INTERNATIONAL STANDARD

ISO 965-4

Second edition
2021-07

ISO general purpose metric screw threads — Tolerances —

Part 4: Limits of sizes for hot-dip galvanized external screw threads to mate with internal screw threads tapped with tolerance position H or G after galvanizing

Filetages métriques ISO pour usages généraux — Tolérances —

Partie 4: Dimensions limites pour filetages extérieurs galvanisés à chaud pour assemblages avec des filetages intérieurs de position de tolérance H ou G après galvanisation

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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 second edition cancels and replaces the first edition (ISO 965-4:1998), which has been technically revised.

The main changes compared to the previous edition are as follows:

— in Clause 1, the third paragraph, including the formula for the fundamental deviation az, has been deleted;

— the tolerance classes 6AZ and 6AX, internal threads, have been replaced with the tolerance class 6az, external threads (NOTE of Clause 1 in ISO 965-4:1998; first paragraph of Clause 4 in ISO 965-4:2021);

— in Table 1, the deviation values for the minor diameter of external threads, stress calculation, have been deleted, and M8 is added;

— the phrase “basic profiles” has been replaced by “basic profile and fundamental deviation” (fourth paragraph of Clause 6 in ISO 965-4:1998; fifth paragraph of Clause 7 in ISO 965-4:2021);

— in Table 2, the maximum values for the minor diameter of external threads, stress calculation, have been deleted, and M8 is added.

— an informative annex is added for the external screw thread minor diameter, d_3, used by ISO/TC 2 to calculate the nominal stress area, $A_{s,nom}$.

A list of all parts in the ISO 965 series can be found on the ISO website.

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 www.iso.org/members.html.

ISO general purpose metric screw threads — Tolerances —

Part 4: Limits of sizes for hot-dip galvanized external screw threads to mate with internal screw threads tapped with tolerance position H or G after galvanizing

1 Scope

This document specifies limit deviations and limits of sizes for the pitch and crest diameters of the hot-dip galvanized metric external screw threads conforming to the coarse thread series of ISO 262 (from M8 to M64) having a basic profile according to ISO 68-1.

This document is applicable to the hot-dip galvanized metric external screw threads to mate with the internal screw threads tapped with tolerance position H or G after galvanizing.

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

ISO 965-5, *ISO general purpose metric screw threads — Tolerances — 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 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 terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 General

After the hot-dip galvanization the external threaded products with the tolerance class 6az shall be centrifuged immediately.

Products made with thread tolerances in accordance with this document may show lower ultimate tensile loads than the full loadability specified in ISO 898-1 due to reduction of the stress area.

External screw threads with thread tolerances according to this document shall not be mated with internal screw threads with thread tolerances in accordance with ISO 965-5 because such combinations will create severe risk for thread stripping.