

INTERNATIONAL STANDARD

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Series 1 freight containers — Classification, dimensions and ratings

*Conteneurs de la série 1 — Classification, dimensions et masses
brutes maximales*



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 104, *Freight containers*, Subcommittee SC 1 *General purpose containers*.

This sixth edition cancels and replaces the fifth edition (ISO 668:1995), which has been technically revised. It also incorporates the Amendments ISO 668:1995/Amd1:2005 and ISO 668:1995/Amd2:2005.

[Annex A](#) forms an integral part of this International Standard.

Series 1 freight containers — Classification, dimensions and ratings

1 Scope

This International Standard establishes a classification of series 1 freight containers based on external dimensions, and specifies the associated ratings and, where appropriate, the minimum internal and door opening dimensions for certain types of containers.

These containers are intended for intercontinental traffic.

This International Standard summarizes the external and some of the internal dimensions of series 1 containers. The dimensions of each type of container are defined in the appropriate part of ISO 1496, which is the authoritative document for internal container dimensions.

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.

ISO 830:1981, *Freight containers — Terminology*

ISO 1161, *Series 1 freight containers — Corner fittings — Specification*

ISO 1496-1, *Series 1 freight containers — Specification and testing — Part 1: General cargo containers for general purposes*

ISO 1496-2, *Series 1 freight containers — Specification and testing — Part 2: Thermal containers*

ISO 6346, *Freight containers — Coding, identification and marking*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 830:1981 and the following apply.

3.1

freight container

article of transport equipment

- a) of a permanent character and accordingly strong enough to be suitable for repeated use;
- b) specially designed to facilitate the carriage of goods by one or more modes of transport, without intermediate reloading;
- c) fitted with devices permitting its ready handling, particularly its transfer from one mode of transport to another;
- d) so designed as to be easy to fill and empty;
- e) having an internal volume of 1 m³ (35,3ft³) or more

Note 1 to entry: The term “freight container” does not include vehicles or conventional packing.

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3.2

ISO container

freight container complying with all relevant ISO container standards in existence at the time of its manufacture

3.3

rating

R

gross mass, *R*, of a container which is both the maximum mass for operation and the minimum mass for testing

Note 1 to entry: In some countries, in order to conform to current commercial practice, the term “weight” is used (incorrectly) instead of “mass”.

3.4

nominal dimensions

dimensions, disregarding tolerances and rounded to the nearest convenient whole number, by which a container may be identified

Note 1 to entry: Nominal dimensions are usually expressed in imperial units.

3.5

internal dimensions

dimensions of the largest unobstructed rectangular parallelepiped which could be inscribed in the container if inward protrusions of the top corner fittings are disregarded

Note 1 to entry: Except where otherwise stated, the term “internal dimensions” is synonymous with the term “unobstructed internal dimensions”.

3.6

door opening

size of the (end) door aperture, i.e. width and height dimensions of the largest parallelepiped which could possibly be passed into the container through the door aperture in question

4 Classification and designation

Series 1 freight containers have a uniform width of 2 438 mm (8 ft).

The nominal lengths are listed in [Table 1](#).

Containers 2 896 mm (9 ft 6 in) in height are designated 1EEE, 1AAA and 1BBB.

Containers 2 591 mm (8 ft 6 in) in height are designated 1EE, 1AA, 1BB and 1 CC.

Containers 2 438 mm (8 ft) in height are designated 1A, 1B, 1C and 1D.

Containers less than 2 438 mm (8 ft) in height are designated 1AX, 1BX, 1 CX and 1 DX.

NOTE 1 The letter “X” used in the designation has no specific connotation other than to indicate that the height of the container is between 0 and 2 438 mm (8 ft).

Table 1 — Nominal lengths

Freight container designation	Nominal length	
	m	ft
1EEE 1EE	13,7 ^a	45 ^a
1AAA 1AA 1A 1AX	12,2 ^a	40 ^a
1BBB 1BB 1B 1BX	9,1	30
1CC 1C 1CX	6,1	20
1D 1DX	3,00	10

^a In certain countries there are legal limitations to the overall length of vehicle and load.

5 Dimensions, tolerances and ratings

5.1 Reference temperature for measurements

The dimensions and tolerances apply when measured at the temperature of 20 °C (68 °F); measurements taken at other temperatures shall be adjusted accordingly.

5.2 External dimensions, tolerances and ratings

5.2.1 External dimensions and tolerances

The external dimensions and permissible tolerances given in [Table 2](#) are applicable to all types of containers, except that a reduced height is permissible for tank, open top, bulk, platform and platform-based type containers.

5.2.2 Ratings

The ratings given in [Table 2](#) are applicable to all types of containers, except that for particular traffic higher values are permissible for 1 BBB, 1 BB, 1 B, 1 BX, 1 CC, 1 C and 1 CX containers of any type. Such containers are considered as ISO containers provided that their maximum gross mass (*R*) does not exceed 30 480 kg and that they are tested and marked to these ratings (see [3.3](#)).

WARNING — Recognizing that there will always be a need for special containers for particular traffic, attention is drawn to the fact that numerous containers exist which have length and width dimensions similar to those of ISO series 1 containers but have ratings and/or heights in excess of those defined by this International Standard. This may include containers having maximum gross masses in excess of the ratings in [Table 2](#). They may not, therefore, be fully intermodal worldwide and their operation could require special arrangements.

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5.2.3 Gooseneck tunnels

Gooseneck tunnels shall be provided as mandatory features in containers 1EEE, 1AAA, and may be provided as optional features in containers 1EE, 1AA, 1A and 1AX. The dimension of gooseneck tunnels shall be in accordance with [Annex C](#). The base structure of a container, if any, shall be in accordance with Figure B 10.

5.3 Internal dimensions and door openings

5.3.1 Dimensions with projecting top corner fitting

Where a top corner fitting projects into the internal space (specified by [Table 3](#)), that part of the corner fitting projecting into the container shall not be considered as reducing the size of the container.

5.3.2 General cargo containers for general purposes (see ISO 1496-1)

The type code numbers shall be in accordance with ISO 6346.

5.3.2.1 Minimum internal dimensions

Internal dimensions of containers shall be as large as possible, but, in any case:

- closed containers type 00 shall comply with the requirements for minimum internal length, width and height given in [Table 3](#);
- containers type 02, having partial opening(s) in the side(s), shall comply with the requirements for minimum internal length and height given in [Table 3](#);
- containers type 03, having an opening roof, shall comply with the requirements for minimum internal length and width given in [Table 3](#);
- containers types 01 and 04, having openings in the side(s) and/or roof, shall comply with the requirements for minimum internal length given in [Table 3](#);
- closed, vented containers types 10 and 11 shall comply with the requirements for minimum internal length, width and height given in [Table 3](#);
- closed, ventilated containers type 13 shall comply with the requirements for minimum internal length, width and height given in [Table 3](#).

5.3.2.2 Minimum door opening dimensions

Closed-type containers designated 1A, 1B, 1C and 1D (types 00 and 02) shall have a door opening, preferably having dimensions equal to those of the internal cross-section (height and width) of the containers and, in any case, not less than the values given in [Table 3](#).

Closed-type containers designated 1EE, 1AA, 1BB and 1CC (types 00 and 02) shall have a door opening, preferably having dimensions equal to those of the internal cross-section (height and width) of the containers and, in any case, not less than the values given in [Table 3](#).

Closed-type containers designated 1EEE, 1AAA and 1BBB (types 00 and 02) shall have a door opening, preferably having dimensions equal to those of the internal cross-section (height and width) of the containers and, in any case, not less than the values given in [Table 3](#).

5.3.3 Thermal containers (see ISO 1496-2)

The internal dimensions and door openings of thermal containers shall be as large as possible. Door openings shall preferably have dimensions equal to those of the internal cross-section of the containers.

The internal dimensions shall be measured from inner faces of battens, bulkheads, ceiling air ducts, floor air ducts, etc., where fitted.