

**Troopide komponendid. Ohutus. Osa 4: Lülid,
Klass 8 KONSOLIDEERITUD TEKST**

Components for slings - Safety - Part 4: Links, Grade 8
CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1677-4:2001+A1:2008 sisaldab Euroopa standardi EN 1677-4:2000+A1:2008 ingliskeelset teksti.

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English Version

Components for slings - Safety - Part 4: Links, Grade 8

Accessoires pour élingues - Sécurité - Partie 4: Mailles,
Classe 8Einzelteile für Anschlagmittel - Sicherheit - Teil 4:
Einzelglieder, Güteklasse 8

This European Standard was approved by CEN on 30 September 2000 and includes Amendment 1 approved by CEN on 9 September 2008.

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Foreword

This document (EN 1677-4:2000+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of an identical text or by endorsement, at the latest by May 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.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 1677-4:2000.

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** and **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**

It is a Part of a products standard related to safety for components for slings.

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 5: Forged steel lifting hooks with latch - Grade 4
- Part 6: Links - Grade 4

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 links 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 link 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 or welded steel master links, intermediate master links, master link assemblies and lower terminal links of grade 8 up to 132 t WLL, mainly for use in:

- chain slings according to EN 818-4
- steel wire rope slings
- textile slings according to EN 1492-1:2000, EN 1492-2:2000.

intended for lifting objects, materials or goods.

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

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

A₁ Annexes ZA and ZB give the relationship with EU-Directives. **A₁**

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/A1:1995, Safety of machinery - Basic concepts - General principles for design - Part 2: Technical principles and specifications (Amendment 1: 1995)

EN 818-4:1996, Short link chain for lifting purposes – Safety - Part 4: Chain slings - grade 8

EN 818-6:2000, 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 of risk assessment.

EN 1492-1:2000, Textile slings – Safety - Part 1: Flat woven webbing slings made of man-made fibres

EN 1492-2:2000, Textile slings – Safety - Part 2: Round slings made of man-made fibres

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

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

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

EN 10228-1:1999, Non-destructive testing of steel forgings - Part 1: Magnetic particle inspection

EN 10228-2:1998, Non-destructive testing of steel forgings - Part 2: Penetrant testing

EN 45012, General criteria for certification bodies operating quality system certification

ISO 643 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 link is authorized to sustain in general lifting service.

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 link during the manufacturing proof test.

3.3

breaking force (BF)

maximum force reached during the static tensile test of the link at the end of which the link fails to retain the load.

3.4

sling

assembly consisting of chain, wire rope or textile joined to upper and lower terminals suitable for attaching loads to the hook of a crane or other lifting machine.

3.5

master link

link forming the upper terminal of a sling by means of which the sling is attached to the hook of a crane or other lifting machine.

3.6

intermediate master link

link used to connect one or two legs of a sling to a master link.

3.7

master link assembly

assembly consisting of a master link together with two intermediate master links.