Carrier Cycles - Part 3: Lightweight multi track carrier cycles - Mechanical aspects

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 17860-3:2024 sisaldab Euroopa standardi EN 17860-3:2024 ingliskeelset teksti.	This Estonian standard EVS-EN 17860-3:2024 consists of the English text of the European standard EN 17860-3:2024.
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 04.09.2024.	Date of Availability of the European standard is 04.09.2024.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Cycles utilitaires - Partie 3 : Cycles utilitaires légers à 3 roues et plus - Aspects mécaniques

Lastenfahrräder - Teil 3: Leichte mehrspurige Lastenfahrräder - Mechanische Aspekte

This European Standard was approved by CEN on 14 July 2024.

EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 17860-3:2024) has been prepared by Technical Committee CEN/TC 333 “Cycles”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by March 2025.

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 is part of standard series consisting of the following parts, users are invited to check which parts are applicable to their situation

— FprEN 17860-1:2023, Cycles — Carrier Cycles — Part 1: Vocabulary

— FprEN 17860-2:2023, Cycles — Carrier Cycles — Part 2: Lightweight single track carrier cycles – mechanical and functional aspects

— FprEN 17860-3:2023, Cycles — Carrier Cycles — Part 3: Lightweight multi track carrier cycles – mechanical and functional aspects

— prEN 17860-4, Cycles — Carrier Cycles — Heavyweight multi track carrier cycles – mechanical and functional aspects

— prEN 17860-5:2023, Cycles — Carrier Cycles — Electrical aspects

— prEN 17860-6, Cycles — Carrier Cycles — Passenger transport

— prEN 17860-7:2023, Cycles — Carrier Cycles — Trailers

Examples of carrier cycle configurations can be found in EN 17860-2:2024, Annex A. EN 17860-2:2024, Annex B provides a reading guide for parts 2,3 and 4 of this standard series.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, 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, Türkiye and the United Kingdom.

Introduction

This document gives requirements and test methods for mechanical and functional aspects for multi track carrier cycles.

This document has been developed in response to demand throughout Europe. Its aim is to provide a standard for the assessment of mechanical aspects for multi track carrier cycles of a type which are excluded from type approval by Regulation (EU) No. 168/2013.

Because of the diversity of geometries and solutions of carrier cycles not all requirements and test methods in this document may apply to every carrier cycle.

— Annex A in FprEN 17860-2:2023 gives an overview of vehicle configurations.

— Annex B in FprEN 17860-2:2023 provides a reading guide for the parts of this standard series.

— Annex J in FprEN 17860-2:2023 contains a rationale explaining the choices made when developing the standard series

This document is based on a risk analysis, the focus is on mechanical aspects for multitrack carrier cycles. This document is a type C standard as specified in EN ISO 12100. The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

1 Scope

This document is applicable to multi track carrier cycles with or without electric assistance and a maximum gross vehicle weight of 300 kg.

NOTE1 Requirements that are similar to single track carrier cycles are covered in Part 2 of this standard series.

NOTE2 Requirements for electrical power assisted carrier cycles will be covered in Part 5 of this standard series.

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 17860-1:2024, *Cycles — Carrier Cycles — Part 1: Vocabulary*

EN 17860-2:2024, *Cycles — Carrier Cycles — Part 2: Lightweight single track carrier cycles – mechanical and functional aspects*

EN 17860-7:—,[1] *Cycles — Carrier Cycles — Trailers*

EN ISO 4210-3:2023, *Cycles - Safety requirements for bicycles - Part 3: Common test methods (ISO 4210-3:2023)*

EN ISO 4210-6:2023, *Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods (ISO 4210-6:2023, Corrected version 2023-08)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

ISO 5775-1:2023, *Bicycle tyres and rims — Part 1: Tyre designations and dimensions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17860-1:2024 and EN ISO 12100:2010 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

4 Use cases: private and commercial/professional use

The requirements in the main part of this standard refer to carrier cycles for private use. In case the manufacturer defines the carrier cycles to be intended for commercial/professional use higher test values for dynamic tests apply. Annex A gives the higher test values for the relevant tests.

[1] Under preparation. Stage at time of publication: FprEN 17860-7:2024.