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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

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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. 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*

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