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Safety requirements for cableway installations  
designed to carry persons - Carriers - Part 2: Slipping  
resistance tests for grips

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13796-2:2017+A1:2022 sisaldab Euroopa standardi EN 13796-2:2017+A1:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 13796-2:2017+A1:2022 consists of the English text of the European standard EN 13796-2:2017+A1:2022.
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 and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.06.2022.	Date of Availability of the European standard is 15.06.2022.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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ICS 45.100

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English Version

**Safety requirements for cableway installations designed to  
transport persons - Carriers - Part 2: Slipping resistance  
tests for grips**

Prescriptions de sécurité pour les installations à câbles  
transportant des personnes - Véhicules - Partie 2 :  
Essai de résistance au glissement des attaches

Sicherheitsanforderungen an Seilbahnen für die  
Personenbeförderung - Fahrzeuge - Teil 2:  
Klemmenabziehversuch

This European Standard was approved by CEN on 8 December 2014 and includes Amendment 1 approved by CEN on 20 April 2022.

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

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



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 13796-2:2017+A1:2022) 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, by December 2022 at the latest, and all conflicting national standards shall be withdrawn no later than December 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights or similar rights. CEN and/or CENELEC shall not be held responsible for identifying all or some of these patent rights.

This document replaces EN 13796-2:2017.

This document includes amendment 1 approved by the CEN on 20 April 2022.

The start and end of the text added or modified by the amendment are indicated in the text with ! and " respectively.

EN 13796 comprises the following parts under the general title *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;*
- *Part 2: Slipping resistance tests for grips;*
- *Part 3: Fatigue testing.*

This document forms part of the standards programme approved by the CEN Technical Board (CEN/BT) on safety requirements for cableway installations designed to carry persons. This programme comprises the following standards:

- EN 1907, *Safety requirements for cableway installations designed to carry persons — Terminology;*
- EN 12929 (all parts), *Safety requirements for cableway installations designed to carry persons — General requirements;*
- EN 12930, *Safety requirements for cableway installations designed to carry persons — Calculations;*
- EN 12927 (all parts), *Safety requirements for cableway installations designed to carry persons — Ropes;*
- EN 1908, *Safety requirements for cableway installations designed to carry persons — Tensioning devices;*
- EN 13223, *Safety requirements for cableway installations designed to carry persons — Drive systems and other mechanical equipment;*

- EN 13796 (all parts), *Safety requirements for cableway installations designed to carry persons — Carriers*;
- EN 13243, *Safety requirements for cableway installations designed to carry persons — Electrical equipment other than drive systems*;
- EN 13107, *Safety requirements for cableway installations designed to carry persons — Civil engineering works*;
- EN 1709, *Safety requirements for cableway installations designed to carry persons — Pre-commissioning inspection, maintenance and operational inspection and checks*;
- 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*.

This document has been prepared as part of a standardisation request made to CEN by the European Commission and the European Free Trade Association, and supports the essential requirements of the (EU) Directive(s)/Regulation(s).

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

The user should address any feedback or questions regarding this document to their country's national standards organisation. A comprehensive list of these organisations can be found on the CEN website.

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

## 1 European scope

This European Standard specifies the safety requirements applicable to carriers for cableway installations for passenger transportation. It is applicable to the various types of installations and takes into account their environment.

This European Standard describes the requirements to be met when testing the slipping resistance of grips clamped

- on the haulage or carrying hauling rope of carriers of monocable or bicable aerial ropeways with fixed or detachable grips, covered by EN 13796-1:2017;
- on the towing rope of ski-tows with fixed grips, covered by EN 13796-1:2017.

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

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable to its application. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 13796-1:2017, *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 ISO/IEC 17025:2017, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2017)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1907:2017 and EN 13796-1:2017 apply.

## 4 Symbols and abbreviations

- |              |   |      |
|--------------|---|------|
| — $F_{lab}$  | slipping resistance force determined experimentally in the laboratory | (kN) |
| — $F_{max}$  | maximum slipping resistance force                                     | (kN) |
| — $F_{theo}$ | calculated slipping resistance force                                  | (kN) |
| — $l_{gtot}$ | total slipping length   | (m)  |