



SLOVENSKI STANDARD
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**Varnostne in nadzorne naprave za plinske gorilnike in plinske aparate -
Večnamenske naprave za nadzor plinskih aparatov**

Safety and control devices for burners and appliances burning gaseous fuels -
Multifunctional controls for gas burning appliances

Sicherheits- und Regeleinrichtungen für Brenner und Brennstoffgeräte für gasförmige
Brennstoffe - Mehrfachstellgeräte für Gasgeräte

Équipements auxiliaires pour brûleurs et appareils utilisant des combustibles gazeux -
Équipements multifonctionnels pour les appareils à gaz

Ta slovenski standard je istoveten z: prEN 126

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ICS:

23.060.99	Drugi ventili	Other valves
27.060.20	Plinski gorilniki	Gas fuel burners

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Safety and control devices for burners and appliances burning gaseous fuels - Multifunctional controls for gas burning appliances

Équipements auxiliaires pour brûleurs et appareils
utilisant des combustibles gazeux - Équipements
multifonctionnels pour les appareils à gaz

Sicherheits- und Regeleinrichtungen für Brenner und
Brennstoffgeräte für gasförmige Brennstoffe -
Mehrfachstellgeräte für Gasgeräte

This draft European Standard is submitted to CEN members for enquiry. 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.

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

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prEN 126:2024 (E)**European foreword**

This document (prEN 126:2024) 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 CEN Enquiry.

This document will supersede EN 126:2012.

The main changes compared with EN 126:2012 are as follows:

- a) alignment with EN 13611:2019;
- b) referencing the control standards as shown in Figure 1 in total, instead of referencing these standards clause by clause;
- c) combinations of electronic controls only are excluded.

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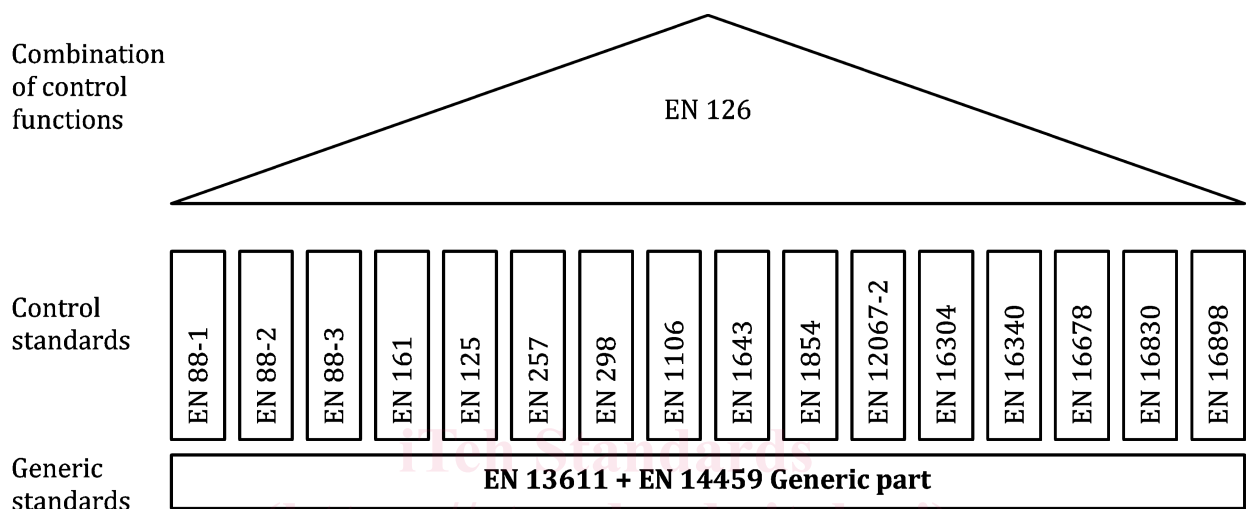
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Introduction

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. This document (see Figure 1) specifies multifunctional controls combining two or more control functions, one of which is a mechanical control function. The requirements for controls are given in the specific control standard.



NOTE This document specifies 'automatic water operated gas valves' in Annex AA.

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. EN 88-1:2022+A1:2023, EN 88-2:2022, EN 88-3:2022, EN 125:2022, prEN 126:2024, EN 161:2022, EN 257:2022+A1:2023, EN 298:2022, EN 1106:2022+A1:2023, EN 1643:2022, EN 1854:2022+A1:2023, EN 12067-2:2022, EN 16304:2022, EN 16340:2014, EN 16678:2022, EN 16830:2022 and EN 16898:2022+A1:2023), 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.

In addition, this standard covers requirements for the safety related interactions between the different devices.

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.

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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 “MFC”.

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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 multifunctional controls for burners and appliances burning one or more gaseous fuels, hereafter referred to as 'MFC'. This document is applicable to MFCs with declared maximum inlet pressures up to and including 50 kPa and nominal connection sizes up to and including DN 150.

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

Addition:

This document is applicable to MFCs consisting of two or more functions, at least one of which is a mechanical control, as specified in the relevant control standard (see Figure 1).

This document is not applicable to MFCs consisting only of electronics (an example is a combination of functions according to EN 298:2022 and EN 1643:2022).

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 26:2023, *Gas-fired instantaneous water heaters for the production of domestic hot water*

EN 88-1:2022+A1:2023, *Safety and control devices for gas burners and gas burning appliances — Part 1: Pressure regulators for inlet pressures up to and including 50 kPa*

EN 88-3:2022, *Safety and control devices for gas burners and gas burning appliances — Part 3: Pressure and/or flow rate regulators for inlet pressures up to and including 500 kPa, electronic types*

EN 125:2022, *Flame supervision devices for gas burning appliances — Thermoelectric flame supervision devices*

EN 161:2022, *Automatic shut-off valves for gas burners and gas appliances*

EN 257:2022+A1:2023, *Mechanical thermostats for gas-burning appliances*

EN 298:2022, *Automatic burner control systems for burners and appliances burning gaseous or liquid fuels*

EN 1106:2022+A1:2023, *Manually operated taps for gas burning appliances*

EN 1643:2022, *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — Valve proving systems for automatic shut-off valves*

EN 1854:2022+A1:2023, *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — Pressure sensing devices for gas burners and gas burning appliances*

EN 12067-2:2022, *Safety and control devices for burners and appliances burning gaseous or liquid fuels — Control functions in electronic systems — Part 2: Fuel/air ratio control/supervision of the electronic type*

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

EN 14459:2021, *Safety and control devices for burners and appliances burning gaseous or liquid fuels — Control functions in electronic systems — Methods for classification and assessment*

EN 16304:2022, *Automatic vent valves for gas burners and gas burning appliances*

EN 16340:2014, *Safety and control devices for burners and appliances burning gaseous or liquid fuels — Combustion product sensing devices*

EN 16830:2022, *Safety and control devices for burners and appliances burning gaseous or liquid fuels — Control functions in electronic systems — Temperature control function*

EN 16898:2022+A1:2023, *Safety and control devices for gas burners and gas burning appliances — Gas filters having a maximum working pressure up to and including 600 kPa*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13611:2019 and the following 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/>

3.101**control**

device which provides functionality as described in the specific control standard

[SOURCE: EN 13611:2019, 3.1]

3.102**multifunctional control****MFC**

combination of two or more controls whereby the functional parts cannot operate if separated

3.105**automatic shut-off valve**

valve which opens when energized and closes automatically when de-energized

[SOURCE: EN 161:2022, 3.101]

3.106**automatic water operated gas valve**

device that uses flow of water to control the flow of gas

3.107**closing mechanism**

part of the actuating mechanism that operates the closure member to the closed position guaranteeing the valve shut-off function with the required tightness

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

4 Classification

4.1 Classes of control

Shall be according to EN 13611:2019, 4.1 with the following addition:

The MFC is classified according to the classification of the standards as listed in 6.2.1.

4.2 Groups of control

Shall be according to EN 13611:2019, 4.2.

4.3 Classes of control functions

Shall be according to EN 13611:2019, 4.3 with the following addition:

The MFC is classified according to the classification of the standards as listed in 6.2.1.

4.4 Types of DC supplied controls

Shall be according to EN 13611:2019, 4.4.

5 Test conditions and uncertainty of measurements

Shall be according to EN 13611:2019, Clause 5.

6 Design and construction

EN 13611:2019, Clause 6 is replaced by the following:

6.1 General

The MFC consists of a combination of controls according to 6.2.1.

The construction of the controls incorporated in the MFC shall meet the requirements in the relevant control standards listed in 6.2.1. Where no control standard is available, the requirements of EN 13611:2019 and EN 14459:2021 apply.

In addition, 6.2.2 covers requirements for the safety related interactions between the different functions of the MFC.

Where there are no requirements for these interactions between two or more controls, a risk assessment shall be performed as given in 6.2.2.2 to identify additional requirements.

MFCs shall be designed such that access to internal parts requires the use of tools.

Blockage of auxiliary canals and orifices shall not lead to an unsafe situation otherwise they shall be protected against blockage by suitable means.

6.2 MFC based on combination of controls

6.2.1 General

The MFC is based on a combination of the functionality provided by the controls as given by the following list:

- pressure regulators according to EN 88-1:2022+A1:2023 and EN 88-3:2022;
- thermoelectric flame supervision devices according to EN 125:2022;
- automatic shut-off valves according to EN 161:2022;