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### **Vägfordon — Växelflak med styrtunnel — Klass C — Mått och allmänna krav**

Europastandarden EN 284:1992 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 284:1992.

### **Swap bodies of class C — Dimensions and general requirements**

The European Standard EN 284:1992 has the status of a Swedish Standard. This document contains the official English version of EN 284:1992.



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 284

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English version

## Swap bodies — Swap bodies of class C — Dimensions and general requirements

Caisses mobiles —  
Caisses mobiles de classe C — Dimensions et  
spécifications générales

Wechselbehälter —  
Wechselbehälter der Klasse C — Maße und  
allgemeine Anforderungen

This European Standard was approved by CEN on 1992-02-28. 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.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

## Foreword

The purpose of this standard is to combine the national standards into one single European Standard to ensure for the future a free, unimpeded circulation of swap bodies in Europe within the road/rail transport chain.

This European Standard was prepared by CEN/TC 119 'Swap bodies' the secretariat of which is held by Normenausschuß Kraftfahrzeuge (FAKRA), a subdivision of Deutsches Institut für Normung (DIN).

At the 2nd meeting of CEN/TC119 in Frankfurt am Main in May 1988 the basic decisions for publication of a draft European Standard had been taken. At that meeting delegations from the following countries participated: Belgium, Denmark, Germany, Finland, France, Italy, Netherlands, Norway, Sweden, United Kingdom.

In accordance with the common CEN/CENELEC Rules, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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## 1 Object and field of application

This European Standard lays down the basic specifications for swap bodies of class C, which are designed as totally enclosed types, e.g. box types or as open types, e.g. platform without or with cover/stake. This standard does not apply to swap bodies having a gross mass of more than 16 t (e.g. tank type swap bodies).

These swap bodies are suitable for international exchange and for conveyance by road and rail including interchange between these forms of transport.

NOTE. Class C means that all swap bodies having this designation are equipped with bottom fittings positioned according to the specification for 1C (20') ISO-Containers (see ISO 668).

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this European Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on these International and European Standards are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of CEN maintain registers of currently valid International and European Standards.

EN 283-1991	Swap bodies; Testing
ISO 668-1988	Series 1 freight containers – classification – dimensions and ratings
ISO 1161-1984	Series 1 freight containers – Corner fittings – specification
ISO 6346-1984	Freight containers – Coding, identification and marking
UIC 592-4-1985	Swap bodies which can be handled by grabs – Technical conditions
UIC 596-6-1986	Traffic of road vehicles on wagons; Technical organization – conditions for coding load units in combined transport and combined transport lines

## 3 Dimensions and ratings

The external dimensions, tolerances and rating (*R*) of the general cargo swap bodies covered by this standard are those specified in figure 1 and table 1. No part of the swap body shall project beyond these specified overall external dimensions.

## 4 General requirements

The strength requirements for swap bodies are given in EN 283. The swap bodies as complete units shall be capable of withstanding the loads and loadings specified in this standard.

## 5 Mandatory features

### 5.1 Bottom fittings

All swap bodies shall be equipped with four bottom fittings. Requirements for the location of the fittings are given in figure 1 and table 1 and are in conformity with the positioning specified for 1C ISO-Containers. The apertures of the fittings shall comply with ISO 1161; for basic fitting dimensions see annex A.

### 5.2 Grappler arm lifting areas

All swap bodies shall be equipped with four grappler arm lifting areas. Requirements for the location and dimensions of grappler arm lifting areas are given in figure 2. They shall be designed to prevent grappler arms sliding from the lifting area at longitudinal movement of the swap body relative to the lifting device. This can normally be accomplished by fixing two stops at 250 mm on either side of the grappler arm lifting area centre line.

If this is unpracticable (e.g. supporting legs, etc.), the total length of the area shall be increased from 500 mm to 850 mm as measured from the axis of the bottom fitting, and all of the longitudinal safety lip and part of the contact area may be removed:

- over a depth of less than 15 mm from the inside face of the safety lip of the grappler arm lifting area, and
- in the areas marked a) and b) on figure 2.

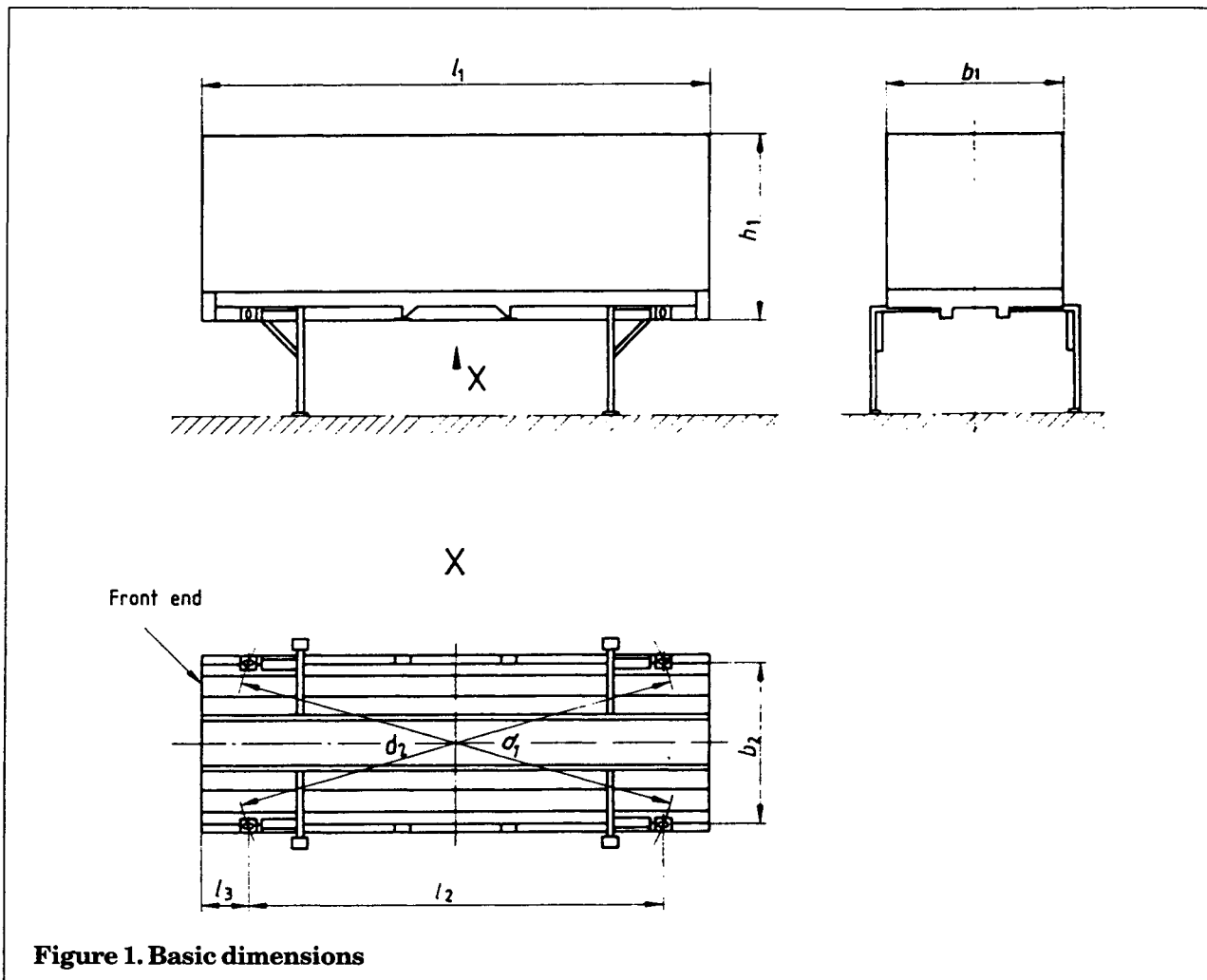


Figure 1. Basic dimensions

Swap body designation	Dimensions in mm							
	$l_1$	$l_2$	$l_3$	$h_1$ <sup>1)</sup>	$b_1$ <sup>2)</sup>	$b_2$	$d_1 - d_2$ or $d_2 - d_1$	$R$ <sup>3)</sup>
C 715	7150 0 -20	5853 ± 3	648,5 0 -3	2670	2500	2259 ± 3	13 max.	16 t max.
C 745	7450 0 -20		798,5 0 -3					
C 782 <sup>4)</sup>	7820 0 -20		983,5 0 -3					

<sup>1)</sup> The body height of 2670 mm assures transportation without hindrance on the main railway lines of continental Europe. For larger heights the International Union of Railways code for line categories UIC 592-4 shall be taken into consideration. For UK and Ireland the max. height is 2550 mm.

<sup>2)</sup> A max. width of 2600 mm is permitted for certain thermal bodies according to Council Directive No. 88/218/EEC.

The body width of 2500 mm assures transportation without hindrance throughout Europe. For larger widths the national road regulations and International Union of Railways code UIC 596-6 shall be taken into consideration.

<sup>3)</sup> Lower gross masses may be agreed.

<sup>4)</sup> At the present state of road vehicle regulation in certain countries, the transport of two swap bodies of this size on a road train is only feasible together with a short coupling and/or a short driver's cab.



**5.3 Steering tunnel**

All swap bodies shall have a steering tunnel in their base structure. The space required to constitute the steering tunnel is defined in figure 3. The steering tunnel shall pass completely through the entire length of the base structure. A profiled structure forms the lateral limitations of the tunnel, the lower faces of the side members forming the tunnel shall be level with the bottom faces of the securing fittings and shall constitute load transfer areas being capable of supporting part of the total load of the swap body whilst positioned on a carrying vehicle.

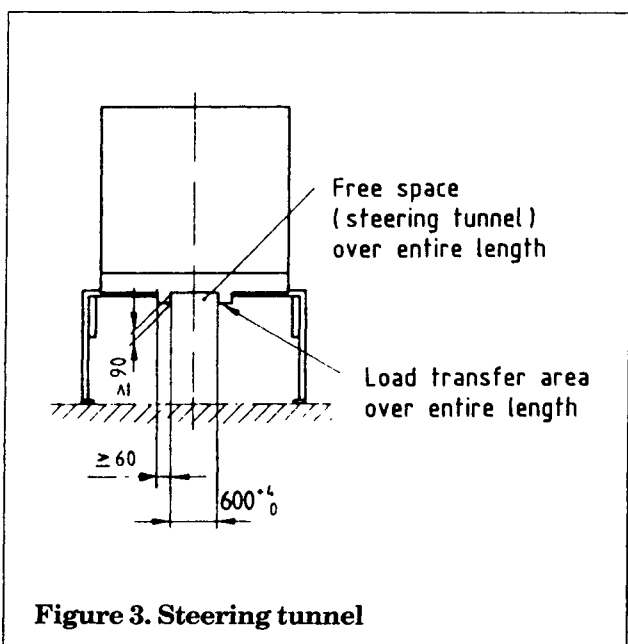


Figure 3. Steering tunnel

**5.4 Front stop**

All swap bodies shall be equipped with a front stop at the front end wall. The stop shall have a minimum width of 800 mm, a minimum height of 8 mm and shall be equispaced about the vertical centre line of the 800 mm x 160 mm area defined in figure 4.

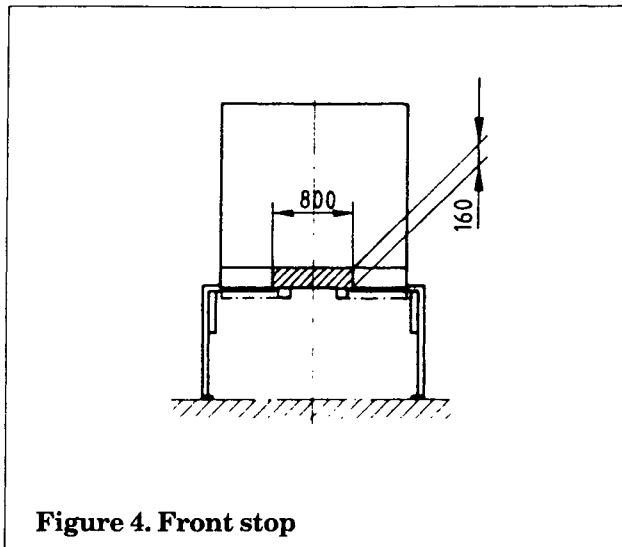


Figure 4. Front stop

**5.5 Supporting legs**

Swap bodies according to this standard shall be equipped with four foldable supporting legs. Positioning of the supporting legs is specified in figures 5 and 6. The free height underneath the chassis interface of a swap body placed onto its supporting legs shall be  $1320^{+10}_0$  mm. An alternative free height of  $1220^{+10}_0$  mm may be agreed between manufacturer and client.

The supporting legs may be vertically adjustable. Each leg shall be provided with a foot-plate of  $\geq 95$  mm x 95 mm and shall be equipped with two catches giving a secure locking in folded and mounted position. The 2nd securing shall be easily visible and its function easily be checked. False operation shall be excluded.

When the supporting legs are folded they shall not come outside the width of the swap body and not be a hindrance to the handling of the swap body.

Examples of supporting legs are shown in annex B. However, when using other supporting legs the above mentioned requirements shall be met in all cases.

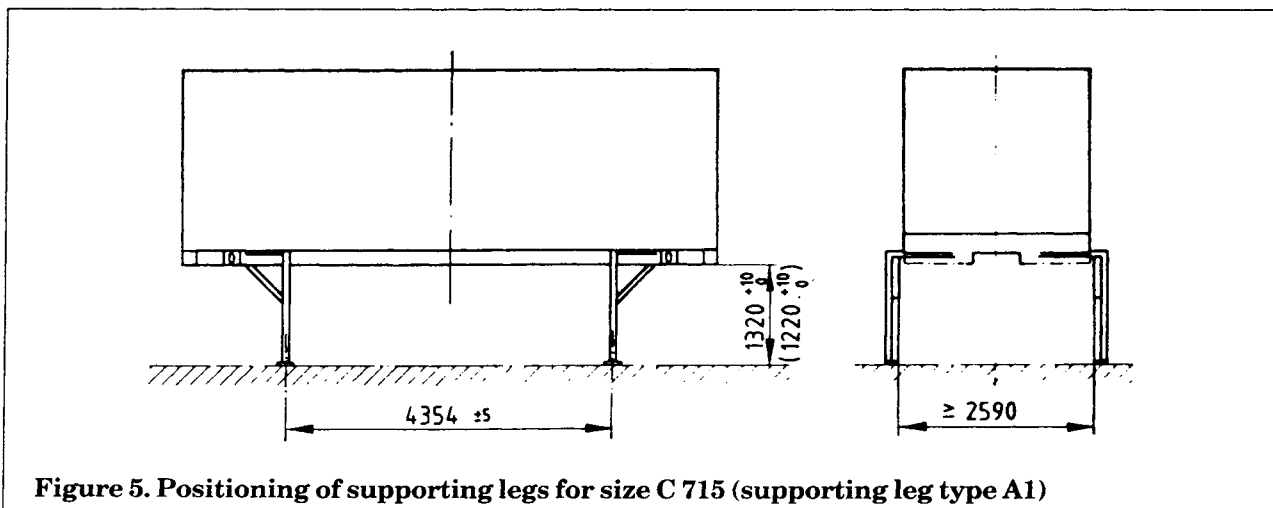


Figure 5. Positioning of supporting legs for size C 715 (supporting leg type A1)