SLOVENSKI STANDARD
SIST EN 15417:2006

01-september-2006

Plinski kotli za centralno gretje – Posebne zahteve za kondenzacijske kotle z imensko močjo nad 70 kW do vključno 1000 kW

Gas-fired central heating boilers - Specific requirements for condensing boilers with a nominal heat input greater than 70 kW but not exceeding 1000 kW

Heizkessel für gasförmige Brennstoffe - Spezielle Anforderungen an Brennwert-Heizkessel mit einer Nennwärmebelastung größer als 70 kW aber gleich oder kleiner als 1000 kW

Chaudieres de chauffage central utilisant les combustibles gazeux - Exigences spécifiques aux chaudieres a condensation dont le débit calorifique nominal est supérieur a 70 kW mais inférieur ou égal a 1000 kW

Ta slovenski standard je istoveten z: EN 15417:2006

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91.140.10	Sistemi centralnega ogrevanja	Central heating systems
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EUROPEAN STANDARD

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English Version

Gas-fired central heating boilers - Specific requirements for condensing boilers with a nominal heat input greater than 70 kW but not exceeding 1000 kW

Chaudières de chauffage central utilisant les combustibles gazeux - Exigences spécifiques aux chaudières à condensation dont le débit calorifique nominal est supérieur à 70 kW mais inférieur ou égal à 1000 kW

Heizkessel für gasförmige Brennstoffe - Spezielle Anforderungen an Brennwert-Heizkessel mit einer Nennwärmebelastung größer als 70 kW aber gleich oder kleiner als 1000 kW

This European Standard was approved by CEN on 18 May 2006.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists 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 Central Secretariat has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 15417:2006) has been prepared by Technical Committee CEN/TC 109 "Central heating boilers using gaseous fuels", the Secretariat of which is held by NEN.

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 January 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This document applies to gas-fired central heating boilers, which are declared by the manufacturer to be "condensing boilers":

— of types C (excluding appliances without a fan) and B,

— using one or more gases corresponding to the three gas families, and

— for which the nominal heat input is greater than 70 kW but not exceeding 1 000 kW. This document only covers type testing.

This document completes or modifies the standards EN 656, EN 13836, and prEN 15420 hereafter called "boiler standards". It specifies supplementary requirements for condensing boilers.

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 656:1999, *Gas-fired central heating boilers — Type B boilers of nominal heat input exceeding 70 kW, but not exceeding 300 kW*

EN 13836:2006, *Gas-fired central heating boilers — Type B boilers of nominal heat input exceeding 300 kW, but not exceeding 1 000 kW*

prEN 15420:2006, *Gas-fired central heating boilers — Type C boilers of nominal heat input exceeding 70 kW, but not exceeding 1 000 kW*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 656:1999, EN 13836:2006 and the following apply.

3.1
condensate
liquid formed from the combustion products during the condensation process

4 Classification of boilers

4.1 Gases and categories

Gases and categories are in accordance with those given in the "boiler standards"

4.2 Classification according to the mode of evacuation of the combustion products

The classifications according to the mode of evacuation of combustion products are in accordance with those given in the "boiler standards".

4.3 Classification according to operating conditions[1]

4.3.1 Gas condensing boiler

A type of boiler designed to condense permanently a large part of the water vapour contained in the combustion gases

4.3.2 Standard boiler

A type of boiler for which the average water temperature can be restricted by design

5 Constructional requirements

5.1 Materials in contact with condensate

All parts of the heat exchanger(s) and other parts of the boiler likely to come into contact with condensate shall be constructed of sufficiently corrosion resistant materials or materials protected by a suitable coating in order to ensure a reasonable life for a boiler that is installed, used and maintained in accordance with the manufacturer's instructions.

5.2 Removal of condensate

Condensate produced during operation of the boiler, including condensate formed in the flue and its connecting pipes, shall be removed by means of a discharge pipe (or pipes).

The internal diameter of the outside connection of the condensate discharge system shall be at least 13 mm.

The disposal system, forming part of the boiler or supplied with the boiler, shall be such that:

— it can be easily inspected and cleaned in accordance with the manufacturer's instructions;

— it cannot transmit combustion products into the room where the boiler is installed; this requirement is satisfied if the disposal system incorporates a water trap;

— a water trap has a seal of at least 25 mm at the maximum pressure in the combustion chamber at the maximum flue length specified by the manufacturer.

Surfaces in contact with condensate (except purpose provided drains, water traps and siphons) shall be designed to prevent condensate retention.

5.3 Chemical composition of the condensate

The manufacturer shall communicate the probable chemical composition of the condensate (pH, heavy metals, etc.) if the composition is required by national regulations.

5.4 Control of the combustion products temperature

If the combustion products circuit contains materials that are likely to be affected by heat or is intended to be connected to a flue (including seals) that is likely to be affected by heat from the combustion products, the boiler shall incorporate a device to prevent the combustion products temperature exceeding the maximum allowable working temperature for the material as declared by the manufacturer.

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[1] These definitions are in accordance with 92/42/EEC, however in this document, definition 4.3.2 is limited to gas boilers.

The device for limiting the combustion products temperature shall be non-adjustable and shall not be accessible without tools.

If the flue gas system is not supplied with the boiler, the device for limiting the combustion products temperature may be supplied as an option to be fitted by the installer. Instructions for mounting of the device shall be well-defined.

6 Operational requirements

6.1 General

In addition to the requirements of the "boilers standards" the following shall apply as appropriate.

6.2 Verification of the nominal condensing output

If the manufacturer states the nominal condensing output it is verified under the test conditions of 7.2.

6.3 Formation of condensate

When the boiler is installed in accordance with the test conditions for efficiency measurement given in 7.2, and tested in accordance with 7.3, condensate shall only form at the points intended for this purpose and shall be readily drained.

The formation of condensate shall not impair the correct operation of the boiler.

Condensate shall not find its way to parts of the boiler which are not intended for formation, collection and discharge of condensate, nor may the condensate cause any nuisance to the operation, the boiler and the surroundings.