



**SLOVENSKI STANDARD**  
**SIST EN 126:2012/oprA1:2015**

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**Večnamenske naprave za nadzor plinskih aparatov**

Multifunctional controls for gas burning appliances

Mehrfachstellgeräte für Gasgeräte

Equipments multifonctionnels pour les appareils à gaz

**Ta slovenski standard je istoveten z: EN 126:2012/prA1**

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23.060.99	Drugi ventili	Other valves
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## Multifunctional controls for gas burning appliances

Equipements multifonctionnels pour les appareils à gaz

Mehrfachstellgeräte für Gasgeräte

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 58.

This draft amendment A1, if approved, will modify the European Standard EN 126:2012. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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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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## Foreword

This document (EN 126:2012/prA1:2014) 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 Amendment (see Annex BB) is supposed to replace EN 14459:2007, Annex L "Gas shut-off function". In addition to that EN 126:2012, Clause 3 and Clause 6 are modified accordingly.

**EN 126:2012/prA1:2014 (E)**

*Introduce the following three modifications to EN 126:2012:*

- 1) *Add the following after 3.106:*

**3.107****stored closing energy****SCE**

energy available (even after interruption of the power supply) to move the closure member into the closed position and keep it closed

**3.108****shut-off valve**

valve that opens and closes the gas flow other than automatic shut-off valves

- 2) *Replace the text under 6.103.2 by the following:*

Shall be according to Annex BB.

- 3) *Introduction of the following normative Annex BB “Gas shut-off function” and the informative Annex CC “Examples of new solutions” after the last Annex AA.*

## Annex BB (normative)

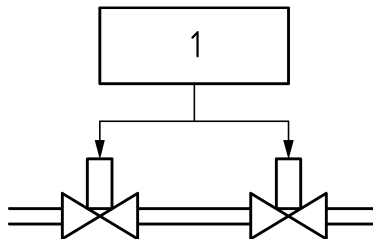
### Gas shut-off function

#### BB.1 Introduction

This Annex defines a method for assessing solutions for the gas shut-off function as well as requirements for solutions other than those described in this document for use in gas appliances. In this document, the term safety class A, class B and class C is **not** related to the sealing force classes. The sealing force shall be indicated in the backpressure value as defined in EN 161 and as required in the relevant gas appliance standard. Those requirements shall not be superseded by this annex.

Protection against fire and explosion in a gas appliance, as a result of uncontrolled gas flow, requires a safety class C system for the gas shut-off function. This is based on a comparison, made between an automatic burner controller and gas shut-off function, the safety class of each considered equal.

Today's solutions (see Figure BB.1) according to this document, using two automatic shut-off valves, fulfil the safety class C requirement even though they are not based on a fault assessment approach as specified in EN 14459:2007, 6.6. This assumption is based on specific mechanical solutions originating from practice over many years and as a principle relying on redundancy of two automatic shut-off valves, fulfilling the construction and performance requirements of this document.



#### Key

1 burner control (BC)

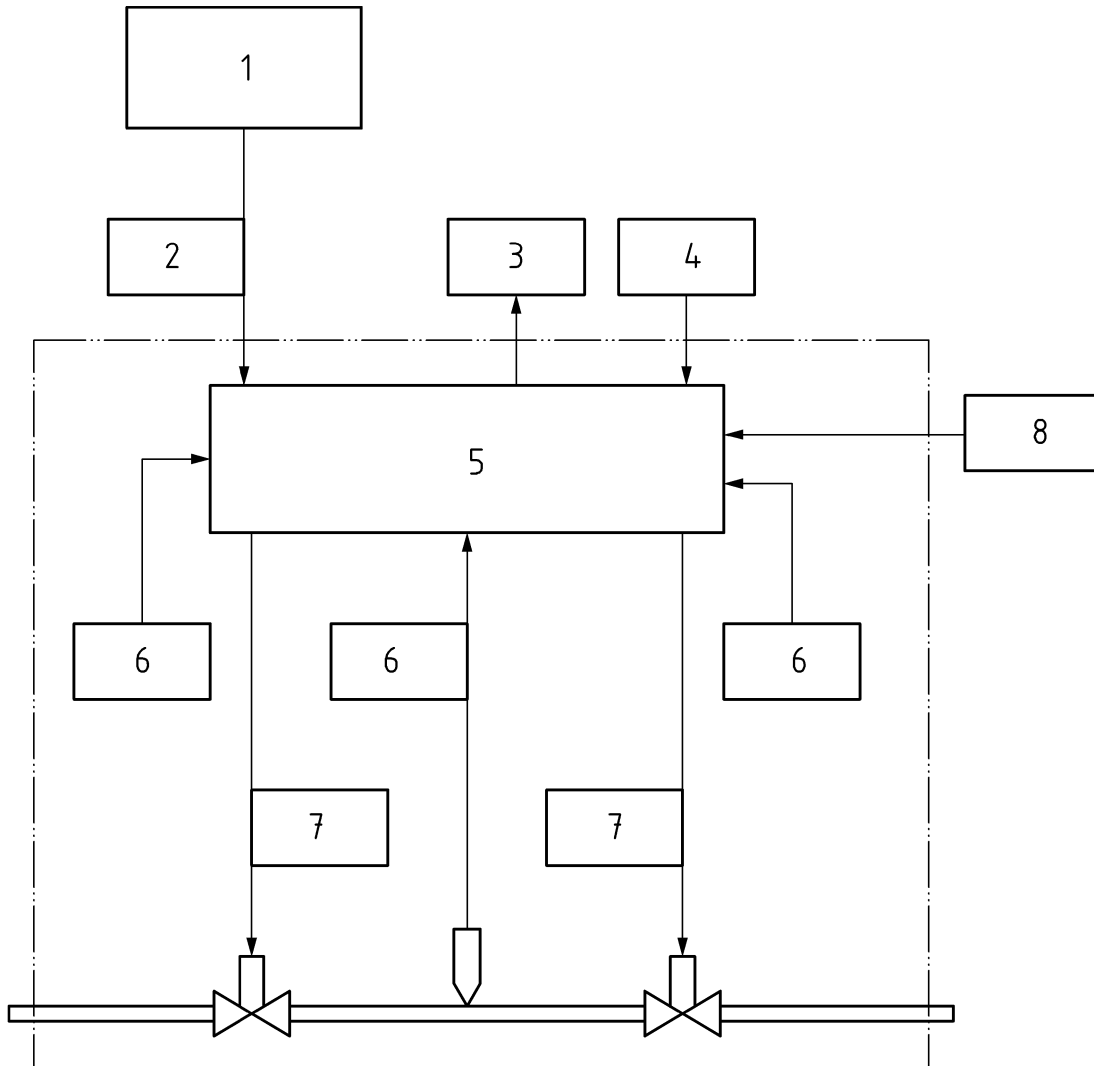
**Figure BB.1 — Standard solution with two valves**

The approach of the above mentioned classifications can be used as a reference for assessing new solutions.

A safety class C shut-off function with only one shut-off valve is not acceptable.

New solutions of the gas shut-off function may consist of a combination of shut-off valves, electronic controller, sensing elements, actuators, lock-out and reset as shown in Figure BB.2.

EN 126:2012/prA1:2014 (E)

**Key**

1	automatic burner control (BC)	5	electronic controller for gas shut-off function
2	on/off	6	sensor
3	lockout	7	actuator
4	reset	8	mains supply

**Figure BB.2 — Example of components in a new solution****BB.2 Classification**

The gas shut-off function shall be safety class C.

**BB.3 Construction requirements****BB.3.1 General**

The constructional requirements are given in EN 14459:2007, Clause 6.

The sealing force and the closing time of the shut off valves shall be according to EN 161. The manufacturer shall declare the type of Stored Energy (SCE), the sealing force and the closing time and shall give information to prove that the sealing force will be maintained.

For a system with one of the shut-off valves being without Stored Closing Energy (SCE), when interfacing to the burner control unit, a safety shut-down followed by lock-out signal of the burner control shall not lead to de-energized terminals before the valve has closed. The manufacturer shall declare the interaction.



### **BB.3.2 Valve combinations**

The safety class C gas shut-off function requires two shut-off valves, to ensure gas flow shut-off, with the remaining valve, shall the other fail to close.

To fulfil the requirements of safety class C, and considering the method of assessment given in BB.6, additional requirements shall be applied to those combinations of shut-off valves listed below using different types of SCE. Informative examples are given in Annex CC.

#### **BB.3.3 Two automatic shut-off valves**

Both valves are automatic shut-off valves, no additional measures are required.

#### **BB.3.4 One automatic shut-off and one shut-off valve with SCE**

One automatic shut-off valve and one shut-off valve with SCE based on electronic components (EC) (e.g. capacitor, battery) to close the valve after power interruption, this circuit has to be included in the fault assessment according to BB.6.

#### **BB.3.5 One automatic shut-off and one shut-off valve without SCE**

One automatic shut-off valve and one shut-off valve with no SCE to close the valve after power interruption (e.g. motorized actuator), additional measures are required according to BB.3.2. This combination can only be used for non-permanent operations.

#### **BB.3.6 Two shut-off valves with SCE**

Two shut-off valves with SCE based on electronic components (EC) (e.g. capacitor, battery) to close the valve after power interruption, additional measures are required according to BB.3.2 and fault assessment according to BB.6.

#### **BB.3.7 One shut-off with SCE and one shut-off valve without SCE**

One shut-off valve with SCE based on electronic components (EC) (e.g. capacitor, battery) and one shut-off valve with no SCE to close the valve after power interruption (e.g. motorized actuator), additional measures are required according to BB.3.2 and fault assessment according to BB.6. This combination shall only be used for applications complying, at every start up, with EN 13611:2007+A2:2011, 6.6 in combination with a maximum operating time of 24 h between each start up.

#### **BB.3.8 Two shut-off valves without SCE**

The combination of two shut-off valves with no SCE to close the valve after power interruption (e.g. driven by a motor) is not acceptable.

### **BB.4 Additional safety measures**

#### **BB.4.1 General**

For valves that have no SCE and/or electrical SCE, the following additional requirements apply.

#### **BB.4.2 Functional check (internal leakage, for systems with no SCE only)**

For shut-off valves with no SCE, a leakage test shall be made at every burner cycle on the valve with SCE. This increases the availability of the valve with SCE in case of power interruption during heat demand, to shut off the gas flow.

A maximum leakage rate of 1 l/h is accepted. If the maximum leakage rate is exceeded, the system shall continue with a safety-shut-down followed by a non-volatile lock-out.