



SLOVENSKI STANDARD

SIST EN 12561-6:2004

01-junij-2004

Železniške naprave - Vagoni-cisterne -6. del: Vstopne odprtine

Railway applications - Tank wagons - Part 6: Manholes

Bahnanwendungen - Kesselwagen - Teil 6: Mannloch

Applications ferroviaires - Wagons citernes - Partie 6: Trous d'homme

Ta slovenski standard je istoveten z: EN 12561-6:2002

[SIST EN 12561-6:2004](https://standards.iteh.ai/catalog/standards/sist/3d233afb-0261-47d2-964c-4d77b59954ad/sist-en-12561-6-2004)

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ICS:

13.300	Varstvo pred nevarnimi izdelki	Protection against dangerous goods
45.060.20	Železniški vagoni	Trailing stock

SIST EN 12561-6:2004

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12561-6

September 2002

ICS 13.300; 45.060.20

English version

Railway applications - Tank wagons - Part 6: Manholes

Applications ferroviaires - Wagons citernes - Partie 6:
Trous d'homme

Bahnwendungen - Kesselwagen - Teil 6: Mannloch

This European Standard was approved by CEN on 3 January 2002.

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 Management Centre 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 Management Centre has the same status as the official versions.

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

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 12561-6:2002) has been prepared by Technical Committee CEN /TC 256, "Railway applications", the secretariat of which is held by DIN.

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 March 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

- Council Directive 96/49/EC of 23 July 1996 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail ¹⁾;
- Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-european highspeed rail system²⁾;
- Council Directive 93/38/EEC of 14 June 1993 co-ordinating the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors ³⁾;
- Council Directive 91/440/EEC of 29 July 1991 on the development of the community railways ⁴⁾.

It is in compliance with the following regulations being in force on the date of approval of this European Standard:

- Regulations concerning the International carriage of Dangerous goods by rail (RID) ⁵⁾;
- Regulations governing the reciprocal use of wagons in international traffic (RIV) ⁶⁾.

This European Standard has been submitted for reference into the RID. Therefore in this context the standards listed in the normative references and covering basic requirements of the RID not addressed within the present standard are normative only when the standards themselves are referred to in the RID.

This series of European Standards "Railway applications — Tank wagons" consists of the following parts:

- Part 1: Marking of tank wagons for the carriage of dangerous goods
- Part 2: Bottom emptying devices for liquid products including vapour return
- Part 3: Bottom filling and emptying devices for gases liquefied under pressure
- Part 4: Top devices for top emptying and filling of liquid products

1) Official Journal of the European Community No L 235 of 96/09/17.

2) Official Journal of the European Community No L 235 of 96/09/17.

3) Official Journal of the European Community No L 199 of 93/08/09.

4) Official Journal of the European Community No L 237 of 91/08/24.

5) Can be purchased from : OTIF, Gryphenhübeliweg, CH-3006 BERN

6) Can be purchased from : UIC, Bureau RIV-RIC, 16 rue Jean Rey, F-75015 PARIS

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- Part 5: Top devices for bottom emptying and top filling of liquid products
- Part 6: Manholes
- Part 7: Platforms and ladders
- Part 8: Heating connections

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

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1 Scope

This European Standard applies to manholes on tank wagons used for the transport of dangerous substances.

This European Standard specifies the dimensions for the interchangeability of seals and other wearing parts and defines also the important dimensions for :

- manholes for gas tank wagons located in one end of the tank;
- manholes for gas tank wagons located on the top of the tank including the arrangement of fittings;
- bolted manholes for tank wagons for liquid substances located on the top of the tank;
- swing bolt manholes for tank wagons for liquid substances located on the top of the tank.

2 Normative references

This European Standard 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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 12972, *Tanks for transport of dangerous goods - Testing, inspection and marking of metallic tanks.*

EN 20286-1, *ISO system of limits and fits - Part 1: Bases of tolerances, deviations and fits (ISO 286-1:1988).*

EN ISO 898-1:1999, *Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs (ISO 898-1:1999).*

EN 20898-2:1993, *Mechanical properties of fasteners - Part 2: Nuts with specified proof load values - Coarse thread (ISO 898-2:1992).*

ISO 4287, *Geometrical Product Specification (GPS) – Surface texture: Profile method – Terms, definitions and surface texture parameters.*

ISO 7005-1: 1992, *Metallic flanges - Part 1: Steel flanges.*

ISO 9669, *Series 1 freight containers - Interface connections for tank containers.*

3 Terms and definitions

For the purposes of this European Standard, the following term and definition apply :

3.1

manhole

opening in the tank which includes the sealing, the manlid and fastenings

4 Requirements

4.1 Bolts

The bolts used for manholes shall conform to the requirements of EN ISO 898-1 and EN 20898-2.

EN 12561-6:2002 (E)**4.2 Dimensions**

All dimensions are given in millimetres. Unless otherwise indicated in this European Standard, tolerances of EN 20286-1 apply for all dimensions.

5 End fitted manhole for gas tank wagons**5.1 Position of manhole**

The centre of the manhole shall be positioned on the longitudinal centre line of one end of the tank wagon. For easier access inside the tank, it is recommended that it is positioned according to Figure 1.

For easier access to the tank two handles above the manhole, one at the inside and one at the outside shall be fitted.

Dimensions in millimetres

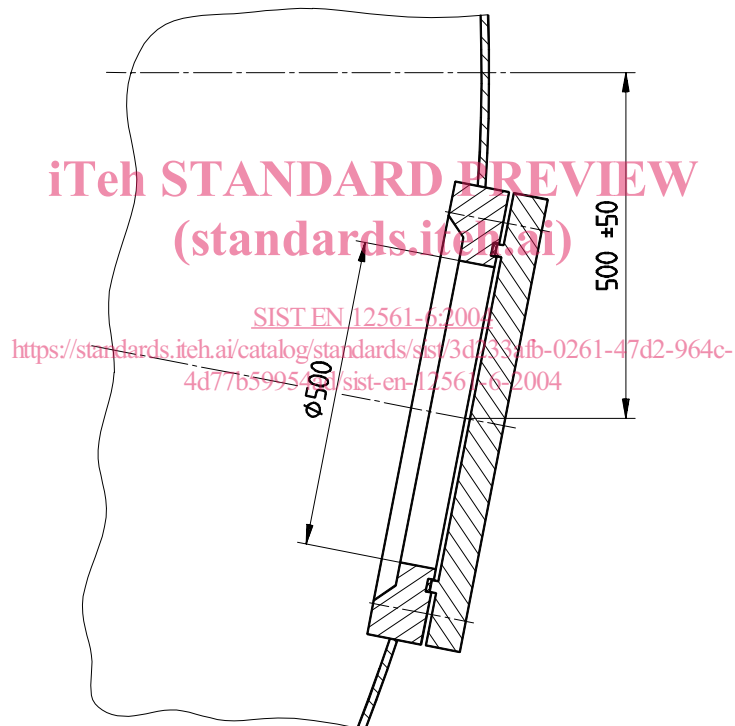


Figure 1 — Positioning of manhole

5.2 Ring and plate**5.2.1 General**

The ring and plate shall be calculated using the test pressure of the tank.

5.2.2 Dimensions

Dimensions shall be in accordance with Figure 2.

Dimensions in millimetres

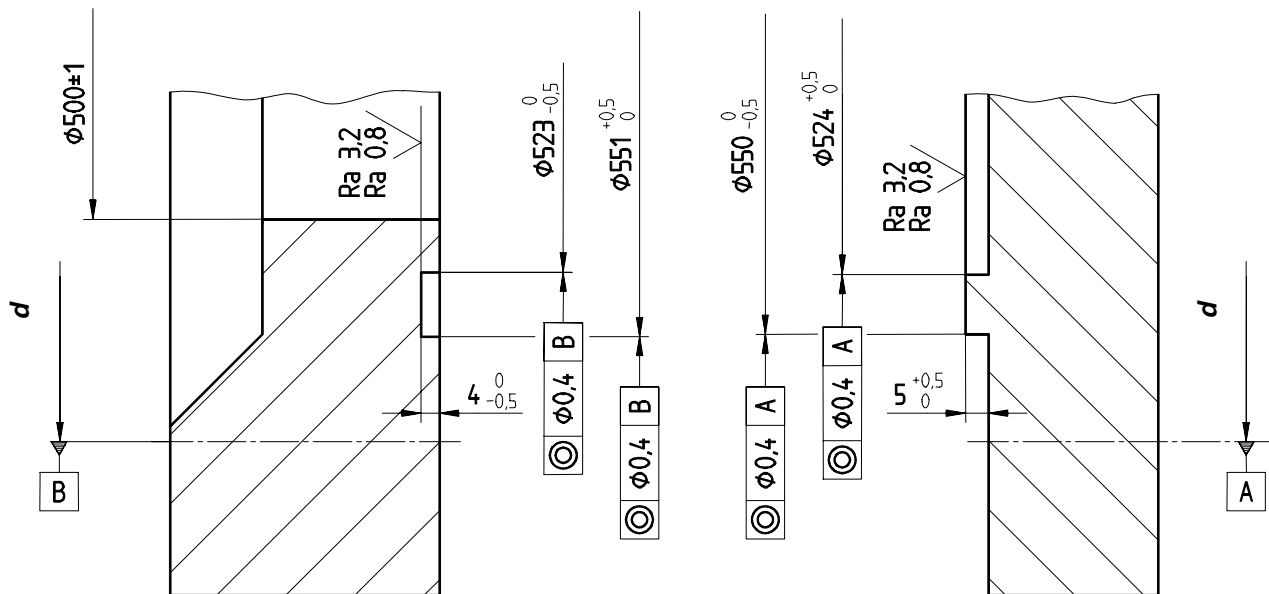


Figure 2 — Dimensions of ring and plate

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5.2.3 Surface parameters

To ensure static liquid tightness and interchangeability of gaskets the maximum profile height (Rt) of surface defects according to ISO 4287 of gasket seat shall be less than $16\ \mu\text{m}$.

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5.2.4 Tolerances

Tolerances shall be in accordance with those of flanges DN 500 of ISO 7005-1:1992.

5.3 Gaskets

The dimensions of the gasket shall be in accordance with Figure 3.

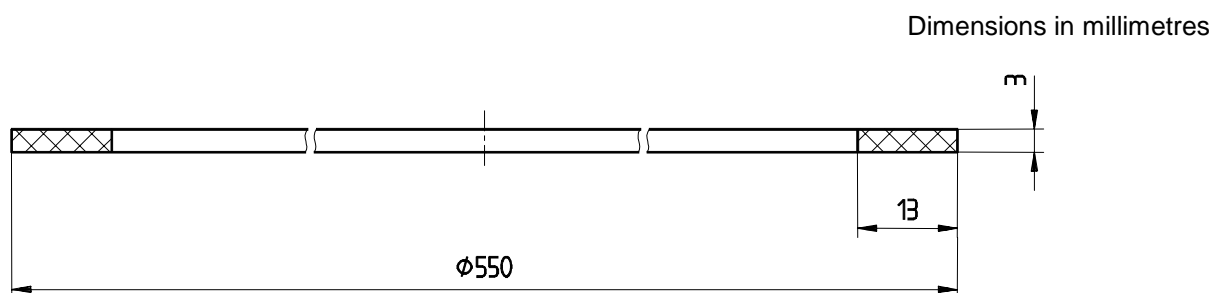


Figure 3 — Gasket dimensions

The average outside diameter obtained by measurements on two perpendicular diameters shall be 550 mm with a limit deviation of $(0/- 1,5)$ mm.

For flat gaskets made from fibre/elastomer or plastics, the thickness limit deviation is $\pm 0,20$ mm.

For metal plastics gaskets, the thickness limit deviation is $(+ 0,5/ 0)$ mm.