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Safety requirements for cableway installations designed to transport persons - Precommissioning inspection and instructions for maintenance and operational inspection and checks

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 1709:2019 sisaldab Euroopa standardi EN 1709:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 1709:2019 consists of the English text of the European standard EN 1709:2019.
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  
transport persons - Precommissioning inspection and  
instructions for maintenance and operational inspection  
and checks

Prescriptions de sécurité pour les installations à câbles  
transportant des personnes - Examen probatoire et  
instructions pour la maintenance et les contrôles en  
exploitation

Sicherheitsanforderungen an Seilbahnen für die  
Personenbeförderung - Erprobung und Anleitungen für  
die Instandhaltung und die Betriebskontrollen

This European Standard was approved by CEN on 15 January 2019.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

# Contents

Page

European foreword.....	4
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions .....	8
4 General requirements .....	8
4.1 Application of this Standard.....	8
4.2 Safety principles.....	8
4.2.1 General.....	8
4.2.2 Hazard scenarios.....	9
4.2.3 Safety measures.....	9
4.2.3.1 General .....	9
4.2.3.2 General safety.....	9
4.2.3.3 Safety of workers .....	9
5 Precommissioning inspection .....	9
5.1 General.....	9
5.2 Verifying the conformity of the installation with the technical documentation and other documents .....	10
5.3 Checking the individual components, their interaction with each other and with their local environment.....	10
5.4 Operating test.....	11
5.5 Submitting the required documentation to the controller.....	11
5.6 Report on the precommissioning inspection.....	11
6 Instructions for Maintenance .....	12
6.1 General.....	12
6.2 Servicing.....	13
6.3 Inspection .....	13
6.3.1 General.....	13
6.3.2 First inspection of the civil engineering works.....	13
6.3.3 Monthly inspections.....	13
6.3.4 Inspection in the case of intermittent operation.....	14
6.3.5 Annual inspections .....	14
6.3.5.1 General .....	14
6.3.5.2 Civil engineering works.....	14
6.3.5.3 Mechanical equipment.....	14
6.3.5.4 Carriers and tow-hangers.....	15
6.3.5.5 Electrical installations .....	15
6.3.5.6 Safety functions and devices as well as signalling devices .....	16
6.3.5.7 Mobile evacuation equipment.....	16
6.3.5.8 Other equipment and components.....	16
6.3.6 Multiannual inspections .....	16
6.3.7 Special inspections .....	17
6.4 Repair .....	18
7 Instructions for operational inspection and checks.....	18
7.1 General.....	18

<b>7.2</b>	<b>Daily operational inspection and checks prior to passenger transportation .....</b>	<b>18</b>
<b>7.2.1</b>	<b>Operational inspection and checks while the installation is stationary .....</b>	<b>18</b>
<b>7.2.2</b>	<b>Operational inspection and checks during the test run .....</b>	<b>19</b>
<b>7.3</b>	<b>Operational inspection and checks during operation.....</b>	<b>20</b>
<b>7.4</b>	<b>Operational inspection and checks after exceptional events.....</b>	<b>20</b>
<b>Annex ZA (informative)</b>	<b>Relationship between this European Standard and the essential requirements of Regulation (EU) 2016/424.....</b>	<b>21</b>

## European foreword

This document (EN 1709:2019) has been prepared by Technical Committee CEN/TC 242 "Safety requirements for cableway installations designed to carry persons", 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 supersedes EN 1709:2004.

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 Regulation (EU) 2016/424.

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

The main changes with respect to the previous edition are listed below:

- a) 4.2.2 h) was added due to the unsuitability of one procedure.
- b) The classification of Clause 5 has been changed in order to implement the term "precommissioning inspection" consistently with 3.1.
- c) Clause 5 has been changed in order to clarify the differences between the two categories of documents (documents by which the planned configuration of the installation is established, and documents which the suppliers have to provide to the controller).
- d) 5.2 has been deleted, as it is already included in the modified 5.1.
- e) 5.3 g) was inserted.
- f) The order of the list in 5.3 was adapted to the Regulation (EU) 2016/424 and to Section 6.
- g) In the last paragraph of 5.3, the independent competent person has been deleted, as this is a matter for the national members.
- h) In 5.3 m) the pre-commissioning inspection has been deleted because it conflicts with the title and the performance of recovery exercises as determined in national regulations and/or in EN 1909.
- i) The final paragraph of 5.4 has been deleted as it is already covered in EN 12397.
- j) In 6.1, the requirements for documenting maintenance work have been combined and extended in one place.
- k) 6.1.1 (new 6.1.2) has been changed, as, in accordance with 5.5, suppliers are required to provide instructions for maintenance.
- l) 6.1.4 was inserted, so that Annex ZA is still possible.

- m) The definition of inspection in 6.3.1 has been supplemented with information concerning the time requirements. This definition is now not the same as the term “inspection” in EN 1907.
- n) The requirements in 6.3.1 for civil engineering works are generally applicable and have been expanded to include all parts of the installation.
- o) In 6.3.2 and 6.3.5, the visual inspection of screws and rivets for tightness has been changed to cover loose and missing elements, and the visual inspection with regard to deformation has been extended to include all components.
- p) In 6.3.3, a), c), i), k) and parts of m) have been omitted and a stipulation of switching cabinet cleanliness requirements included. The order of the list was adapted to Regulation (EU) 2016/424.
- q) In 6.3.5, the order of the lists has been changed to comply with Regulation (EU) 2016/424 and a clause concerning mobile evacuation equipment has been included.
- r) 6.3.5.2 has been supplemented with detailed requirements for timber structures and for the terrain in the vicinity of the civil engineering works.
- s) Most of the requirements for funicular railways originally included in 6.3.6 are generally applicable and have been extended to include all cableway systems. In order to create a comprehensible qualitative difference with respect to the annual inspections in accordance with 6.3.5.2, inspection by a competent person was introduced for the multiannual inspection of engineering structures (tunnels, galleries, bridges) and ground anchors.
- t) The intervals and the inspection methodology were changed in 6.3.7.
- u) The requirements relating to the civil engineering works in 6.4 have been omitted, as they repeat similar requirements in this Standard.
- v) 6.5 has been deleted without replacement.
- w) The terms and organization of Clause 7 have been revised. In addition, it was decided that the supplier’s instructions in accordance with 5.5 shall include the stated operational inspections.
- x) Clause 8 has been deleted, as it is already covered in other areas of the Standard.
- y) The scope of the Standard was changed from “Maintenance and operational inspections” to “Instructions for maintenance and operational inspections”.

This document forms part of a series of European Standards concerning safety requirements for cableway installations designed to transport persons. This series of standards comprises the following documents:

- EN 1907 relating to Terminology;
- EN 12929 (all parts) relating to General requirements;
- EN 12930 relating to Calculations;
- EN 12927 relating to Cables;
- EN 1908 relating to Tensioning devices;
- EN 13223 relating to Drive systems and other mechanical equipment;

- EN 13796 (all parts) relating to Carriers;
- EN 13243 relating to Electrical equipment other than for drive systems;
- EN 13107 relating to Civil engineering works;
- EN 1709 relating to Pre-commissioning inspections and instructions for maintenance and operational inspection and checks;
- EN 1909 relating to Recovery and evacuation;
- EN 12397 relating to Operation;
- EN 12408 relating to Quality control.

Together these form a series of standards regarding design, manufacture, erection, maintenance and operation of all installations for cableway installations designed to transport persons.

In respect of ski-tows, the drafting of this document has been guided by the works of the International Organization 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, 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 sets the safety requirements that need to be met in relation to pre-commissioning inspections and the instructions for maintenance and operational inspections and checks of cableway installations designed to transport persons. This document is applicable to the various types of cableway installation and takes into account their environment.

It also includes requirements relating to accident prevention and to the protection of workers irrespective of the application of national regulations.

National regulations regarding building laws or regulations or which afford protection to specific groups of people, as well as national regulations regarding testing, acceptance testing prior to starting passenger service, maintenance and operational inspection shall remain unaffected.

It does not apply to cableway installations for the transportation of goods or to lifts.

The provisions of Clause 5 apply to the measures to be taken prior to the commissioning of the installation, and those of Clauses 6 and 7 to the measures to be taken during operation.

This document does not apply to cableway installations designed to transport persons that were manufactured before the publication of this EN standard.

## 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 1907, *Safety requirements for cableway installations designed to transport persons — Terminology*

EN 1908, *Safety requirements for cableway installations designed to transport persons — Tensioning devices*

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

EN 12397, *Safety requirements for cableway installations designed to transport persons — Operation*

EN 12408, *Safety requirements for cableway installations designed to transport persons — Quality control*

EN 12927, *Safety requirements for cableway installations designed to carry persons — Ropes*

EN 12929 (all parts), *Safety requirements for cableway installations designed to transport persons — General requirements*

EN 12930, *Safety requirements for cableway installations designed to transport persons — Calculations*

EN 13107, *Safety requirements for cableway installations designed to transport persons — Civil engineering works*

EN 13223, *Safety requirements for cableway installations designed to transport persons — Drive systems and other mechanical equipment*

EN 13243, *Safety requirements for cableway installations designed to transport persons — Electrical equipment other than for drive systems*

EN 13796 (all parts), *Safety requirements for cableway installations designed to transport persons — Carriers*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1907 and the following apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: go to <http://www.electropedia.org/>
- ISO Online Browsing Platform: go to <http://www.iso.org/obp>

#### 3.1

##### **Precommissioning inspection**

all of the measures required to confirm the readiness of the installation for acceptance

#### 3.2

##### **Operational inspection and checks**

operations intended for verifying the readiness for operation of the installation before and during operation

#### 3.3

##### **Operating test**

operation of a defined duration during which the working of the installation is tested

#### 3.4

##### **Readiness for acceptance**

condition of the installation where the functional and technical safety conditions for acceptance have been fulfilled

#### 3.5

##### **Readiness for operation**

condition of the installation where the functional and technical safety conditions to allow passengers to be transported have been fulfilled

### 4 General requirements

#### 4.1 Application of this Standard

The requirements of this document, together with those of standards EN 1908, EN 1909, EN 12397, EN 12408, EN 12927, EN 12929 (all parts), EN 12930, EN 13107, EN 13223, EN 13243, EN 13796 (all parts) apply to all cableway installations.

#### 4.2 Safety principles

##### 4.2.1 General

The safety principles formulated in EN 12929-1 shall apply.

In addition, the scope of this document includes the following hazard scenarios and safety measures.