

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 965/II

ISO GENERAL PURPOSE METRIC SCREW THREADS

TOLERANCES

LIMITS OF SIZES FOR COMMERCIAL BOLT AND NUT THREADS

MEDIUM QUALITY

1st EDITION

February 1969

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BRIEF HISTORY

The ISO Recommendation R 965/II, *ISO general purpose metric screw threads – Tolerances – Limits of sizes for commercial bolt and nut threads – Medium quality*, was drawn up by Technical Committee ISO/TC 1, *Screw threads*, the Secretariat of which is held by the Sveriges Standardiseringskommission (SIS).

Work on this question by the Technical Committee led, in 1964, to the adoption of the proposed tolerance system for ISO metric screw threads.

In September 1966, a Draft ISO Recommendation (No. 980) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Argentina	Germany	South Africa, Rep. of
Australia	Greece	Spain
Austria	India	Sweden
Belgium	Israel	Switzerland
Brazil	Italy	Turkey
Canada	Japan	U.A.R.
Chile	Korea, Rep. of	United Kingdom
Czechoslovakia	Netherlands	U.S.A.
Denmark	New Zealand	Yugoslavia
Finland	Norway	
France	Romania	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1969, to accept it as an ISO RECOMMENDATION.

FOREWORD

This document is one of a number of ISO Recommendations determining tolerances for ISO metric screw threads.

The complete set of these ISO Recommendations is made up as follows :

ISO/R 965/I, *ISO general purpose metric screw threads – Tolerances – Principles and basic data*;

ISO/R 965/II (this document), *ISO general purpose metric screw threads – Tolerances – Limits of sizes for commercial bolt and nut threads – Medium quality*;

ISO/R 965/III, *ISO general purpose metric screw threads – Tolerances – Deviations for constructional threads*;

ISO/R ...*, *ISO miniature screw threads*.

* At present Draft ISO Recommendation No. 1501

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MEDIUM QUALITY

1. SCOPE

This ISO Recommendation tabulates limits of sizes for pitch and crest diameters for ISO general purpose metric screw threads according to ISO Recommendation R 262*.

2. DESIGNATIONS

Tolerance designation for nut threads according to this ISO Recommendation is

- 5H for sizes up to and including M1.4,
- 6H for sizes M1.6 and larger.

Examples :

M1–5H
M10 × 1.25–6H

Tolerance designation for bolt threads according to this ISO Recommendation is

- 6h for sizes up to and including M1.4,
- 6g for sizes M1.6 and larger.

Examples :

M1–6h
M10 × 1.25–6g

A fit between threaded parts is indicated by the nut thread tolerance designation followed by the bolt thread tolerance designation separated by a stroke.

Examples :

M1–5H/6h
M10 × 1.25–6H/6g

3. APPLICATION

The limits of sizes for the tolerance quality specified are derived from the fundamental deviations and tolerances specified in ISO Recommendation R 965/I, *ISO general purpose metric screw threads – Tolerances Principles and basic data*.

For coated threads the tolerances apply to the parts *before* coating unless otherwise stated. After coating, the actual thread profile should not in any point transgress the maximum material limits for position H or h respectively.

* At present under revision, under the new title, *ISO general purpose metric screw threads – Selected sizes for screws, bolts and nuts* (Draft ISO Recommendation No. 1500).