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MÕELDUD KÖISTEPAIGALDISTELE. KANDURID. OSA 3:
VÄSIMUSKATSED

Safety requirements for cableway installations
designed to carry persons - Carriers - Part 3: Fatigue
testing

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13796-3:2017+A1:2023 sisaldab Euroopa standardi EN 13796-3:2017+A1:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 13796-3:2017+A1:2023 consists of the English text of the European standard EN 13796-3:2017+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 16.11.2022.	Date of Availability of the European standard is 16.11.2022.
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English Version

Safety requirements for cableway installations designed to carry persons - Carriers - Part 3: Fatigue tests

Prescriptions de sécurité pour les installations à câbles
transportant des personnes - Véhicules - Partie 3 :
Essais de fatigue

Sicherheitsanforderungen an Seilbahnen für die
Personenbeförderung - Fahrzeuge - Teil 3:
Ermüdungsversuche

This European Standard was approved by CEN on 1 December 2014 and includes Amendment 1 approved by CEN on 15 August 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 13796-3:2017+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 May 2023 at the latest, and all conflicting national standards shall be withdrawn no later than May 2023.

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 includes Amendment 1, approved by the CEN on 15 August 2022.

This document replaces A1 EN 13796-3:2017 A1.

The start and end of the text added or modified by the amendment are indicated in the text with A1 and A1 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 for 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 and instructions for 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 control*.

Together, these standards govern the design, manufacturing, production, maintenance and operation of all cableway installations designed to carry persons.

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).

A1 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 and CENELEC web pages. **A1**

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, the Czech Republic, Denmark, Estonia, Finland, the Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, the Republic of Serbia, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 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 sets out the requirements for fatigue tests for carriers of unidirectional monocable aerial ropeways with a capacity of no more than 16 persons according to [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

$\Delta\varepsilon$	range of elongation	[$\mu\text{m}/\text{m}$]
ε_m	average elongation	[$\mu\text{m}/\text{m}$]
ε_u	lower limit of elongation	[$\mu\text{m}/\text{m}$]
$\varepsilon_{\text{stat}}$	elongation due to static loading ($G + Q$)	[$\mu\text{m}/\text{m}$]
ΔF	range of load	[kN]
F_m	average load	[kN]
F_u	smaller load	[kN]
G	self-weight of carrier	[kN]
N	number of cycles	[-]
Q	useful load	[kN]