

SLOVENSKI STANDARD
oSIST prEN ISO 15995:2018
01-februar-2018

Plinske jeklenke - Specifikacija in preskušanje ventilov za jeklenke za utekočinjeni naftni plin (UNP) - Ročno upravljanje (ISO/DIS 15995:2018)

Gas cylinders - Specifications and testing of LPG cylinder valves - Manually operated (ISO/DIS 15995:2018)

Gasflaschen - Spezifikation und Prüfung von Flaschenventilen für Flüssiggas (LPG) - Handbetätigt (ISO/DIS 15995:2018)

Bouteilles à gaz - Spécifications et essais pour valves de bouteilles de GPL - Fermeture manuelle (ISO/DIS 15995:2018)

Ta slovenski standard je istoveten z: prEN ISO 15995

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ICS:

23.020.35	Plinske jeklenke	Gas cylinders
23.060.40	Tlačni regulatorji	Pressure regulators

oSIST prEN ISO 15995:2018

en,fr,de

DRAFT INTERNATIONAL STANDARD

ISO/DIS 15995

ISO/TC 58/SC 2

Secretariat: **AFNOR**Voting begins on:
2017-12-28Voting terminates on:
2018-03-22

Gas cylinders — Specifications and testing of LPG cylinder valves — Manually operated

Bouteilles à gaz — Spécifications et essais pour valves de bouteilles de GPL — Fermeture manuelle

ICS: 23.020.35

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ISO/CEN PARALLEL PROCESSING



Reference number
ISO/DIS 15995:2017(E)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/58 SC 2.

ISO 15995 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 2, and by Technical Committee CEN/TC 286, *Liquefied petroleum gas equipment and accessories*, in collaboration.

This second edition cancels and replaces the first edition (ISO 15995:2006) which has been technically revised.

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ISO/DIS 15995:2017(E)**Introduction**

This International Standard covers the function of a LPG cylinder valve as a closure (defined by the UN Model Regulations).

ISO 15995 is intended to be used under a variety of national regulatory regimes, but has been written so that it is suitable for the application of the UN Model Regulations. Attention is drawn to requirements in the relevant national regulations of the country (countries) where the cylinder valves are intended to be used that might override the requirements given in this International Standard.

Cylinder valves complying with this International Standard can be expected to perform satisfactorily under normal service conditions.

Where there is any conflict between this International Standard and any applicable regulation, the regulation always takes precedence.

Considering the changes described in the Foreword, when a LPG cylinder valve has been approved according to the previous version of this International Standard the body responsible for approving the same LPG cylinder valve to this new edition should consider which tests need to be performed.

In this International Standard the unit bar is used, due to its universal use in the field of technical gases. It should, however, be noted that bar is not an SI unit, and that the corresponding SI unit for pressure is Pa ($1 \text{ bar} = 10^5 \text{ Pa} = 10^5 \text{ N/m}^2$).

Pressure values given in this International Standard are given as gauge pressure (pressure exceeding atmospheric pressure) unless noted otherwise.

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Gas cylinders — Specifications and testing of LPG cylinder valves — Manually operated

1 Scope

This International Standard specifies the requirements for design, specification, type testing and production testing and inspection of dedicated LPG manually operated cylinder valves for use with and directly connected to transportable refillable LPG cylinders.

It also includes requirements for associated equipment for vapour and liquid service. Bursting discs and/or fusible plugs are not covered in this International Standard.

[Annex B](#) identifies requirements for production testing and inspection.

This International Standard excludes other LPG cylinder devices which are not an integral part of the dedicated manually operated cylinder valve.

This International Standard does not apply to cylinder valves for fixed automotive installations and ball valves.

NOTE For self-closing LPG cylinder valves see ISO 14245. For cylinder valves for compressed, dissolved and other liquefied gases see ISO 10297, ISO 17871 or ISO 17879.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11114-1, *Gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 1: Metallic materials*

ISO 11114-2, *Gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials*

ISO 2859-1:1999, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 13341, *Gas cylinders — Fitting of valves to gas cylinders*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10286 and the following apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

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3.1 liquefied petroleum gas LPG

low pressure liquefied gas composed of one or more light hydrocarbons which are assigned to UN 1011, UN 1075, UN 1965, UN 1969 or UN 1978 only and which consists mainly of propane, propene, butane, butane isomers, butene with traces of other hydrocarbon gases

[SOURCE: ISO 10286:2015]

3.2 cylinder valve valve

primary shutoff device fitted to LPG cylinders, intended for liquid or vapour filling and withdrawal.

Note 1 to entry: The valve can also include additional devices, e.g. *liquid level indicator* (3.7), *excess flow valve* (3.9), *pressure relief valve* (3.29), *sediment tube* (3.18), *non-return valve* (3.10) and *eduction tube* (3.5).

3.3 external leak tightness

leak tightness to atmosphere (leakage in and/or leakage out), when the valve is open

3.4 internal leak tightness

leak tightness across the valve seat (leakage in and/or leakage out), when the valve is closed

3.5 eduction tube

tube fitted to the valve to allow withdrawal of liquid LPG with the cylinder in its normal operating position

3.6 fixed liquid level gauge

device such as a dip tube in combination with a vent valve to verify that the predetermined maximum liquid level in a cylinder has been reached or surpassed

3.7 liquid level indicator

device such as a float gauge, permitting the gauging of the liquid level in the cylinder

3.8 valve body

major valve component including *valve stem* (3.13) and *valve outlet* (3.14) and, where applicable, the provision for other optional components

3.9 excess flow valve

valve comprising two or more components designed to close or partially close when the flow of liquid or vapour passing through it exceeds a predetermined value and to re-open when the pressure differential across the valve has been restored below a certain value

3.10 non-return valve

automatic valve which allows gas to flow only in one direction

3.11 dual valve

valve designed to allow separate vapour and liquid withdrawal from a cylinder in its normal operating position each port having its own valve operating mechanism

3.12**sealing element**

element used to obtain internal *leak tightness* (3.4)

3.13**valve stem**

section of the *valve body* (3.8), which connects to the cylinder

3.14**valve outlet**

section of the *valve body* (3.8) to which a regulator or connector can be fitted for vapour or liquid withdrawal

Note 1 to entry: The valve outlet is also normally used for filling the cylinder.

3.15**type test**

test or series of tests conducted to prove that the design meets the requirements of this International Standard

3.16**cylinder opening**

part of the cylinder to which the *valve stem* (3.13) connects

3.17**test pressure**

pressure at which the valve or component is tested

3.18**sediment tube**

device designed to reduce the risk of foreign matter, which can be in the cylinder, entering the valve

3.19**sealing cap**

device which is intended to seal the external outlet connection of a valve

3.20**sealing plug**

device which is intended to seal the internal outlet connection of a valve

3.21**valve operating mechanism**

mechanism which closes and opens the valve orifice and which includes the internal and external sealing systems

[SOURCE: ISO 10286:2015]

Note 1 to entry: Normally the valve operating mechanism includes the hand wheel.

3.22**operating torque**

torque during opening or closing the valve, after the first half rotation of the hand wheel in opening the valve and before the last half rotation of the hand wheel in closing the valve

3.23**opening torque**

initial torque required to open the valve from the closed position

3.24**closing torque**

torque required to close the valve and obtain *internal leak tightness* (3.4)