



SLOVENSKI STANDARD
SIST-TS CEN/TS 13853:2004
01-september-2004

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Swap bodies for combined transport - Stackable swap bodies type C 745-S16 -
 Dimensions, design requirements and testing

Wechselbehälter für den kombinierten Verkehr - Stapelbare Wechselbehälter Typ C 745-
 S16 - Abmessungen, Konstruktionsanforderungen und Prüfung

Caisses mobiles pour transport combiné - Caisse gerbable de type C 745-S16 -
 Dimensions, exigences de conception et essais

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Ta slovenski standard je istoveten z: CEN/TS 13853:2003

ICS:

55.180.10 X^ } æ ^} •\ ä [] c b ^!ã General purpose containers

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
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CEN/TS 13853

December 2003

ICS 55.180.10

English version

**Swap bodies for combined transport – Stackable swap bodies
type C 745-S16 – Dimensions, design requirements and testing**

Caisses mobiles pour transport combiné – Caisse gerbable
de type C 745-S16 – Dimensions, exigences de conception
et essais

Wechselbehälter für den kombinierten Verkehr –
Stapelbare Wechselbehälter Typ C 745-S16 –
Abmessungen, Konstruktionsanforderungen und Prüfung

This Technical Specification (CEN/TS) was approved by CEN on 9th November 2003 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

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Contents

Contents.....	2
Introduction	4
1 Scope	5
2 Normative references	5
3 General.....	5
3.1 Characteristics of stackable swap bodies	5
3.2 Type description	5
4 Dimensions and Ratings.....	5
5 Design requirements	9
5.1 General.....	9
5.2 Corner fittings	9
5.3 Base structure.....	9
5.4 End structure.....	10
5.5 Side structure.....	10
5.6 Walls.....	10
5.7 Optional features.....	10
6 Testing	11
6.1 General.....	11
6.2 Test No. 1—Stacking	11
6.3 Test No. 2—Lifting from the four top corner fittings.....	12
6.4 Test No. 3—Lifting from the four intermediate bottom fittings.....	13
6.5 Test No. 4—Lifting from the four bottom fittings.....	13
6.6 Test No. 5—Restraint (longitudinal).....	14
6.7 Test No. 6—Strength of end walls.....	14
6.8 Test No. 7—Strength of side walls.....	14
6.9 Test No. 8—Strength of the roof (where provided)	15
6.10 Test No. 9—Floor strength.....	15
6.11 Test No. 10—Rigidity (transverse)	16
6.12 Test No. 11—Rigidity (longitudinal)	16
6.13 Test No. 12—Lifting from fork-lift pockets	17
6.14 Test No. 13—Lifting from the base at grapples arm positions	17
6.15 Test No. 14—Stability of swap body on supporting legs	17
6.16 Test No. 15—Weatherproofness.....	18
7 Marking	18
Annex A (normative) Diagrammatic representation of capabilities appropriate to stackable swap bodies type C 745-S16.....	19
Annex B (normative) Prohibition sign of not allowed configurations	24

Foreword

This document (CEN/TS 13853:2003) has been prepared by Technical Committee CEN/TC 119 "Swap bodies for Combined Goods Transport", the secretariat of which is held by DIN.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

For a couple of years already an increased demand for a new type of containers with pallet-wide load areas has been registered on the European transport market, capable of being lifted more efficiently, faster and more safely by upper corner castings and able to be stacked for the purpose of storage at the terminal and during the transport with short sea and inland waterway ships.

This Technical Specification shall ensure the development of such new containers concerning their compatibility with each other and to their compatibility with the existing European system of transport and handling equipment.

Furthermore, this Technical Specification shall define the requested minimum of safety and reliability during the operation of these new containers.

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1 Scope

This Technical Specification specifies dimensions, design requirements and testing requirements of stackable swap bodies type C 745-S16 which are suitable for domestic and international multimodal conveyance by road, rail, short sea and coastal sea transport (including Ro/Ro or ferry transport) and inland waterways.

2 Normative references

This Technical Specification incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this Technical Specification only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 283:1991, *Swap bodies – Testing*

EN 284:1992, *Swap bodies – Swap bodies of class C – Dimensions and general requirements*

EN 12640, *Securing of cargo on road vehicles – Lashing points on commercial vehicles for goods transportation – Minimum requirements and testing*

EN 13044, *Swap bodies – Coding identification and marking*

ISO 668:1995, *Series 1 freight containers – Classification, dimensions and ratings*

ISO 1161:1984, *Series 1 freight containers – Corner fittings – Specification*

ISO 1496-1:1990, *Series 1 freight containers – Specification and testing – Part 1: General cargo containers for general purpose*

3 General

3.1 Characteristics of stackable swap bodies

Stackable swap bodies combine basic dimensional and design features of non-stackable swap bodies in compliance with EN 284 and requirements and testing criteria of ISO containers in compliance with ISO 1496-1. In addition to EN 284, stackable swap bodies shall be equipped with top corner fittings to permit top lift handling.

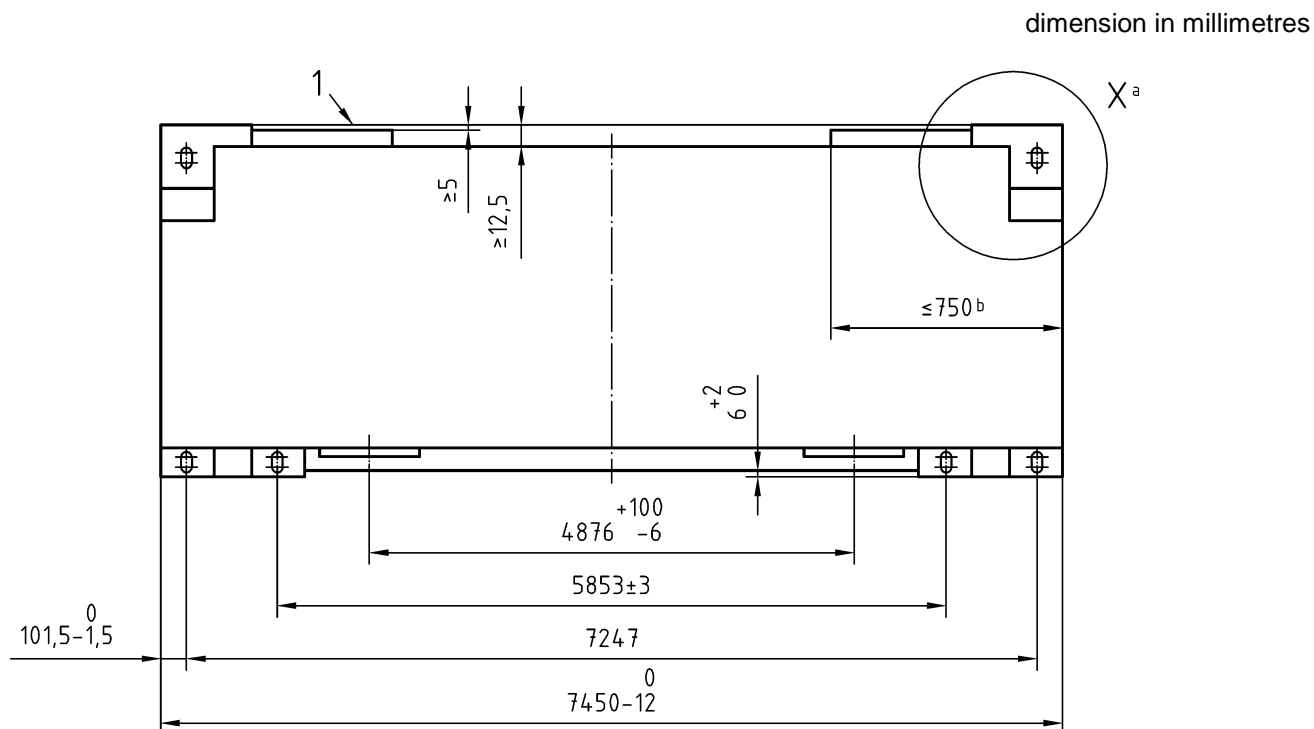
3.2 Type description

Type C 745-S16 is a stackable swap body designed for 16 t rating having the following features:

- a swap body specific base structure such as steering tunnel and supporting legs,
- ISO series 1 freight container specific structural strength, in particular full ISO stacking abilities, to permit conveyance by short sea and coastal sea.

4 Dimensions and Ratings

The external dimensions of the stackable swap body C 745-S16 shall be in compliance with table 1 and the following figures. The rating *R* of a stackable swap body is its maximum gross mass; i.e., the maximum value for operation and the minimum value for design.



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Figure 2 — Side view of swap body type C 745-S16

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dimension in millimetres

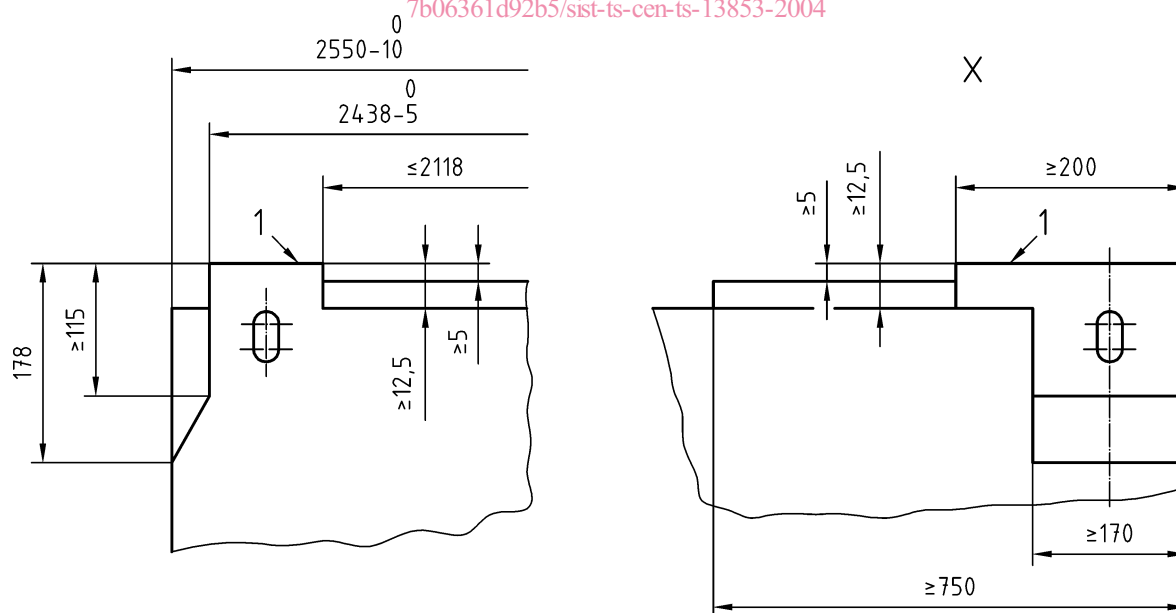


Figure 3 — Detail X of figure 2

5 Design requirements

5.1 General

Stackable swap bodies shall be capable of fulfilling the following requirements.

The swap body shall be capable of withstanding the loads and loadings detailed in clause 6.

The strength requirements for swap bodies are given in diagrammatic form in annex A (these requirements are applicable to all swap bodies except where otherwise stated). They apply to swap bodies as complete units.

As the effects of loads encountered under any dynamic operating condition should only approach, but not exceed, the effects of the corresponding test loads, it is implicit that the capabilities of swap bodies indicated in annex A and demonstrated by the tests described in clause 6 shall not be exceeded in any mode of operation.

Any closure in a swap body, which, if unsecured, could lead to a hazardous situation, shall be provided with an adequate securing system having external indication of the positive security of that closure in the appropriate operating position.

In particular, doors should be capable of being securely fastened in the open and closed position.

Any removable roof or roof section shall be fitted with locking devices such that an observer at ground level can check (when the swap body is on a rail or highway carrying vehicle) that its roof is secured.

All closed swap bodies and all open swap bodies fitted with covers, which were designed for them, shall be weatherproof as required by the test described in clause 6.16).

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5.2 Corner fittings

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Stackable swap bodies C 745-S16 shall be equipped with top and bottom corner fittings located in the corner posts and additionally four intermediate bottom fittings with the positioning as specified for 1C ISO containers (see figures 1 to 5). The strength requirements for all corner fittings and intermediate fittings are given in ISO 1161.

The upper faces of the top corner fittings shall protrude above the top of the swap body by a minimum of 12,5 mm.

The "top of the swap body" means the highest level of the cover of the swap body, for example the level of the top of a soft cover. However, if reinforced zones or protection plates are provided to afford protection to the roof in the vicinity of the top corner fittings, such plates and their securements shall not protrude above the upper faces of the top corner fittings. The vertical clearance between the upper faces of the top corner fittings and the upper faces of the protection plates shall be 5 mm minimum. These plates shall not extend more than 750 mm from either end of the swap body but may extend the full width.

5.3 Base structure

5.3.1 For stackable swap bodies C 745-S16 under dynamic conditions, or the static equivalent thereof, with the swap body having a load uniformly distributed over the floor in such a way that the combined mass of the swap body and test load is equal to $1,8R$, no part of the base of the swap body shall deflect more than 12 mm below the base plane (bottom faces of the lower corner fittings).

5.3.2 The base structure shall be designed to withstand all forces, particularly lateral forces, induced by the cargo in service. This is particularly important where provisions are made for securement of cargo to the base structure of the swap body.