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**Tolerances for fasteners - Part 1: Bolts, screws, studs and nuts - Product grades A, B and C**

Tolerances for fasteners - Part 1: Bolts, screws, studs and nuts - Product grades A, B and C

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 4759-1:2001 sisaldab Euroopa standardi EN ISO 4759-1:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.10.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 4759-1:2001 consists of the English text of the European standard EN ISO 4759-1:2000.</p> <p>This document is endorsed on 19.10.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This International Standard specifies a selection of tolerances for bolts, screws, studs and nuts with ISO metric thread and with product grades A, B and C and for tapping screws with product grade A.</p>	<p><b>Scope:</b> This International Standard specifies a selection of tolerances for bolts, screws, studs and nuts with ISO metric thread and with product grades A, B and C and for tapping screws with product grade A.</p>
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**ICS** 21.060.10, 21.060.20

**Võtmesõnad:** bolts, dimensional tolerances, fasteners, geometric tolerances, iso metric thread, nuts, run-outtolerances, screws, studs, tapped screws, tolerances of position

ICS 21.060.10; 21.060.20

English version

Tolerances for fasteners

Part 1: Bolts, screws, studs and nuts – Product grades A, B and C  
(ISO 4759-1 : 2000)

Tolérances pour éléments de fixation – Partie 1: Vis, goujons et écrous – Grades A, B et C  
(ISO 4759-1 : 2000)

Toleranzen für Verbindungselemente – Teil 1: Schrauben und Muttern – Produktklassen A, B und C  
(ISO 4759-1 : 2000)

This European Standard was approved by CEN on 2000-10-07.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Management Centre: rue de Stassart 36, B-1050 Brussels

## Foreword

International Standard

ISO 4759-1 : 2000 Tolerances for fasteners – Part 1: Bolts, screws, studs and nuts – Product grades A, B and C,

which was prepared by ISO/TC 2 'Fasteners' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 185 'Threaded and non-threaded mechanical fasteners and accessories', the Secretariat of which is held by DIN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by May 2001 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 4759-1 : 2000 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

## Contents

	Page
<b>Foreword</b> .....	2
<b>1 Scope</b> .....	3
<b>2 Normative references</b> .....	4
<b>3 Tolerances for metric bolts, screws and studs</b> .....	5
<b>4 Tolerances for metric nuts</b> .....	27
<b>5 Tolerances for tapping screws</b> .....	38
<b>Annex A (informative) Tolerances</b> .....	46
<b>Annex B (informative) Examples of dimensioned and toleranced fasteners</b> .....	48
<b>Annex C (informative) Examples of gauges and other measuring devices</b> .....	51

## 1 Scope

This part of ISO 4759 specifies a selection of tolerances for bolts, screws, studs and nuts with ISO metric threads and with product grades A, B and C and for tapping screws with product grade A.

NOTE The product grades refer to the size of the tolerances where grade A is the most precise and grade C is the least precise.

The tolerances, except tolerances for threads, are selected from the system of limits and fits specified in ISO 286-1 and ISO 286-2. The tolerances for metric threads are taken from the series of tolerance classes specified in ISO 965-3. The tolerances for tapping screw threads are covered in ISO 1478.

The tolerances of form and position are specified and indicated in accordance with ISO 1101, ISO 8015 and ISO 2692.

The tolerances specified in this part of ISO 4759 apply to fasteners prior to coating unless otherwise specified. See also ISO 4042.

Deviations from the tolerances specified in this part of ISO 4759 are only permitted in product standards where there are valid technical reasons. In cases where there is a difference between the tolerance requirements in this part of ISO 4759 and the product standard, the product standard takes precedence.

It is recommended that these tolerances also be used for non-standard fasteners.

Dimensions and tolerances given in this part of ISO 4759 are in millimetres.

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## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 4759. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 4759 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 225:1983, *Fasteners — Bolts, screws, studs and nuts — Symbols and designation of dimensions.*

ISO 286-1:1988, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits.*

ISO 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts.*

ISO 885:2000, *General purpose bolts and screws — Metric series — Radii under the head.*

ISO 965-3:1998, *ISO general purpose metric screw threads — Tolerances — Part 3: Deviations for constructional screw threads.*

ISO 1101:2000, *Geometrical Product Specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out.*

ISO 1478:1999, *Tapping screws thread.*

ISO 1479:1983, *Hexagon head tapping screws.*

ISO 2692:1988, *Technical drawings — Geometrical tolerancing — Maximum material principle.*

ISO 4032:1999, *Hexagon nuts, style 1 — Product grades A and B.*

ISO 4042:1999, *Fasteners — Electroplated coatings.*

ISO 4757:1983, *Cross recesses for screws.*

ISO 7053:1992, *Hexagon washer head tapping screws.*

ISO 7721:1983, *Countersunk head screws — Head configuration and gauging.*

ISO 8015:1985, *Technical drawings — Fundamental tolerancing principle.*

ISO 10509:1992, *Hexagon flange head tapping screws.*

ISO 10642:1997, *Hexagon socket countersunk head screws.*

ISO 10664:1999, *Hexalobular internal driving feature for bolts and screws.*