

**Ohutusnõuded inimeste transportimiseks mõeldud  
köisteepaigaldistele. Üldnõuded. Osa 2: Täiendavad  
nõuded reverseeritavatele mitme trossiga piduriteta  
liikuritega rippköisteedele**

Safety requirements for cableway installations designed to carry persons - General requirements - Part 2: Additional requirements for reversible bicable aerial ropeways without carrier truck brakes

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12929-2:2004 sisaldab Euroopa standardi EN 12929-2:2004 ingliskeelset teksti.

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This Estonian standard EVS-EN 12929-2:2004 consists of the English text of the European standard EN 12929-2:2004.

This standard is ratified with the order of Estonian Centre for Standardisation dated 21.12.2004 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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ICS 45.100

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English version

**Safety requirements for cableway installations designed to carry  
persons - General requirements - Part 2: Additional  
requirements for reversible bicable aerial ropeways without  
carrier truck brakes**

Prescriptions de sécurité pour les installations à câbles  
transportant des personnes - Dispositions générales -  
Partie 2: Prescriptions complémentaires pour les  
téléphériques bicâbles à va et vient sans frein de chariot

Sicherheitsanforderungen für Seilbahnen für den  
Personenverkehr - Allgemeine Bestimmungen - Teil 2:  
Ergänzende Anforderungen für Zweiseil - Pendelbahnen  
ohne Tragseilbremse

This European Standard was approved by CEN on 23 August 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN 12929-2:2004) has been prepared by Technical Committee CEN/TC 242 "Safety requirements for passenger transportation by rope", the secretariat of which is held by AFNOR.

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 2005, and conflicting national standards shall be withdrawn at the latest by April 2005.

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).

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

EN 12929 with the generic title "*Safety requirements for cable way installations designed to carry persons - General requirements*", is in two parts:

- *Part 1: Requirements for all installations*
- *Part 2: Additional requirements for reversible bicable aerial ropeways without carrier truck brakes*

This document forms part of the standards programme approved by the CEN Technical Board on safety requirements for cableway installations designed to carry persons:

- 1) Safety requirements for cableway installations designed to carry persons – Terminology.
- 2) Safety requirements for cableway installations designed to carry persons - General requirements.
- 3) Safety requirements for cableway installations designed to carry persons – Calculations.
- 4) Safety requirements for cableway installations designed to carry persons - Ropes.
- 5) Safety requirements for cableway installations designed to carry persons - Tensioning devices.
- 6) Safety requirements for cableway installations designed to carry persons – Drive systems and other mechanical equipment.
- 7) Safety requirements for cableway installations designed to carry persons - Carriers.
- 8) Safety requirements for cableway installations designed to carry persons - Electrical equipment other than for drive systems.
- 9) Safety requirements for cableway installations designed to carry persons - Civil engineering works.
- 10) Safety requirements for cableway installations designed to carry persons – Pre-commissioning inspection, maintenance and operational inspection and checks.
- 11) Safety requirements for cableway installations designed to carry persons – Recovery and evacuation.
- 12) Safety requirements for cableway installations designed to carry persons - Operation.
- 13) Safety requirements for cableway installations designed to carry persons - Quality assurance.

This series of standards forms a complete set with regard to the design, manufacture, construction, maintenance and operation of all cableway installations for designed to carry persons.

In respect of ski-tows, the drafting of this document has been guided by the works of the International Organisation for Transportation by Rope (OITAF).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This document specifies additional safety requirements for reversible bicable aerial ropeways without carrier truck brakes. This standard is applicable to the various types of installations and takes into account their environment.

It contains:

- additional requirements relating to the integrity of the haul rope loop;
- additional requirements intended to prevent specific operational incidents;
- requirements concerning the attachment of the carriers to the haul rope.

It does not apply to installations for the transportation of goods, nor to inclined lifts.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1709, *Safety requirements for cableway installations designed to carry persons – Pre-commissioning inspection, maintenance and operational inspection and checks*

prEN 1907:2004, *Safety requirements for cableway installations designed to carry persons - Terminology.*

EN 1908, *Safety requirements for cableway installations designed to carry persons – Tensioning devices.*

EN 1909, *Safety requirements for cableway installations designed to carry persons – Recovery and evacuation.*

EN 12397, *Safety requirements for cableway installations designed to carry persons – Operation.*

EN 12408, *Safety requirements for cableway installations designed to carry persons – Quality assurance.*

EN 12927-1, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 1: Selection criteria for ropes and their end fixings.*

EN 12927-2, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 2: Safety coefficients.*

EN 12927-3, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 3: Splicing of haul ropes, carrying hauling ropes and 6 strand towing ropes.*

EN 12927-4, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 4: End fixings.*

EN 12927-5, *Safety requirements for passenger transportation by rope – Ropes – Part 5: Storage, transportation, installation and tensioning.*

EN 12927-6, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 6: Discard criteria.*

EN 12927-7, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 7: Inspection, repair and maintenance.*

EN 12927-8, *Safety requirements for cableway installations designed to carry persons – Ropes – Part 8: Magnetic rope testing (MRT).*

EN 12929-1:2004, *Safety requirements for cableway installations designed to carry persons – General requirements – Part 1: Requirements for all installations.*

EN 12930, *Safety requirements for cableway installations designed to carry persons – Calculations.*

EN 13107, *Safety requirements for cableway installations designed to carry persons – Civil engineering works.*

EN 13223, *Safety requirements for cableway installations designed to carry persons – Drive systems and other mechanical equipment.*

EN 13243, *Safety requirements for cableway installations designed to carry persons – Electrical equipment other than for drive systems.*

prEN 13796-1, *Safety requirements for cableway installations designed to carry persons – Carriers – Part 1: Grips, carrier trucks, on-board brakes, cabins, chairs, carriages, maintenance carriers, tow-hangers.*

prEN 13796-2, *Safety requirements for cableway installations designed to carry persons - Carriers – Part 2: Slipping resistance tests for grips.*

prEN 13796-3, *Safety requirements for cableway installations designed to carry persons - Carriers – Part 3: Fatigue testing.*

### **3 Terms and definitions**

For the purposes of this document, the terms and definitions given in prEN 1907:2004 and in EN 12929-1:2004 and the following apply.

### **4 Symbols and abbreviations**

Symbols and abbreviations are defined with the formula in which they are used.

### **5 General requirements**

#### **5.1 Application of the standard**

The requirements of this document, together with those of EN 1709, EN 1908, EN 1909, EN 12397, EN 12408, EN 12927 (Parts 1 to 8), EN 12929-1, EN 12930, EN 13107, EN 13223, EN 13243 and prEN 13796 (Parts 1 to 3), apply to reversible bicable aerial ropeways without carrier truck brakes.

#### **5.2 Safety principles**

##### **5.2.1 General**

The safety principles as set out in EN 12929-1 apply.

In addition, the following hazard scenarios and safety requirements relative to the scope of this document are to be taken into consideration.