

JIS

JAPANESE INDUSTRIAL STANDARD

Metric Coarse Screw Threads

JIS B 0205 -1982

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JAPANESE INDUSTRIAL STANDARD

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Metric Coarse Screw Threads

B 0205-1982

(Reaffirmed: 1992)

1. Scope

This Japanese Industrial Standard specifies basic profile, formulae and basic dimensions of general purpose metric coarse screw threads.

The screw threads having designations of M 1.7, M 2.3 and M 2.6 shall be in accordance with Appendix.

Remark: The basic profile, series of designation of screw threads and basic dimensions specified in the text of this standard correspond to the following ISO standards:

Basic profile:

ISO 68 (ISO general purpose screw threads-Basic profile)

Designation of screw threads:

Coarse screw thread series specified in ISO 261 (ISO general purpose metric screw threads-General plan)

Basic dimensions:

Basic dimensions of coarse screw threads specified in ISO 724 (ISO metric screw threads-Basic dimensions)

Applicable Standard:

JIS B 0123-Designation of Screw Threads

Reference Standards:

ISO 68-1973 ISO general purpose screw threads-Basic profile

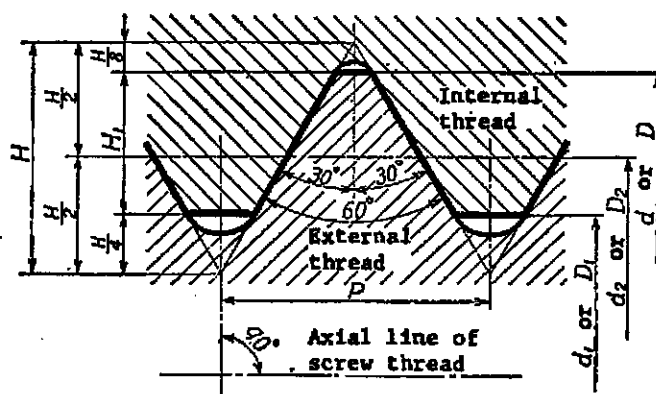
ISO 261-1973 ISO general purpose metric screw threads-General plan

ISO 724-1978 ISO metric screw threads-Basic dimensions

2. Basic Profile, Formulae and Basic Dimensions

2.1 Basic Profile The basic profile is shown with bold continuous line in Figure.

Figure. Basic Profile of Metric Coarse Screw Threads



2.2 Formulae The formulae to be used for calculation of basic dimensions shall be in accordance with the following:

$$H = 0.866025P \quad d_1 = d - 0.649519P \quad D = d$$

$$H_1 = 0.541266P \quad d_1 = d - 1.082532P \quad D_2 = d_1$$

$$D_1 = d_1$$

2.3 Basic Dimensions The basic dimensions shall be as shown in Attached Table.

3. Designation

The designation of screw threads according to the body of this standard shall be in accordance with the specifications of JIS B 0123.

Example: M 6

Attached Table. Basic Dimensions of
Metric Coarse Screw Threads

Unit: mm

Designation of screw threads*			Pitch	Height of engagement	Internal thread		
					Major diameter D	Pitch diameter D_1	Minor diameter D_2
Col. 1	Col. 2	Col. 3			P	H_1	External thread
					Major diameter d	Pitch diameter d_1	Minor diameter d_2
M 1	M 1.1		0.25	0.135	1.000	0.838	0.729
M 1.2			0.25	0.135	1.100	0.938	0.829
			0.25	0.135	1.200	1.038	0.929
M 1.6	M 1.4		0.3	0.162	1.400	1.205	1.075
	M 1.8		0.35	0.189	1.600	1.373	1.221
			0.35	0.189	1.800	1.573	1.421
M 2	M 2.2		0.4	0.217	2.000	1.740	1.567
M 2.5			0.45	0.244	2.200	1.908	1.713
			0.45	0.244	2.500	2.208	2.013
M 3	M 3.5		0.5	0.271	3.000	2.675	2.459
M 4			0.6	0.325	3.500	3.110	2.850
			0.7	0.379	4.000	3.545	3.242
M 5 M 6	M 4.5		0.75	0.406	4.500	4.013	3.688
			0.8	0.433	5.000	4.480	4.134
			1	0.541	6.000	5.350	4.917
M 8		M 7	1	0.541	7.000	6.350	5.917
		M 9	1.25	0.677	8.000	7.188	6.647
			1.25	0.677	9.000	8.188	7.647
M 10		M 11	1.5	0.812	10.000	9.026	8.376
M 12			1.5	0.812	11.000	10.026	9.376
			1.75	0.947	12.000	10.863	10.106
M 16	M 14		2	1.083	14.000	12.701	11.835
	M 18		2	1.083	16.000	14.701	13.835
			2.5	1.353	18.000	16.376	15.294
M 20	M 22		2.5	1.353	20.000	18.376	17.294
M 24			2.5	1.353	22.000	20.376	19.294
			3	1.624	24.000	22.051	20.752
M 30	M 27		3	1.624	27.000	25.051	23.752
	M 33		3.5	1.894	30.000	27.727	26.211
			3.5	1.894	33.000	30.727	29.211
M 36	M 39		4	2.165	36.000	33.402	31.670
M 42			4	2.165	39.000	36.402	34.670
			4.5	2.436	42.000	39.077	37.129
M 48	M 45		4.5	2.436	45.000	42.077	40.129
	M 52		5	2.706	48.000	44.752	42.587
			5	2.706	52.000	48.752	46.587
M 56	M 60		5.5	2.977	56.000	52.428	50.046
M 64			5.5	2.977	60.000	56.428	54.046
			6	3.248	64.000	60.103	57.505
	M 68		6	3.248	68.000	64.103	61.505

Note * Choose, for preference, column 1 and, if necessary, column 2 and then column 3.

Appendix. Screw Threads of M 1.7, M 2.3 and M 2.6

1. Scope

This Appendix specifies the screw threads of M 1.7, M 2.3 and M 2.6.

These screw threads are to be abolished in future, and, therefore, these screw threads should be not used for apparatus of new design.

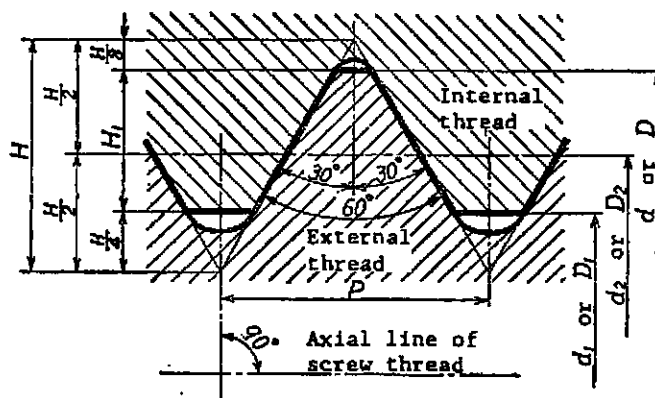
Remark: The screw threads of M 1.7, M 2.3 and M 2.6 are not specified in ISO 261.

2. Basic Profile, Formulae and Basic Dimensions

2.1 Basic Profile The basic profile⁽¹⁾ is shown with bold continuous line in Appendix Figure.

Note (1) This basic profile coincides with 2.1 of the body.

Appendix Figure. Basic Profile of Screw Threads of M 1.7, M 2.3 and M 2.6



2.2 Formulae The formulae⁽²⁾ to be used for calculation of basic dimensions shall be in accordance with the following:

Note (2) These formulae coincide with 2.2 of the body.

$$\begin{aligned} H &= 0.866025P & d_1 &= d - 0.649519P & D &= d \\ H_1 &= 0.541266P & d_1 &= d - 1.082532P & D_1 &= d_1 \\ & & & & D_1 &= d_1 \end{aligned}$$

2.3 Basic Dimensions The basic dimensions shall be as shown in Appendix Table.

Appendix Table

Unit: mm

Designation of screw threads	Pitch P	Height of engagement H_1	Internal thread		
			Major diameter D	Pitch diameter D_1	Minor diameter D_2
			External thread		
			Major diameter d	Pitch diameter d_1	Minor diameter d_2
M 1.7	0.35	0.189	1.700	1.473	1.321
M 2.3	0.4	0.217	2.300	2.040	1.867
M 2.6	0.45	0.244	2.600	2.308	2.113

3. Designation

The designation of screw threads according to this Appendix shall be in accordance with the specifications of JIS B 0123.

Example: M 1.7

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