SLOVENSKI STANDARD
oSIST prEN 16129:2025

01-april-2025

Regulatorji tlaka, avtomatski preklopni ventili z največjim nastavljivim tlakom do vključno 4 bar, s pretokom do vključno 150 kg/h in s pripadajočimi varnostnimi napravami ter priključki za butan, propan in njune zmesi

Pressure regulators, automatic change-over devices, having a maximum regulated pressure of 4 bar, with a maximum capacity of 150 kg/h, associated safety devices and adaptors for butane, propane, and their mixtures

Druckregelgeräte, automatische Umschaltanlagen mit einem höchstem Ausgangsdruck bis einschließlich 4 bar und einem maximalen Durchfluss von 150 kg/h sowie die dazugehörigen Sicherheitseinrichtungen und Übergangsstücke für Butan, Propan und deren Gemische

Détendeurs, inverseurs automatiques, ayant une pression maximum de détente de 4 bar, avec une capacité maximale de 150 kg/h, dispositifs de sécurité associés et adaptateurs pour butane, propane et leurs mélanges

Ta slovenski standard je istoveten z: prEN 16129

ICS:

23.060.40 Tlačni regulatorji Pressure regulators

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

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Will supersede EN 16129:2013

English Version

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 181.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. prEN 16129:2025 E

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European foreword

This document (prEN 16129:2025) has been prepared by Technical Committee CEN/TC 181 “Appliances and leisure vehicle installations using liquefied petroleum gas and appliances using natural gas for outdoor use”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16129:2013.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA or Annex ZB, which is an integral part of this document.

The main changes compared with EN 16129:2013 are as follows:

— harmonization with pressure equipment directive 2014/68/EU. Annex O describes the situation of regulating devices and adaptors regarding to PED;

— modification of the wording of both paragraphs 5.3.4.3 (Devices with a quick coupling connection) and 5.3.4.4 (Devices for fitting to a self-closing valve by means of a thread) in order to distinguish quick coupling connections from devices for fitting to a self closing valve;

— reconsideration of the G.56 connection specifications with the possibility to both connect and disconnect in “on” position;

— additional tests regarding to marking durability;

— editorial changes (Definition Butane / Propane / LPG, Performance (FR vs UK versions), marking and instructions);

— harmonization of pressure definitions and symbols with those given in EN 334:2019+A1:2024;

— dynamic resistance corrosion test;

— lock-up pressure test;

— Annex C;

— Annex M;

— rewording of the Annex ZA according to the Gas Appliance Regulation (EU) 2016/426;

— Annex ZB according to the pressure equipment directive 2014/68/EU.

NOTE Gas pressure regulators according to this document do not have their own source of ignition and therefore are not within the scope of European Directive 2014/34/EU. Any additional components (e.g. proximity switch, travel transducer etc.) are expected to be independently considered in the framework of assemblies as per ATEX Guideline “Guideline on the application of Council directive 94/9/EC of 23rd March 1994 edition June 2009”, Clauses 3.7.3 and 3.7.4.

1 Scope

This document specifies the design and operational characteristics, the safety requirements, test methods and the marking of regulators and automatic change-over devices having a maximum regulated pressure of 4 bar, with a maximum capacity of 150 kg/h, for use with butane, propane and their mixtures in the vapour phase.

The maximum supply pressures for devices covered by this standard are 7,5 bar for butane and 16 bar for propane and LPG.

This document also applies to the safety devices which are included within regulating devices covered by this document.

This document also includes requirements for:

— adaptors for connecting to self-closing valves;

— integral or auxiliary safety devices.

This document covers devices used in locations where the temperature likely to be reached during use is between −20 °C and +50 °C

Additional requirements for devices to be used at temperatures down to −30 °C and/or up to +80 °C are defined in Annex C.

This document gives special requirements for:

— devices intended to be used in caravans and motor caravans (Annex D);

— devices intended to be used in boats (Annex M);

— specific connections which are not defined in other standards (e.g. EN 15202:2019 for cylinder valve connections).

NOTE Boats considered in this document are recreational crafts covered by European Directive 2013/53/EU.

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.

EN 437:2021, *Test gases — Test pressures — Appliance categories*

EN 549:2019+A2:2024, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 624:2011, *Specification for dedicated LPG appliances Room sealed LPG space heating equipment for installation in vehicles and boats*

EN 751-1:1996, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water — Part 1: Anaerobic jointing compounds*

EN 751-2:1996, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water — Part 2: Non-hardening jointing compounds*

EN 751-3:2022+A1:2023, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water — Part 3: Unsintered PTFE tapes and PTFE strings*

EN 1563:2018, *Founding — Spheroidal graphite cast irons*

EN 1652:1997,[1] *Copper and copper alloys — Plate, sheet, strip and circles for general purposes*

EN 1774:1997, *Zinc and zinc alloys — Alloys for foundry purposes — Ingot and liquid*

EN 10226-1:2004, *Pipe threads where pressure tight joints are made on the threads — Part 1: Taper external threads and parallel internal threads — Dimensions, tolerances and designation*

EN 10226-2:2005, *Pipe threads where pressure tight joints are made on the threads — Part 2: Taper external threads and taper internal threads — Dimensions, tolerances and designation*

EN 12164:2024, *Copper and copper alloys — Rod for free machining purposes*

EN 12165:2024, *Copper and copper alloys — Wrought and unwrought forging stock*

EN 12420:2024, *Copper and copper alloys — Forgings*

EN 12844:1998, *Zinc and zinc alloys — Castings — Specifications*

EN 15202:2019, *LPG equipment and accessories — Essential operational dimensions for LPG cylinder valve outlet and associated equipment connections*

EN 60695-11-10:2013,[2] *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods*

EN ISO 75-1:2020, *Plastics — Determination of temperature of deflection under load — Part 1: General test method (ISO 75-1:2020)*

EN ISO 75-2:2013, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite (ISO 75-2:2013)*

EN ISO 75-3:2004,[3] *Plastics — Determination of temperature of deflection under load — Part 3: High-strength thermosetting laminates (ISO 75-3:2004)*

EN ISO 178:2019, *Plastics — Determination of flexural properties (ISO 178:2019)*

EN ISO 180:2023, *Plastics — Determination of Izod impact strength (ISO 180:2023)*

EN ISO 527-1:2019, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:2019)*

EN ISO 527-2:2012, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:2012)*

EN ISO 527-3:2018, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets (ISO 527-3:2018)*

EN ISO 527-4:2023, *Plastics — Determination of tensile properties — Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites (ISO 527-4:2023)*

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[1] As impacted by EN 1652:1997/AC:2003.

[2] As impacted by EN 60695-11-10:2013/AC:2014.

[3] As impacted by EN ISO 75-3:2004/AC:2006.

EN ISO 527-5:2021, *Plastics — Determination of tensile properties — Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (ISO 527-5:2021)*

EN ISO 4628-3:2024, *Paints and varnishes — Evaluation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 3: Assessment of degree of rusting (ISO 4628-3:2024)*

EN ISO 4892-3:2024, *Plastics — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps (ISO 4892-3:2024)*

ISO 565:1990, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 7005-1:2011, *Pipe flanges — Part 1: Steel flanges for industrial and general service piping systems*

ISO 7005-2:1988, *Metallic flanges — Part 2: Cast iron flanges*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

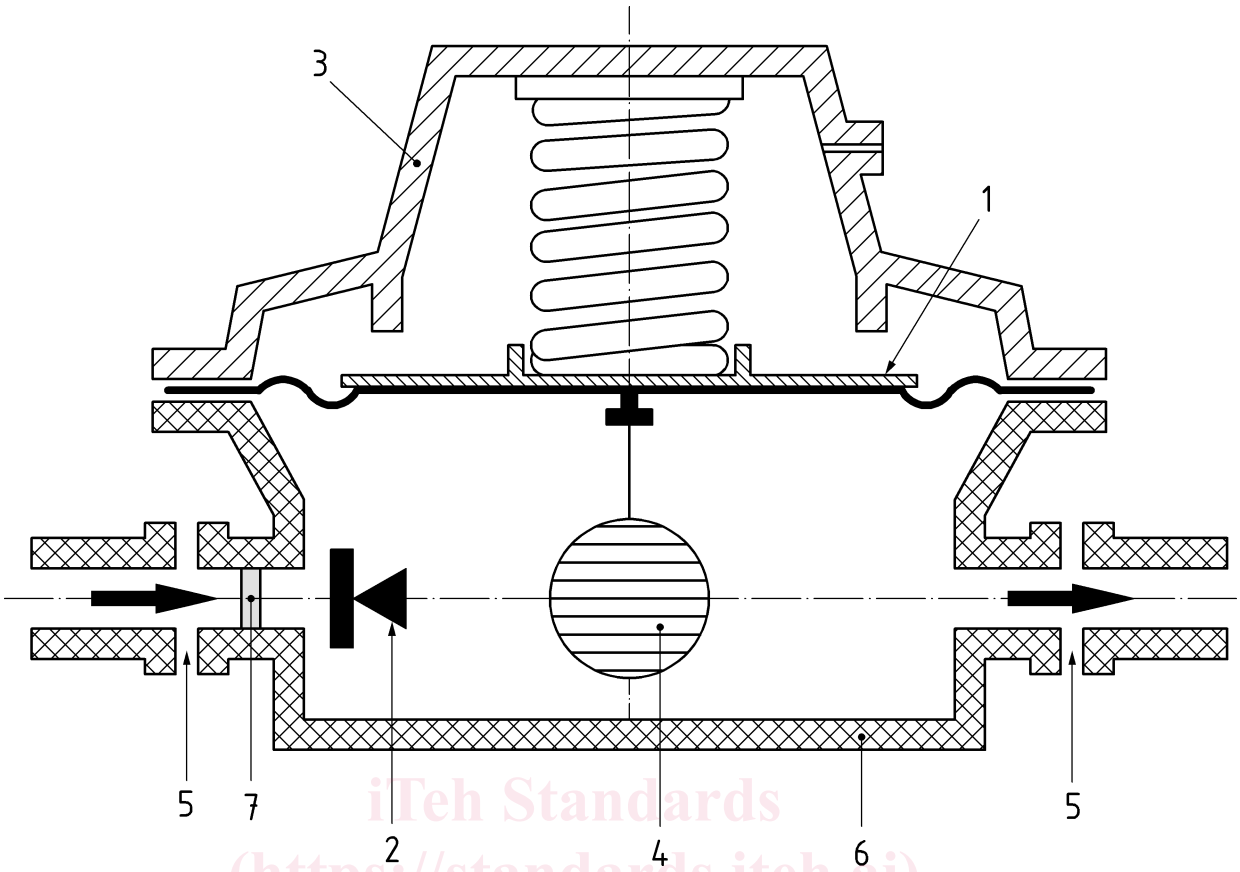
— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 General terms and definitions

3.1.1
regulator
regulating device which maintains a regulated pressure within pre-set limits, for a defined range of upstream pressure, flow rate and temperature

Note 1 to entry: Figure 1 gives the terminology used in this document. The design shown is only an example.



Key

1 pressure sensing subassembly (diaphragm and plate)

2 regulation subassembly (seat and valve pad)

3 back pressure subassembly (cover, vent, spring and spring adjustment)

4 mechanical linkage subassembly (levers, linkages)

5 connection subassembly (inlet and outlet connections)

6 body

7 integral filter (if applicable)

Figure 1 — Principal parts of a regulator

3.1.2
automatic change-over device
regulating device which maintains the gas supply continuity by automatically using gas from a “reserve” cylinder or series of cylinders when the supply pressure from a preselected “service” cylinder or series of cylinders drops below a defined value

3.1.3
integral two stage automatic change-over device
regulating device combining an automatic change-over device and a regulator

3.1.4
regulating device
regulator or automatic change-over device or combination of both

3.1.5
monitor
second regulator installed in series with an active regulator, normally upstream, which has the task of maintaining the controlled variable within allowable limits in the event of its value exceeding pre-established values

3.1.6
adaptor
device which connects another part of the gas installation (e.g. hose) directly to a self-closing cylinder valve and can incorporate an “on/off” or other function but not a pressure regulating function

3.1.7
device
regulator, automatic change-over device or adaptor

3.1.8
fixed regulating device
regulating device whose regulated pressure is fixed by construction

3.1.9
adjustable regulating device
regulating device whose regulated pressure can only be modified during commissioning or during maintenance; it is then fixed

3.1.10
variable regulating device
regulating device whose regulated pressure can be modified during use with simple manipulation between two fixed limits

3.1.11
automatic change-over device system “kit”
system of several regulators designed and adjusted in such a way as to operate like an automatic change-over device as in 3.1.2

3.1.12
quick coupling
connection system which allows the fitting of a regulator or adaptor to a cylinder valve without a threaded connection and without using tools

3.1.13
union connection
threaded connection with a freely rotating nut

Note 1 to entry: A union connection allows the assembly of a device without rotating it.

3.1.14
manual closing mechanism
part of a device used for closing the gas flow which requires an intentional manual action

EXAMPLE A lever or selector

3.1.15
self-closing valve
device fixed on the gas cylinder allowing the automatic shut off of the gas flow, by simple disconnection of the regulator or adaptor from the cylinder valve