

**Fasteners - Quality assurance system**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 16426:2003 sisaldab Euroopa standardi EN ISO 16426:2002 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 19.03.2003 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.11.2002.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 16426:2003 consists of the English text of the European standard EN ISO 16426:2002.

This standard is ratified with the order of Estonian Centre for Standardisation dated 19.03.2003 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.11.2002.

The standard is available from Estonian standardisation organisation.

ICS 21.060.01

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ICS 21.060.01

English version

Fasteners - Quality assurance system (ISO 16426:2002)

Eléments de fixation - Système d'assurance qualité (ISO  
16426:2002)

Verbindungselemente - Qualitätssicherungssystem (ISO  
16426:2002)

This European Standard was approved by CEN on 15 October 2002.

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## Foreword

This document (EN ISO 16426:2002) has been prepared by Technical Committee ISO/TC 2 "Fasteners" in collaboration with Technical Committee CEN/TC 185 "Threaded and non-threaded mechanical fasteners and accessories", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2003, and conflicting national standards shall be withdrawn at the latest by May 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Endorsement notice

The text of ISO 16426:2002 has been approved by CEN as EN ISO 16426:2002 without any modifications.

NOTE Normative references to International Standards are listed in Annex ZA (normative).

## Annex ZA (normative)

### Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 3269	2000	Fasteners - Acceptance inspection	EN ISO 3269	2000
ISO 9000	2000	Quality management systems - Fundamentals and vocabulary	EN ISO 9000	2000
ISO 15330	1999	Fasteners - Preloading test for the detection of hydrogen embrittlement - Parallel bearing surface method	EN ISO 15330	1999

# INTERNATIONAL STANDARD

**ISO**  
**16426**

First edition  
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## **Fasteners — Quality assurance system**

*Éléments de fixation — Système d'assurance qualité*



Reference number  
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 16426 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

Annex A of this International Standard is for information only.



## Introduction

This International Standard is the second in a series of two standards for mechanical fastener quality using a detection system and a prevention system respectively.

- ISO 3269 deals with acceptance inspection based on statistical sampling of fasteners at a given AQL level at the time of receiving and constitutes a detection system intended primarily for use by the customer.
- ISO 16426 deals with fully traceable mechanical fasteners which have been produced under a verifiable quality assurance system and constitutes a prevention system intended primarily for use by the fastener manufacturer.

# Fasteners — Quality assurance system

## 1 Scope

This International Standard specifies requirements for a fastener quality assurance system to be met by the fastener manufacturers and distributors. These requirements are intended to reduce or prevent the production of non-conforming fasteners with the objective of approaching zero defects for the characteristics specified.

This International Standard outlines the requirements from receipt of raw material through the manufacturing process to delivery at the distributor or the user, who is the installer.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard 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 3269:2000, *Fasteners — Acceptance inspection*

ISO 9000:2000, *Quality management systems — Fundamentals and vocabulary*

ISO 15330:1999, *Fasteners — Preloading test for the detection of hydrogen embrittlement — Parallel bearing surface method*

## 3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

### 3.1

#### **advanced quality planning**

process that facilitates an interpretation of design objectives into design requirements that are an integral part of the fastener quality plan, including process failure mode and effects analysis and control plans

### 3.2

#### **alter**

to perform any step after original manufacture which changes the geometry, mechanical properties or the performance characteristics of a mechanical fastener

### 3.3

#### **$C_{pk}$ value**

measure of the capability of the process in relation to the process average based on the distance in units of standard deviation between the process average and the closest specification limit for characteristics that have a normal distribution pattern