

SLOVENSKI STANDARD

SIST EN 29367-2:2000

01-december-2000

Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships - General requirements - Part 2: Semi-trailers (ISO 9367-2:1994)

Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships - General requirements - Part 2: Semi-trailers (ISO 9367-2:1994)

Zurr- und Befestigungseinrichtungen an Straßenfahrzeugen für den Seetransport auf Ro/Ro Schiffen - Allgemeine Anforderungen - Teil 2: Sattelanhänger (ISO 9367-2:1994)

Dispositifs d'arrimage et de saisissage des véhicules routiers en transport maritime sur navires rouliers - Conditions générales - Partie 2: Semi-remorques (ISO 9367-2:1994)

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Ta slovenski standard je istoveten z: EN 29367-2:1994

ICS:

43.080.10	Tovornjaki in priklopniki	Trucks and trailers
55.180.99	Drugi standardi v zvezi z distribucijo blaga s prevozom	Other standards related to freight distribution of goods

SIST EN 29367-2:2000

en

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EUROPEAN STANDARD

EN 29367-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1994

ICS 43.040.70

Descriptors: Road vehicles, commercial road vehicles, semitrailers, sea transport, mooring devices, fastenings, definitions, specifications, mechanical strength, tests, safety, marking

English version

**Lashing and securing arrangements on road
vehicles for sea transportation - General
requirements - Part 2: Semi-trailers
(ISO 9367-2:1994)**

Dispositifs d'arrimage et de saisissage des
véhicules routiers en transport maritime -
Conditions générales - Partie 2: Semi-remorques
(ISO 9367-2:1994)

Zurri- und Befestigungseinrichtungen an
Straßenfahrzeugen für den Seetransport auf
Ro/Ro Schiffen - Allgemeine Anforderungen -
Teil 2: Sattelanhänger (ISO 9367-2:1994)

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This European Standard was approved by CEN on 1994-11-24. 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.

The European Standards exist 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

This European Standard is the endorsement of ISO 9367-2 "Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships - General requirements - Part 2: Semi-trailers", which was prepared by ISO/TC 22.

This European Standard shall be given the status of a National Standard, either by publication of an identical text or by endorsement, at the latest by May 1995, and conflicting national standards shall be withdrawn at the latest by May 1995.

According to the CEN/CENELEC Internal Regulations, 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, United Kingdom.

Endorsement Notice

The text of the International Standard ISO 9367-2 was approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

ISO
9367-2

First edition
1994-01-15

Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships — General requirements —

Part 2: **Semi-trailers**

SIST EN 29367-2:2000

<https://standards.iteh.ai/standards/sist/29367-2-2000-4da1b6f1-5608/iso-9367-2-2000>
*Dispositifs d'arrimage et de saisissage des véhicules routiers en transport
maritime sur navires rouliers — Conditions générales —*

Partie 2: Semi-remorques



Reference number
ISO 9367-2:1994(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9367-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

ISO 9367 consists of the following parts, under the general title *Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships — General requirements*:

- *Part 1: Commercial vehicles and combinations of vehicles, semi-trailers excluded*
- *Part 2: Semi-trailers*

Annexes A, B and C of this part of ISO 9367 are for information only.

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Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships — General requirements —

Part 2: Semi-trailers

1 Scope

This part of ISO 9367 specifies the minimum requirements to allow efficient lashing and securing of semi-trailers, as defined in ISO 3833, on board roll-on/roll-off (Ro/Ro) ships, indicating in particular the lashing arrangements on the semi-trailer and the securing method to be used. It also gives, in annex A, for information to semi-trailer designers, the securing point arrangements generally used on Ro/Ro ships as laid down by International Maritime Organization (IMO) recommendations. In annex B, it gives for information some design indications to decrease damage during handling.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9367. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9367 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1726:1989, *Road vehicles — Mechanical coupling between tractors and semi-trailers — Interchangeability*.

ISO 3833:1977, *Road vehicles — Types — Terms and definitions*.

3 Definitions

For the purposes of this part of ISO 9367, the following definitions apply.

3.1 Ro/Ro ship: Ship, normally not transversely subdivided, with one or more decks, closed or open, generally running the entire length of the ship, on which goods can be loaded by means of ramps and/or lifts. The cargo is

— either self-moving, on road vehicles including road tank vehicles, semi-trailers, trailers, rolling pallets and similar cargo transport units,

— or transported on loading vehicles moving between ship and shore.

[ISO 9367-1:1989, definition 3.1]

3.2 semi-trailer: Trailer which is designed to be coupled to a semi-trailer towing vehicle and to impose a substantial part of its total weight on the towing vehicle.

[ISO 3833:1977, definition 3.2.2]

3.3 lashing point: That part on a semi-trailer to which a lashing may be directly attached and which meets the requirements of this part of ISO 9367. [Adapted from ISO 9367-1:1989, definition 3.4]

4 Lashing points

4.1 General requirements

Lashing points shall be designed to enable the semi-trailer to be secured to the ship.

Each lashing point shall be designed for one lashing only. Lashing points may be either hinged, fixed or swivelling.

4.2 Number of lashing points

The same number of lashing points shall be provided on each side of the semi-trailer.

Semi-trailers with a gross mass above 20 tons and up to 40 tons shall be fitted with at least four pairs of lashing points. For semi-trailers with lower or higher gross mass, the manufacturers shall provide a suitable number of lashing points.

It is essential that semi-trailers with a box body (e.g. reefer body) or tank body which has, integral with the body or tank structure, an upper fifth-wheel plate and a king-pin at the front end, with a subframe to support the running gear at the rear, with no chassis as such between these two units, shall be fitted with the same number of lashing points to meet the strength requirement.

4.3 Location

4.3.1 Lashing points shall be located within defined areas on the semi-trailer. The allowable vertical and transverse areas on laden semi-trailers are shown in figure 1 and the longitudinal positions are shown in figure 2. For air-suspended semi-trailers, the figures apply to the Ro/Ro position (see 7.2).

The preferable position of the rear pair of lashing points is $300 \text{ mm} \pm 300 \text{ mm}$ (datum line) from the rearmost part of the semi-trailer. The two pairs at the front shall be positioned with one pair in front of and one pair behind the trestle position at a distance l , calculated in accordance with the formula in 4.3.2, from the rearmost pair of lashing points, but shall not protrude below the upper fifth-wheel plate. This longitudinal placing of the lashing points corresponds to a distance of 2 500 mm between the longitudinal lashing points on the ship's deck. When necessary due to practical or structural restraints of the semi-trailer construction, the rearmost lashing points can, alternatively, be positioned in accordance with figure

2 d) or 2 e). Using a datum of $300 \text{ mm} \pm 300 \text{ mm}$ from the rearmost part of the semi-trailer, the front lashing points can be calculated at a distance l as described above.

The remaining pair of lashing points shall be located in accordance with the alternative figure 2 a), 2 b) or 2 c).

4.3.2 For the total length of a semi-trailer above 8 250 mm, l in figure 2, in millimetres, is given by

$$l = 625 + (n \times 1\,250) \text{ mm}$$

where n is the number of intervals.

Values for length l are given in table 1.

Table 1 — Length l

Number of intervals	l in figure 2 mm
3	4 375
4	5 625
5	6 875
6	8 125
7	9 375
8	10 625
9	11 875
10	13 125
11	14 375

It is recommended that these specifications be applied to all types of semi-trailers. However, if it is difficult to comply with these specifications for the two front pairs of lashing points due to special design of the base structure, the front pairs should preferably be located according to figure 3. When necessary due to practical or structural restraints of semi-trailer construction, the foremost lashing point can alternatively be located at the front end of the trailer.

4.4 Free space around lashing points

To allow flexibility in the longitudinal stowage of the semi-trailer on the ship's deck, free sectors as large as possible should be provided around the lashing points. For alternative stowage positions, see the examples in annex C.

Dimensions in millimetres

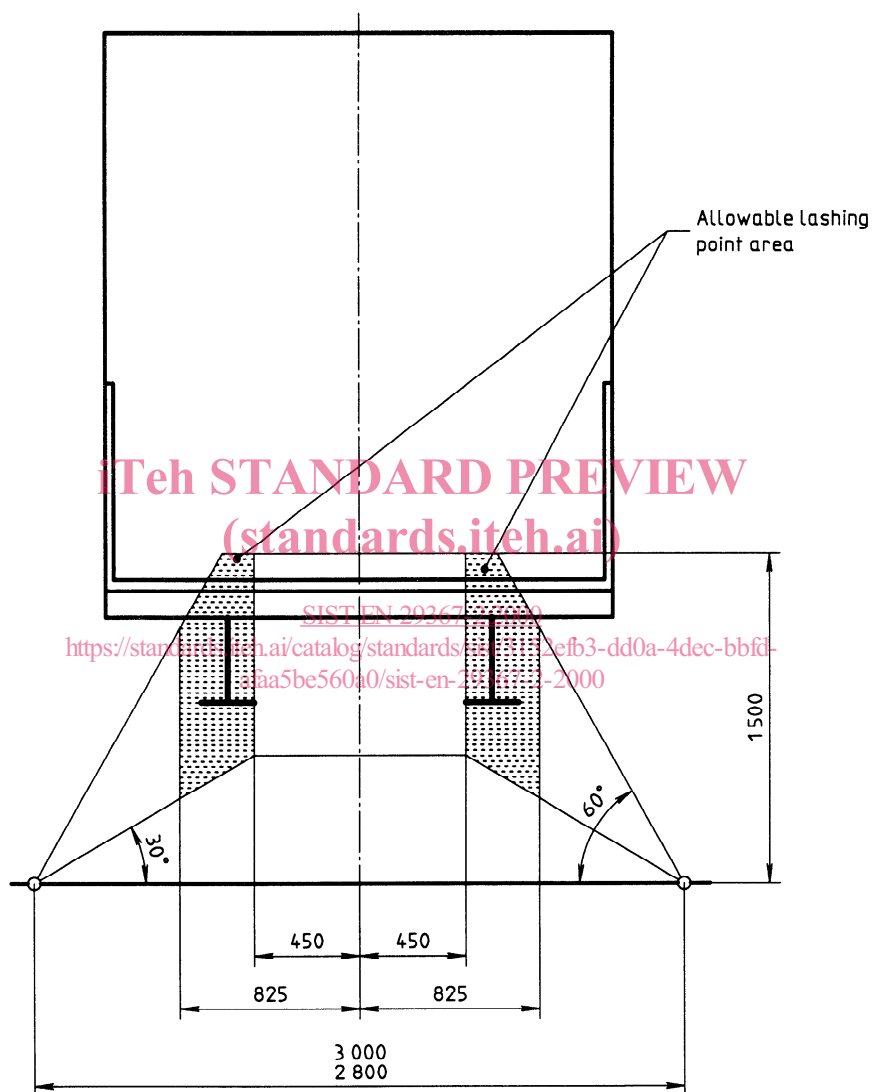
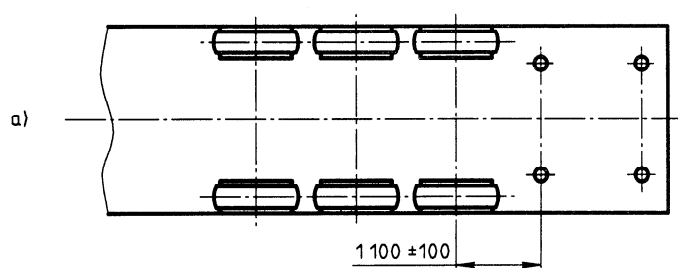
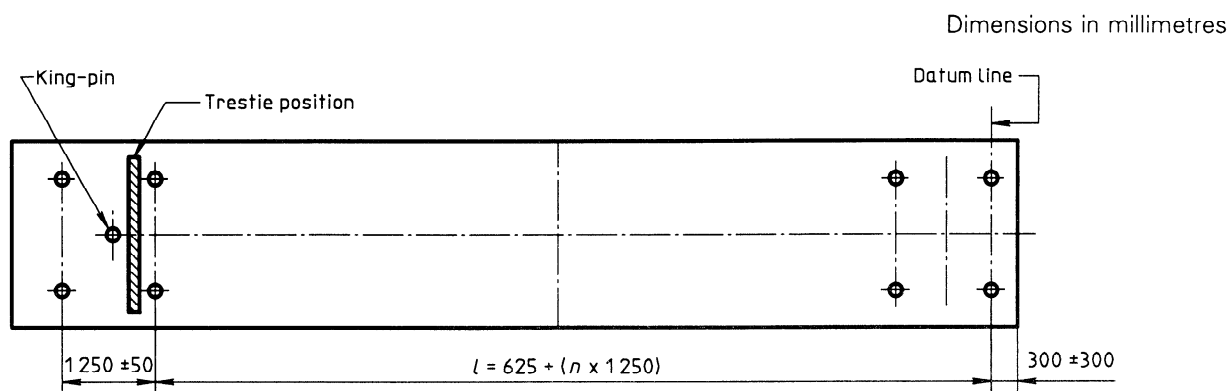
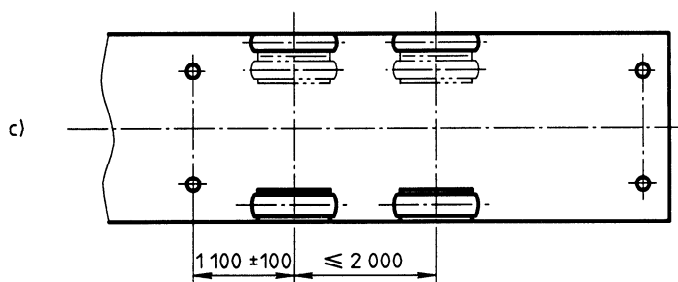
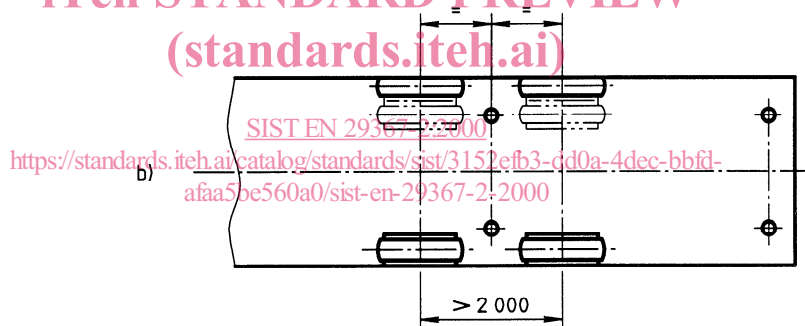
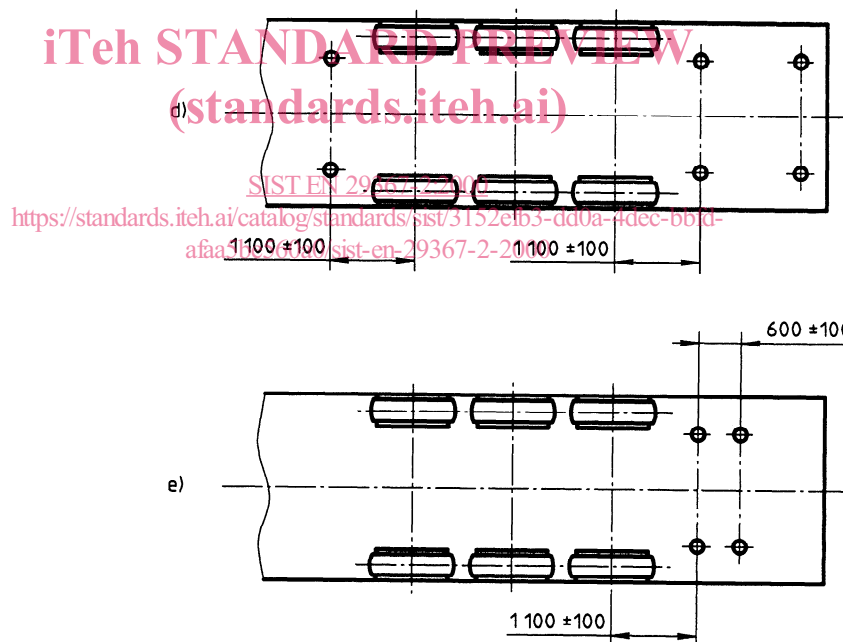
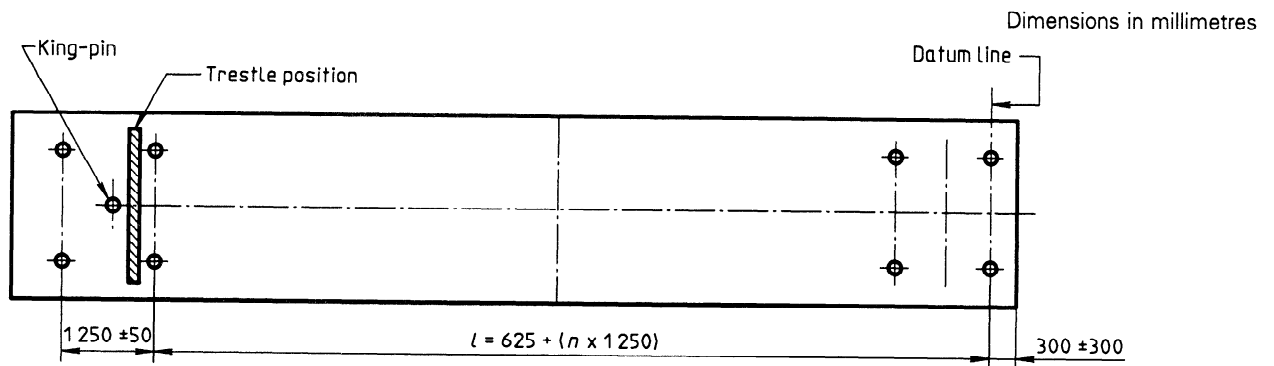


Figure 1 — Allowable vertical and transverse lashing point areas on laden semi-trailers



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NOTE — Figures 2 d) and 2 e) show tandem or tri-axle layout.

Figure 2 — Longitudinal positions of lashing points