

Basket trolleys —

Part 4: Requirements and tests for basket trolleys with additional goods carrying facility(ies), with or without a child carrying facility, intended to be used on passenger conveyors

The European Standard EN 1929-4:2005 has the status of a British Standard

ICS 97.130.30

National foreword

This British Standard is the official English language version of EN 1929-4:2005.

The UK participation in its preparation was entrusted to Technical Committee CW/51, Shopping trolleys, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

Leg room

The UK committee would like to draw the user's attention to BS EN 1929-1, 4.2.1.4, which specifies adequate space for the trolley user's stride. In this standard, BS EN 1929-1, 4.2.1.4 should be observed in this respect.

Additional goods carrying facilities

In its present form this standard permits the contents of some of the additional goods carrying facilities to be insecure and likely to fall onto the floor. Manufacturers and users of this standard should be aware that this could be hazardous to health and safety. Manufacturers should take steps to ensure that their designs hold contents securely. This could be achieved by ensuring that there are appropriate vertical sides of suitable height on the additional goods carrying facilities. Designs ought to ensure that no goods could be kicked out by a child sitting in the child seat.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 9 and a back cover.

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Basket trolleys - Part 4: Requirements and tests for basket trolleys with additional goods carrying facility(ies), with or without a child carrying facility, intended to be used on passenger conveyors

Chariots d'achat à corbeille - Partie 4 : Prescriptions et essais pour les chariots d'achat à corbeille et dispositif(s) supplémentaire(s) de dépose de marchandises, avec ou sans siège pour enfant, destinés à être utilisés sur trottoirs roulants

Einkaufswagen - Teil 4: Anforderungen und Prüfungen für Einkaufswagen mit zusätzlichen Abstelleinrichtungen für Waren, mit oder ohne Kindersitz, geeignet für den Gebrauch auf Personenfahrsteigen

This European Standard was approved by CEN on 14 February 2005.

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Foreword

This document (EN 1929-4:2005) has been prepared by Technical Committee CEN/TC 291 “Self service shopping trolleys”, the secretariat of which is held by BSI.

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 October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

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

Introduction

This document is a part of a series of standards currently under preparation by CEN/TC 291.

The parts of this series are:

EN 1929-1	Basket trolleys — Part 1: Requirements and tests for basket trolleys with or without a child carrying facility
EN 1929-2	Basket trolleys — Part 2: Requirements, tests and inspection for basket trolleys with or without a child carrying facility, intended to be used on passenger conveyors
EN 1929-3	Basket trolleys — Part 3: Requirements and tests for basket trolleys with additional goods carrying facility(ies), with or without a child carrying facility
EN 1929-4	Basket trolleys — Part 4: Requirements and tests for basket trolleys with additional goods carrying facility(ies), with or without a child carrying facility, intended to be used on passenger conveyors
prEN 1929-6:	Basket trolleys — Part 6: Requirements, tests and inspection for basket trolleys with base trays for Do It Yourself markets intended to be used on passenger conveyors
EN 1929-7:	Basket trolleys — Part 7: Requirements and tests for basket trolleys with baby and child carrying facilities

1 Scope

This document specifies requirements for the construction, performance, testing and safety specifications for general purpose self-service basket trolleys, with additional goods carrying facility(ies), with or without a child carrying facility, intended to be used on passenger conveyors, accompanied by a user.

2 Normative references

The following referenced documents are indispensable for the application 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 115, *Safety rules for the construction and installation of escalators and passenger conveyors*

EN 1929-1:1998, *Basket trolleys — Part 1: Requirements and tests for basket trolleys with or without a child carrying facility*

EN 1929-2:2004, *Basket trolleys — Part 2: Requirements, tests and inspection for basket trolleys with or without a child carrying facility, intended to be used on passenger conveyors*

EN 1929-3:2005, *Basket trolleys — Part 3: Requirements and tests for basket trolleys with additional goods carrying facility(ies), with or without a child carrying facility*

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 1929-2:2004 and EN 1929-3:2005 and the following apply.

3.1

basket trolley with goods carrying facility(ies) intended to be used on passenger conveyors
manually driven trolley with goods carrying facility(ies), suitable for use on a passenger conveyor

4 Safety

4.1 Generalities

Trolleys covered by this document are intended to be used on passenger conveyors conforming with EN 115 and shall comply with EN 1929-3, with the exception of

- subclause 4.1 only for the diameter of the wheels (in Table 1 paragraph line 4.2.2 'rolling quality' of EN 1929-1:1998, where the diameter of the wheels shall be not less than 120 mm),
- subclause 5.5,
- Clause 6.

4.2 Total loading mass

When used on a passenger conveyor, the total loading mass of the trolley shall not exceed 160 kg.

4.3 Space between the trolley and passenger conveyor

The difference between the overall width of the trolley and the nominal width of the passenger conveyor shall be not less than 400 mm.

4.4 Maintaining the trolley on the passenger conveyor

The trolley shall be equipped with a device that maintains it in a stopped position in the absence of any outside intervention. The diameter of the wheels shall not be less than 120 mm.

4.5 Stability

The trolley shall not overturn, when tested in accordance with:

- 7.1.2, up to and including 16° in the ascending and descending direction;
- 7.1.3, up to and including 10° in the sideways direction.

4.6 Stability when exiting the passenger conveyor

The trolley shall not overturn in the descending direction when encountering the comb at the exit of the passenger conveyor. This requirement is considered to be met when the trolley conforms to test 7.3.

5 Inspections and tests

See 5 of EN 1929-2:2004.

6 Signboards, use instructions and marking

6.1 Signboards and use instructions

See 6.1 of EN 1929-2:2004.

6.2 Marking

Trolleys shall have a pictogram conforming to Figure 2 in paragraph 6.1 of EN 1929-2:2004 of dimensions not less than 20 mm x 20 mm and permanently affixed to the handle. The maximum basket load shall be clearly visible to the user.

An identification plate including the following indications shall be visibly and permanently affixed to each trolley:

- manufacturer's name or trade mark;
- address of the manufacturer;
- commercial name of the trolley and indicated volume (in accordance with 4.4 of EN 1929-1:1998);
- calculated volume in litres (in accordance with 3.10 of EN 1929-1:1998);
- maximum load in kilograms (in accordance with 3.11 of EN 1929-1:1998 and 4.2 of this document);
- load of every goods carrying facility in kilograms (see 3.7 of EN 1929-3:2005);
- month and year of manufacture;
- number and date of this document.

The maximum load of the child carrying facility for type D trolley, i.e. 15 kg (see 4.9 of EN 1929-1:1998) shall be clearly displayed on the trolley.

7 Tests

7.1 Stability tests

7.1.1 General

Stability tests shall be carried out with the additional load(s) simulating the goods carrying facility(ies) (see 4.2.4.2 of EN 1929-3:2005), as described in Table 1:

- on type C trolleys with the basket empty,
- on type D trolleys with the basket empty and with a load simulating a child in the child carrying facility as described in 5.4 of EN 1929-1:1998.

Table 1 — Loading of goods carrying facility(ies) for the stability tests

Goods carrying facility	Lateral stability	Longitudinal stability forward	Longitudinal stability backward
Below the basket (see Figure 1, position a in 3.1 of EN 1929-3:2005)	Empty	Empty	Empty
Behind the basket (see Figure 1, position b in 3.1 of EN 1929-3:2005)	Empty	Empty	Loaded as described in 4.2.4.2 of EN 1929-3:2005
In connection with the back rest (see Figure 1, position c in 3.1 of EN 1929-3:2005)	Loaded as described in 4.2.4.2 of EN 1929-3:2005	Empty	Loaded as described in 4.2.4.2 of EN 1929-3:2005
At the front of the basket (see Figure 1, position d in 3.1 of EN 1929-3:2005)	Loaded as described in 4.2.4.2 of EN 1929-3:2005	Loaded as described in 4.2.4.2 of EN 1929-3:2005	Empty
Above the bottom of the basket (see Figure 1, position e in 3.1 of EN 1929-3:2005)	Loaded as described in 4.2.4.2 of EN 1929-3:2005	Loaded as described in 4.2.4.2 of EN 1929-3:2005	Empty

7.1.2 Longitudinal stability test

The test device shall consist of a tilting platform equipped with a 20 mm high strip placed parallel to the axis of inclination and acting as a limit stop for the trolley wheels.

The test shall be carried out at room temperature.

Place the swivelling castors in the least stable position.

Tilt the trolley on the test apparatus, in the ascending and descending direction to an angle of 16°. If the trolley does not overturn at an angle up to and including 16°, then it shall be deemed to conform to this document.

7.1.3 Lateral stability test

The test device shall consist of a tilting platform equipped with a 20 mm high strip placed parallel to the axis of inclination and acting as a limit stop for the trolley wheels.

The test shall be carried out at room temperature.

Place the swivelling castors in the least stable position.

Tilt the trolley on the test apparatus, to either side, to an angle of 10°. If the trolley does not overturn at an angle up to and including 10°, then it shall be deemed to conform to this document.

7.2 Test for maintaining trolleys on passenger conveyors

See 7.2 of EN 1929-2:2004.

7.3 Toppling test when exiting from the passenger conveyor

For trolleys with goods carrying facility at the front of the basket (see Figure 1, position d in 3.1 of EN 1929-3:2005), load only the goods carrying facility as described in 4.2.4.2 of EN 1929-3:2005.

For trolleys without goods carrying facility at the front of the basket (see Figure 1, positions a, b, c, e in 3.1 of EN 1929-3:2005), place only a 400 mm x 300 mm x 300 mm cuboid with a homogenous mass of 24 kg in the basket of the trolley, in the most unfavourable position, i.e. the centre of gravity being as near as possible to the front face of the trolley.

The test apparatus shall consist of a tilting platform equipped with a 20 mm high strip placed parallel to the axis of inclination and acting as a limit stop for the trolley wheels.

The test shall be carried out at room temperature.

Place the trolley on the test platform with the swivelling castors directed towards the rear of the trolley.

Tilt the trolley facing in the descending direction to an angle of 18°.

If the trolley does not overturn at an angle up to and including 18°, then it shall be deemed to conform to this document.

Bibliography

- [1] ISO 3864-1: 2002, *Graphical symbols - Safety colours and safety signs — Part 1: Design principles for safety signs in workplaces and public areas*
- [2] ISO 3864-2: 2004 , *Graphical symbols - Safety colours and safety signs — Part 2: Design principles for product safety labels*

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