

Nissan Engineering Standard

NES	Metric Screw Threads	D 1402 Revised 1970
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1. SCOPE:

This standard specifies basic profiles, basic dimensions, series and grades of metric screw threads.

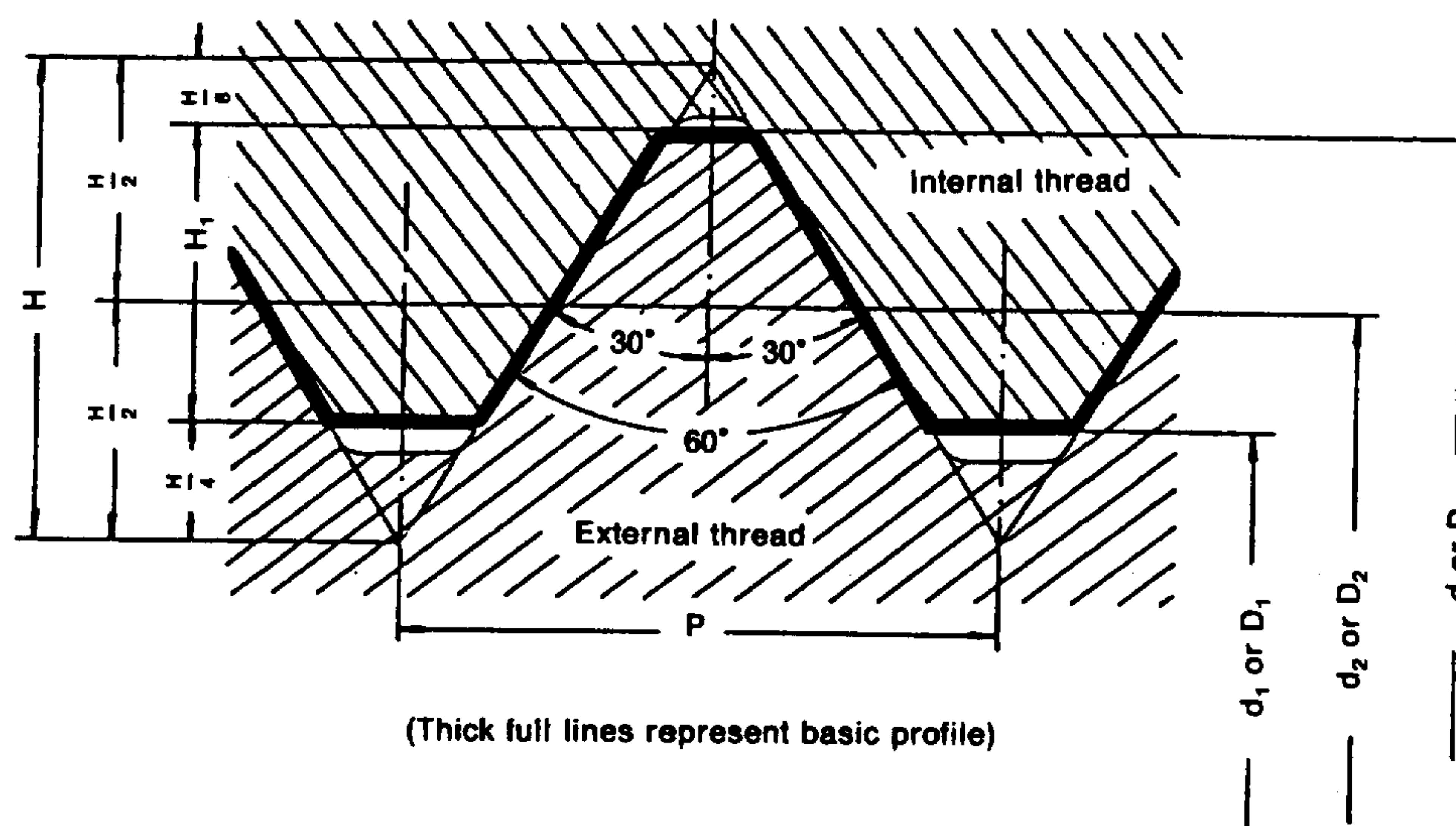
2. SERIES OF METRIC SCREW THREADS:

The threads shall be classified into two series, namely, coarse threads and fine threads in accordance with the combination of nominal size or nominal diameter and the pitch of metric screw threads. These combinations are given in Attached tables 1 and 2.

3. BASIC PROFILE, BASIC DIMENSION AND CALCULATING FORMULAE:

The positions of the basic profile, basic dimension and calculating formulae are given in Figure below, and the basic dimensions are given in Attached tables 3 and 4.

Fig. Basic profile



Height of basic triangle $H = 0.866025P$

Height of engagement $H_1 = 0.541266P$

Pitch diameter of external thread $d_2 = d - 0.649519P$

Minor diameter of external thread $d_1 = d - 1.082532P$

Major diameter of internal thread $D = \text{Major diameter of external thread } d$

Pitch diameter of internal thread $D_2 = \text{Pitch diameter of external thread } d_2$

Minor diameter of internal thread $D_1 = \text{Minor diameter of external thread } d_1$

4. GRADES, VARIATION OF TOLERANCE AND TOLERANCES OF SCREW THREADS:

The grades of external and internal screw threads shall correspond to the dimensions of the tolerances and shall be classified into grade 1 and grade 2. The relationships between the basic profiles and the variation of tolerance and tolerances are given in Attached fig. 1 and Attached fig. 2. Variations of tolerances are given in Attached tables 5 through 8 in accord with the classification of the following table. Grade 2 shall be used for general standard accuracy, while grade 1 shall be used for parts that especially require accuracy, are subject to vibration, or are permanently installed. Where problems of fatigue strength or any other dynamic strength may be posed, the roundness of $0.1 p$ or more may be specified on the root only in case of M6 through M24 (¹). If necessary, a combination of different grades of external and internal threads may be used.

Classification of grades	Coarse threads		Fine threads	
	Grade 1	Grade 2	Grade 1	Grade 2
Applicable tables	Attached table 5	Attached table 6	Attached table 7	Attached table 8

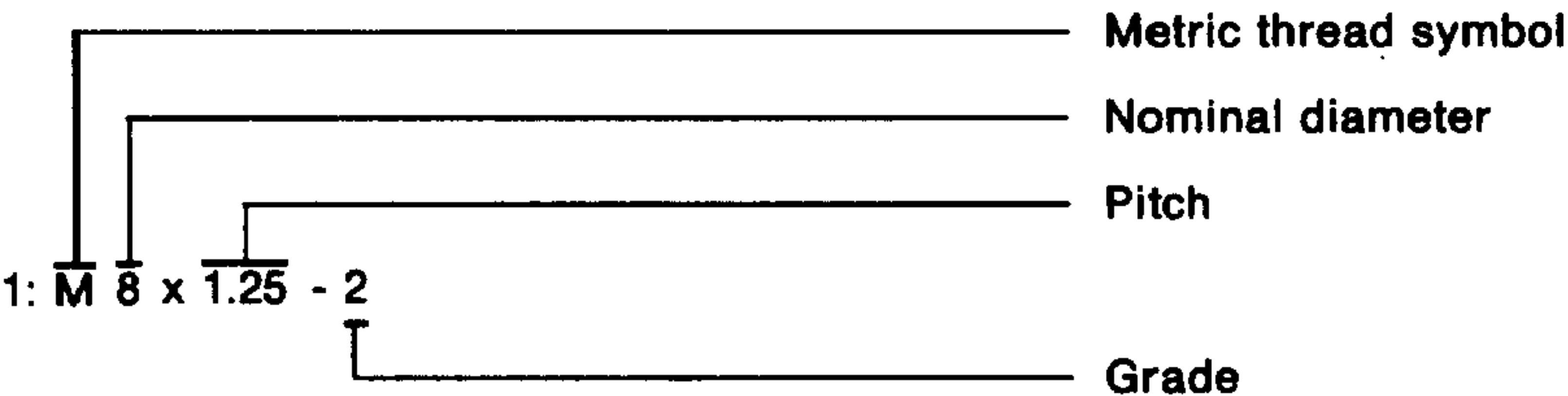
Note (1): This is used only when special dynamic strength, e.g. important security parts, is required.

5. IDENTIFICATION OF SCREW THREADS ON DRAWINGS

The symbol, M, nominal diameter, pitch and metric screw thread grade shall be used in that order to specify metric screw threads. See example 1. Additionally, specifically designated requirements may be appended as shown on examples 2 to 7.

- (1) In case of designating the roundness of 0.1p or more in the root of external thread for M6 through M24. R (Example 2)
- (2) In case of designating left-hand threads and multiple threads. LH, number of threads (Example 3)
- (3) In case of applying the max. value of grade 1 to the upper limit of accuracy of the threads having applied plating or anticorrosive treatment to the external threads grade 2. Pitch diameter, and before or after plating (Example 4)
- (4) In case the length of the engagement of a product is extremely different from the value in the standard, and therefore the clearance and tolerance specified in the standard cannot be applied. Pitch diameter (Example 5)
- (5) In case of studs. Pitch diameter and stud (Example 6)
- (6) In case of a combination of internal and external threads. Grade of internal thread/grade of external thread (Example 7)
- (7) For special deviations from the standard, or a particular combination of the nominal diameter, pitch and length of engagement. The variations of tolerances for nominal diameter, pitch, pitch diameter, major diameter and minor diameter shall be enumerated to make clear that it is a particular screw thread.

Examples



- 2: M10 x 1.25-2R
- 3: LH2 (2) THREADS (2) M5 x 0.8-1
- 4: M10 x 1-2 P.D 9.320/9.170 Max P.D 9.350 AFTER PLATING
- 5: M10 x 1-2 P.D 9.330/9.220
- 6: M20 x 1.5 P.D 19.126/19.026 Stud
- 7: M10 x 1-2/1

Note (2): Omit this designation for single-thread fasteners. For multiple-thread fasteners, i.e. 3, 4, etc., designate the number as shown.

Attached table 1 Combination of nominal diameters and pitches of metric coarse threads

Nominal diameter of thread ⁽³⁾			Pitch mm																			
1	2	3	6	5.5	5	4.5	4	3.5	3	2.5	2	1.75	1.5	1.25	1	0.8	0.75	0.7	0.6	0.5	0.45	0.4
M2																						0.4
M2.2																					0.45	
		M2.3																				0.4
M2.5																					0.45	
		M2.6																			0.45	
M3																				0.5		
	M3.5																		0.6			
M4																		0.7				
	M4.5																0.75					
M5																0.8						
M6															1							
		M7													1							
M8														1.25								
		M9												1.25								
M10													1.5									
		M11											1.5									
M12												1.75										
	M14										2											
M16											2											
	M18									2.5												
M20										2.5												
	M22									2.5												
M24									3													
	M27								3													
M30								3.5														
	M33							3.5														
M36							4															
	M39						4															
M42						4.5																
	M45					4.5																
M48					5																	
	M52				5																	
M56				5.5																		
	M60			5.5																		
M64			6																			
	M68		6																			

Note ⁽³⁾: Select column 1 preferentially, and then column 2, if necessary. Column 3 should be avoided from use if possible.

Attached table 2 Combination of nominal diameters and pitches of metric fine threads

Nominal diameter of thread ⁽³⁾			Pitch mm										
1	2	3	6	4	3	2	1.5	1.25	1	0.75	0.5	0.35	0.25
M3												0.35	
	M3.5											0.35	
M4											0.5		
	M4.5										0.5		
M5											0.5		
		M5.5									0.5		
M6										0.75			
		M7								0.75			
M8									1	0.75			
		M9							1	0.75			
M10								1.25	1	0.75			
		M11							1	0.75			
M12							1.5	1.25	1				
	M14						1.5	1.25 ⁽⁴⁾	1				
		M15					1.5		1				
M16							1.5		1				
		M17					1.5		1				
	M18					2	1.5		1				
M20						2	1.5		1				
	M22					2	1.5		1				
M24						2	1.5		1				
		M25				2	1.5		1				
		M26					1.5						
	M27					2	1.5		1				
		M28				2	1.5		1				
M30					(3)	2	1.5		1				
		M32				2	1.5						
	M33				(3)	2	1.5						
		M35					1.5						
M36					3	2	1.5						
		M38					1.5						
	M39				3	2	1.5						
		M40			3	2	1.5						
M42				4	3	2	1.5						
	M45			4	3	2	1.5						
M48				4	3	2	1.5						
		M50			3	2	1.5						
	M52			4	3	2	1.5						
		M55		4	3	2	1.5						
M56				4	3	2	1.5						

Attached table 2 (Continued)

Nominal diameter of thread ⁽³⁾			Pitch mm										
1	2	3	6	4	3	2	1.5	1.25	1	0.75	0.5	0.35	0.25
		M58		4	3	2	1.5						
	M60			4	3	2	1.5						
		M62		4	3	2	1.5						
M64				4	3	2	1.5						
		M65		4	3	2	1.5						
	M68			4	3	2	1.5						
		M70	6	4	3	2	1.5						
M72			6	4	3	2	1.5						
		M75		4	3	2	1.5						
	M76		6	4	3	2	1.5						
		M78				2							
M80			6	4	3	2	1.5						
		M82				2							
	M85		6	4	3	2							
M90			6	4	3	2							
	M95		6	4	3	2							
M100			6	4	3	2							
	M105		6	4	3	2							
M110			6	4	3	2							
	M115		6	4	3	2							
	M120		6	4	3	2							
M125			6	4	3	2							
	M130		6	4	3	2							
		M135	6	4	3	2							
M140			6	4	3	2							
		M145	6	4	3	2							
	M150		6	4	3	2							
		M155	6	4	3								
M160			6	4	3								

Note ⁽³⁾: Select column 1 preferentially, and then column 2, if necessary. Column 3 should be avoided from use if possible.

⁽⁴⁾: The thread of nominal dia. 14 mm and pitch 1.25 mm shall be used only for spark plugs for internal combustion engines.

Remarks: 1. The pitch shall be selected, if possible, from those printed boldly.
2. Pitches in parentheses shall be avoided from use if possible.
3. In case the thread of smaller pitch than that shown in Table is required, select from the following pitches.
2 1.5 1 0.75 0.5 0.35 0.25 0.2
However, the max. nominal diameter used for these pitches shall conform to the following table if possible.

Unit: mm				
Pitch	0.5	0.75	1	1.5
Max. nominal dia.	22	33	80	150

4. Selection of fine threads for machine screws, bolts and nuts shall, as a rule, comply with the following table within the range of nominal diameters 8 through 39 mm.

Nominal diameter ⁽⁵⁾		Pitch mm
1	2	
M8		1
M10		1.25
M12		1.25
	M14	1.5
M16		1.5
	M18	1.5
M20		1.5
	M22	1.5
M24		2
	M27	2
M30		2
	M33	2
M36		3
	M39	3

Note ⁽⁵⁾: Select column 1 preferentially, and then column 2, if necessary.

Attached table 3 Basic dimensions of metric coarse threads

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H _i	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M2 x 0.4	0.4	0.217	2.000	1.740	1.567
M2.2 x 0.45	0.45	0.244	2.200	1.908	1.713
M2.3 x 0.4	0.4	0.217	2.300	2.040	1.867
M2.5 x 0.45	0.45	0.244	2.500	2.208	2.013
M2.6 x 0.45			2.600	2.308	2.113
M3 x 0.5	0.5	0.271	3.000	2.675	2.459
M3.5 x 0.6	0.6	0.325	3.500	3.110	2.850
M4 x 0.7	0.7	0.379	4.000	3.545	3.242
M4.5 x 0.75	0.75	0.406	4.500	4.013	3.688
M5 x 0.8	0.8	0.433	5.000	4.480	4.134
M6 x 1	1	0.541	6.000	5.350	4.917
M7 x 1			7.000	6.350	5.917
M8 x 1.25	1.25	0.677	8.000	7.188	6.647
M9 x 1.25			9.000	8.188	7.647
M10 x 1.5	1.5	0.812	10.000	9.026	8.376
M11 x 1.5			11.000	10.026	9.376
M12 x 1.75	1.75	0.947	12.000	10.863	10.106
M14 x 2	2	1.083	14.000	12.701	11.835
M16 x 2			16.000	14.701	13.835
M18 x 2.5	2.5	1.353	18.000	16.376	15.294
M20 x 2.5			20.000	18.376	17.294
M22 x 2.5			22.000	20.376	19.294
M24 x 3	3	1.624	24.000	22.051	20.752
M27 x 3			27.000	25.051	23.752
M30 x 3.5	3.5	1.894	30.000	27.727	26.211
M33 x 3.5			33.000	30.727	29.211
M36 x 4	4	2.165	36.000	33.402	31.670
M39 x 4			39.000	36.402	34.670
M42 x 4.5	4.5	2.436	42.000	39.077	37.129
M45 x 4.5			45.000	42.077	40.129
M48 x 5	5	2.706	48.000	44.752	42.587
M52 x 5			52.000	48.752	46.587
M56 x 5.5	5.5	2.977	56.000	52.428	50.046
M60 x 5.5			60.000	56.428	54.046
M64 x 6	6	3.248	64.000	60.103	57.505
M68 x 6			68.000	64.103	61.505

Attached table 4 Basic dimensions of metric fine threads

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H ₁	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M3 x 0.35	0.35	0.189	3.000	2.773	2.621
M3.5 x 0.35			3.500	3.273	3.121
M4 x 0.5	0.5	0.271	4.000	3.675	3.459
M4.5 x 0.5			4.500	4.175	3.959
M5 x 0.5			5.000	4.675	4.459
M5.5 x 0.5			5.500	5.175	4.959
M6 x 0.75	0.75	0.406	6.000	5.513	5.188
M7 x 0.75			7.000	6.513	6.188
M8 x 1	1	0.541	8.000	7.350	6.917
M8 x 0.75	0.75	0.406		7.513	7.188
M9 x 1	1	0.541	9.000	8.350	7.917
M9 x 0.75	0.75	0.406		8.513	8.188
M10 x 1.25	1.25	0.677	10.000	9.188	8.647
M10 x 1	1	0.541		9.350	8.917
M10 x 0.75	0.75	0.406		9.513	9.188
M11 x 1	1	0.541	11.000	10.350	9.917
M11 x 0.75	0.75	0.406		10.513	10.188
M12 x 1.5	1.5	0.812	12.000	11.026	10.376
M12 x 1.25	1.25	0.677		11.188	10.647
M12 x 1	1	0.541		11.350	10.917
M14 x 1.5	1.5	0.812	14.000	13.026	12.376
M14 x 1.25	1.25	0.677		13.188	12.647
M14 x 1	1	0.541		13.350	12.917
M15 x 1.5	1.5	0.812	15.000	14.026	13.376
M15 x 1	1	0.541		14.350	13.917
M16 x 1.5	1.5	0.812	16.000	15.026	14.376
M16 x 1	1	0.541		15.350	14.917
M17 x 1.5	1.5	0.812	17.000	16.026	15.376
M17 x 1	1	0.541		16.350	15.917
M18 x 2	2	1.083	18.000	16.701	15.835
M18 x 1.5	1.5	0.812		17.026	16.376
M18 x 1	1	0.541		17.350	16.917
M20 x 2	2	1.083	20.000	18.701	17.835
M20 x 1.5	1.5	0.812		19.026	18.376
M20 x 1	1	0.541		19.350	18.917

Attached table 4 (Continued)

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H ₁	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M22 x 2	2	1.083	22.000	20.701	19.835
M22 x 1.5	1.5	0.812		21.026	20.376
M22 x 1	1	0.541		21.350	20.917
M24 x 2	2	1.083	24.000	22.701	21.835
M24 x 1.5	1.5	0.812		23.026	22.376
M24 x 1	1	0.541		23.350	22.917
M25 x 2	2	1.083	25.000	23.701	22.835
M25 x 1.5	1.5	0.812		24.026	23.376
M25 x 1	1	0.541		24.350	23.917
M26 x 1.5	1.5	0.812	26.000	25.026	24.376
M27 x 2	2	1.083	27.000	25.701	24.835
M27 x 1.5	1.5	0.812		26.026	25.376
M27 x 1	1	0.541		26.350	25.917
M28 x 2	2	1.083	28.000	26.701	25.835
M28 x 1.5	1.5	0.812		27.026	26.376
M28 x 1	1	0.541		27.350	26.917
M30 x 3	3	1.624	30.000	28.051	26.752
M30 x 2	2	1.083		28.701	27.835
M30 x 1.5	1.5	0.812		29.026	28.376
M30 x 1	1	0.541		29.350	28.917
M32 x 2	2	1.083	32.000	30.701	29.835
M32 x 1.5	1.5	0.812		31.026	30.376
M33 x 3	3	1.624	33.000	31.051	29.752
M33 x 2	2	1.083		31.701	30.835
M33 x 1.5	1.5	0.812		32.026	31.376
M35 x 1.5	1.5	0.812	35.000	34.026	33.376
M36 x 3	3	1.624	36.000	34.051	32.752
M36 x 2	2	1.083		34.701	33.835
M36 x 1.5	1.5	0.812		35.026	34.376
M38 x 1.5	1.5	0.812	38.000	37.026	36.376
M39 x 3	3	1.624	39.000	37.051	35.752
M39 x 2	2	1.083		37.701	36.835
M39 x 1.5	1.5	0.812		38.026	37.376
M40 x 3	3	1.624	40.000	38.051	36.752
M40 x 2	2	1.083		38.701	37.835
M40 x 1.5	1.5	0.812		39.026	38.376

Attached table 4 (Continued)

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H ₁	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M42 x 4	4	2.165	42.000	39.402	37.670
M42 x 3	3	1.624		40.051	38.752
M42 x 2	2	1.083		40.701	39.835
M42 x 1.5	1.5	0.812		41.026	40.376
M45 x 4	4	2.165	45.000	42.402	40.670
M45 x 3	3	1.624		43.051	41.752
M45 x 2	2	1.083		43.701	42.835
M45 x 1.5	1.5	0.812		44.026	43.376
M48 x 4	4	2.165	48.000	45.402	43.670
M48 x 3	3	1.624		46.051	44.752
M48 x 2	2	1.083		46.701	45.835
M48 x 1.5	1.5	0.812		47.026	46.376
M50 x 3	3	1.624	50.000	48.051	46.752
M50 x 2	2	1.083		48.701	47.835
M50 x 1.5	1.5	0.812		49.026	48.376
M52 x 4	4	2.165	52.000	49.402	47.670
M52 x 3	3	1.624		50.051	48.752
M52 x 2	2	1.083		50.701	49.835
M52 x 1.5	1.5	0.812		51.026	50.376
M55 x 4	4	2.165	55.000	52.402	50.670
M55 x 3	3	1.624		53.051	51.752
M55 x 2	2	1.083		53.701	52.835
M55 x 1.5	1.5	0.812		54.026	53.376
M56 x 4	4	2.165	56.000	53.402	51.670
M56 x 3	3	1.624		54.051	52.752
M56 x 2	2	1.083		54.701	53.835
M56 x 1.5	1.5	0.812		55.026	54.376
M58 x 4	4	2.165	58.000	55.402	53.670
M58 x 3	3	1.624		56.051	54.752
M58 x 2	2	1.083		56.701	55.835
M58 x 1.5	1.5	0.812		57.026	56.376
M60 x 4	4	2.165	60.000	57.402	55.670
M60 x 3	3	1.624		58.051	56.752
M60 x 2	2	1.083		58.701	57.835
M60 x 1.5	1.5	0.812		59.026	58.376

Attached table 4 (Continued)

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H ₁	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M62 x 4	4	2.165	62.000	59.402	57.670
M62 x 3	3	1.624		60.051	58.752
M62 x 2	2	1.083		60.701	59.835
M62 x 1.5	1.5	0.812		61.026	60.376
M64 x 4	4	2.165	64.000	61.402	59.670
M64 x 3	3	1.624		62.051	60.752
M64 x 2	2	1.083		62.701	61.835
M64 x 1.5	1.5	0.812		63.026	62.376
M65 x 4	4	2.165	65.000	62.402	60.670
M65 x 3	3	1.624		63.051	61.752
M65 x 2	2	1.083		63.701	62.835
M65 x 1.5	1.5	0.812		64.026	63.376
M68 x 4	4	2.165	68.000	65.402	63.670
M68 x 3	3	1.624		66.051	64.752
M68 x 2	2	1.083		66.701	65.835
M68 x 1.5	1.5	0.812		67.026	66.376
M70 x 6	6	3.248	70.000	66.103	63.505
M70 x 4	4	2.165		67.402	65.670
M70 x 3	3	1.624		68.051	66.752
M70 x 2	2	1.083		68.701	67.835
M70 x 1.5	1.5	0.812		69.026	68.376
M72 x 6	6	3.248	72.000	68.103	65.505
M72 x 4	4	2.165		69.402	67.670
M72 x 3	3	1.624		70.051	68.752
M72 x 2	2	1.083		70.701	69.835
M72 x 1.5	1.5	0.812		71.026	70.376
M75 x 4	4	2.165	75.000	72.402	70.670
M75 x 3	3	1.624		73.051	71.752
M75 x 2	2	1.083		73.701	72.835
M75 x 1.5	1.5	0.812		74.026	73.376
M76 x 6	6	3.248	76.000	72.103	69.505
M76 x 4	4	2.165		73.402	71.670
M76 x 3	3	1.624		74.051	72.752
M76 x 2	2	1.083		74.701	73.835
M76 x 1.5	1.5	0.812		75.026	74.376
M78 x 2	2	1.083	78.000	76.701	75.835

Attached table 4 (Continued)

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H ₁	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M80 x 6	6	3.248	80.000	76.103	73.505
M80 x 4	4	2.165		77.402	75.670
M80 x 3	3	1.624		78.051	76.752
M80 x 2	2	1.083		78.701	77.835
M80 x 1.5	1.5	0.812		79.026	78.376
M82 x 2	2	1.083	82.000	80.701	79.835
M85 x 6	6	3.248	85.000	81.103	78.505
M85 x 4	4	2.165		82.402	80.670
M85 x 3	3	1.624		83.051	81.752
M85 x 2	2	1.083		83.701	82.835
M90 x 6	6	3.248	90.000	86.103	83.505
M90 x 4	4	2.165		87.402	85.670
M90 x 3	3	1.624		88.051	86.752
M90 x 2	2	1.083		88.701	87.835
M95 x 6	6	3.248	95.000	91.103	88.505
M95 x 4	4	2.165		92.402	90.670
M95 x 3	3	1.624		93.051	91.752
M95 x 2	2	1.083		93.701	92.835
M100 x 6	6	3.248	100.000	96.103	93.505
M100 x 4	4	2.165		97.402	95.670
M100 x 3	3	1.624		98.051	96.752
M100 x 2	2	1.083		98.701	97.835
M105 x 6	6	3.248	105.000	101.103	98.505
M105 x 4	4	2.165		102.402	100.670
M105 x 3	3	1.624		103.051	101.752
M105 x 2	2	1.083		103.701	102.835
M110 x 6	6	3.248	110.000	106.103	103.505
M110 x 4	4	2.165		107.402	105.670
M110 x 3	3	1.624		108.051	106.752
M110 x 2	2	1.083		108.701	107.835
M115 x 6	6	3.248	115.000	111.103	108.505
M115 x 4	4	2.165		112.402	110.670
M115 x 3	3	1.624		113.051	111.752
M115 x 2	2	1.083		113.701	112.835

Attached table 4 (Continued)

Unit: mm

Nominal thread	Pitch P	Height of basic triangle H ₁	Internal thread		
			Major dia. D	Pitch dia. D ₂	Minor dia. D ₁
			External thread		
			Major dia. d	Pitch dia. d ₂	Minor dia. d ₁
M120 x 6	6	3.248	120.000	116.103	113.505
M120 x 4	4	2.165		117.402	115.670
M120 x 3	3	1.624		118.051	116.752
M120 x 2	2	1.083		118.701	117.835
M125 x 6	6	3.248	125.000	121.103	118.505
M125 x 4	4	2.165		122.402	120.670
M125 x 3	3	1.624		123.051	121.752
M125 x 2	2	1.083		123.701	122.835
M130 x 6	6	3.248	130.000	126.103	123.505
M130 x 4	4	2.165		127.402	125.670
M130 x 3	3	1.624		128.051	126.752
M130 x 2	2	1.083		128.701	127.835
M135 x 6	6	3.248	135.000	131.103	128.505
M135 x 4	4	2.165		132.402	130.670
M135 x 3	3	1.624		133.051	131.752
M135 x 2	2	1.083		133.701	132.835
M140 x 6	6	3.248	140.000	136.103	133.505
M140 x 4	4	2.165		137.402	135.670
M140 x 3	3	1.624		138.051	136.752
M140 x 2	2	1.083		138.701	137.835
M145 x 6	6	3.248	145.000	141.103	138.505
M145 x 4	4	2.165		142.402	140.670
M145 x 3	3	1.624		143.051	141.752
M145 x 2	2	1.083		143.701	142.835
M150 x 6	6	3.248	150.000	146.103	143.505
M150 x 4	4	2.165		147.402	145.670
M150 x 3	3	1.624		148.051	146.752
M150 x 2	2	1.083		148.701	147.835
M155 x 6	6	3.248	155.000	151.103	148.505
M155 x 4	4	2.165		152.402	150.670
M155 x 3	3	1.624		153.051	151.752
M160 x 6	6	3.248	160.000	156.103	153.505
M160 x 4	4	2.165		157.402	155.670
M160 x 3	3	1.624		158.051	156.752