
Cisterne za prevoz nevarnega blaga - Oprema za obratovanje - Izpustni ventili z imenskim premerom, večjim ali manjšim od 100 mm

Tanks for the transport of dangerous goods - Service equipment - Footvalve sizes other than 100 mm dia (nom)

Tanks für die Beförderung gefährlicher Güter - Bedienungsausrüstung - Bodenventile mit einem Nenndurchmesser von mehr oder weniger als 100 mm

Citernes destinées au transport de matières dangereuses - Equipement de service - Dimension des clapets de fond d'un diamètre nominal différent de 100 mm

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Ta slovenski standard je istoveten z: EN 16257:2012

ICS:

23.020.20	Posode in vsebniki, montirani na vozila	Vessels and containers mounted on vehicles
23.060.01	Ventili na splošno	Valves in general

SIST EN 16257:2012**en,fr,de**

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EUROPEAN STANDARD

EN 16257

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2012

ICS 23.020.20

English Version

Tanks for the transport of dangerous goods - Service equipment - Footvalve sizes other than 100 mm dia (nom)

Citernes destinées au transport de matières dangereuses -
Équipement de service - Clapets de fond avec diamètre
nominal différent de 100 mm

Tanks für die Beförderung gefährlicher Güter -
Bedienungsausrüstung - Bodenventile mit einem
Nenndurchmesser von mehr oder weniger als 100 mm

This European Standard was approved by CEN on 25 August 2012.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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EN 16257:2012 (E)

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Foreword

This document (EN 16257:2012) has been prepared by Technical Committee CEN/TC 296 "Tanks for the transport of dangerous goods", the secretariat of which is held by AFNOR.

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 April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This European Standard forms part of a coherent standards programme comprising the following standards under the general title.

"Tanks for transport of liquid dangerous goods with vapour pressure not exceeding 110 kPa (absolute pressure) at 50 °C and petrol - Service equipment" :

EN 13081, *Tanks for transport of dangerous goods — Service equipment for tanks — Vapour collection adaptor and coupler*;

EN 13082, *Tanks for transport of dangerous goods — Service equipment for tanks — Vapour transfer valve*;

EN 13083, *Tanks for transport of dangerous goods — Service equipment for tanks — Adaptor for bottom loading and unloading*;

EN 13308, *Tanks for transport of dangerous goods — Service equipment for tanks — Non-pressure balanced footvalve*;

EN 13314, *Tanks for transport of dangerous goods — Service equipment for tanks — Fill hole cover*;

EN 13315, *Tanks for transport of dangerous goods — Service equipment for tanks — Gravity discharge coupler*;

EN 13316, *Tanks for transport of dangerous goods — Service equipment for tanks — Pressure balanced footvalve*;

EN 13317, *Tanks for transport of dangerous goods — Service equipment for tanks — Manhole cover assembly*;

EN 14595, *Tanks for transport of dangerous goods — Service equipment for tanks — Pressure and vacuum breather vent*;

EN 14596, *Tanks for transport of dangerous goods — Service equipment for tanks — Emergency pressure relief valve*.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 16257:2012 (E)

Introduction

The footvalve, also called emergency valve or internal security valve, the subject of this standard, is an internal self closing stop valve ensuring the primary containment to confine the dangerous substances within the tank when closed.

It allows the flow of dangerous substances in the unloading direction, that is, from the tank compartment into the run-off pipe only when externally actuated.

The non-pressure balanced footvalve shall be capable of allowing transfer of dangerous substances in the bottom loading direction through self-actuation by the hydraulic force of the loaded dangerous substances.

The pressure balanced footvalve does not allow flow of dangerous substances in either the loading or unloading direction when not externally actuated, and stops the flow if the external actuation is interrupted or disengaged.

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1 Scope

This European Standard is applicable to non-pressure balanced and pressure balanced footvalves intended for loading and unloading and specifies the performance requirements, critical dimensions and tests necessary to verify the compliance of the equipment with this standard.

Footvalves covered by this European standard are unsuitable for use in applications where the product velocity exceeds 5 m/sec

The equipment specified by this standard is suitable for use with liquid petroleum products and other dangerous substances of Class 3 of ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road – (flammable liquids) which have a vapour pressure not exceeding 110 kPa at 50 °C and petrol, and which have no sub-classification as toxic or corrosive.

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 13308:2002, *Tanks for transport of dangerous goods — Service equipment for tanks — Non-pressure balanced footvalve*

EN 13316:2002, *Tanks for transport of dangerous goods — Service equipment for tanks — Pressure balanced footvalve*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13308:2002 and EN 13316:2002 apply.

4 Functions

The requirements for non-pressure balanced footvalves shall be in accordance with Clause 4 of EN 13308:2002 and for pressure balanced footvalves in accordance with Clause 4 of EN 13316:2002.

Smaller dimensions for other purposes than loading and unloading (e.g. emptying the water sump of aircraft refuellers) may be used provided that all the requirements given in the standard are fulfilled. If smaller sizes than those given in the annexes of this standard are chosen, the dimensions of the flanges for connecting the tank and the pipework shall be designed for those dimensions.

5 Design characteristics

The minimum requirements for each type of footvalve are as follows.

5.1 Pressure rating

The requirements for non-pressure balanced footvalves shall be in accordance with 5.1 of EN 13308:2002 and for pressure balanced footvalves in accordance with 5.1 of EN 13316:2002.

EN 16257:2012 (E)**5.2 Mounting**

The tank mounting flange dimensions shall be in accordance with Annex A.

The pipe connection flange dimensions shall be in accordance with Annex B or Annex C according to the specified type.

5.3 Actuation

The requirements for non-pressure balanced footvalves shall be in accordance with 5.5 of EN 13308:2002 and for pressure balanced footvalves in accordance with 5.5 of EN 13316:2002.

5.4 Break-away security

The footvalve seat shall be designed to be located within the envelope of the tanker compartment

The footvalve shall be designed with reference to Annexes D and E, such that in the event of accidental damage, the external housing shall break away, leaving the footvalve sealing mechanism within the tank compartment intact.

The impact energy required to break away the external housing of footvalves

- with a nominal diameter of less than 100 mm shall not exceed 1 kJ
- with a nominal diameter greater than 100 mm shall not exceed the value given by:

$$(d_t / 100)^2 \text{ in kJ}$$

where

d_t is the nominal diameter in mm.

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5.5 Temperature range

The requirements for non-pressure balanced footvalves shall be in accordance with 5.7 of EN 13308:2002 and for pressure balanced footvalves in accordance with 5.7 of EN 13316:2002.

5.6 Materials of construction

The requirements for non-pressure balanced footvalves shall be in accordance with 5.8 of EN 13308:2002 and for pressure balanced footvalves in accordance with 5.8 of EN 13316:2002.

Whenever possible, selected materials shall be recyclable and sustainable.

5.7 Electrical resistance

The requirements for non-pressure balanced footvalves shall be in accordance with 5.9 of EN 13308:2002 and for pressure balanced footvalves in accordance with 5.9 of EN 13316:2002.

5.8 Strainer

The requirements for non-pressure balanced footvalves shall be in accordance with 5.10 of EN 13308:2002 and for pressure balanced footvalves in accordance with 5.10 of EN 13316:2002.

6 Tests

The test requirements for non-pressure balanced footvalves shall be in accordance with Clause 6 of EN 13308:2002 and for pressure balanced footvalves in accordance with Clause 6 of EN 13316:2002.

7 Marking

The marking requirements for non-pressure balanced footvalves shall be in accordance with Clause 7 of EN 13308:2002 and for pressure balanced footvalves in accordance with Clause 7 of EN 13316:2002

8 Installation, operating and maintenance recommendations

Installation, operation and maintenance instructions shall be provided for the equipment.

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