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### Izdelki za otroke - Otroški vozički - Varnostne zahteve in preskusne metode

Child care articles - Wheeled child conveyances - Safety requirements and test methods

Artikel für Säuglinge und Kleinkinder - Transportmittel auf Rädern für Kinder -  
Sicherheitstechnische Anforderungen und Prüfungen

Articles de puériculture - Voitures d'enfant - Exigences de sécurité et méthodes d'essai

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Equipment for children

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English Version

Child care articles - Wheeled child conveyances - Safety  
requirements and test methodsArticles de puériculture - Voitures d'enfant - Exigences de  
sécurité et méthodes d'essaiArtikel für Säuglinge und Kleinkinder - Transportmittel auf  
Rädern für Kinder - Sicherheitstechnische Anforderungen  
und Prüfungen

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## Foreword

This document (EN 1888:2012) has been prepared by Technical Committee CEN/TC 252 "Child use and care articles", 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of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by March 2013.

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

This document supersedes EN 1888:2003.

In comparison with this EN 1888:2003, the significant technical changes relates to the following issues:

- a) determination of a protected volume;
- b) clarification of the protective function;
- c) angles measurements test method;
- d) holes and openings;
- e) locking mechanisms;
- f) handle movement;
- g) introduction of a bite test;
- h) parking and braking devices;
- i) stability;
- j) handle strength;
- k) product information;
- l) introduction of rationales in Annex A.

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## EN 1888:2012 (E)

## 1 Scope

This European Standard specifies the safety requirements and test methods for *wheeled child conveyances*, designed for the carriage of one or more children, up to 15 kg each and additional 20 kg on any integrated platform on which a child can stand.

This European Standard does not cover toys, shopping trolleys; baby carriers fitted with wheels; *wheeled child conveyances* propelled by a motor and *wheeled child conveyances* designed for children with special needs.

Where additional products are designed to be attached to a *wheeled child conveyance*, a hazard and risk analysis should be undertaken to identify any potential hazards.

Where a *wheeled child conveyance* or any part of the *wheeled child conveyance* has several functions or can be converted into another function it shall comply with the relevant standards.

## 2 Normative references

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

EN 71-1, *Safety of toys — Part 1: Mechanical and physical properties*

EN 71-3:1994, *Safety of toys — Part 3: Migration of certain elements*

EN 1103, *Textiles — Fabrics for apparel — Detailed procedure to determine the burning behaviour*

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## 3 Terms and definitions

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

### 3.1

#### **wheeled child conveyance**

vehicle designed for the carriage of one or more children consisting of a *chassis* to which a *pram body* (bodies) or *car seat(s)* or *seat unit(s)* or combination of these is (are) attached, which can be manually steered while being pushed or pulled

Note 1 to entry: Referred to as the "vehicle" for the purpose of this standard.

### 3.2

#### **pram body**

structure with essentially vertical and continuous sides and ends with an internal base designed to transport one or more children in a primarily horizontal position

### 3.3

#### **seat unit**

structure which may or may not be adjustable to achieve a reclining or recumbent position designed to support one or more children

### 3.4

#### **car seat**

group 0/0+ child restraint system complying with ECE44



**3.5****chassis**

wheeled framework with extended handle(s) for pushing, pulling and steering, designed to accommodate and transport a *pram body* (bodies) or *car seat(s)* or *seat unit(s)* or a combination of these items

**3.6****pram**

vehicle comprising a *chassis* and one or more *pram bodies*

**3.7****pushchair**

vehicle comprising a *chassis* and one or more *seat units* or *car seats*

**3.8****parking device**

device to maintain the vehicle in a stationary position

**3.9****restraint system**

system to restrain the child within the vehicle

**3.10****crotch restraint**

device positioned between the child's legs to prevent the child from sliding forwards

**3.11****harness anchorage point**

device suitable for the attachment of an additional child's harness

**3.12****braking device**

device to reduce the speed of the vehicle

**3.13****platform**

integral part of the vehicle designed to support an additional child in a standing position

**3.14****junction line**

intersection of the seat and the backrest

**3.15****folding system**

assembly of moving parts which enables the vehicle to be changed from an erected position to a folded position and vice versa under the control of the carer

**3.16****locking device**

mechanical component that maintains part(s) of the vehicle erected in the position of use (e.g. latch(es), hooks, over centre lock...) which could be deactivated or activated by action(s) on the *operating device*

**3.17****operating device**

part of the *locking mechanism(s)* designed to be activated by the carer through one or several positive action(s)

**3.18****locking mechanism**

assembly of components consisting of one or more *locking device(s)* and *one or more operating device(s)*

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**EN 1888:2012 (E)****3.19****automatic locking device**

device that engages with no additional voluntary action by the carer, when the vehicle is erected to its position of use

**3.20****reversible handle**

handle that can be rotated on the chassis to change the direction of pushing

**3.21****carry cot (generic term)**

product consisting of a base, sides, ends and carrying handle(s), within which a child can be laid down and transported by hand(s)

**4 General requirements and test conditions**

NOTE Words in *italics* are defined in Clause 3 (Terms and definitions). Additional information on the background and rationale for various requirements is given in Annex A.

**4.1 Samples**

Tests should be carried out in the order of the clauses given in this standard, unless otherwise stated. Each test shall be carried out only using one vehicle, unless otherwise stated.

Vehicles with multiple places for *pram bodies* and/or *seat units* shall comply with all applicable requirements in any possible arrangement in accordance with the manufacturer's instructions. If a vehicle can be equipped with an additional *seat unit* or *pram body* or group 0/0+ car seat supplied or recommended by the manufacturer, the combination shall comply with this European Standard.

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**4.2 Principle of the most onerous condition**

Unless otherwise stated each test shall be conducted with the vehicle in the most onerous condition for that test in terms of:

- the choice and number of *seat units* and/or *pram bodies* and/or *car seats* attached to the *chassis* stated in the manufacturer's instructions;
- the addition of any additional *seat unit(s)* approved by the manufacturer;
- the use of test masses: for vehicles transporting more than one child, at least one place that a child can occupy shall be loaded with a test mass;
- the loading (or not) of any receptacle designed for carrying additional load(s) allowed for in the instructions or otherwise approved by the manufacturer and the placing (or not) of load(s) in any such facility, up to the maximum mass allowed in the manufacturer's instructions, or 2 kg if nothing is indicated; small pockets fitted onto textile parts are not concerned by this condition;
- the addition (or not) of any other accessories supplied or recommended by the manufacturer for use with the vehicle and with accessories loaded according to the manufacturer's instructions;
- the adjustment of *seat units*, *pram bodies*, handles, *car seats*, and any other adjustable features or accessories, or any other optional arrangement of the vehicle allowed in the manufacturer's instructions or otherwise approved by the manufacturer.

NOTE The heaviest loads do not always produce the most onerous conditions.

### 4.3 Tolerances for test equipment

Unless otherwise stated, the accuracy of the test equipment shall be:

- forces  $\pm 5 \%$ ;
- masses  $\pm 0,5 \%$ ;
- dimensions  $\pm 0,5 \text{ mm}$ ;
- timing  $\pm 1 \text{ s}$ ;
- angles  $\pm 0,5^\circ$ .

### 4.4 Test conditions

The vehicle shall be conditioned at a temperature of  $(23 \pm 5)^\circ\text{C}$  for at least 2 h prior to tests. All tests shall be carried out at a temperature of  $(23 \pm 10)^\circ\text{C}$  unless otherwise specified.

For vehicles fitted with inflatable tyres, the tyre pressure shall be adjusted according to manufacturer's instructions for use before conducting the entire test procedure. If a tyre is punctured during the test procedure, the tyre shall be replaced and the test procedure continued.

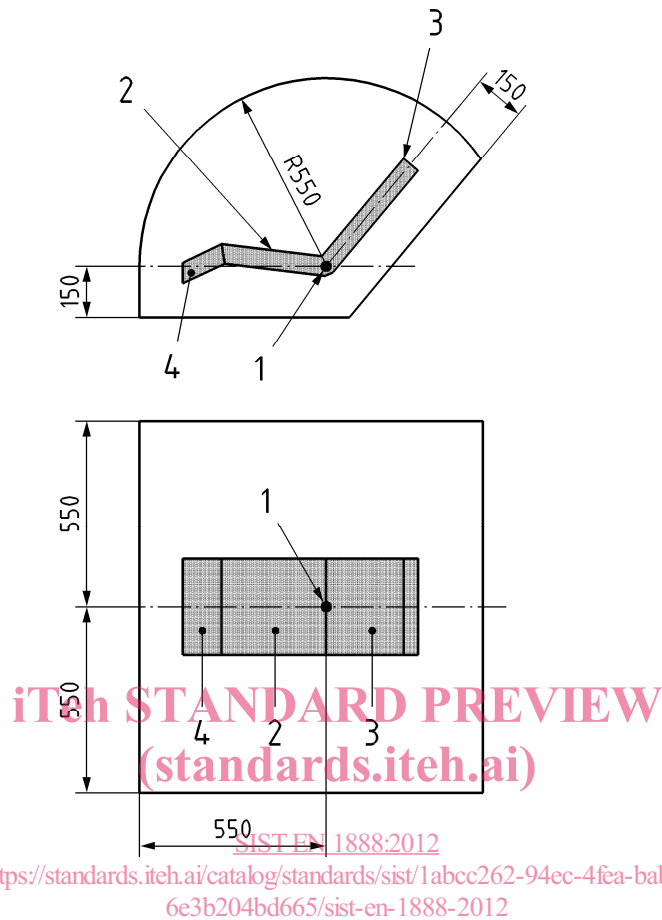
### 4.5 Determination of the protected volume

#### 4.5.1 Protected volume of seat units

The protected volume of seat units shall be determined in accordance with Figure 1 below.

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### Key

- 1 origin from which the protected volume has been defined (mid-point of the *junction line*, on the uncompressed upper surface of the seat unit)
- 2 seat
- 3 back rest
- 4 leg rest

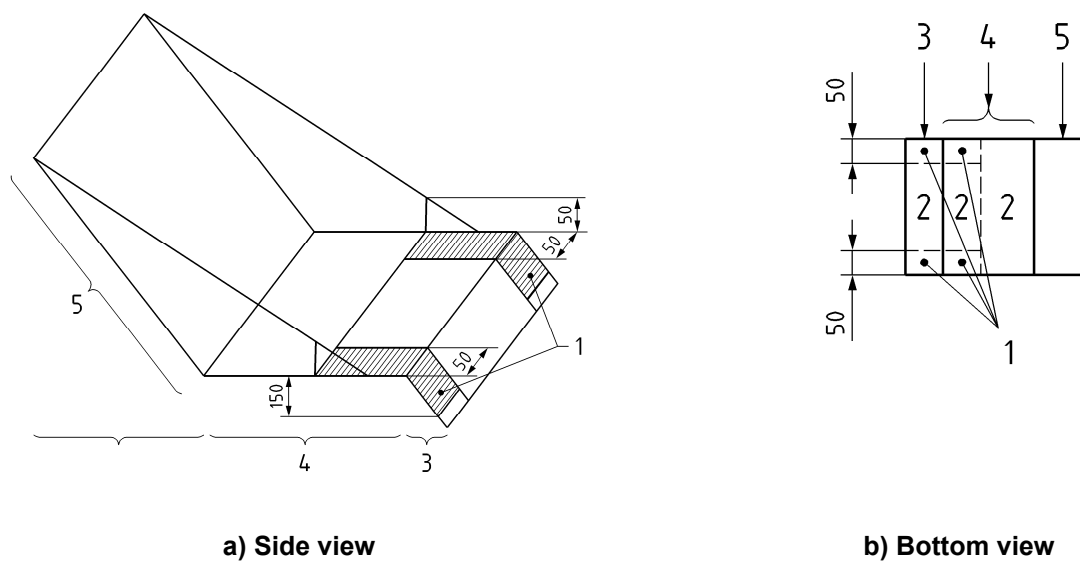
**Figure 1 — Protected volume for seat units**

The space located behind the backrest is excluded from the protected volume.

Where a vehicle is suitable for two or more children the space located behind the backrest shall be considered if it enters another protected volume.

The space underneath the seat and underneath the leg rest is excluded from the protected volume, except for a 50 mm wide band measured from the outermost edge of the seat/leg rest sides where the seat/leg rest is not fitted with lateral protections of a height greater than 50 mm (textile or any rigid component), (see Figure 2).

Dimensions in millimetres

**Key**

- 1 space to be checked
- 2 space not to be checked
- 3 leg rest
- 4 seat
- 5 backrest

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Figure 2 — Effect of lateral protection on the determination of the protected volume

#### 4.5.2 Protected volume of pram bodies having a length greater than 800 mm

The protected volume of pram bodies having a length greater than 800 mm shall be determined in accordance with Figure 3.

The 550 mm height shall be measured in accordance with 8.1.2.2.

The surface underneath the *pram body* is excluded from the protected volume.

Dimensions in millimetres

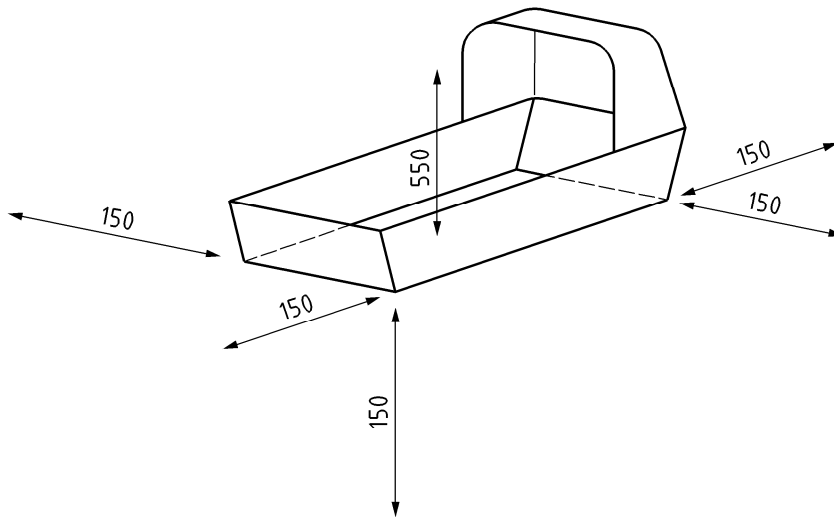


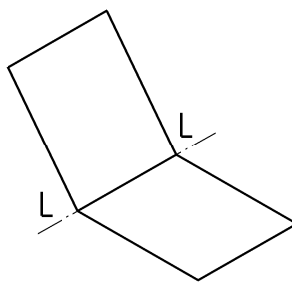
Figure 3 — Protected volume for *pram bodies* having a length greater than 800 mm

#### 4.5.3 Protected volume for *pram bodies* having a maximum internal length of 800 mm and *car seats*

For vehicles designed only for children under 6 months of age, *pram bodies* with a maximum internal length of 800 mm and for *car seats*, the protected volume is considered to be the inner upper surface that supports the child and the inner surface of the sides and ends of the pram body.

#### 4.6 Determination of the junction line

The *junction line* shall be determined as the intersection between the seat and the backrest as shown in Figure 4.

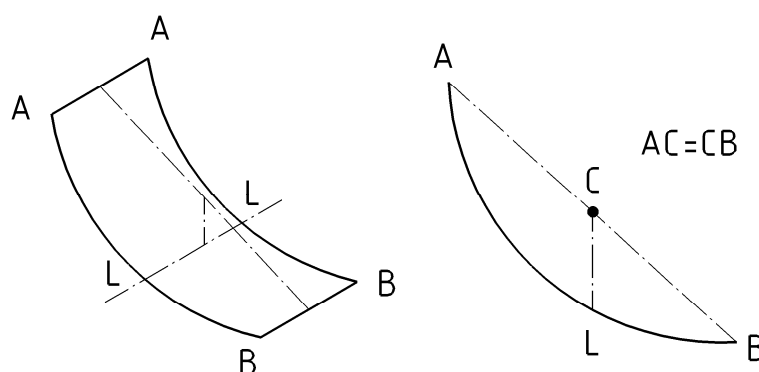


#### Key

LL *junction line*

Figure 4 — *Junction line*

When the *seat unit* is in the form of a hammock, then a theoretical *junction line*, “LL”, is determined as shown in Figure 5.



### Key

LL *junction line*

CL *vertical projection of C on the hammock*

**Figure 5 — Junction line for seat unit in form of a hammock**

NOTE The *junction line* may vary when the backrest is adjusted to different positions.

## 5 Test equipment **STANDARD PREVIEW** (standards.iteh.ai)

### 5.1 Test masses

#### 5.1.1 General [SIST EN 1888:2012](https://standards.iteh.ai/catalog/standards/sist/1abcc262-94ec-4fea-babd-6e3b204bd665/sist-en-1888-2012) <https://standards.iteh.ai/catalog/standards/sist/1abcc262-94ec-4fea-babd-6e3b204bd665/sist-en-1888-2012>

Unless otherwise specified, the test masses shall be those given in 5.1.2 to 5.1.9.

Any damage to fabric which may occur as a result of abrasion by the test masses during tests shall be ignored. Damage can be minimized by using a convenient means of protection of negligible mass. Where damage is not caused by abrasion by the test masses it constitutes a structural failure.

#### 5.1.2 Test mass *A*

Test mass *A* is a rigid cylinder  $(160 \pm 5)$  mm in diameter and  $(300 \pm 5)$  mm in height, having a mass of  $(9 + 0,01/0)$  kg and with its centre of gravity in the centre of the cylinder. All edges shall have a radius of  $(5 \pm 1)$  mm. Two anchorage points shall be provided, positioned  $(150 \pm 2,5)$  mm from the base and at  $180^\circ$  to each other around the circumference as shown in Figure 6.