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Carrier cycles - Part 1: Terms and definitions

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Lastenfahrräder - Teil 1: Begriffe und Definitionen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5

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European foreword

This document (prEN 17860-1:2022) has been prepared by Technical Committee CEN/TC 333 “Cycles”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This standard is part of standard series consisting of the following parts:

- prEN 17860-1: Cycles -Carrier Cycles - Part 1: Terms and definitions
- prEN 17860-2: Cycles -Carrier Cycles - Part 2: Lightweight single track carrier cycles – mechanical and functional aspects
- prEN 17860-3: Cycles -Carrier Cycles - Part 3: Lightweight multi track carrier cycles – mechanical and functional aspects

Preliminary parts:

- Part 4: Cycles -Carrier Cycles - Heavyweight multi track carrier cycles – mechanical and functional aspects
- Part 5: Cycles -Carrier Cycles - Electrical aspects
- Part 6: Cycles -Carrier Cycles - Passenger transport
- Part 7: Cycles -Carrier Cycles - Trailers

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prEN 17860-1:2022 (E)**Introduction**

This document gives terms and definitions related to requirements and test methods for 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 carrier cycles of a type which are excluded from type approval by Regulation (EU) No. 168/2013.

Following the completion of a risk analysis, the focus is on mechanical aspects for single-track 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 indicated in the scope of this document.

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1 Scope

This document specifies terms and definitions related to safety and performance requirements for the design, assembly, and testing of carrier cycles.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 Cycle type

3.1.1

bicycle

two-wheeled vehicle that is propelled solely or mainly by the muscular energy of the person on that vehicle, in particular by means of pedals

[SOURCE: EN 15194:2017, 3.2]

3.1.2

cycle

vehicle that has at least two wheels and is propelled solely or mainly by the muscular energy of the person on that vehicle, in particular by means of pedals

[SOURCE: EN 15194:2017, 3.1]

3.1.3

carrier cycle

cycle specifically for transporting goods and/or passengers

Note 1 to entry: carrier cycles are commonly referred to as cargo bikes or delivery (bi)cycles

3.1.4

electrically power assisted cycle

EPAC

cycle, equipped with pedals and an auxiliary electric motor, which cannot be propelled exclusively by means of this auxiliary electric motor, except in the start-up assistance mode

[SOURCE: EN 15194:2017, 3.3]

3.1.5

single track

with wheels in line

3.1.6

multi track

with wheels not in line

prEN 17860-1:2022 (E)**3.1.7****cycle trailer**

one or two track trailer for the conveyance of loads and/or passive passengers, who do not contribute towards propulsion of the vehicle, with device for connection behind a cycle

[SOURCE: EN 15918+A2:2017, 3.2]

3.2 General terms**3.2.1****bolted joint**

components joined together with threaded fastener

[SOURCE: EN 15194:2017, 3.71]

3.2.2**composite material**

component that is entirely or partially made of a non-metallic matrix materials which is reinforced by metallic or non-metallic materials such as short or long fibres, fabric, or particles

[SOURCE: EN 15194:2017, 3.18]

3.2.3**connecting device**

part of the cycle trailer that is fixed to the towing cycle

[SOURCE: EN 15918+A2:2017, 3.5]

3.2.4**maximum cut-off speed**

maximum speed at which the motor controller cuts off the assistance of the auxiliary electric motor, and stated by the manufacturer

3.2.5**footrest**

facility for supporting the feet of the transported passenger

[SOURCE: DIN 79010, 3.12]

3.2.6**fracture**

unintentional separation into two or more parts

[SOURCE: EN 15194:2017, 3.35]

3.2.7**luggage carrier**

device, including containers such as baskets, that is mounted and permanently attached above and/or adjacent to the rear wheel(s) (in the case of a rear luggage carrier) or front wheel(s) (in the case of a front luggage carrier) of a cycle and that is exclusively designed for carrying luggage or children in child-seats

[SOURCE: EN ISO 11243:2016, 3.2]

3.2.8**quick-release device**

lever actuated mechanism that connects, retains, or secures a wheel or any other component

[SOURCE: EN 15194:2017, 3.54]

3.2.9**payload****total load**

sum of the weight of the cyclist and the weight of the loaded goods/passengers

Note 1 to entry: Table 1 gives an overview of the relation between weight related definitions.

[SOURCE: DIN 79010, 3.6]

3.2.10**maximum permissible total weight****gross vehicle weight**

weight of the fully assembled carrier cycle plus cyclist and luggage as defined by the manufacturer

Note 1 to entry: Table 1 gives an overview of the relation between weight related definitions.

3.2.11**unladen weight**

weight of the carrier cycle with standard equipment (according to the manufacturer's description) for normal operation, including the battery

Note 1 to entry: Table 1 gives an overview of the relation between weight related definitions.

Table 1 — Relation between weight related definitions

Definition	Weight of the carrier cycle	Weight of the cyclist	Weight of the goods and/or passengers
Pay load/total load		Included	Included
Unladen weight	Included		
Maximum permissible total weight / Gross vehicle weight	Included	Included	Included

3.2.12**visible crack**

crack which results from a test where that crack is visible to the naked eye

[SOURCE: EN 15194:2017, 3.66]

3.2.13**wheelbase**

distance between the contact centres of the vehicle tyres measured parallel to the x-axis

Note 1 to entry: the vehicle is at rest and stood on a horizontal surface; the steer angles are zero.

[SOURCE: DIN 79010. 3.18]

prEN 17860-1:2022 (E)**3.2.14****track**

distance between the tyre contact centres of the two wheels of a single-wheel axle on multi-track vehicles measured parallel to the y-axis; at rest, the vehicle is stood on a horizontal surface

[SOURCE: DIN 79010, 3.19]

3.2.15**minimum insertion-depth mark**

mark indicating the minimum insertion-depth of handlebar stem into fork steerer (fork stem) or seat-post into frame

[SOURCE: EN 15194:2017, 3.46]

3.3 Driving environment**3.3.1****public road**

any designated and adopted road, pavement, path or track on which a cycle is legally permitted to travel and on most though not all such public roads, cycles will share use with other forms of transport including motorized traffic

[SOURCE: EN 15194:2017, 3.52]

3.4 Brake**3.4.1****brake lever****brake-lever**

lever that operates a braking device

[SOURCE: EN 15194:2017, 3.12]

3.4.2**brake system**

interconnected parts/components that make up a velocity retarding and stopping function for a cycle

3.4.3**braking distance**

distance travelled by a cycle between the commencement of braking (3.16) and the point at which the cycle comes to rest

[SOURCE: EN 15194:2017, 3.14]

3.4.4**braking force**

tangential rearward force between the tyre and the ground or the tyre and the drum or belt of the test machine

[SOURCE: EN 15194:2017, 3.15]

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