ICS 23.060.10 SLOVENSKÁ TECHNICKÁ NORMA September 2025

STN	**Automatické uzatváracie ventily horákov na plynné palivá a spotrebičov na plynné palivá**	**STN EN 161+A1** 06 1803

Automatic shut-off valves for gas burners and gas appliances

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/25

Obsahuje: EN 161:2022+A1:2025

Oznámením tejto normy sa od 30.04.2028 ruší
STN EN 161 (06 1803) z januára 2023

140789

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 161:2022+A1

April 2025

ICS 23.060.10 Supersedes EN 161:2022

English Version

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 European Standard was approved by CEN on 1 August 2022 and includes Amendment 1 approved by CEN on 5 February 2025.

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Ref. No. EN 161:2022+A1:2025 E

Contents

Page

European foreword ... 5

Introduction ... 6

1 Scope ... 8

2 Normative references ... 8

3 Terms and definitions ... 9

4 Classification ... 11
4.1 Classes of control ... 11
4.2 Groups of control ... 11
4.3 Classes of control functions ... 11
4.4 Types of *DC* supplied controls ... 11

5 Test conditions and uncertainty of measurements ... 11

6 Design and construction ... 11
6.1 General ... 11
6.2 Mechanical parts of the control ... 11
6.2.1 Appearance ... 11
6.2.2 Holes ... 11
6.2.3 Breather holes ... 11
6.2.4 Screwed fastenings ... 12
6.2.5 Jointing ... 12
6.2.6 Moving parts ... 12
6.2.7 Sealing caps ... 12
6.2.8 Dismantling and reassembly ... 12
6.2.9 Auxiliary canals and orifices ... 12
6.2.10 Presetting device ... 12
6.2.101 Design ... 12
6.2.102 Closed position indicator switch ... 12
6.2.103 Valve with modulating control ... 12
6.2.104 Controls assembled to a valve ... 12
6.2.105 Balanced valves ... 12
6.2.106 Closing and sealing ... 13
6.2.107 Additional requirements for shut-off function ... 14
6.3 Materials ... 14
6.3.1 General material requirements ... 14
6.3.2 Housing ... 14
6.3.3 Zinc alloys ... 14
6.3.4 Springs ... 14
6.3.5 Resistance to corrosion and surface protection ... 14
6.3.6 Impregnation ... 14
6.3.7 Seals for glands for moving parts ... 14
6.3.101 Closure members ... 15
6.4 Gas connections ... 15
6.4.1 Making connections ... 15
6.4.2 Connection sizes ... 15
6.4.3 Threads ... 15
6.4.4 Union joints ... 15

6.4.5 Flanges 15
6.4.6 Compression fittings 15
6.4.7 Nipples for pressure test 15
6.4.8 Strainers 15
6.5 Electrical parts of the control 15
6.5.1 General 15
6.5.2 Switching elements 15
6.5.3 Electrical components 16
6.6 Protection against internal faults for the purpose of functional safety 16
6.101 Pneumatic and hydraulic actuating mechanisms 16

7 Performance 16
7.1 General 16
7.2 Leak-tightness 16
7.3 Torsion and bending 16
7.4 Rated flow rate 17
7.4.1 Requirement 17
7.4.2 Test 17
7.4.3 Conversion of air flow rate 17
7.5 Durability 17
7.6 Performance tests for electronic controls 17
7.7 Long-term performance for electronic controls 17
7.8 Data exchange 17
7.101 Closing function 17
7.102 Closing force 18
7.103 Delay time and opening time 18
7.104 Closing time 19
7.105 Sealing force 19
7.106 Closed position indicator switch 21
7.107 Endurance 21

8 Electrical requirements 23
8.1 General 23
8.2 Protection by enclosure 23
8.101 Switches 23
8.102 Plug connections 23
8.103 Power saving circuits 24

9 Electromagnetic compatibility (EMC) 24
9.1 Protection against environmental influences 24
9.2 Supply voltage variations below 85 % of rated voltage 24
9.3 Voltage dips and interruptions 24
9.4 Supply frequency variations 25
9.5 Surge immunity tests 25
9.6 Electrical fast transient/burst 25
9.7 Immunity to conducted disturbances induced by radio frequency fields 25
9.8 Immunity to radiated disturbances induced by radio frequency fields 25
9.9 Electrostatic discharge tests 25
9.10 Power frequency magnetic field immunity tests 25
9.11 Harmonics and interharmonics including mains signalling at a. c. power port, low frequency immunity tests 25

10 Marking, instructions 25
10.1 Marking 25
10.2 Instructions 26

10.3 Warning notice 27
Annex A (informative) Abbreviations and symbols 28
Annex B (informative) Leak-tightness test for gas controls – volumetric method 29
Annex C (informative) Leak-tightness test for gas controls – pressure loss method 30
Annex D (normative) Calculation of pressure loss into leakage rate 31
Annex E (normative) Electrical/electronic component fault modes 32
Annex F (normative) Additional requirements for safety accessories and pressure accessories as defined in EU Directive 2014/68/EU 33
Annex G (normative) Materials for pressurized parts 34
Annex H (normative) Additional materials for pressurized parts 35
Annex I (normative) Requirements for controls used in *DC* supplied burners and appliances burning gaseous or liquid fuels 36
Annex J (normative) Method for the determination of a Safety Integrity Level (SIL) 37
Annex K (normative) Method for the determination of a Performance Level (PL) 38
K.1 Scope 38
K.2 Normative references 38
K.3 Terms and definitions 38
K.4 Performance 38
K.5 Marking, instructions 40
Annex L (informative) Relationship between Safety Integrity Level (SIL) and Performance Level (PL) 41
Annex M (normative) Reset functions 42
Annex N (informative) Guidance document on Environmental Aspects 43
Annex O (normative) Seals of elastomer, cork and synthetic fibre mixtures 44
Annex AA (informative) Model of a FMEA for valves 45
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Regulation (EU) 2016/426 aimed to be covered 63
Bibliography 66

European foreword

This document (EN 161:2022+A1:2025) 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 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 October 2025, and conflicting national standards shall be withdrawn at the latest by April 2028.

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

This document includes Amendment 1 approved by CEN on 5th of February 2025.

〖A1〉 This document supersedes EN 161:2022. 〈A1〗

〖A1〉 *Deleted text* 〈A1〗

The start and finish of text introduced or altered by amendment is indicated in the text by tags 〖A1〉 〈A1〗.

〖A1〉 This document differs from EN 161:2022 as follows: Annex ZA has been brought in line with Mandate M/595 and updates to Annex ZA. 〈A1〗

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document is intended to be used in conjunction with EN 13611:2019.

EN 13611:2019 recognizes the safety level specified by CEN/TC 58 and is regarded as a horizontal standard dealing with the safety, construction, performance and testing of controls for burners and appliances burning gaseous and/or liquid fuels.

The general requirements for controls are given in EN 13611:2019, and methods for classification and assessment for new controls and control functions are given in EN 14459:2021 (see Figure 1). EN 126:2012 (see Figure 1) specifies multifunctional controls combining two or more controls and Application Control Functions, one of which is a mechanical control function. The requirements for controls and Application Control Functions are given in the specific control standard (see Figure 1, control functions).

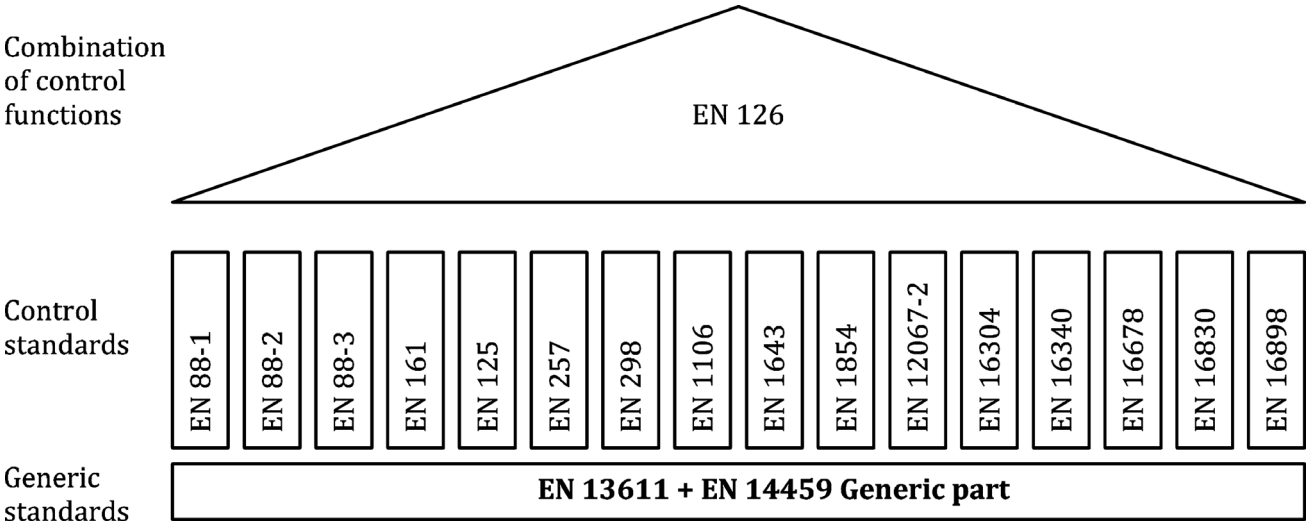

Figure 1 — Interrelation of control standards

EN 13611:2019 should be used in conjunction with the specific standard for a specific type of control (e.g. [A1] EN 88-1:2022+A1:2023 [A1], [A1] EN 88-2:2022+A1:2024 [A1], [A1] EN 88-3:2022+A1:2024 [A1], [A1] EN 125:2022+A1:2024 [A1], EN 126:2012, EN 161:2022, [A1] EN 257:2022+A1:2023 [A1], EN 298:2022, [A1] EN 1106:2022+A1:2023 [A1], EN 1643:2022, [A1] EN 1854:2022+A1:2023 [A1], EN 12067-2:2022, [A1] EN 16304:2022+A1:2024 [A1], EN 16340:2014, EN 16678:2022 and [A1] EN 16898:2022+A1:2023 [A1]), or for controls for specific applications.

EN 13611:2019 can also be applied, so far as reasonable, to controls not mentioned in a specific standard and to controls designed on new principles, in which case additional requirements can be necessary. EN 14459:2021 provides methods for classification and assessment of new control principles.

Primarily in industrial applications it is common practice to rate the safety of a plant based on values describing the likelihood of a dangerous failure. These values are being used to determine Safety Integrity Levels or Performance Levels when the system is being assessed in its entirety.

CEN/TC 58 standards for safety relevant controls do go beyond this approach, because for a certain life time for which the product is specified, designed and tested a dangerous failure is not allowed at all. Failure modes are described and assessed in greater detail.

Measures to prevent from dangerous situations are defined. Field experience over many decades is reflected in the CEN/TC 58 standards. Requirements of EN 13611:2019 can be considered as proven in practice.

This document refers to clauses of EN 13611:2019 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 document adds clauses or subclauses to the structure of EN 13611:2019 which are particular to this document. Subclauses which are additional to those in EN 13611:2019 are numbered starting from 101. Additional Annexes are designated as Annex AA, Annex BB, Annex CC etc. It should be noted that these clauses, subclauses and Annexes are not indicated as an addition.

If by reference to EN 13611:2019 the term “control” is given, this term should be read as “valve”.

This document establishes methodologies for the determination of a Performance Level (PL) in accordance with EN 13611:2019, Annexes K and L.

EN 161 compliance for valves cannot be claimed based upon Performance Level (PL) classification according to EN ISO 13849-1:2015 or Safety Integrity Level (SIL) classification according to EN 61508-1:2010.

Valves with PL or SIL classification do not automatically meet the requirements of this document.

Performance Level (PL) classification according to EN ISO 13849-1:2015 or Safety Integrity Level (SIL) classification according to EN 61508-1:2010 cannot be claimed based upon compliance with this standard only.

1 Scope

EN 13611:2019, Clause 1 applies with the following modification and addition:

Modification:

The 1st paragraph of EN 13611:2019, Clause 1 is replaced by:

This document specifies the safety, design, construction, and performance requirements and testing for automatic shut-off valves for burners and appliances burning one or more gaseous fuels, hereafter referred to as “valves”.

This document is applicable to valves with declared maximum inlet pressures up to and including 500 kPa and of nominal connection sizes up to and including DN 250.

Addition:

This document is applicable to:

— electrically actuated valves;

— 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;

— valves where the flow rate is controlled by external electrical signals, either in discrete steps or proportional to the applied signal;

— valves fitted with closed position indicator switches.

An assessment method for valve designs is given by this document.

The 4th paragraph of EN 13611:2019, Clause 1 is removed.

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 30-1-4:2012, *Domestic cooking appliances burning gas — Safety — Part 1-4: Appliances having one or more burners with an automatic burner control system*

EN 298:2022, *Automatic gas burner control systems for gas burners and gas burning appliances with or without fans*

EN 13611:2019[1], *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — General requirements*

EN 13906-1:2013, *Cylindrical helical springs made from round wire and bar — Calculation and design — Part 1: Compression springs*

EN 13906-2:2013, *Cylindrical helical springs made from round wire and bar — Calculation and design — Part 2: Extension springs*

[1] As impacted by EN 13611:2019/AC:2021.

EN 60730-1:2016[2], *Automatic electrical controls for household and similar use — Part 1: General requirements (IEC 60730-1:2013, modified)*

EN IEC 61058-1:2018, *Switches for appliances — Part 1: General requirements (IEC 61058-1:2016)*

EN 175301-803:2006, *Detail Specification: Rectangular connectors — Flat contacts, 0,8 mm thickness, locking screw not detachable*

[2] As impacted by EN 60730-1:2016/A1:2019 and EN 60730-1:2016/A2:2022.