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# International Standard



# 668

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Series 1 freight containers — Classification, external dimensions and ratings

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

Third edition — 1979-04-15

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**Descriptors** : cargo transportation, freight containers, specifications, dimensions, weight (mass), ratings, classifications, designation.

Price based on 5 pages

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 668 was developed by Technical Committee ISO/TC 104, *Freight containers*, and was circulated to the member bodies in May 1978.

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It has been approved by the member bodies of the following countries :

Australia	India	South Africa, Rep. of
Austria	Iran	Spain
Belgium	Ireland	Sweden
Bulgaria	Israel	Switzerland
Canada	Italy	Turkey
Chile	Mexico	United Kingdom
Czechoslovakia	Netherlands	USA
Denmark	New Zealand	USSR
France	Norway	Yugoslavia
Germany, F.R.	Poland	
Hungary	Romania	

No member body expressed disapproval of the document.

This third edition cancels and replaces the second edition (i.e. ISO 668-1976).

# Series 1 freight containers — Classification, external dimensions and ratings

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard establishes a classification of series 1 freight containers based on external dimensions, and specifies the associated ratings.

These containers are intended for intercontinental traffic.

NOTE — Series 3 containers are intended essentially for internal continental systems. For their dimensions as well as strength and testing requirements, a document is in preparation.

## 2 DEFINITIONS

For the purposes of this International Standard, the following definitions apply :

**2.1 freight container** : An 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 m<sup>3</sup> (35.3 ft<sup>3</sup>) or more.

The term "freight container" includes neither vehicles nor conventional packing.

**2.2 ISO container** : A freight container complying with all relevant ISO container standards in existence at the time of its manufacture.

**2.3 rating** : The maximum gross mass<sup>1)</sup>. It is the maximum permissible combined mass of the freight container and its contents.

## 3 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.

TABLE 1 — Nominal lengths

Freight container designation	Nominal length	
	m	ft
1AA 1A 1AX	12*	40*
1BB 1B 1BX	9	30
1CC 1C 1CX	6	20
1D 1DX	3	10

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

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

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, 1CX and 1DX.

NOTE — X has no specific connotation other than to indicate that the height of the container is between 0 and 2 438 mm (8 ft).

The reduced height containers are permissible for tank, open top, bulk, platform and platform based type containers.

1) In some countries, to conform to current commercial practice, the term "weight" is used (incorrectly) instead of "mass".

**4 EXTERNAL DIMENSIONS, TOLERANCES AND RATINGS**

**4.1** The external dimensions, tolerances and ratings are given in table 2.

**4.2** The dimensions and tolerances apply when measured

at the temperature of 20 °C (68 °F); measurements taken at other temperatures shall be adjusted accordingly.

**4.3** Corner fittings locations (centre-to-centre distances and diagonal tolerances) are given in the annex.

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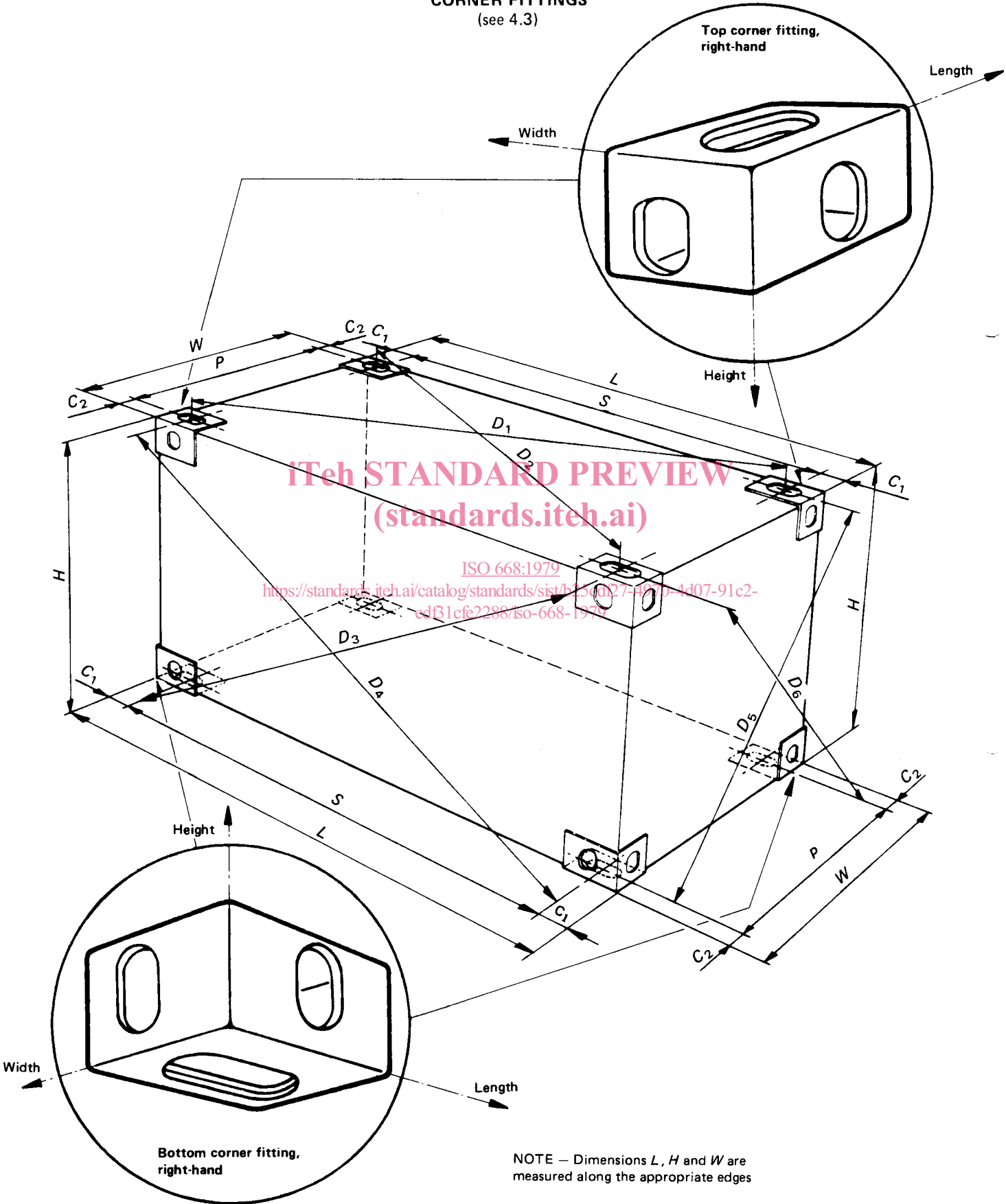
TABLE 2 — External dimensions, permissible tolerances and ratings of series 1 freight containers

Freight container designation	Length (L)			Width (W)			Height (H)			Rating (maximum gross mass)					
	mm	Tolerances mm	ft in	Tolerances in	mm	Tolerances mm	ft in	Tolerances mm	ft in	Tolerances in	kg	lb			
													mm	Tolerances mm	mm
1AA	12 192	0 -10	40	0 -3/8	2 438	0 -5	8	0 -3/16	2 591*	0 -5	8	6*	0 -3/16	30 480	67 200
1A	12 192	0 -10	40	0 -3/8	2 438	0 -5	8	0 -3/16	2 438	0 -5	8	8	0 -3/16	30 480	67 200
1AX	12 192	0 -10	40	0 -3/8	2 438	0 -5	8	0 -3/16	< 2 438		< 8			30 480	67 200
1BB	9 125	0 -10	29 11 1/4	0 -3/8	2 438	0 -5	8	0 -3/16	2 591*	0 -5	8	6*	0 -3/16	25 400	56 000
1B	9 125	0 -10	29 11 1/4	0 -3/8	2 438	0 -5	8	0 -3/16	2 438	0 -5	8	8	0 -3/16	25 400	56 000
1BX	9 125	0 -10	29 11 1/4	0 -3/8	2 438	0 -5	8	0 -3/16	< 2 438		< 8			25 400	56 000
1CC	6 058	0 -6	19 10 1/2	0 -1/4	2 438	0 -5	8	0 -3/16	2 591*	0 -5	8	6*	0 -3/16	20 320	44 800
1C	6 058	0 -6	19 10 1/2	0 -1/4	2 438	0 -5	8	0 -3/16	2 438	0 -5	8	8	0 -3/16	20 320	44 800
1CX	6 058	0 -6	19 10 1/2	0 -1/4	2 438	0 -5	8	0 -3/16	< 2 438		< 8			20 320	44 800
1D	2 991	0 -5	9 9 3/4	0 -3/16	2 438	0 -5	8	0 -3/16	2 438	0 -5	8	8	0 -3/16	10 160	22 400
1DX	2 991	0 -5	9 9 3/4	0 -3/16	2 438	0 -5	8	0 -3/16	< 2 438		< 8			10 160	22 400

\* In certain countries there are legal limitations to the overall height of vehicle and load.

ANNEX

CORNER FITTINGS  
(see 4.3)



NOTE — Dimensions  $L$ ,  $H$  and  $W$  are measured along the appropriate edges

$S$  = Length between centres of apertures in corner fittings

$P$  = Width between centres of apertures in corner fittings

$C_1$  = Corner fitting measurement  $101,5 \pm 1,5$  mm ( $4 \pm 1/16$  in)

$C_2$  = Corner fitting measurement  $89 \pm 1,5$  mm ( $3 \frac{1}{2} \pm 1/16$  in)

$L$  = External length of the container

$W$  = External width of the container

$D$  = Distance between centres of apertures, or projected reference points therefrom, of diagonally opposite corner fittings, resulting in six measurements :  $D_1, D_2, D_3, D_4, D_5$  and  $D_6$

$K_1$  = Difference between  $D_1$  and  $D_2$  or between  $D_3$  and  $D_4$ ; i.e.  $K_1 = |D_1 - D_2|$  or  $K_1 = |D_3 - D_4|$

$K_2$  = Difference between  $D_5$  and  $D_6$ ; i.e.  $K_2 = |D_5 - D_6|$

$H$  = Overall height

TABLE 3 – Dimensions and tolerances relating to corner fitting locations

Freight container designation	$S$			$P$			$K_1$ max.		$K_2$ max.	
	mm	ft	in	mm	ft	in	mm	in	mm	in
1AA 1A 1AX	11 985	39	3 7/8	2 259	7	4 31/32	19	3/4	10	3/8
1BB 1B 1BX	8918	29	3 1/8	2 259	7	4 31/32	16	5/8	10	3/8
1CC 1C 1CX	5 853	19	2 7/16	2 259	7	4 31/32	13	1/2	10	3/8
1D 1DX	2787	9	1 23/32	2 259	7	4 31/32	10	3/8	10	3/8

NOTE – Attention of manufacturers is drawn to the vital importance of accurately maintaining the reference dimensions of  $S$  and  $P$ .

The tolerances to be applied to  $S$  and  $P$  are governed by the tolerances shown for the overall length and width in this International Standard and in ISO 1161.

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