

**Terastraadist trosside tropid. Ohutus. Osa 1:  
Tropid üldiste tõsteteenuste osutamiseks  
KONSOLIDEERITUD TEKST**

Steel wire rope slings - Safety - Part 1: Slings for  
general lifting service CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13414-1:2003+A2:2008 sisaldab Euroopa standardi EN 13414-1:2003+A2:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 10.11.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.10.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13414-1:2003+A2:2008 consists of the English text of the European standard EN 13414-1:2003+A2:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 10.11.2008 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 29.10.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** cables, inspectio, lifting equipment, load capacity, ropes, safety, safety engineering, safety requirements, specification (approval), specifications, steel wires, steel-wire ropes, terminal fittings (ropes), testing, wire rope, wire rope slings, wire ropes

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Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

English Version

**Steel wire rope slings - Safety - Part 1: Slings for general lifting service**

Elingues en câbles d'acier - Sécurité - Partie 1: Elingues pour applications générales de levage

Anschlagseile aus Stahldrahtseilen - Sicherheit - Teil 1: Anschlagseile für allgemeine Hebezwecke

This European Standard was approved by CEN on 26 June 2003 and includes Amendment 1 approved by CEN on 29 April 2005 and Amendment 2 approved by CEN on 18 September 2008.

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# Contents

Page

Foreword.....	3
Introduction .....	4
1 Scope .....	4
2 Normative references .....	5
3 Terms and definitions .....	5
4 Hazards .....	6
Table 1 — Hazards and associated requirements .....	6
5 Safety requirements and/or measures .....	6
5.1 General.....	6
5.2 Single-leg sling .....	7
Table 2 — Examples of single-leg slings and terminal fittings.....	9
5.3 Ferrule-secured and spliced endless slings.....	10
5.4 Multi-leg sling.....	11
Figure 1 — Multi-leg slings .....	13
Table 3 — <b>A1</b> Working load limits for slings using fibre cored rope of classes 6x19 and 6x36 in grade 1770 and having ferrule-secured eye terminations <b>A1</b> .....	14
Table 4 — <b>A1</b> Working load limits for slings using steel cored rope of classes 6x19, 6x36 and 8x36 in grade 1770 and having ferrule-secured eye terminations <b>A1</b> .....	15
6 Verification of the safety requirements and/or measures .....	16
6.1 Components of the wire rope sling.....	16
6.2 Rope construction .....	16
6.3 Length of the sling.....	16
6.4 WLL of terminal fittings.....	16
6.5 Formation of a multi-leg sling .....	16
7 Information for use .....	16
7.1 Marking .....	16
7.2 Certification .....	17
Annex A (informative) Information which should be supplied with an enquiry or order.....	18
Annex B (informative) Rating of multi-leg slings for general service .....	19
Annex ZA (informative) <b>A2</b> Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC <b>A2</b> .....	20
Annex ZB (informative) <b>A2</b> Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC <b>A2</b> .....	21
Bibliography .....	22

## Foreword

This document (EN 13414-1:2003+A2:2008) 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 April 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document supersedes EN 13414-1:2003.

This document includes Amendment 1, approved by CEN on 2005-04-29 and Amendment 2, approved by CEN on 2008-09-18.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** and **A2**.

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(s).

**A2** For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A2**

The other Parts of this European Standard are:

- Part 2: Specification for information for use and maintenance to be provided by the manufacturer
- Part 3: Grommets and cable-laid slings

Annexes A and B are informative.

This document includes a Bibliography.

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 a means of complying with the essential safety requirements of the Machinery Directive and associated EFTA regulations.

This European Standard is a type C standard as specified in EN 292.

While producing this standard it was assumed that negotiation occurs between the manufacturer and the user to decide whether sling eyes are to be spliced or ferrule-secured and whether a thimble is to be fitted. For endless slings it was assumed that negotiation occurs to decide whether the interlapping rope ends are to be spliced or ferrule-secured.

Purchasers are advised to specify in their purchasing contract that the supplier operates a certified quality assurance system applicable to this standard (e.g. EN ISO 9001) to ensure that products claimed to comply consistently achieve the required level of quality.

## 1 Scope

This European Standard specifies the construction requirements, calculation of WLL, verification, certification and marking of steel wire rope slings for general lifting service. It covers single-, two-, three- and four-leg slings, with ferrule-secured or spliced eye terminations and spliced or ferrule-secured endless slings made from 8 mm to 60 mm diameter 6 strand ordinary lay steel wire rope with fibre or steel core and 8 strand ordinary lay steel wire rope with a steel core conforming to EN 12385-4.

The standard assumes a working coefficient (factor of safety) of five.

**[A1]** This standard does not cover slings for single use, i.e. one trip slings, having a working coefficient lower than 5. **[A1]**

This standard does not cover matched sets of slings with spliced eyes.

This document is not applicable to slings which are manufactured before the date of publication of this document by CEN.

The hazards covered by this Part of EN 13414 are identified in clause 4.

These wire rope slings are intended for lifting objects, materials or goods.

Guidance on the information which should be provided with an enquiry or order is given in annex A.

**NOTE** Information for use and maintenance, including operating temperature ranges, is given in Part 2 of this standard.

## 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 292-2:1991/A1:1995, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles and specifications.*

EN 1050:1996, *Safety of machinery – Principles for risk assessment.*

EN 1677-1, *Components for slings – Safety – Part 1: Forged steel components – Grade 8.*

EN 1677-2, *Components for slings – Safety – Part 2: Forged steel lifting hooks with latch – Grade 8.*

EN 1677-3, *Components for slings – Safety – Part 3: Forged steel self-locking hooks – Grade 8.*

EN 1677-4, *Components for slings – Safety – Part 4: Links – Grade 8.*

EN 1677-5, *Components for slings – Safety – Part 5: Forged steel lifting hooks with latch – Grade 4.*

EN 1677-6, *Components for slings – Safety – Part 6: Links - Grade 4.*

EN 12385-1, *Steel wire ropes – Safety – Part 1: General requirements.*

EN 12385-2:2002, *Steel wire ropes – Safety – Part 2: Definitions, designation and classification.*

EN 13411-1, *Terminations for steel wire ropes – Safety – Part 1: Thimbles for steel wire rope slings.*

EN 13411-2, *Terminations for steel wire ropes – Safety – Part 2: Splicing of eyes for wire rope slings.*

EN 13411-3, *Terminations for steel wire ropes – Safety – Part 3: Ferrules and ferrule-securing.*

EN 13889, *Forged steel shackles for general lifting purposes – Dee shackles and bow shackles – Grade 6 – Safety.*

## 3 Terms and definitions

For the purposes of this European Standard the terms and definitions given in EN 12385-2:2002 and the following apply.

### 3.1

#### **steel wire rope sling for general lifting service**

assembly of components which includes one or more single part legs or an endless sling which is intended for a variety of lifting operations and not designed for one specific lifting application

### 3.2

#### **terminal fittings**

link, link assembly, hook or other device permanently fitted at the upper or lower end of a sling and intended to connect the sling to the load or the lifting machine