

**Troopide komponendid. Ohutus. Osa 6:
Lülid. Klass 4**

Components for slings - Safety - Part 6: Links -
Grade 4

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1677-6:2001 sisaldab Euroopa standardi EN 1677-6:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.12.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1677-6:2001 consists of the English text of the European standard EN 1677-6:2001.</p> <p>This document is endorsed on 19.12.2001 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>Käsitlusala: This part of EN 1677 specifies requirements for welded steel master links, intermediate master links, master link assemblies and lower terminal links of grade 4 up to 67 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.</p>	<p>Scope: This part of EN 1677 specifies requirements for welded steel master links, intermediate master links, master link assemblies and lower terminal links of grade 4 up to 67 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.</p>
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Võtmesõnad: grades, intermediate I, last members, lifting slings, load capacity, marking, mechanical properties, quality, round steel chains, safety, safety catch, safety requirements, specification (approval), specifications, suspension members, testing, wire rope slings

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English version

Components for slings - Safety - Part 6: Links - Grade 4Accessoires pour élingues - Sécurité - Partie 6: Mailles -
Classe 4Einzelteile für Anschlagmittel - Sicherheit - Teil 6:
Einzelglieder - Güteklasse 4

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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 European Standard 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 October 2001, and conflicting national standards shall be withdrawn at the latest by October 2001.

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 EC Directive(s).

For relationship with EC Directive(s), see informative Annex ZA, which is an integral part of this standard.

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 5: Forged steel lifting hooks with latch - 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the 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 welded steel master links, intermediate master links, master link assemblies and lower terminal links of grade 4 up to 67 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.

The hazards covered by this Part of EN 1677 are identified in clause 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 /A1:1995	Safety of machinery - Basic concepts - General principles for design Part 2: Technical principles and specifications (Amendment 1: 1995)
EN 818-5:1999	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 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

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 link is authorized to sustain in general lifting service

NOTE This term has the same meaning as the term maximum working load used in the amendment to 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 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

3.8

lower terminal

link, hook or other device fitted at the end of a leg of a sling, remote from the master link or upper terminal

3.9

traceability code

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