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BSI Standards Publication

ISO general purpose metric screw threads — Tolerances

Part 1: Principles and basic data

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National foreword

This British Standard is the UK implementation of ISO 965-1:2013. Together with BS ISO 2901:2016, BS ISO 2902:2016, BS ISO 2903:2016 and BS ISO 2904:2020, it supersedes BS 5346:1976, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FME/9, Fasteners.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 15648 5

ICS 21.040.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2013.

Amendments/corrigenda issued since publication

Date	Text affected
31 October 2020	Correction to supersession details in national foreword

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Fourth edition
2013-09-15

ISO general purpose metric screw threads — Tolerances —

Part 1: Principles and basic data

*Filetages métriques ISO pour usages généraux — Tolérances —
Partie 1: Principes et données fondamentales*



Reference number
ISO 965-1:2013(E)

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
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Published in Switzerland

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	1
3.1 Terms and definitions.....	1
3.2 Symbols.....	1
4 Tolerance system	2
5 Tolerance positions	2
6 Tolerance grades	5
7 Lengths of thread engagement	9
8 Recommended tolerance classes	10
8.1 General.....	10
8.2 Tolerance quality.....	10
8.3 Preference order.....	11
8.4 Combination of internal threads and external threads.....	11
8.5 Coated threads.....	11
9 Multiple-start threads	12
10 Formulae	12
10.1 General.....	12
10.2 Fundamental deviations.....	12
10.3 Crest diameter tolerances.....	13
10.4 Pitch diameter tolerances.....	14
10.5 Length of thread engagement.....	15
11 Root contours	15
12 Designation	17
12.1 General.....	17
12.2 Designation of single-start screw threads.....	17
12.3 Designation of multiple-start screw threads.....	19
12.4 Designation of left-hand threads.....	19
Bibliography	20

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. www.iso.org/directives

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The committee responsible for this document is ISO/TC ISO 965-1 was prepared by Technical Committee ISO/TC 1, *Screw Threads*.

This fourth edition cancels and replaces the third edition (ISO 965-1:1998), which has been technically revised. It also incorporates the Technical Corrigendum ISO 965-1:1998/Cor.1:2009.

ISO 965 consists of the following parts, under the general title *ISO general purpose metric screw threads — Tolerances*:

- *Part 1: Principles and basic data*
- *Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*
- *Part 3: Deviations for constructional screw threads*
- *Part 4: Limits of sizes for hot-dip galvanized external threads to mate with internal screw threads tapped with tolerance position H or G after galvanizing*
- *Part 5: Limits of sizes for internal screw threads to mate with hot-dip galvanized external screw threads with maximum size of tolerance position h before galvanizing*

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ISO general purpose metric screw threads — Tolerances —

Part 1: Principles and basic data

1 Scope

This part of ISO 965 specifies a tolerance system for ISO general purpose metric screw threads (M) according to ISO 261.

The tolerance system refers to the basic profile according to ISO 68-1.

2 Normative references

The following referenced documents are indispensable for the application 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 68-1, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

ISO 261, *ISO general purpose metric screw threads — General plan*

ISO 1502, *ISO general-purpose metric screw threads — Gauges and gauging*

ISO 5408, *Screw threads — Vocabulary*

3 Terms, definitions and symbols

3.1 Terms and definitions

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

3.2 Symbols

For the purposes of this document, the following symbols apply.

Symbol	Meaning
D	basic major diameter of internal thread
D_1	basic minor diameter of internal thread
D_2	basic pitch diameter of internal thread
d	basic major diameter of external thread
d_1	basic minor diameter of external thread
d_2	basic pitch diameter of external thread
d_3	minor diameter of external thread (see Figure 6)
P	pitch