INTERNATIONAL STANDARD

Third edition

ISO general purpose metric screw threads — Selected sizes for bolts, screws, studs and nuts

Filetages métriques ISO pour usages généraux — Sélection de dimensions pour la boulonnerie

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 1, Screw threads.

This third edition cancels and replaces the second edition (ISO 262:1998), which has been technically revised.

The main changes are as follows:

- all reference dates in <u>Clause 2</u> have been deleted, and ISO 68-1, ISO 261 and ISO 965-1 have been moved to the Bibliography;
- the large diameter and pitch combinations, diameter range from 68 mm to 100 mm, in <u>Table 1</u> have been added;
- <u>Clause 5</u> has been added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <u>www.iso.org/members.html</u>.

ISO general purpose metric screw threads — Selected sizes for bolts, screws, studs and nuts

1 Scope

This document specifies the selected sizes for bolts, screws, studs and nuts in the diameter range from 1 mm to 100 mm of ISO general purpose metric screw threads (M) having the basic and design profiles according to ISO 68-1. These sizes of diameter and pitch combinations are selected from ISO 261.

This document is applicable to the metric commercial fastener screw threads.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5408, Screw threads — Vocabulary

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5408 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp_4722-a4812
- IEC Electropedia: available at <u>https://www.electropedia.org/</u>

4 Selected sizes

The sizes of diameter and pitch combinations for bolts, screws, studs and nuts should be chosen in Table 1.

Table 1 — Sizes for bolts, screws, studs and nuts

Dimensions in millimetres

Nominal	diameter	Pitch		
D	, d	Р		
1st choice	2nd choice	Coarse	Fine	
1		0,25		
1,2		0,25		
	1,4	0,3		
1,6		0,35		
	1,8	0,35		
2		0,4		
2,5		0,45		
3		0,5		
	3,5	0,6		

D,d P 1st choice 2nd choice Coarse Fine 4 0,7 0,8 0.1 5 0,8 1 0.1 0.1 6 1 1 1.1 1.1 8 1,25 1 1.1 10 1,5 1,25 1 12 1,75 1,5 1.25 16 2 1,5 1 16 2,5 2 1,5 20 2,5 2 1,5 21 3 2 1,5 22 2,5 2 1,5 24 3 2 1,5 36 39 4 3 2 36 39 4,5 3 2 48 6 4 3 2 3 42 4,5 3 3 2 3 48 6 4 6 4									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Nominal	diameter	Pitch						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	D), d	Р						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1st choice	2nd choice	Coarse	Fi	ne				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	4		0,7						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5		0,8						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	6		1						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		7	1						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	8		1,25	1					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10		1,5	1,25	1				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	12		1,75	1,5	1,25				
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		14	2	1,5					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16		2	1,5					
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		18	2,5		1,5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20		2,5	2	1,5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		22	2,5	2	1,5				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	24			2					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		27	3	2					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	30		3,5	2	X X 7				
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $		39	$a_1 u a_4 u s.1$	3					
$\begin{array}{ c c c c c c c c } \hline 48 & \hline & $	42		4,5	3					
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		52	5 //iso-p						
	56		5,5	4					
68 6 4 72 6 4 72 6 4 76 6 4 80 6 4 80 6 4 90 6 4 95 6 4		60		4					
$ \begin{array}{ c c c c c c } \hline 72 & & & & & & & & & & & & & & & & & & $	64			4					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		68	6	4					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	72			6	4				
80 6 4 85 6 4 90 6 4 95 6 4		76			4				
85 6 4 90 6 4 95 6 4	80				4				
90 6 4 95 6 4		85							
95 6 4	90				4				
		95							
100 6 4	100			6	4				

Table 1 (continued)

5 Designation

For screw thread designation, see ISO 965-1.

Bibliography

- [1] ISO 68-1, ISO general purpose screw threads Basic and design profiles Part 1: Metric screw threads
- [2] ISO 261, ISO general purpose metric screw threads General plan
- [3] ISO 965-1, ISO general purpose metric screw threads Tolerances Part 1: Principles and basic data

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