



SLOVENSKI STANDARD
oSIST prEN 16972:2016
01-maj-2016

Cestna vozila - Nosilna vozila za izmenljive kesone razreda C, izmenljive cisterne razreda C in 20' ISO- zabojnike - Priključne mere

Road vehicles - Carrying vehicles for swap bodies class C, swap tanks class C and 20' ISO containers - Interface dimensions

Straßenfahrzeuge - Trägerfahrzeuge für Wechselbehälter Klasse C und 20' ISO-Container - Anschlussmaße

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ICS:

43.080.10 Tovornjaki in priklopniki Trucks and trailers

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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prEN 16972

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ICS 43.080.10

English Version

Road vehicles - Carrying vehicles for swap bodies class C, swap tanks class C and 20' ISO containers - Interface dimensions

Straßenfahrzeuge - Trägerfahrzeuge für
Wechselbehälter Klasse C und 20' ISO-Container -
Anschlussmaße

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

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European Foreword

This document (prEN 16972:2016) has been prepared by Technical Committee CEN/TC 119 “Swap bodies”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

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prEN 16972:2016 (E)**1 Scope**

This European Standard sets the connection dimensions of carrier vehicles for the transport of non-stackable swap bodies of class C following CEN/TS 13853 on the road. The standard also contains specifications for the transport of stackable swap bodies according to CEN/TS 13853, for swap tanks class C according to EN 1432 and 20' ISO-containers according to ISO 668. The standard only describes the necessary interfaces to the transport body. In this, the permitted total weight of the carrier vehicle must not be exceeded.

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.

EN 284, *Swap bodies - Non-stackable swap bodies of class C - Dimensions and general requirements*

EN 1432, *Swap bodies - Swap tanks - Dimensions, requirements, test methods, operation conditions*

CEN/TS 13853, *Swap bodies for combined transport - Stackable swap bodies type C 745-S16 - Dimensions, design requirements and testing*

ISO 668, *Series 1 freight containers — Classification, dimensions and ratings*

ISO 1161, *ISO - containers of the series 1 — corner fittings - requirements*

ADR, *Transport of dangerous goods*

3 General requirements

- <https://standards.iteh.ai/catalog/standards/sist/fa089fc6-b023-4155-a5b7-f639a78024ac/osist-pren-16972-2016>
- The connection dimensions of the carrier vehicles are specified in Figure B.1.
 - The carrier vehicles have to be equipped with a lifting/placing device that enables the swap body of the class C with support legs to be put down and taken off by in-vehicle systems which shall be able to give enough clearance between the support legs and the ground.
 - To take up parked swap bodies, carrier vehicles equipped with directing device assistance can be used (see Figure C.4). The front Instruction assistance must be set up in the range up to 800 mm behind the front cross-member. The back Instruction assistance has to be set up in the range of the back cross-member (± 100 mm). To take up containers the Instruction assistance must be removable.

4 Load bearing surfaces

Figure C.1 describes the setup of load bearing surfaces for the transport of non-stackable swap bodies of the category C according to EN 284 that is suitable for trucks and truck trailers. This setup is not allowed for the transport of 20' ISO-containers according to ISO 668, stackable swap bodies according to CEN/TS 13853 and swap tanks according to EN 1432.

Figure C.2 describes the setup of load bearing surfaces for the transport of non-stackable swap bodies of the category C according to EN 284, suitable for truck trailers, center-axle trailers and semi-trailers. This setup is not allowed for the transport of 20' ISO-containers according to ISO 668, stackable swap bodies according to CEN/TS 13853 and swap tanks according to EN 1432.

Figure C.3 describes the setup of additional load bearing surfaces that are absolutely necessary at the carrying vehicles for the transport of 20' ISO-containers according to ISO 668, stackable swap bodies according to CEN/TS 13853 und swap tanks according to EN 1432.

5 Front stop

The carrier vehicles must be equipped with a front stop (see Figure B.1). The stop can be fixed or foldable. It must provide a moment of resistance of $\geq 25\ 000\ \text{mm}^3$ and a yield strength of $\geq 355\ \text{N/mm}^2$. The stop must be arranged in the longitudinal median plane or, in case of two stops, in symmetrical form in accordance with Figure B.1. (The stop at the trailer can be fixed, foldable or captive removable).

6 Twist lock systems

The inner parts of the twist lock system must be lowerable.

Locking systems for swap vehicles and trailers must be suitable to cope with all powers emerging while being driven and while the containers are being put on. For transports according to ADR the fastenings on the vehicle shall be designed to withstand static and dynamic stresses in normal conditions of carriage, and minimum stresses as defined in ADR described in the attachment A section 6.8.2.1.2 in case of vehicles with approved demountable tanks.

The forces in ADR (described in the attachment A section 6.8.2.1.2) shall be fulfilled by calculation or physical testing.

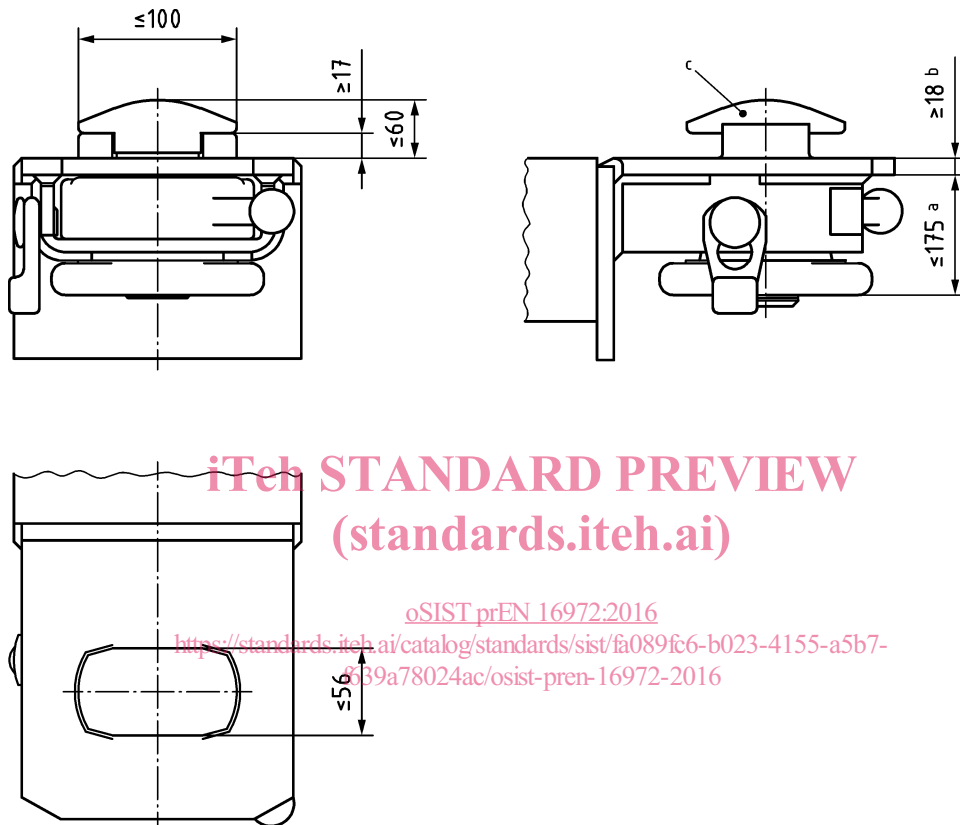
- Locking systems shall be not possible to disengage due to vibrations during carriage.
- Geometrical requirements of the lock must be defined according to Annex A.
- Locks can either be a separate device or also be integrated into a cross-member.

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Annex A (normative)

Geometrical requirements for the twist lock system

Dimension in mm



Key

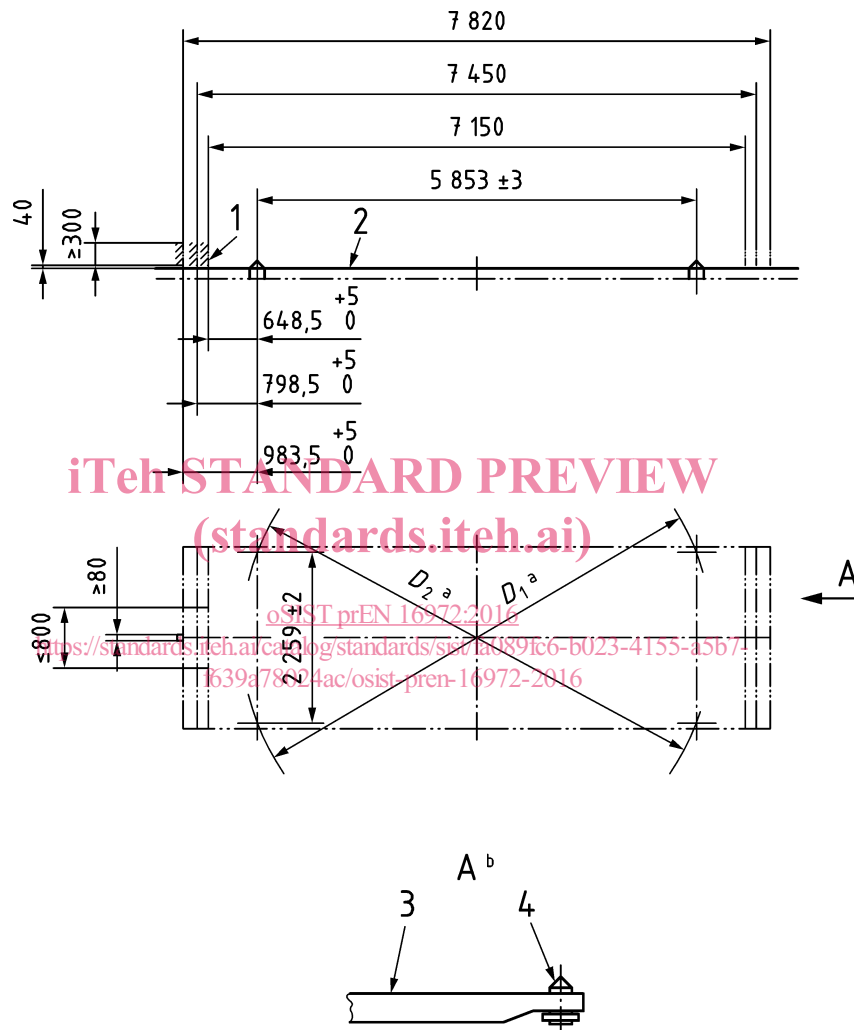
- ^c When with the lock metal fittings according to EN 284 as well as corner fittings according to ISO 1161 are to be braced, the pivot and the guide element must be dimensionally coordinated in a way that in the case of a captured fitting and a tensed locking a minimum surplus cover of 4 mm is guaranteed.

Figure A.1 — Twist lock system

Annex B (normative)

Connecting dimensions of the carrier vehicle

Dimension in mm



Key

- 1 front stop
 - 2 support swap body or container
 - 3 level of support
 - 4 locking pin
- a $D_1 - D_2$ or $D_2 - D_1 = 6$ mm max.
- b detailed view A scaled up

Figure B.1 — Connection dimensions carrying vehicle

Annex C
(normative)

Position of load bearing surfaces

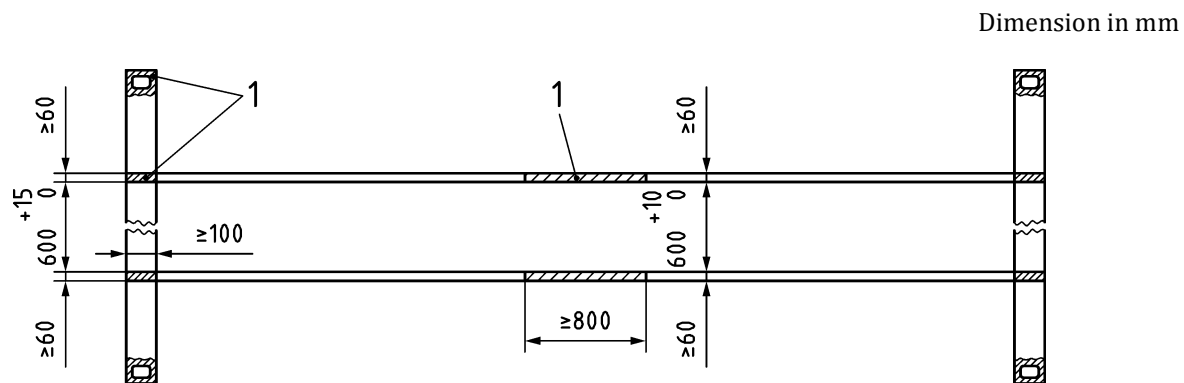


Figure C.1 — Setup of load transmission areas for trucks, center-axle trailers and hitched trailers

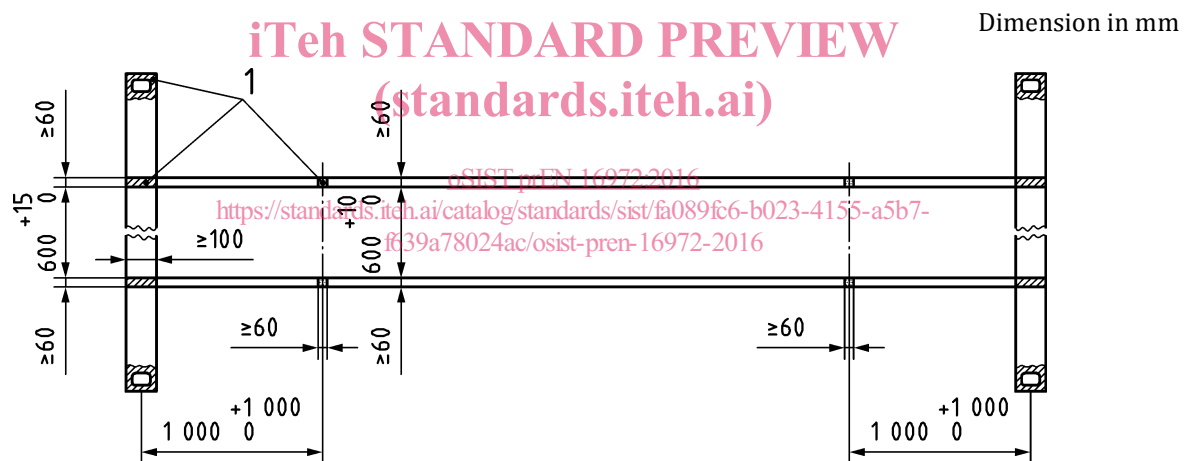


Figure C.2 — Setup of load transmission areas for trucks, center-axle trailers and hitched trailers