

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

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13414-1:2003 sisaldab Euroopa standardi EN 13414-1:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.09.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13414-1:2003 consists of the English text of the European standard EN 13414-1:2003.</p> <p>This document is endorsed on 17.09.2003 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 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</p>	<p>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</p>
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ICS 53.020.30

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

ICS 53.020.30

English version

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

Elingues de câbles en 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.

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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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 13414-1:2003) 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 February 2004, and conflicting national standards shall be withdrawn at the latest by February 2004.

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 EC Directive(s).

For relationship with EC Directives, see informative annex ZA, which is an integral part of this document.

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

This is the first edition of this Part of this standard.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

0 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.

This standard does not cover slings for single use, i.e. one trip slings.

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.*
- prEN 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

3.2.1

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 (see Figure 1)

3.2.2

intermediate master link

link used to connect one or two legs of a sling to a master link (see Figure 1)

NOTE Intermediate links can be assembled with a master link to form a permanent master link assembly.