SLOVENSKI STANDARD
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Samodejni zaporni ventili za plinske gorilnike in plinske aparate

Automatic shut-off valves for gas burners and gas appliances

Automatische Absperrventile für Gasbrenner und Gasgeräte

Robinets automatiques de sectionnement pour brûleurs à gaz et appareils à gaz

Ta slovenski standard je istoveten z: **FprEN 161**

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23.060.20	Zapirni ventili (kroglasti in pipe)	Ball and plug valves
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Automatic shut-off valves for gas burners and gas appliances

Robinets automatiques de sectionnement pour brûleurs à gaz et appareils à gaz

Automatische Absperrventile für Gasbrenner und Gasgeräte

This draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 58.

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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Foreword

This document (FprEN 161:2010) has been prepared by Technical Committee CEN/TC 58 “Safety and control devices for burners and appliances burning gaseous or liquid fuels”, the secretariat of which is held by BSI.

This document is currently submitted to the Unique Acceptance Procedure.

For this draft European Standard a transition period of 3 years is proposed.

This document will supersede EN 161:2007.

This document is intended to be used in conjunction with EN 13611:2007. This document refers to clauses of EN 13611:2007 or adapts clauses by stating “with the following modification”, “with the following addition”, “is replaced by the following” or "is not applicable" in the corresponding clause. This European Standard adds clauses or sub-clauses to the structure of EN 13611:2007 which are particular to this standard. It should be noted that these clauses and sub-clauses are not indicated as an addition.

It should be noted that the following significant editorial changes compared to the previous edition have been incorporated in this European Standard:

a) alignment to EN 13611:2007;

b) normative references: ISO 4400 and ISO 6952 are changed to EN 175301-803;

c) terms and definitions are aligned to EN 13611:2007;

d) sub-clause 6.101 has been moved to sub-clause 8.11.102;

e) installation and operating instructions are integrated in one sub-clause;

f) changes in Annex ZA regarding 1.2, 1.2.2, 1.2.3, 1.3, 3.1.1, 3.3, 3.6, 3.7, 3.8, 3.11, 3.12, 3.2.1 and in addition Annex II and III were deleted.

SIL classification according to EN 61508 cannot be claimed based upon compliance with this standard. Valves with SIL classification do not meet automatically the requirements of this standard.

1 Scope

This European Standard specifies the safety, construction and performance requirements for automatic shut-off valves for use with gas burners, gas appliances and similar use, hereafter referred to as 'valves'.

This European Standard is applicable to valves with declared maximum inlet pressures up to and including 500 kPa (5 bar) of nominal connection sizes up to and including DN 250 for use with one or more fuel gases in accordance with EN 437.

This European Standard is applicable to electrically operated valves and to valves actuated by fluids where the control valves for these fluids are actuated electrically, but not to any external electrical devices for switching the control signal or actuating energy.

An assessment method for valve designs is given by this European Standard.

This European Standard is also applicable to valves where the flow rate is controlled by external electrical signals, either in discrete steps or proportional to the applied signal.

This European Standard is also applicable to valves fitted with closed position indicator switches.

NOTE Provisions for final product inspection and testing by the manufacturer are not specified.

2 Normative references

The following referenced documents are indispensable for the application 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 30 (all parts), *Domestic cooking appliances burning gas*

EN 298*, Automatic gas burner control systems for gas burners and gas burning appliances with or without fans*

EN 13611:2007, *Safety and control devices for gas burners and gas burning appliances — General requirements*

EN 13906-1, *Cylindrical helical springs made from round wire and bar — Calculation and design — Part 1: Compression springs*

EN 13906-2, *Cylindrical helical springs made from round wire and bar — Calculation and design — Part 2: Extension springs*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN 60730-1:2000, *Automatic electrical controls for household and similar use — Part 1: General requirements (IEC 60730-1:1999, modified)*

EN 61058-1, *Switches for appliances — Part 1: General requirements (IEC 61058-1:2000 + A1:2001, modified)*

EN 175301-803, *Detail Specification: Rectangular connectors — Flat contacts, 0,8 mm thickness, locking screw not detachable*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13611:2007 and the following apply.

3.101
automatic shut-off valve
valve which opens when energized and closes automatically when de-energized

3.102
actuating mechanism
part of the valve which moves the closure member

3.103
valve with step control
valve which controls the flow rate in steps

3.104
valve with modulating control
valve which controls the flow rate continuously between two limits in response to external electrical signals

3.105
closed position indicator switch
switch fitted to a valve which indicates when the closure member is in the closed position

3.106
actuating energy
required energy for the actuating mechanism to move the closure member to the open position

NOTE The actuating energy can have an external source (electrical, pneumatic or hydraulic) and can be transformed inside the valve.

3.107
opening force
force required to move the closure member to the open position

3.108
closing force
force available to close the valve, independent of any force provided by fuel gas pressure

3.109
sealing force
force acting on the valve seat when the closure member is in the closed position, independent of any force provided by fuel gas pressure

3.110
frictional force
largest force required to move the actuating mechanism and the closure member from the open position to the closed position with the closure spring removed, independent of any force provided by fuel gas pressure

3.111
actuating pressure
hydraulic or pneumatic pressure supplied to the actuating mechanism of the valve

3.112
opening time
time interval between energizing the valve and the attainment of the maximum or other defined flow rate

3.113
closing time
time interval between de-energizing the valve and the closure member attaining the closed position

3.114
delay time
time interval between energizing the valve and the start of flow

3.115
control valve
valve which controls the fluid (e. g. compressed air) supplied to the actuating mechanism

3.116
rated voltage
voltage declared by the manufacturer at which the valve may be operated

3.117
rated current
current declared by the manufacturer at which the valve may be operated

3.118
balanced valve
valve with a balanced closure member where the inlet pressure acts on the closure member in the opening and closing direction

NOTE The closure member may close more than one opening.

4 Classification

4.1 Classes of control

EN 13611:2007 is replaced by the following:

— Class A, B and C valves

Valves where the sealing force is not decreased by the gas inlet pressure. They are classified A, B or C according to the sealing force requirements of 7.105. Balanced valves according to this standard are class A valves.

— Class D valves

Valves which are not subject for requirements for the sealing force and fixed closing time.

NOTE Class D valves are intended to be used for control functions only.

— Class J valves

Disc-on-seat valves where the sealing force is not decreased by the gas inlet pressure and which meet the requirements of 7.105.

4.2 Groups of control

Shall be according to EN 13611:2007, 4.2.