

OHUTUSNÕUDED INIMESTE TRANSPORTIMISEKS  
MÕELDUD KÖISTEPAIGALDISTELE. KÖIED

Safety requirements for cableway installations designed  
to carry persons - Ropes

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                     |                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| See Eesti standard EVS-EN 12927:2019 sisaldab Euroopa standardi EN 12927:2019 ingliskeelset teksti.                 | This Estonian standard EVS-EN 12927:2019 consists of the English text of the European standard EN 12927:2019.                      |
| Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.                                                  | This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation. |
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English Version

## Safety requirements for cableway installations designed to carry persons - Ropes

Prescriptions de sécurité des installations à câbles  
transportant des personnes - Câbles

Sicherheitsanforderungen an Seilbahnen für die  
Personenbeförderung - Seile

This European Standard was approved by CEN on 11 February 2019.

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## European foreword

This document (EN 12927:2019) 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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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 Regulation (EU) 2016/424.

For relationship with Regulation (EU) 2016/424, see informative Annex ZA, which is an integral part of this document.

This document replaces:

- EN 12927-1:2004: Safety requirements for cableway installations designed to carry persons - Ropes - Part 1: Selection criteria for ropes and their end fixings"
- EN 12927-2:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 2: Safety factors
- EN 12927-3:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 3: Long splicing of 6 strand hauling, carrying hauling and towing ropes
- EN 12927-4:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 4: End fixings
- EN 12927-5:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 5: Storage, transportation, installation and tensioning
- EN 12927-6:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 6: Discard criteria
- EN 12927-7:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 7: Inspection, repair and maintenance
- EN 12927-8:2004: Safety requirements for cableway installations designed to carry persons - Ropes – Part 8: Magnetic rope testing (MRT)

During the systematic review regarding the EN 12927 Part 1 to Part 8, it was decided to merge the 8 parts into one single document.

In comparison to EN 12927, parts 1:2004 to 8:2004, the following major changes have been applied:

- the former parts 1 to 8 have been merged to a single document in order to simplify orientation in working with the standard. Following this principle, the former paragraph-references had to be changed in total.

Therefore, especially general chapters like “normative references”, “terms and definitions”, “safety principles” and so on, now have been compacted for a better overview;

- ambiguous or unclear details of the former versions have been generally rewritten and improved;
- technical developments since the last versions have been adopted to the actual state of the art, e.g. inclusion of optical inspection devices;
- requirements and descriptions in the scope of inspection methods have been improved and extended to details, especially for visual inspection;
- requirements and descriptions for storage, handling and transportation have been improved and extended to details.

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



## 1 Scope

This document specifies the safety requirements applicable to:

- Selection criteria for ropes and their end fixings
- Safety factors (excluding brake ropes)
- Discard criteria
- Storage, handling, transportation and installation (including tensioning, connecting and/or splicing)
- Long splicing of 6 strand haulage, carrying-hauling rope and carrying-hauling rope (for ski-tow)
- End fixings
- Maintenance

and the minimum requirements applicable to:

- MRT, visual and radiographic equipment and procedures for the examination of steel wire ropes.

This document is not applicable to cableway installations for the transportation of goods nor to lifts.

This document includes requirements relating to the prevention of accidents and the protection of workers irrespective of the application of national regulations.

National regulations of a building or federal/state nature or which serve to protect particular groups of people remain unaffected.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1559-2, *Founding — Technical conditions of delivery — Part 2: Additional requirements for steel castings*

EN 1709, *Safety requirements for cableway installations designed to carry persons — Precommissioning inspection, maintenance, operational inspection and checks*

EN 1907:2017, *Safety requirements for cableway installations designed to carry persons — Terminology*

EN 1908, *Safety requirements of cableway installations designed to carry persons — Tensioning devices*

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

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

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

EN 12385-4, *Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications*

EN 12385-8, *Steel wire ropes — Safety — Part 8: Stranded hauling and carrying-hauling ropes for cableway installations designed to carry persons*

- EN 12385-9, *Steel wire ropes — Safety — Part 9: Locked coil carrying ropes for cableway installations designed to carry persons*
- 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 12929-1, *Safety requirements for cableway installations designed to carry persons — General requirements — Part 1: Requirements for all installations*
- EN 12929-2, *Safety requirements for cableway installations designed to carry persons — General requirements — Part 2: Additional requirements for reversible bicable aerial ropeways without carrier truck brakes*
- 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*
- 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 13411-4, *Terminations for steel wire ropes — Safety — Part 4: Metal and resin socketing*
- EN 13411-5, *Terminations for steel wire ropes — Safety — Part 5: U-bolt wire rope grips*
- EN 13411-6, *Terminations for steel wire ropes — Safety — Part 6: Asymmetric wedge socket*
- EN 13411-7, *Terminations for steel wire ropes — Safety — Part 7: Symmetric wedge socket*
- EN 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*
- EN 13796-2, *Safety requirements for cableway installations designed to carry persons — Carriers — Part 2: Slipping resistance tests for grips*
- EN 13796-3, *Safety requirements for cableway installations designed to carry persons — Carriers — Part 3: Fatigue testing*
- EN ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method (ISO 148-1)*
- EN ISO 5579, *Non-destructive testing — Radiographic testing of metallic materials using film and X- or gamma rays — Basic rules (ISO 5579)*
- EN ISO 9554, *Fibre ropes — General specifications (ISO 9554)*
- EN ISO 10547, *Polyester fibre ropes — Double braid construction (ISO 10547)*