SLOVENSKI STANDARD
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Plinski kotli za gretje - 1. del: Splošne zahteve in preskusi

Gas-fired heating boilers - Part 1: General requirements and tests

Heizkessel fur gasförmige Brennstoffe - Teil 1: Allgemeine Anforderungen und Prüfungen

Chaudières de chauffage central utilisant les combustibles gazeux - Partie 1: Exigences générales et essais

Ta slovenski standard je istoveten z: **prEN 15502-1**

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English Version

Gas-fired heating boilers - Part 1: General requirements and tests

Chaudières de chauffage central utilisant les combustibles gazeux - Partie 1: Exigences générales et essais

Heizkessel fur gasfÃ¶rmige Brennstoffe - Teil 1: Allgemeine Anforderungen und PrÃ1/4fungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 109.

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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European foreword

This document (prEN 15502-1:2019) has been prepared by Technical Committee CEN/TC 109 “Central heating boilers using gaseous fuels”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document supersedes EN 15502-1:2012+A1:2015.

The main technical changes compared to EN 15502-1:2012+A1:2015 are the following:

a) Technical changes related to ecodesign and energy labelling for appliances <= 400 kW:

   1) Deletion of the requirements that can be found in the legislation itself.

   2) Modification of the Annexes ZC and ZD

b) New or generally reworded requirements:

   1) Separation between requirements and test methods in to different clauses;

   2) Moving additional common parts from EN 15502-2-1:2012+A1:2016 and/or EN 15502-2-2:2014 to this standard (for example all definitions used in the parts 2 are moved to part 1);

   3) Definitions added for Instructions for installation, Instructions for use and Technical documentation and consequently applied thoughout the document;

   4) Improved wording of definitions related to the air supply and combustion products circuit;

   5) Improved the references of the annexes Z. The annex Z referring to the GAD has been removed and an annex Z referring to the GAR has been inserted;

   6) Only "technical instructions" and "users instructions" are defined.

Therefore these are the only instructions to be used in this standard;

   7) Improved definitions 'ducts / circuits';

   8) Definition weighted value of the NOx concentration added. With regard to Ecodesign, it is clarified that the emissions declared are the emissions when using the references gases.

c) Limitation of the scope compared to the standards superseded by the EN 15502 series (that were cited in the OJEU under the GAD):

   1) Types B_{14} and B_4 appliances, as covered in EN 297:1994 /A4:2004 are not covered by this standard as there seems to be a limited market for these appliances due to the introduction of the Ecodesign Directive that only has an exemption for B_{11} appliances.

   NOTE B_{14} and B_4 are non condensing appliances;

   2) This document does not cover all the requirements for appliances designed and constructed to burn gas containing toxic components. In the past it was always considered that the gases were not toxic, however this was never clearly indicated in the scope. In effect this is not a change of scope, but a clarification of the scope;

3) This document is not intended to cover appliances intended for connection to gas grids where the quality of the distributed gas is likely to vary to a large extent over the lifetime of the appliance (see Annex EE). In the past no big variation in gas quality occurred. Due to the EASEE-gas CBP wide variations of gas quality are considered. As these were never covered the scope now makes clear hat these variations are not covered. In effect this is not a change of scope, but a clarification of the scope.

4) This document does not cover all the requirements for appliances above 1000 kW. In effect this is not a change of scope, but a clarification of the scope;

EN 15502 consists of the following parts under the general title “Gas-fired heating boilers":

— *Part 1: General requirements and tests (this standard);*

— *Part 2-1: Specific standard for type C appliances and type B2, B3 and B5 appliances of a nominal heat input not exceeding 1 000 kW;*

— *Part 2-2: Specific standard for type B1 appliances.*

This document is to be used in conjunction with the specific Part 2.

This document has been prepared under mandates M89/6 and M066, given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements as meant in article 3 of EU Directive 2009/142/EC, relating to appliances burning gaseous fuels and the verification methods valid for production and measurements, as meant in article 5.2 of EU Directive 92/42/EEC, relating to the efficiency requirements for new hot water boilers fired with liquid or gaseous fuels, with an output of 4 – 400 kW.

This document has been prepared under the mandates M/534 and M/535, given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to:

— requirements of Commission Regulation (EC) No 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters;

— requirements of Commission Delegated Regulation (EC) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EC of the European Parliament and of the Council with regard to energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device.

For relationship with EU Directive(s) and Commission Regulations, see informative Annexes ZB, ZC and ZD, ZE which are integral parts of this document.

Introduction

The basic function of gas-fired heating boiler is to generate heat by direct heat transfer in a heat exchanger, from the combustion gasses to the water.

The boiler can include in one design more than one function. It can include for example:

— a sanitary hot water function;

— a function to supply the combustion air from the outside/open air;

— a function to dispose the combustion products to the outside/open air.

The boiler design can be supplied to the market in more than one part. If the boiler is supplied to the market in multiple parts, the boiler is the assembly of various parts according to the instructions for installation.

Boilers can be designed to be connected to specific parts of a building. Connection to a chimney and the means of combustion air supply is particularly relevant.

This European Standard is a first part of a series of standards that will describe the special requirements for specific boiler types. This European Standard contains the common requirements that are applicable for the majority of the specific boiler types.

Matters related to quality assurance systems, tests during production, and certificates of conformity of auxiliary devices are not dealt with in this series of European Standards.

1 Scope

This document specifies the common requirements and test methods, as well as the classification, marking and energy labelling of gas-fired central heating boilers that are fitted with atmospheric burners, fan assisted atmospheric burners or fully premixed burners, and are hereafter referred to as “boilers”.

This document is to be used in conjunction with the specific Parts 2 (Part 2-1 and following ones).

Thisdocument applies to boilers of types B and C:

NOTE For further background information on appliance types see CEN/TR 1749:2014 [1].

a) that use one or more combustible gases of the three gas families at the pressures stated in EN 437;

b) where the temperature of the water does not exceed 105 °C during normal operation;

c) where the maximum operating pressure in the water circuit does not exceed 6 bar;

d) which can give rise to condensation under certain circumstances;

e) which are declared in the instructions for installation to be either a "condensing" boiler or a "low temperature boiler" or a "standard boiler" or an "other boiler". If no declaration is given the boiler is to be considered both a "standard boiler" and an "other boiler";

NOTE The Ecodesign Directive defines "other boilers", "low temperature boilers" and "condensing boilers". The Boiler Efficiency Directive defines "standard boilers", "low temperature boilers" and "condensing boilers". Depending on the legislation applied, a boiler can be both "a standard boiler" and an "other boiler".

f) which are intended to be installed inside a building or in a partially protected place;

g) which are intended to produce also hot water either by the instantaneous or storage principle as a single unit.

This document applies to boilers designed for sealed water systems or for open water systems.

NOTE This general standard and the specific standards (see Part 2) provide requirements for boilers with known constructions. For boilers with any alternative constructions, which might not fully be covered by this standard or a specific standard, the risk associated with this alternative construction will need to be assessed.

An example of an assessment methodology, based upon risk assessment, is given in Clause 11.

This document is not intended to cover appliances intended for connection to gas grids where the quality of the distributed gas is likely to vary to a large extent over the lifetime of the appliance (see Annex EE).

This document does not cover all the requirements for :

a) appliances above 1000 kW;

b) appliances designed and constructed to burn gas containing carbon monoxide or other toxic components.

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 88-1:2011+A1:2016, *Pressure regulators and associated safety devices for gas appliances - Part 1: Pressure regulators for inlet pressures up to and including 50 kPa*

EN 125:2010+A1:2015, *Flame supervision devices for gas burning appliances - Thermoelectric flame supervision devices*

EN 126:2012, *Multifunctional controls for gas burning appliances*

EN 161:2011+A3:2013, *Automatic shut-off valves for gas burners and gas appliances*

EN 298:2012, *Automatic burner control systems for burners and appliances burning gaseous or liquid fuels*

EN 437:2018, *Test gases - Test pressures - Appliance categories*

EN 1057:2006+A1:2010, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 1092-1:2018, *Flanges and their joints —- Circular flanges for pipes, valves, fittings and accessories, PN designated – Part 1: Steel flanges*

EN 1092-2:1997, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 2: Cast iron flanges*

EN 1092-3:2003, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 3: Copper alloy flanges*

EN 1092-4:2002, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 4: Aluminium alloy flanges*