

**Troopide komponendid. Ohutus. Osa 5:  
Sepaterasest fiksaatoriga tõstekonksud. Klass 4  
KONSOLIDEERITUD TEKST**

Components for slings - Safety - Part 5: Forged steel  
lifting hooks with latch - Grade 4 CONSOLIDATED  
TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1677-5:2001+A1:2008 sisaldab Euroopa standardi EN 1677-5:2001+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 15.12.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 12.11.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1677-5:2001+A1:2008 consists of the English text of the European standard EN 1677-5:2001+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 15.12.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 12.11.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** fork ends, grades, grades (quality), hoisting slings, hooks, lifting slings, load capacity, marking, mechanical properties, quality, round steel chains, safety, safety catch, safety requirements, specification (approval), specifications, testing, wire rope slings

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English Version

**Components for slings - Safety - Part 5: Forged steel lifting  
hooks with latch - Grade 4**

Accessoires pour élingues - Sécurité - Partie 5: Crochets  
de levage en acier forgé à linguet - Classe 4

Einzelteile für Anschlagmittel - Sicherheit - Teil 5:  
Geschmiedete Haken mit Sicherungsklappe - Güteklasse 4

This European Standard was approved by CEN on 18 February 2001 and includes Amendment 1 approved by CEN on 9 September 2008.

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This European Standard exists 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 CEN Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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## Foreword

This document (EN 1677-5:2001+A1:2008) has been prepared by 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 May 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document supersedes EN 1677-5:2001.

This document includes Amendment 1, approved by CEN on 2008-09-09.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

This European Standard 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(s).

**A1** For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

The other Parts of EN 1677 for components for slings are:

- Part 1: Forged steel components - Grade 8
- Part 2: Forged steel lifting hooks with latch - Grade 8
- Part 3: Forged steel self-locking hooks - Grade 8
- Part 4: Links - Grade 8
- Part 6: Links - Grade 4

Annexes A and B of this European Standard are informative.

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, 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 United Kingdom.

## Introduction

This European Standard has been prepared to be a harmonized standard providing one means of complying with the essential safety requirements of the Machinery Directive and associated EFTA regulations.

The hooks covered by this Part of EN 1677 are normally supplied to be part of a sling, but they may also be used for other applications. In such instances it is important that the hook design is checked to ensure its fitness for the intended use.

The extent to which hazards are covered is indicated in the scope. In addition, lifting equipment shall conform as appropriate to EN 292 for hazards that are not covered by this standard.

## 1 Scope

This Part of EN 1677 specifies requirements for forged steel lifting hooks of grade 4 having latch and eye up to 31,5 t WLL, mainly for use in:

- chain slings according to EN 818-5
- steel wire rope slings according to prEN 13414-1:1998
- textile slings according to EN 1492-1, EN 1492-2.

intended for lifting objects, materials or goods.

This Part of EN 1677 does not apply to hand forged hooks.

The hazards covered by this Part of EN 1677 are identified in clause 4.

Annex A gives the bases for calculation of hook dimensions.

Annex B gives an example of a designation system for hooks of grade 4.

## 2 Normative references

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).

EN 292-1, Safety of machinery - Basic Concepts - General principles for design - Part 1 : Basic Terminology, methodology

EN 292-2:1991/A.1:1995, Safety of machinery - Basic concepts - General principles for design - Part 2 : Technical principles and specifications (Amendment A.1:1995)

EN 818-5, Short-link chain for lifting purposes – Safety - Part 5: Chain slings - Grade 4

EN 818-6, Short link chain for lifting purposes – Safety - Part 6: Chain slings - Specification for information for use and maintenance to be provided by the manufacturer

EN 1050:1996, Safety of machinery - Principles for risk assessment

EN 1492-1, Textile slings – Safety - Part 1: Flat woven webbing slings made of man-made fibres

EN 1492-2, Textile slings – Safety - Part 2: Round slings made of man-made fibres

EN 10002-2:1991, Metallic materials - Tensile testing - Part 2: Verification of the force measuring system of the tensile testing machines

EN 10025:1990+A1:1993, Hot rolled products of non-alloy structural steels - Technical delivery - conditions

prEN 13414-1:1998, Steel wire ropes for slings – Safety - Part 1: Wire rope slings

EN 45012, General requirements for bodies operating assessment and certification/registration of quality systems (ISO/IEC Guide 62:1996)

EN ISO 9002:1994, Quality systems - Model for quality assurance in production, installation and servicing

ISO 643:1983, Steels - Micrographic determination of the ferritic or austenitic grain size

### 3 Terms and definitions

For the purposes of this Part of EN 1677, the following terms and definitions apply.

#### 3.1

##### **working load limit (WLL)**

maximum mass that a hook is authorized to sustain in general lifting service, expressed as a code

NOTE This term has the same meaning as the term maximum working load used in annex A of EN 292-2:1991/A1:1995.

#### 3.2

##### **manufacturing proof force (MPF)**

force applied to the hook during the manufacturing proof test

#### 3.3

##### **breaking force (BF)**

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

#### 3.4

##### **traceability code**

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

#### 3.5

##### **competent person**

designated person, suitably trained, qualified by knowledge and practical experience, and with the necessary instruction to enable the required test and examination to be carried out

NOTE 4.18 of EN ISO 9002:1994 gives guidance on training.

#### 3.6

##### **lot**

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