INTERNATIONAL STANDARD

ISO 261

Second edition
1998-12-15

ISO general purpose metric screw threads — General plan

Filetages métriques ISO pour usages généraux — Vue d'ensemble

Reference number
ISO 261:1998(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 261 was prepared by Technical Committee ISO/TC 1, *Screw threads*, Subcommittee SC 1, *Basic data*.

This second edition cancels and replaces the first edition (ISO 261:1973) which has been technically revised.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

ISO general purpose metric screw threads — General plan

1 Scope

This International Standard specifies ISO general purpose metric screw threads (M) having basic profile according to ISO 68-1. Basic dimensions are given in ISO 724. For tolerances see ISO 965-1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 68-1:1998, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads.*

ISO 262:1998, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts.*

ISO 724:1993, *ISO general purpose metric screw threads — Basic dimensions.*

ISO 965-1:1998, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data.*

ISO 5408:1983, *Cylindrical screw threads — Vocabulary.*

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 5408 apply.

4 Designation

A screw thread in conformity with this International Standard shall be designated according to ISO 965-1.

5 Choice of diameter and pitch

5.1 Choose, for preference, diameters in column 1 of table 2 and, if necessary, in column 2 and then in column 3.

Diameter 35 mm, and pitch 1,25 mm of diameter 14 mm shall be used only for the special cases indicated in the footnotes.

Pitches shown in parentheses are to be avoided as far as possible.

5.2 The words "coarse" and "fine" are given in order to conform to usage. No concept of quality shall, however, be associated with these words.

It shall be understood that the "coarse" pitches are the largest metric pitches used in current practice.

5.3 For the diameter (or the diameter range) selected, choose one of the pitches shown on the corresponding line (or lines).

5.4 If screw threads finer than those appearing in table 2 are found necessary, only the following pitches shall be used:

3 mm; 2 mm; 1,5 mm; 1 mm; 0,75 mm; 0,5 mm; 0,35 mm; 0,25 mm; 0,2 mm

When selecting such pitches, take into account the fact that there is increasing difficulty in complying with tolerances as the diameter is increased for a given pitch. It is suggested, that diameters larger than those shown in table 1 should generally not be used with the pitches indicated.

Table 1 — Maximum nominal diameter

Dimensions in millimetres

Pitch	Maximum nominal diameter
0,5	22
0,75	33
1	80
1,5	150
2	200
3	300

Table 2 — Nominal diameter/pitch

Dimensions in millimetres

Nominal diameter D, d			Pitch P										
Col. 1 1st choice	Col. 2 2nd choice	Col. 3 3rd choice	coarse	fine									
				3	2	1,5	1,25	1	0,75	0,5	0,35	0,25	0,2
1			0,25										0,2
	1,1		0,25										0,2
1,2			0,25										0,2
	1,4		0,3										0,2
1,6			0,35										0,2
	1,8		0,35										0,2
2			0,4									0,25	
	2,2		0,45									0,25	
2,5			0,45								0,35		
3			0,5								0,35		
	3,5		0,6								0,35		
4			0,7							0,5			
	4,5		0,75							0,5			
5			0,8							0,5			
		5,5								0,5			
6			1						0,75				
	7		1						0,75				
8			1,25					1	0,75				
		9	1,25					1	0,75				
10			1,5				1,25	1	0,75				
		11	1,5					1	0,75				
12			1,75			1,5	1,25	1					
	14		2			1,5	1,25 [a]	1					
		15				1,5		1					
16			2			1,5		1					
		17				1,5		1					
	18		2,5		2	1,5		1					
20			2,5		2	1,5		1					
	22		2,5		2	1,5		1					
24			3		2	1,5		1					
		25			2	1,5		1					
		26				1,5							
	27		3		2	1,5		1					
		28			2	1,5		1					
30			3,5	(3)	2	1,5		1					
		32			2	1,5							
	33		3,5	(3)	2	1,5							
		35 [b]				1,5							
36			4	3	2	1,5							
		38				1,5							
	39		4	3	2	1,5							

(continued)

Table 2 (*continued*)

Dimensions in millimetres

Nominal diameter D, d			**Pitch** P						
Col. 1	Col. 2	Col. 3	**coarse**	**fine**					
1st choice	2nd choice	3rd choice		8	6	4	3	2	1,5
		40					3	2	1,5
42									
			4,5			4	3	2	1,5
	45		4,5			4	3	2	1,5
48			5			4	3	2	1,5
		50					3	2	1,5
	52		5			4	3	2	1,5
		55				4	3	2	1,5
56			5,5			4	3	2	1,5
		58				4	3	2	1,5
	60		5,5			4	3	2	1,5
		62				4	3	2	1,5
64			6			4	3	2	1,5
		65				4	3	2	1,5
	68		6			4	3	2	1,5
		70			6	4	3	2	1,5
72					6	4	3	2	1,5
		75				4	3	2	1,5
	76				6	4	3	2	1,5
		78						2	
80					6	4	3	2	1,5
		82						2	
	85				6	4	3	2	
90					6	4	3	2	
	95				6	4	3	2	
100					6	4	3	2	
	105				6	4	3	2	
110					6	4	3	2	
	115				6	4	3	2	
	120				6	4	3	2	
125				8	6	4	3	2	
	130			8	6	4	3	2	
		135			6	4	3	2	
140				8	6	4	3	2	
		145			6	4	3	2	
	150			8	6	4	3	2	
		155			6	4	3		
160				8	6	4	3		
		165			6	4	3		
	170			8	6	4	3		
		175			6	4	3		
180				8	6	4	3		
		185			6	4	3		
	190			8	6	4	3		
		195			6	4	3		
200				8	6	4	3		

(continued)

Table 2 (*concluded*)

Dimensions in millimetres

Nominal diameter D, d			**Pitch** P						
Col. 1	Col. 2	Col. 3	**coarse**	**fine**					
1st choice	2nd choice	3rd choice		8	6	4	3	2	1,5
		205			6	4	3		
	210			8	6	4	3		
		215			6	4	3		
220				8	6	4	3		
		225			6	4	3		
		230		8	6	4	3		
		235			6	4	3		
	240			8	6	4	3		
		245			6	4	3		
250				8	6	4	3		
		255			6	4			
	260			8	6	4			
		265			6	4			
		270		8	6	4			
		275			6	4			
280				8	6	4			
		285			6	4			
		290		8	6	4			
		295			6	4			
	300			8	6	4			

[a] Only for spark plugs for engines.

[b] Only for locking nuts for bearings.

ICS 21.040.10

Descriptors: screw threads, ISO metric threads, form specifications, dimensions, diameters, thread pitch, designation.

Price based on 5 pages