BRITISH STANDARD

BS 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

The European Standard EN 1929-3:2005 has the status of a British Standard

ICS 97.130.30

BSI
British Standards

National foreword

This British Standard is the official English language version of EN 1929-3:2005.

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.

Clause 5.6
In **5.6**, test 5.5 of EN 1929-1:1998 applies to the whole trolley including all additional goods carrying facilities, even though the relevant diagram only shows the basic trolley.

Clause 5.7
In **5.7**, test 5.6 of EN 1929-1:1998 applies to the whole trolley including all additional goods carrying facilities, even though the relevant diagram only shows the basic trolley.

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.

Summary of pages

This document comprises a front cover, an inside front cover, page i, a blank page, the EN title page, pages 2 to 17 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 13 October 2005

ISBN 0 580 46558 6

Amendments issued since publication

Amd. No.	Date	Comments

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

blank

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1929-3

April 2005

ICS 97.130.30

English version

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

Chariots d'achat à corbeille - Partie 3 : Prescriptions et essais pour les chariots d'achat à corbeille avec dispositif(s) supplémentaire(s) de dépose de marchandises, avec ou sans siège pour enfant

Einkaufswagen - Teil 3: Anforderungen und Prüfungen für Einkaufswagen mit zusätzlichen Abstelleinrichtungen für Waren, mit oder ohne Kindersitz

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

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of 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.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 1929-3:2005: E

Contents

Foreword

This document (EN 1929-3:2005) 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.

During the preparation of this document CEN/TC 291/WG 3 considered general purpose of trolleys existing on the market.

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 and tests 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 or without a child carrying facility, which are also equipped with at least one goods carrying facility.

This part of this document applies to manually driven trolleys that are not intended for use on passenger conveyors.

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

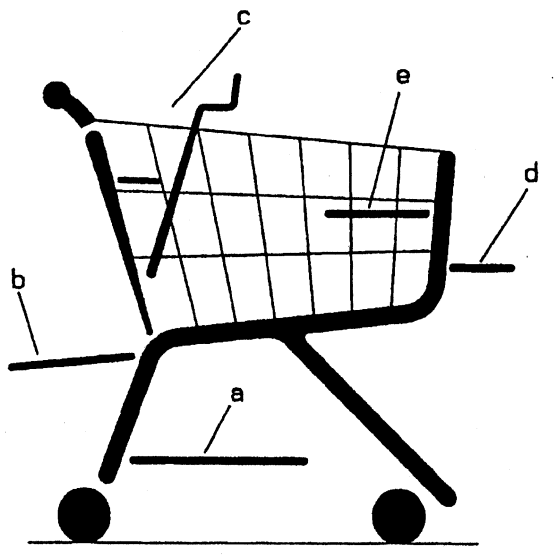
3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1929-1:1998 and the following apply.

3.1
goods carrying facility
device attached on the trolley allowing the possibility of additional load(s) outside and/or inside the basket

3.1.1
fixed goods carrying facility
device, which is always in the same position on the trolley

3.1.2
movable goods carrying facility
device, which can be moved by the user from the use position to the nesting position



Key

a below the basket
b behind the basket
c in connection with the back rest
d at the front of the basket
e above the bottom of the basket

Figure 1 — Example of possible positions for goods carrying facilities

3.2
basket trolley, type C
type A-trolley as defined in EN 1929-1:1998 with at least one additional goods carrying facility

3.3
basket trolley, type D
type B-trolley as defined in EN 1929-1:1998 with at least one additional goods carrying facility

3.4
loading area of the goods carrying facility
area, in which goods are placed

3.5
carrying surface of the goods carrying facility
part(s) of the trolley, on which the goods are placed; this or these carrying surface(s) can be smaller than the area of the outline of the loading area

3.6
accessory
equipment of the trolley other than those listed in Figure 1, that does not alter the characteristics of the trolley or its test results

3.7
load of goods carrying facility
load of goods carrying facility defined by the manufacturer

3.8
goods carrying facility test weight
cuboid from 65 mm x 270 mm x 270 mm, with the centre of gravity in the centre of the volume with a weight of 3 kg, used to test the goods carrying facility

3.9
rear edge of the child seat
horizontal line tangent to the rearmost point of the seat of the child seat, perpendicular to the median plane of the trolley

4 Safety

4.1 Generalities

In addition to the special requirements given in 4.2, basket trolleys type C and D shall conform to the requirements given in Table 1. Table 1 shows the requirements of EN 1929-1:1998 that are applicable for the trolleys of EN 1929-3.

Table 1

Paragraph of EN 1929-1:1998	Title
4.1.1	Safety
4.1.2	Protection of persons against impact
4.2.1.1	Maximum trolley width
4.2.1.2	Handle height
4.2.1.3	Base
4.2.2	Rolling quality
4.3	Base strength
4.4	Basket volume
4.5	Basket strength
4.6	Equipment for transport of a child (type B trolley)
4.7.1	Trolley test load
4.7.2	Strength under load
4.8	Stability
4.9	Maximum load for transport of a child
4.10	Maximum force required for setting a trolley in motion
4.11	Corrosion resistance

4.2 Special requirements

4.2.1 Free space between the floor and the lower point of the goods carrying facility

4.2.1.1 Free space of the goods carrying facility below the basket (see Figure 1, position a)

The free space between the floor and the lower point of the goods carrying facility below the basket (see Figure 1, position a) shall not be less than 45 mm (see Figure 2).

4.2.1.2 Free space of the goods carrying facility behind the basket (see Figure 1, position b)

The free space between the floor and the lower point of the goods carrying facility behind the basket (see Figure 1, position b) shall not be less than 200 mm (see Figure 2).

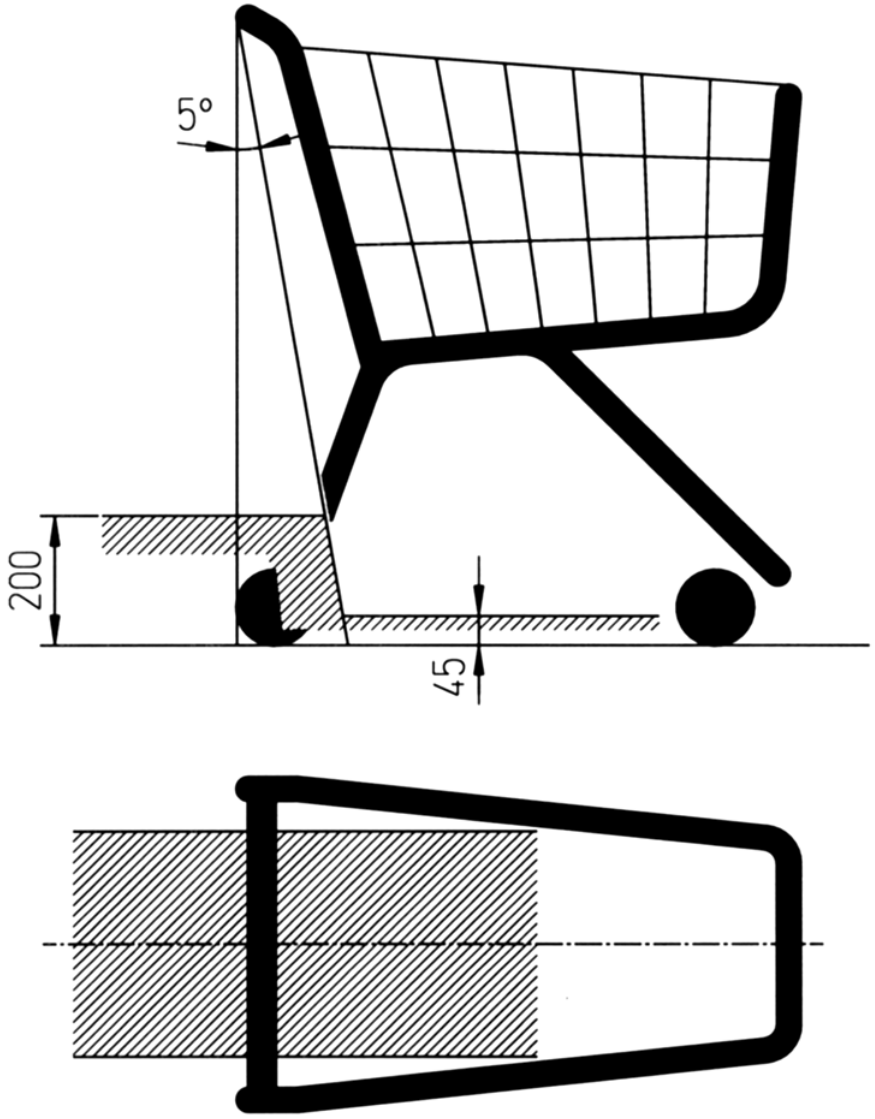


Figure 2

4.2.2 Leg room for user

4.2.2.1 Leg room for user for trolley equipped with fixed goods carrying facility behind the basket (see Figure 1, position b)

No part(s) of a fixed goods carrying facility behind the basket shall be placed under the handle in the space defined by the following limits (see Figure 3a):

— floor,

— between the rear wheels,

— below an horizontal plane 600 mm above the floor,

— behind a plane inclined at 3° tangent to the handle.

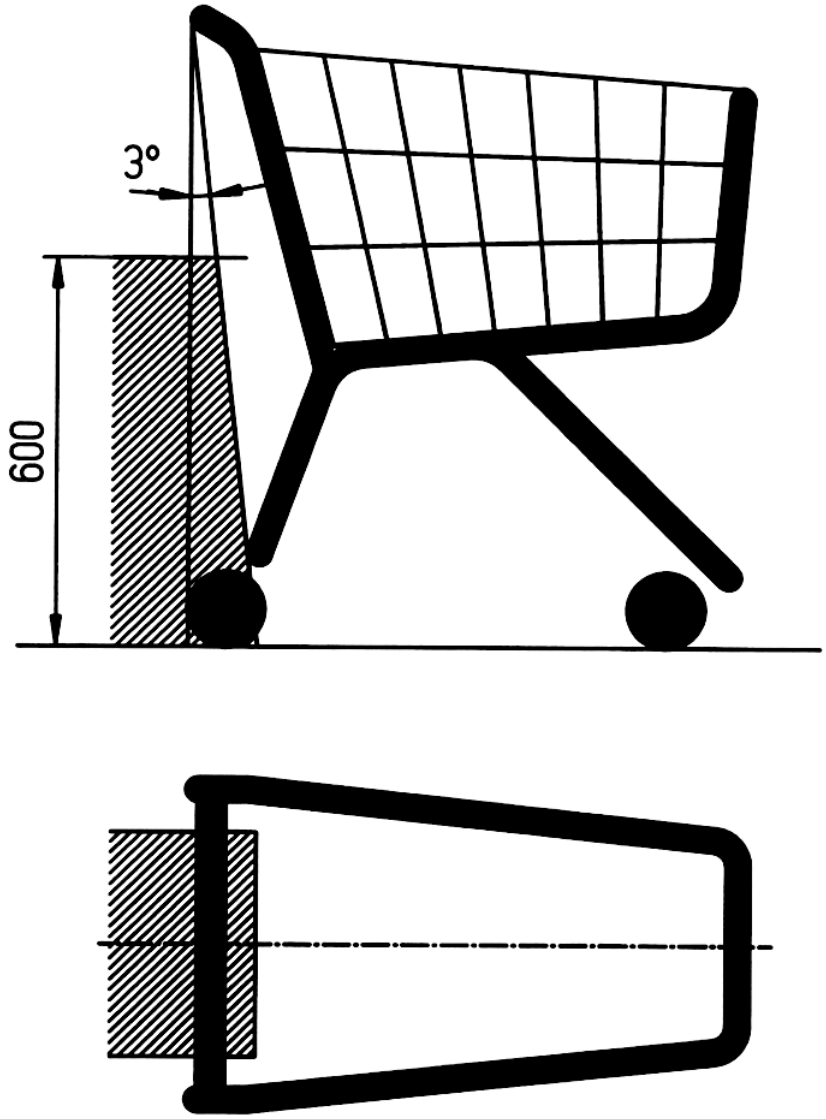


Figure 3a

The part(s) of a fixed goods carrying facility behind the basket situated in the space defined by the following limits (see Figure 3b):

— floor,

— between the rear wheels,

— below a horizontal plane 600 mm above the floor

— in front of a plane inclined at 3° tangent to the handle and behind a plane inclined at 5°

— tangent to the handle

shall be equipped with a bumper.

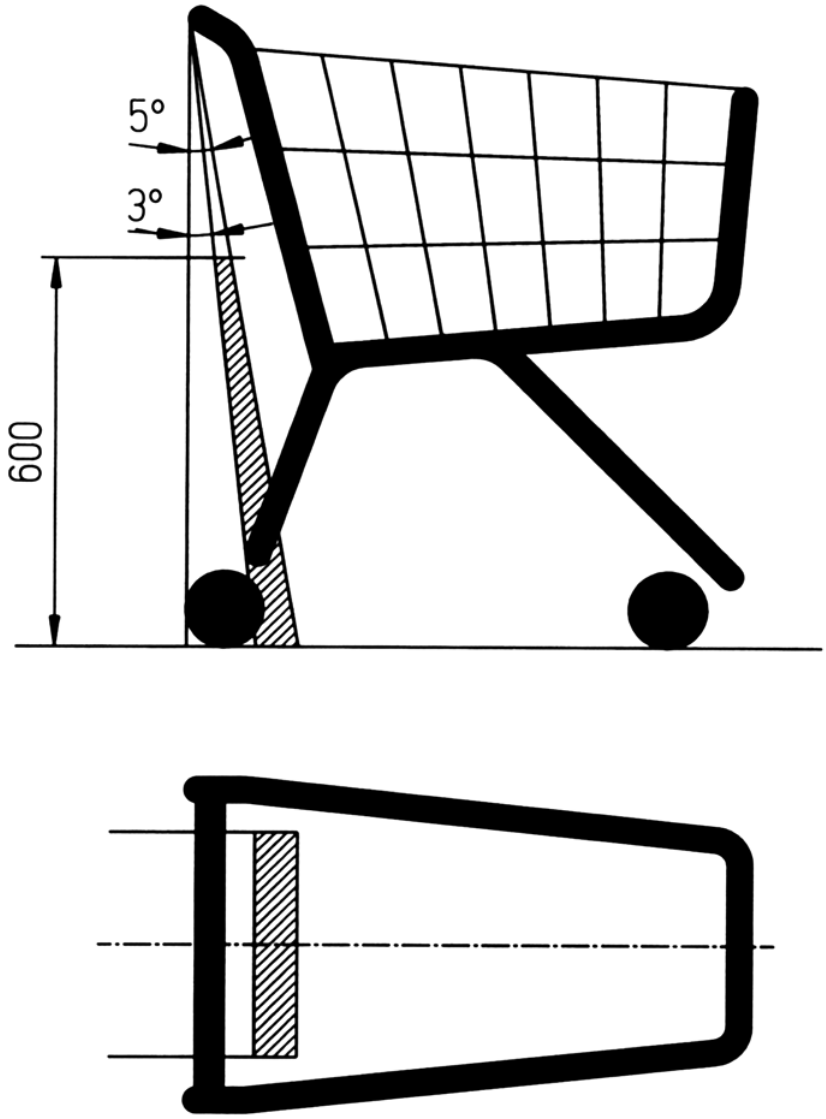


Figure 3b

The part(s) of a fixed goods carrying facility behind the basket situated in the space defined by the following limits (see Figure 3c):

— floor,

— between the rear wheels,

— below an horizontal plane 600 mm above the floor and

— in front of a plane inclined at 5° tangent to the handle

do not need to be equipped with a bumper.

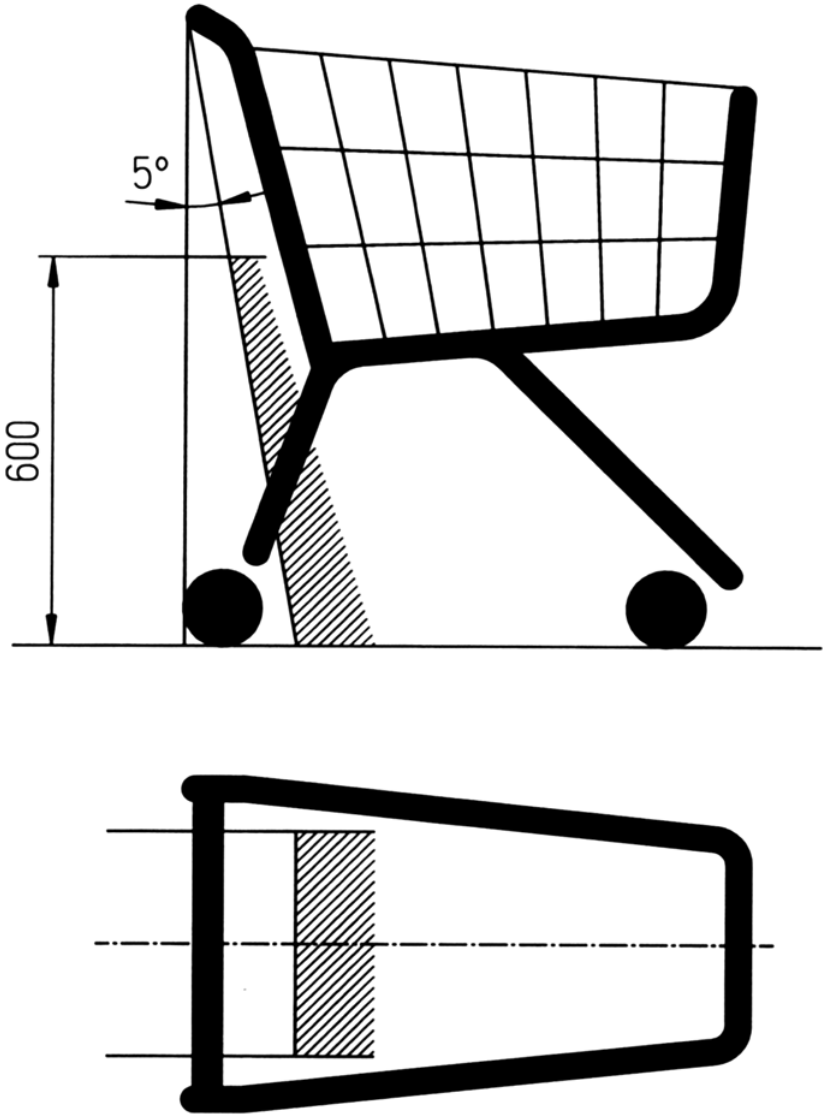


Figure 3c

4.2.2.2 Leg room for user for trolley equipped with movable goods carrying facility behind the basket (see Figure 1, position b)

In nesting position, the movable goods carrying facility shall comply with the requirements for fixed goods carrying facility (see 4.2.2.1).

In use position, a goods carrying facility test weight placed in the least favourable position on the movable goods carrying facility, shall not protrude in the space defined by the following limits (see Figure 4):

— above an horizontal plane 200 mm above the floor,

— between the rear wheels,

— below an horizontal plane 600 mm above the floor,

— behind a surface defined by the points A determined by the graphics in Figure 5.

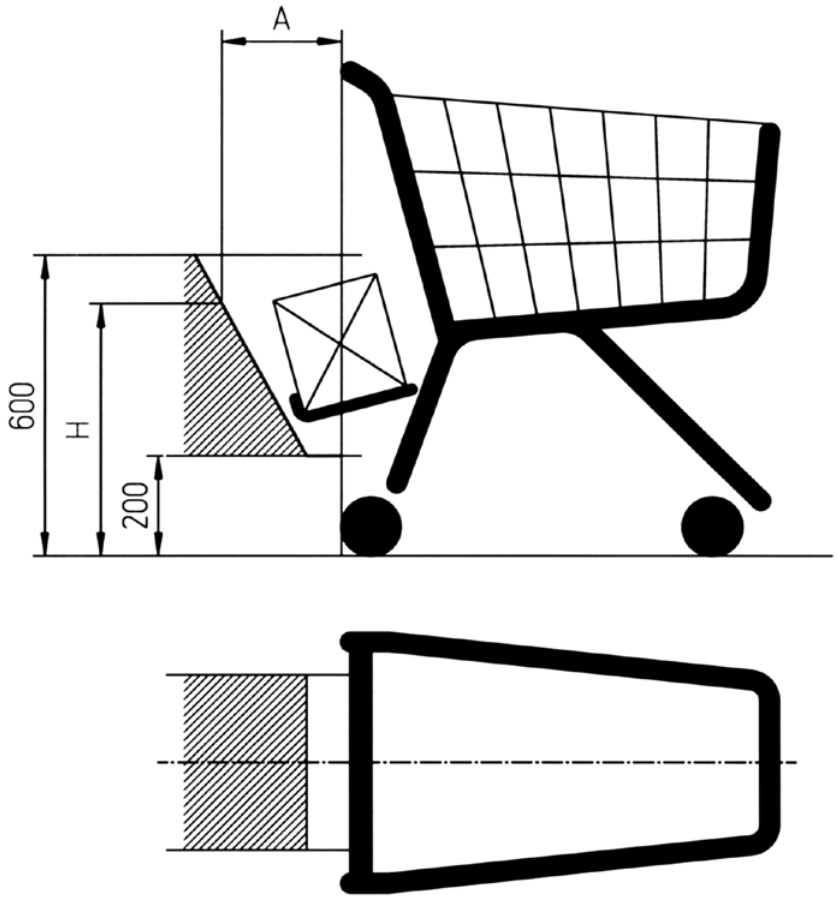


Figure 4

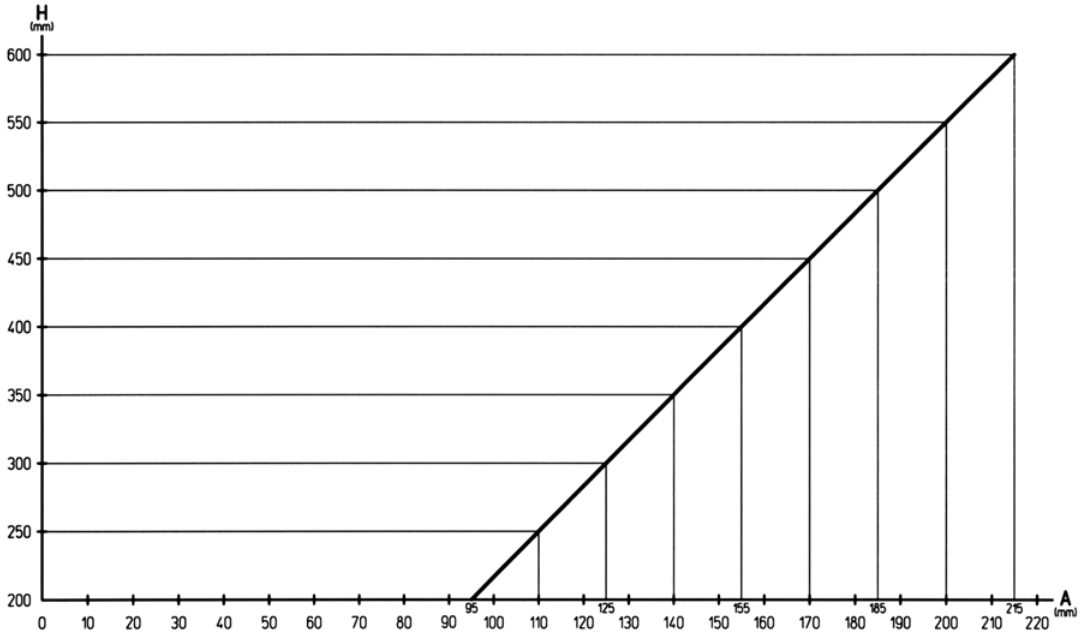


Figure 5

4.2.3 Leg room for children for trolley type D

No part of a goods carrying facility shall protrude in the space defined by the following limits (see Figure 6):

— behind a vertical plane in contact with the rear edge of the child seat,

— in front of a vertical plane parallel to the previous plane situated at 350 mm in the rear direction,

— above a horizontal plane situated 350 mm below a horizontal plane in contact with the rear edge of the child seat,

— below a horizontal plane situated 110 mm above a horizontal plane in contact with the rear edge of the child seat.

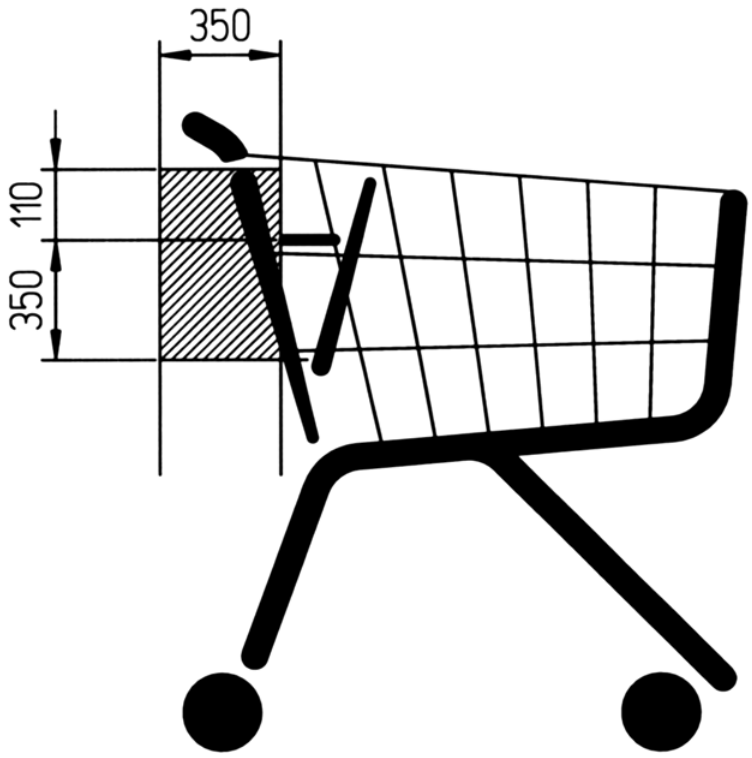


Figure 6

4.2.4 Trolley load

4.2.4.1 Trolley test load

The trolley test load for the strength test (see 5.3) shall be:

— for the basket: 1,5 times the basket nominal load (see 3.11 of EN 1929-1:1998),

— for every goods carrying facility: the load of the goods carrying facility as defined in 4.2.4.2.

4.2.4.2 Loading of goods carrying facility for tests

The loading area(s) of every goods carrying facility(ies) shall be loaded with the number of goods carrying facility test weights (see 3.8), slightly more than the load of the goods carrying facility defined by the manufacturer (see 3.7). For example:

Load of goods carrying facility indicated by the manufacturer: 17 kg.

Number of goods carrying facility test weights: 6 (6 x 3 kg = 18 kg > 17 kg).

The test weights are placed in the most unfavourable loading position:

— The test weights should be placed in an upright position, without being piled up, on the carrying surface of the goods carrying facilities and – if necessary - connected together to allow them to stand on the support areas.

— When it is not possible to put the test weights in an upright position, the test weights should be placed piled up as much as the goods carrying facilities allow.

4.2.5 Strength under load of the trolley

The trolley loaded with the trolley test load defined in 4.2.4.1 shall not show permanent deformation greater than 7 mm to dimension A and B (see Figure 9 of EN 1929-1:1998), and shall maintain all its operating characteristics (see 5.3 of EN 1929-1:1998).

Dimensions A and B shall be measured in the trolley median plane.

4.2.6 Strength under load of goods carrying facility(ies)

The goods carrying facility loaded as described in 4.2.4.2 shall not show any damage and/or permanent deformation(s) and its function shall remain unchanged after the test according to 5.4 of this document.

5 Test methods

5.1 General

All tests shall be carried out on new and complete trolleys and shall be in accordance with EN 1929-1:1998, Clause 5 with the following variations.

5.2 Basket volume measurement

See 5.2 of EN 1929-1:1998.

5.3 Trolley strength test

Measure dimensions A and B defined in 4.7.2 of EN 1929-1:1998. Load the trolley with the trolley test load defined in 4.2.4.1 of this document (the basket trolley is loaded with the material and the method defined in 5.3 of EN 1929-1:1998 and the goods carrying facility(ies) as defined in 4.2.4.2), and leave for 1 h. Unload the trolley and remeasure dimensions A and B. The difference in the dimensions recorded before and after loading shall be the permanent deformations. If the permanent deformations do not exceed 7 mm, the trolley shall be deemed to conform to the trolley strength test.

5.4 Goods carrying facility strength test

If, after the loading of test weight according to 4.2.4.2 of this document, every goods carrying facility does not show any damage and/or permanent deformations and if the function remains unchanged, the trolley shall be deemed to conform to the goods carrying facility strength test.

5.5 Stability tests

5.5.1 Stability tests shall be carried out with the additional load(s) simulating the goods carrying facility(ies) (see 4.2.4.2 loading of goods carrying facility for tests) as described in Table 2:

— 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 2 — 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 in 3.1, position a)	Empty	Empty	Empty
Behind the basket (see Figure 1 in 3.1, position b)	Empty	Empty	Loaded as described in 4.2.4.2
In connection with the back rest (see Figure 1 in 3.1, position c)	Loaded as described in 4.2.4.2	Empty	Loaded as described in 4.2.4.2
At the front of the basket (see Figure 1 in 3.1, position d)	Loaded as described in 4.2.4.2	Loaded as described in 4.2.4.2	Empty
Above the bottom of the basket (see Figure 1 in 3.1, position e)	Loaded as described in 4.2.4.2	Loaded as described in 4.2.4.2	Empty

5.5.2 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 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.

5.5.3 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.

5.6 Basket wall impact strength test

See 5.5 of EN 1929-1:1998.

5.7 Base strength test

See 5.6 of EN 1929-1:1998.

5.8 Endurance test

Endurance test shall be carried out as described in 5.7 of EN 1929-1:1998, but with the additional load simulating the goods carrying facility(ies) (see 4.2.4.2 loading of goods carrying facility for tests).

5.9 Measurement of the force required for setting in motion

Measurement of the force required for setting in motion shall be carried out as described in 5.8 of EN 1929-1: 1998 but with the additional load simulating the goods carrying facility(ies) (see 4.2.4.2 loading of goods carrying facility for tests).

5.10 Inspection of front part of the base

See 5.9 of EN 1929-1:1998.

5.11 Test for impact strength of castor mounting point

See 5.10 of EN 1929-1:1998.

5.12 Corrosion resistance test

See 5.11 of EN 1929-1:1998.

6 Marking

An identification plate shall be permanently marked on each trolley, displaying the following information:

— manufacturer’s name or trademark;

— address of the manufacturer;

— commercial designation and indicated volume of trolley (see 4.4 of EN 1929-1:1998);

— calculated basket volume in litres (see 3.10 of EN 1929-1:1998);

— nominal load of the basket in kilograms (see 3.11 of EN 1929-1:1998);

— load of every goods carrying facility in kilograms (see 3.7);

— month and year of manufacture;

— number and date of this document.

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

7 Maintenance

See 7 of EN 1929-1:1998.

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001. Fax: +44 (0)20 8996 7001. Email: orders@bsi-global.com. Standards are also available from the BSI website at http://www.bsi-global.com.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: info@bsi-global.com.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001. Email: membership@bsi-global.com.

Information regarding online access to British Standards via British Standards Online can be found at http://www.bsi-global.com/bsonline.

Further information about BSI is available on the BSI website at http://www.bsi-global.com.

Copyright

BSI
389 Chiswick High Road
London
W4 4AL