

RÕHUREGULAATORID JA NENDEGA SEOTUD
OHUTUSSEADMED GAASISEADMETELE. OSA 1:
RÕHUREGULAATORID SISENDRÕHULE KUNI 500 MBAR

Pressure regulators and associated safety devices for
gas appliances - Part 1: Pressure regulators for inlet
pressures up to and including 50 kPa

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 88-1:2011+A1:2016 sisaldab Euroopa standardi EN 88-1:2011+A1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 88-1:2011+A1:2016 consists of the English text of the European standard EN 88-1:2011+A1:2016.
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English Version

**Pressure regulators and associated safety devices for gas
appliances - Part 1: Pressure regulators for inlet pressures
up to and including 50 kPa**

Régulateurs de pression et dispositifs de sécurité
associés pour appareils à gaz - Partie 1: Régulateurs de
pression pour pression amont inférieure ou égale à 50
kPa

Druckregler und zugehörige Sicherheitseinrichtungen
für Gasgeräte - Teil 1: Druckregler für Eingangsdrücke
bis einschließlich 50 kPa

This European Standard was approved by CEN on 26 February 2011 and includes Amendment 1 approved by CEN on 1 December 2015.

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European foreword

This document (EN 88-1:2011+A1:2016) 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of an identical text or by endorsement, at the latest by August 2016, and conflicting national standards shall be withdrawn at the latest by August 2016.

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

This document includes Amendment 1 approved by CEN on 2015-12-01.

This document supersedes A1 EN 88-1:2011. A1

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

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 EU Directive(s).

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

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 European Standard. It should be noted that these clauses and sub-clauses are not indicated as an addition. Sub-clauses or annexes which are additional to those in EN 13611:2007 are numbered starting from 101 or are designated as Annex AA, BB, CC etc.

A1 *deleted text* A1

EN 88 *Pressure regulators and associated safety devices for gas appliances* consists of the following parts:

- EN 88-1, *Pressure regulators and associated safety devices for gas appliances — Part 1: Pressure regulators for inlet pressures up to and including 50 kPa*;
- EN 88-2, *Pressure regulators and associated safety devices for gas appliances — Part 2: Pressure regulators for inlet pressures above 500 mbar up to and including 5 bar*.

Performance Level (PL) or Safety Integrity Level (SIL) classifications according to EN ISO 13849-1 or EN 61508-1 cannot automatically be claimed based upon compliance with this European Standard. Pressure regulators with PL or SIL classification do not automatically meet the requirements of this European Standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia,

France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1 Scope

This European Standard specifies the safety, construction and performance requirements for pressure regulators and pneumatic gas/air ratio pressure regulators (zero pressure regulators are included as a special type of pneumatic gas/air ratio pressure regulator), intended for use with gas burners, gas appliances and similar use, hereafter referred to as 'pressure regulators'.

This European Standard is applicable to

- pressure regulators with declared maximum inlet pressures up to and including 50 kPa (500 mbar) of nominal connection sizes up to and including DN 250 for use with one or more fuel gases in accordance with EN 437,
- pressure regulators which use auxiliary energy,
- pneumatic gas/air ratio pressure regulators, which function by controlling a gas outlet pressure in response to an air signal pressure, air signal differential pressure, and/or to a furnace pressure signal (zero pressure regulators are included as a special type of pneumatic gas/air ratio pressure regulator),
- gas/air ratio pressure regulators which change an air outlet pressure in response to a gas signal pressure or a gas signal differential pressure.

This European Standard does not cover

- pressure regulators connected directly to gas distribution network or to a container that maintains a standard distribution pressure,
- pressure regulators intended for gas appliances to be installed in the open air and exposed to the environment,
- mechanically linked gas/air ratio controls,
- electronic gas/air ratio controls (EN 12067-2).

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 161:2011¹, *Automatic shut-off valves for gas burners and gas appliances*

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

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)*

¹ To be published.

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

pressure regulator

device which maintains the outlet pressure constant independent of the variations in inlet pressure and/or flow rate within defined limits

3.102

direct regulator

pressure regulator where the spring or pressure signal acts directly on the working diaphragm

3.103

indirect regulator

pressure regulator where the spring or pressure signal acts directly on a regulator diaphragm that controls the working diaphragm or the control member with pneumatic, hydraulic or electric means

3.104

adjustable pressure regulator

pressure regulator provided with means for changing the outlet pressure setting

3.105

pneumatic gas/air ratio pressure regulator

pressure regulator, which supplies gas at specified pressure at it's outlet in response to control pressure

3.106

zero pressure regulator

pressure regulator, which maintains the outlet pressure constant at atmospheric pressure

3.107

control member

movable part of the pressure regulator which varies flow rate and/or outlet pressure directly

3.108

inlet pressure range

difference between the minimum and maximum values of the inlet pressure

3.109

maximum outlet pressure

p_{2max}

upper limit of the outlet pressure, as stated in the installation and operating instructions

3.110

minimum outlet pressure

p_{2min}

lower limit of the outlet pressure, as stated in the installation and operating instructions