

**Üldisteks tõstetöödeks ettenähtud terasest sepistatud
rõngaspoldid, klass 4**

Forged steel eyebolts grade 4 for general lifting purposes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 3266:2010 sisaldab Euroopa standardi EN ISO 3266:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.06.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 01.05.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 3266:2010 consists of the English text of the European standard EN ISO 3266:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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English Version

Forged steel eyebolts grade 4 for general lifting purposes (ISO
3266:2010)

Anneaux à tige de classe 4 en acier forgé pour applications
générales de levage (ISO 3266:2010)

Geschmiedete Ringschrauben aus Stahl, Güteklasse 4, für
allgemeine Hebezwecke (ISO 3266:2010)

This European Standard was approved by CEN on 15 April 2010.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 3266:2010) has been prepared by Technical Committee ISO/TC 111 "Round steel link chains, chain slings, components and accessories" in collaboration with Technical Committee CEN/TC 168 "Chains, ropes, webbing, slings and accessories - Safety" the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2010, and conflicting national standards shall be withdrawn at the latest by November 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

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

Endorsement notice

The text of ISO 3266:2010 has been approved by CEN as a EN ISO 3266:2010 without any modification.

Annex ZA (informative)

Relationship between this International Standard and the Essential Requirements of EU Directive 2006/42/EC

This International Standard has been prepared under a mandate given to CEN by the European Commission the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this International Standard and Directive 2006/42/EC

Clauses/subclauses of this International Standard	Essential Requirements (ERs) of EU Directive 2006/42/EC	Qualifying remarks/Notes
1	4.1	
5, 6, 7, 8, 9, 10, 12, 13	4.1.2.5 d), f)	
14, 15	4.3.2	CE marking is mandatory
16	4.4.1	

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

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Introduction

This document is a type-C standard as stated in ISO 12100.

The equipment concerned as well as the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this International Standard.

When provisions of this type-C standard are different from those which are stated in type-A or type-B standards, the provisions of this type-C standard take precedence over the provisions of the other standards, for equipment that have been designed and built according to the provisions of this type-C standard.

Forged steel eyebolts grade 4 for general lifting purposes

1 Scope

This International Standard specifies the general characteristics, performance and critical dimensions necessary for interchangeability and compatibility with other components, of forged steel eyebolts grade 4 for general lifting purposes. These eyebolts can be used for axial and inclined loading.

This International Standard specifies the dimensions of the eyes of eyebolts permitting direct connection with shackles of the same working load limit as those defined in ISO 2415. These dimensions also allow designs with a larger eye which can permit direct connection with sling hooks of similar working load limit.

This International Standard covers all significant hazards, hazardous situations and events relevant to eyebolts grade 4 as defined in Clause 4.

This International Standard is applicable to eyebolts grade 4 for use in the temperature range of $-20\text{ }^{\circ}\text{C}$ to $200\text{ }^{\circ}\text{C}$.

This International Standard is not applicable to eyebolts which are not forged in one piece.

This International Standard is not applicable to forged steel eyebolts grade 4 manufactured before the date of its publication as an International Standard.

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 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 148-2, *Metallic materials — Charpy pendulum impact test — Part 2: Verification of testing machines*

ISO 261, *ISO general purpose screw threads — General plan*

ISO 643, *Steels — Micrographic determination of the apparent grain size*

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

ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)*

ISO 7500-1:2004, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

EN 10228-1, *Non-destructive testing of steel forgings — Part 1: Magnetic particle inspection*

EN 10228-2, *Non-destructive testing of steel forgings — Part 2: Penetrant testing*

3 Terms and definitions

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

3.1

nominal size

thread size

size related to the nominal diameter of the thread, d , of an eyebolt

3.2

working load limit

WLL

maximum mass that an eyebolt is authorized to sustain along its centreline axis in general lifting service

3.3

traceability code

series of letters and/or numbers marked on an eyebolt that enables its manufacturing history, including the identity of the cast of steel used, to be traced

3.4

proof force

force applied to the eyebolt during the manufacturing proof test

3.5

breaking force

maximum force reached during the static tensile test of the eyebolt at which the eyebolt fails to retain the load

3.6

axial loading

F_a

loading along the centreline axis of the eyebolt

See Figure 1.

3.7

inclined loading

F_β

loading at an angle β to the centreline axis

See Figure 1.

3.8

lot

specified number of eyebolts from which samples are selected for testing purposes and which have been manufactured from the same cast of steel and subjected to the same heat treatment

NOTE Adapted from ISO 8539:2009, definition 3.6.