SLOVENSKI STANDARD
oSIST prEN 16129:2018

01-september-2018

Regulatorji tlaka, samodejni 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 höchsten 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

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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

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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.

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

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Contents

Page

European foreword ... 10

1 Scope ... 11

2 Normative references ... 12

3 Terms and definitions ... 13
3.1 General terms and definitions ... 13
3.2 Terms and definitions concerning gas and air for tests ... 16
3.3 Terms and definitions concerning pressures ... 17
3.4 Terms and definitions concerning flow rates ... 18

4 Types of regulating devices ... 18
4.1 Introduction ... 18
4.2 Regulating device with a nominal regulated pressure specified by EN 437:2003+A1:200919
4.3 Regulating device with a nominal regulated pressure not specified by EN 437:2003+A1:2009 ... 19

5 Constructional characteristics ... 20
5.1 General ... 20
5.2 Materials ... 21
5.2.1 General ... 21
5.2.2 Body ... 21
5.2.3 Internal parts ... 21
5.2.4 Zinc alloys ... 21
5.2.5 Brass ... 22
5.2.6 Steel and cast iron ... 22
5.2.7 Elastomeric parts ... 22
5.3 Special requirements ... 22
5.3.1 Pressure sensing subassembly (regulating devices only) ... 22
5.3.2 Regulation subassembly (regulating devices only) ... 22
5.3.3 Back pressure subassembly (regulating devices only) ... 23
5.3.4 Connection subassembly ... 23
5.3.5 Change over devices ... 26
5.4 Mechanical strength ... 26
5.4.1 Resistance to impact ... 26
5.4.2 Resistance to pressure ... 26
5.4.3 Strength of connections ... 26
5.5 Soundness ... 30
5.6 Mechanical endurance ... 30
5.6.1 Regulators ... 30
5.6.2 Automatic change over devices ... 31
5.6.3 Devices fitted with a manual closing device ... 31
5.6.4 Quick coupling device ... 31
5.6.5 Device with freely rotating outlet connection ... 31
5.7 Resistance to humidity changes ... 31
5.8 Resistance to corrosion ... 31

6 Performance characteristics ... 32
6.1 General ... 32
6.2 Regulators ... 32

6.2.1 Supply and regulated pressures for regulators to be used on installations where the final pressure is to EN 437:2003+A1:2009 32
6.2.2 Supply and regulated pressures for fixed or adjustable regulators to be used on installations where the final pressure is not to EN 437:2003+A1:2009 36
6.2.3 Variable regulators 37
6.3 Automatic change over devices 38
6.3.1 Supply and regulated pressures for automatic change over devices to be used on installations where the final pressure is to EN 437:2003+A1:2009 38
6.3.2 Supply and regulated pressures for fixed or adjustable automatic change over devices to be used on installations where the final pressure is not to EN 437:2003+A1:2009 39
6.3.3 Automatic change over device with integral variable regulator 39
6.3.4 Change over pressure 40
6.4 Adaptors 40

7 Test methods 40
7.1 General conditions 40
7.1.1 Type of test gas 40
7.1.2 Test conditions 40
7.1.3 Equivalence formulas 41
7.1.4 Test samples 41
7.1.5 Tolerances of measurements 42
7.2 Verification of constructional characteristics 42
7.2.1 Resistance to impact 42
7.2.2 Resistance to pressure 43
7.2.3 Mechanical strength of connections 44
7.2.4 Valve pad retention 48
7.2.5 Soundness 48
7.2.6 Mechanical endurance 49
7.2.7 Resistance to humidity changes 51
7.2.8 Resistance to corrosion 51
7.3 Verification of performance characteristics 52
7.3.1 General 52
7.3.2 Plotting of the performance curves for regulating devices 54
7.3.3 Performances of adaptors 55
7.3.4 Verification of first stage pressure for G.56 connection regulating devices 55
7.3.5 Soundness of the non-return valve 56

8 Marking, packaging, instructions 56
8.1 General 56
8.2 Marking of the device 56
8.2.1 Marking 56
8.2.2 Durability of the marking 57
8.3 Packaging 57
8.4 Instructions for installation, use and maintenance 57

Annex A (normative) Special requirements for devices fitted with pressure or flow rate operated safety functions 59

A.1 Regulating devices fitted with an over-pressure relief valve of a limited flow rate (PRV) 59

A.1.1 Definition 59

A.1.2 Constructional characteristics 59

A.1.3 Performance characteristics 59

A.1.4 Regulating devices with regulated pressures specified in EN 437:2003+A1:2009 59

A.1.5 Regulating devices with regulated pressures other than those specified in EN 437:2003+A1:2009 59
A.1.6 Test methods 60
A.1.7 Regulating device marking 60
A.1.8 Instructions 60
A.2 Regulating devices fitted with an over-pressure shut off safety device (OPSO) 61
A.2.1 Definition 61
A.2.2 Constructional characteristics 61
A.2.2.1 General 61
A.2.2.2 Closing force 61
A.2.2.3 Diaphragm strength 61
A.2.3 Performance characteristics 62
A.2.3.1 Regulating devices with regulated pressures specified in EN 437:2003+A1:2009 62
A.2.3.2 Regulating devices with regulated pressures other than those specified in EN 437:2003+A1:2009 62
A.2.4 Test methods 62
A.2.4.1 Frictional force 62
A.2.4.2 Performance test 62
A.2.4.3 Test for diaphragm strength 62
A.2.5 Regulating device marking 63
A.2.6 Instructions 63
A.3 Regulating devices fitted with an under-pressure shut off safety device (UPSO) 63
A.3.1 Definition 63
A.3.2 Constructional and performance characteristics 63
A.3.3 Test methods 63
A.3.4 Regulating device marking 64
A.3.5 Instructions 64
A.4 Regulating devices fitted with an excess flow valve (EFV) 64
A.4.1 Definition 64
A.4.2 Performance characteristics 64
A.4.2.1 General requirements 64
A.4.2.2 Requirements for regulating devices with regulated pressures specified in EN 437:2003+A1:2009 65
A.4.2.3 Requirements for regulating devices with regulated pressures not specified in EN 437:2003+A1:2009 65
A.4.3 Test methods 65
A.4.3.1 General 65

A.4.3.2 Performance tests 65
A.4.3.2.1 Regulating devices with regulated pressures specified in EN 437:2003+A1:2009 65
A.4.3.2.2 Regulating devices with regulated pressures not specified in EN 437:2003+A1:2009 66
A.4.3.3 Residual flow test 66
A.4.3.4 Re-setting test 67
A.4.3.4.1 Automatic re-setting excess flow valves 67
A.4.3.4.2 Manual re-setting excess flow valves 67
A.4.3.5 Endurance test 67
A.4.3.6 Resistance to impact test 68
A.4.4 Regulating device marking 68
A.4.5 Instructions 68
A.5 Regulating devices fitted with a regulated outlet pressure limiter 69
A.5.1 Definition 69
A.5.2 Constructional and performance characteristics 69
A.5.3 Test method 69
A.5.3.1 Test conditions 69
A.5.3.2 Verification of the minimum intervention pressure p_{lim} 69
A.5.3.3 Measurement of the maximum limited pressure 70
A.5.3.4 Measurement of the pressure loss 70
A.5.4 Marking 70
A.5.4.1 Integral limiter 70
A.5.4.2 Independent limiter 70
A.5.5 Instructions 70
A.5.5.1 General 70
A.5.5.2 Integral limiter 70
A.5.5.3 Independent limiter 70
A.6 Two stage pressure limiting regulating device 71
A.6.1 Description 71
A.6.2 Constructional and performance characteristics 71
A.6.3 Test methods 71
A.6.4 Marking 71
A.6.5 Instructions 71
A.7 Additional diaphragm 72
A.7.1 Description 72
A.7.2 Constructional characteristics 72
A.7.2.1 General 72

A.7.2.2 Additional diaphragm strength 72
A.7.2.3 Leakage through orifice 72
A.7.3 Performance characteristics 72
A.7.4 Test methods 72
A.7.4.1 Test for diaphragm strength and leakage through orifice 72
A.7.4.2 Performance test 72
A.7.5 Marking 73
A.7.6 Instructions 73
Annex B (normative) Special requirements for devices fitted with a thermal shut off system 74
B.1 Thermal shut off valve 74
B.1.1 Definition 74
B.1.2 Constructional characteristics 74
B.1.3 Performance characteristics 74
B.1.4 Test methods 74
B.1.5 Marking 75
B.1.6 Instructions 75
B.2 Thermal spindle on devices for self-closing valve connection 75
B.2.1 Definition 75
B.2.2 Constructional characteristics 75
B.2.3 Performance characteristics 76
B.2.4 Test methods 76
B.2.5 Marking 76
B.2.6 Instructions 76
Annex C (normative) Special requirements for devices under extreme temperature conditions (temperatures below −20 °C) 77
C.1 Scope 77
C.2 Requirements 77
C.2.1 Material 77
C.2.2 Extreme temperature test 77
C.3 Conditioning 77
C.4 Marking 77
C.5 Instructions 77
Annex D (normative) Regulating devices for gas cylinders to supply appliances installed in caravans, motor caravans or freshwater boats 78
D.1 Scope 78
D.2 Installations and connections 78
D.3 Pressures and flow rate 81

D.4 Pressure safety functions **81**
D.5 Automatic change over system ("kit") **82**
D.6 Resistance to vibration **82**
D.7 Marking **83**
D.8 Instructions **84**
Annex E (normative) **Complementary test requirements for non-metallic thermoplastic or thermal setting materials used in the construction of devices** **85**
E.1 Scope **85**
E.2 Materials **85**
E.3 Special requirements **86**
E.3.1 Accelerated ageing **86**
E.3.2 Resistance to hydrocarbons **87**
E.3.3 Resistance to cracking under stress and when chemical agents are present **87**
E.3.4 Characteristics relating to fire resistance **87**
E.4 Special conditions for carrying out the tests mentioned in the body of the standard **87**
E.4.1 Resistance to impact (see 5.4.1 and 7.2.1) **87**
E.4.2 Mechanical resistance of connections (see 5.4.3 and 7.2.3) **87**
E.4.3 Soundness (see 5.5 and 7.2.5) **88**
E.5 Sampling and order of tests **88**
Annex F (normative) **Requirements for elastomeric reinforced diaphragms** **89**
Annex G (normative) **Inlet connections** **90**
Annex H (normative) **Outlet connections** **105**
Annex I (informative) **Test method for resistance to corrosion** **126**
I.1 Principle **126**
I.2 Reagents **126**
I.2.1 Saline solution **126**
I.2.2 Compressed air **126**
I.2.3 Salt mist **126**
I.3 Apparatus **127**
I.3.1 Spraying chamber **127**
I.3.2 Sprayers **127**
I.3.3 Heating device **127**
I.3.4 Salt solution supply device **128**
I.3.5 Compressed air supply device **128**
I.3.6 Mist collectors. **128**
I.4 Test method **128**

I.4.1 Method of exposure of devices 128
I.4.2 Duration of tests 128
I.4.3 Checks 129
I.4.4 Cleaning of devices 129
I.4.5 Results 129
Annex J (informative) Method for measuring leaks 132
J.1 Scope 132
J.2 Diagram of the test bench 132
J.3 Coefficient *K* 132
J.3.1 Method 132
J.3.2 Calculations 133
J.4 Measurement of the leak 133
J.4.1 Method 133
J.4.2 Calculations 133
J.5 Checks 133
Annex K (normative) Special requirements for low pressure fixed regulators fitted with two or three outlets for outdoor use 134
K.1 Scope 134
K.2 Constructional characteristics 134
K.3 Performance characteristics 134
K.4 Test methods 134
K.4.1 Test on the shut off devices 134
K.4.1.1 Soundness test 134
K.4.1.2 Endurance test 134
K.4.2 Performance test 135
K.4.2.1 Test conditions 135
K.4.2.2 Regulator with two outlets (marked A and B) 135
K.4.2.3 Regulator with three outlets 136
K.5 Marking 136
K.6 Instructions 136
Annex L (normative) Special requirements for regulators fitted with an inlet valve 137
L.1 Scope 137
L.2 Definition 137
L.3 Constructional characteristics 137
L.4 Performance characteristics: mechanical strength 137
L.5 Test methods 137

Annex M (normative) **Devices for gas cylinders to supply appliances installed in seawater boats** 138
M.1 Scope 138
M.2 General 138
M.3 Maximum guaranteed flow rate 138
M.4 Regulating devices fitted with a pressure relief valve 138
M.5 Vent 138
M.6 Connections 138
M.7 Material 138
M.8 Corrosion 139
M.8.1 General 139
M.8.2 Corrosion requirement 139
M.8.3 Corrosion test method 139
M.9 Marking 139
M.10 Instructions for use and maintenance 139
Annex N (normative) **Alternative possible seal** 140
N.1 Scope 140
N.2 Dimensions 140
N.3 Materials 140
N.4 Markings 141
Annex O (informative) **Flow chart describing situation of regulators regarding to PED** 142
Annex ZA (informative) **Relationship between this European Standard and the Essential Requirements of EU Regulation (EU) 2016/426/EC aimed to be covered (for regulating devices only)** 145
Annex ZB (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68 aimed to be covered** 147
Bibliography 149

European foreword

This document (prEN 16129:2018) has been prepared by Technical Committee CEN/TC 181 “Dedicated liquefied petroleum gas appliances”, 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 mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Regulation 2016/426/EC and of EU Directive 2014/68.

For relationship with Regulation 2016/426/EC and EU Directive 2014/68, see informative Annexes ZA, and ZB.

For installation rules of devices and their possible associated safety devices, reference should be made to national regulations in force in the member countries.

The main changes from the previous version of the standard are:

— Harmonization with pressure equipment directive

— Modification of the wording of both paragraphs 5.3.4.3 and 5.3.4.4 in order to distinguish quick coupling connections from threaded connections

— 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

— Rewording of the ZA annex according to the Gas Appliance Regulation 2016/426/EC

1 Scope

This document defines the constructional 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.

This document also applies to the safety devices which are included within regulating devices covered by this standard. The characteristics of these safety devices are given in Annexes A and B.

This document also includes the requirements for:

— adaptors for connecting to self-closing valves;

— auxiliary safety devices.

For the purpose of this European Standard:

— regulators and automatic change-over devices are referred to as “regulating devices”;

— regulators, automatic change-over devices and adaptors are referred to as “devices”.

This document does not cover automatic change over devices which do not have a regulating function.

The requirements apply to 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 below −20 °C are given in Annex C.

Additional requirements for regulating devices intended to be used in caravans, motor caravans and freshwater boats are given in Annex D.

Additional requirements for regulating devices intended to be used in seawater boats are given in Annex M.

All connections and the countries in which they are used are given in Annexes G and H.

This document defines only specific connections which are not defined in other standards (e.g. EN 15202:2012 for cylinder valve connections).

This document covers:

— Regulating devices fitted with an over-pressure relief valve of a limited flow rate (PRV) (see A.1)

— Regulating devices fitted with an over-pressure shut off safety device (OPSO) (see A.2)

— Regulating devices fitted with a regulated outlet pressure limiter (see A.5)

— Two stage pressure limiting regulating device (see A.6)

which are considered as “safety accessories” and all other devices which are considered as “pressure accessories” according to the Pressure Equipment Directive (2014/68/EU).

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 component (e.g. proximity switch, travel transducer etc.) should 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.

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.

<std>EN 437:2003+A1:2009, *Test gases - Test pressures - Appliance categories*</std>

<std>EN 549:1994, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*</std>

<std>EN 561:2002, *Gas welding equipment - Quick-action coupling with shut-off valves for welding, cutting and allied processes*</std>

<std>EN 1563:2011, *Founding — Spheroidal graphite cast irons*</std>

<std>EN 1774:1997, *Zinc and zinc alloys - Alloys for foundry purposes - Ingot and liquid*</std>

<std>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*</std>

<std>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*</std>

<std>EN 12164:2016, *Copper and copper alloys - Rod for free machining purposes*</std>

<std>EN 12165:2016, *Copper and copper alloys - Wrought and unwrought forging stock*</std>

<std>EN 12420:2014, *Copper and copper alloys - Forgings*</std>

<std>EN 12844:1998, *Zinc and zinc alloys — Castings — Specifications*</std>

<std>EN 15202:2012, *LPG equipment and accessories — Essential operational dimensions for LPG cylinder valve outlet and associated equipment connections*</std>

<std>EN 60695-11-10:2013, *Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods*</std>

<std>EN ISO 178:2011, *Plastics — Determination of flexural properties (ISO 178)*</std>

<std>EN ISO 180:2001, *Plastics — Determination of Izod impact strength (ISO 180)*</std>

<std>EN ISO 527-1:2012, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1:2012)*</std>

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

<std>EN ISO 527-3:1995, *Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets (ISO 527-3:1995)*</std>

<std>EN ISO 527-4:1997, *Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotopic fibre-reinforced plastic composites (ISO 527-4:1997)*</std>

<std>EN ISO 527-5:2005, *Plastics — Determination of tensile properties – Part 5: Test conditions for unidirectional fibre-reinforced plastic composites Part 5: Test conditions for unidirectional fibre-reinforced plastic composites*</std>

<std>EN ISO 4628-3:2003, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 3: Assessment of degree of rusting (ISO 4628-3:2003)*</std>

<std>EN ISO 4892-3:2016, *Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3:2016)*</std>

<std>EN ISO 9227:2017, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2017)*</std>

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

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

<std>ISO 7005-2:1998, *Metallic flanges — Part 2: Cast iron flanges*</std>

3 Terms and definitions

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

3.1 General terms and definitions

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

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