30		31	0,35 0,35 0,35	31,773 32,773 33,773	31,571 32,571 33,571	31,621 32,621 33,621
	33	32 34	0,35 0,35 0,35	34,773 35,773 36,773	34,571 35,571 36,571	34,621 35,621 36,621
36		35 37	0,35 0,35 0,35	37,773 38,773 39,773	37,571 38,571 39,571	37,621 38,621 39,621
	39	38 40	0,35 0,35 0,35	41,773 44,773 47,773	41,571 44,571 47,571	41,621 44,621 47,621
42 48	45		0,35 0,35 0,35	49,773	49,571	49,621
		50	0,35			

Standards referred to

- DIN 13 Part 14 ISO metric screw threads; principles of a tolerance system for screw threads of 1 mm diameter and larger
- DIN 13 Part 15 ISO metric screw threads; fundamental deviations and tolerances for screw threads of 1 mm diameter and larger
- DIN 13 Part 19 ISO metric screw threads; basic profile and maximum and minimum material profiles
- DIN 13 Part 21 ISO metric screw threads; limits of size for 1 mm to 24,5 mm diameter fine pitch threads and commonly used tolerance classes
- DIN 13 Part 22 ISO metric screw threads; limits of size for 25 mm to 52 mm diameter fine pitch threads and commonly used tolerance classes
- DIN 2244 Screw threads; terminology

Other relevant standard

- DIN 202 Screw threads; general plan

Previous editions

- DIN 13 Part 44; 03.66.
- DIN 520; 10.23, 09.43, 12.52.
- DIN 521; 10.23, 09.43, 12.52.
- DIN 13 Part 2; 03.70.

Amendments

In comparison with the March 1970 edition, the standard has been editorially revised and harmonized with existing standards.

International Patent Classification

F16B 33/02