SLOVENSKI STANDARD
SIST EN 15502-1:2012/kFprA1:2015

01-januar-2015

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: **EN 15502-1:2012/FprA1**

ICS:

91.140.10	Sistemi centralnega ogrevanja	Central heating systems
97.100.20	Plinski grelniki	Gas heaters

SIST EN 15502-1:2012/kFprA1:2015 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

FINAL DRAFT
EN 15502-1:2012

FprA1

October 2014

ICS 27.060.30; 91.140.10

English Version

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

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

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 109.

This draft amendment A1, if approved, will modify the European Standard EN 15502-1:2012. 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.

This draft amendment 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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 15502-1:2012/FprA1:2014) 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 Unique Acceptance Procedure.

This document comprises technical changes to:

- Subclause 7.2, Requirements;

- Subclause 10.2, Minimum required marking of fittings.

0 Modifications to the Foreword

0.1 Addition after the 4th paragraph of the Foreword

After the paragraph ending on "with an output of 4 – 400 kW.", add the following:

"*This document has been prepared under mandate M/495, 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."

0.2 Modification to the 5th paragraph of the Foreword

Replace the existing text of this paragraph:

"For relationship with EU Directive(s), see informative Annex ZA and ZB, which are integral parts of this document."

with the following:

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

1 Modifications to Clause 1, Scope

1.1 Modification to the 1st paragraph of the Scope

After "marking" *add* "and energy labelling"

to read:

"This European Standard specifies the common requirements and test methods concerning, in particular the construction, safety, fitness for purpose, and rational use of energy, 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”."

1.2 Modification to the 3rd paragraph of the Scope

Replace "CEN/TR 1749:2009" *with* "CEN/TR 1749:2014".

1.3 Modification to indent e) under the Scope

Replace the existing text of the indent e) with the following:

"which are declared in the installation instructions to be either a “condensing” boiler or a "low temperature boiler" or a “standard boiler” or a "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"."

2 Modifications to Clause 2, Normative references

Delete the following reference and move it to the Bibliography:

"CR 1404:1994, *Determination of emissions from appliances burning gaseous fuels during type-testing*".

Replace "CEN/TR 1749:2009" *with* "CEN/TR 1749:2014".

Add the following references:

"FprEN 13203-2:2014, *Gas-fired domestic appliances producing hot water - Part 2: Assessment of energy* consumption"

"EN 15036-1:2006, *Heating boilers – Test regulations for airborne noise emissions from heat generators - Part 1: Airborne noise emissions from heat generators*"

3 Modifications to Clause 3, Terms, definitions and symbols

3.1 Modifications to 3.1.6 Outputs

Add the following term and definition:

"3.1.6.4
rated heat output
Prated
useful output stated by the manufacturer in kW, corresponding to the operation of the boiler in a nominal (80 °C/60 °C) water temperature regime"

3.2 Addition of a new subclause 3.1.13

Add the following new subclause 3.1.13 after the existing subclause 3.1.12:

"3.1.13 Relevant eco-design and labelling regulations terms

3.1.13.1
electric auxiliary energy for eco-design and labelling regulations
electric energy consumed by the system components such as fan, valves, heating elements required for the heat generator‘s designed operation, but no circulation pump

3.1.13.2
seasonal space heating energy efficiency
ratio between the space heating demand for a designated heating season, supplied by the boiler and the annual energy consumption based on GCV required to meet this demand

— Symbol η_s

— Unit percent (%)

3.1.13.3
water heating energy efficiency
ratio between the useful energy in drinking or sanitary water provided by a combination boiler and the energy required for its generation based on GCV

— Symbol η_{WH}

— Unit percent (%)

3.1.13.4
sound power level
A-weighted sound power level, indoors

— Symbol *LWA*

— Unit dB(A)

3.1.13.5
package
package of boilers or combination boilers, temperature control and solar devices means a package offered to the end-user containing one or more boilers or combination boilers combined with one or more temperature controls and/or one or more solar devices

Note 1 to entry: Definition based on Labelling Regulation 811/2013 Article 2 - (19) and (20).

3.1.13.6
maximum load profile
load profile for combination water boilers with the greatest reference energy that a combination boiler is able to provide while fulfilling the temperature and flow rate conditions of that load profile".

3.3 Modifications to 3.2, Symbols

In Table 1, after the symbol for Nominal heat input (Qn), add the following definition:

"

….	…
Heat input at the arithmetic mean	*Q*a
…	…

"

In Table 1, after the symbol for Nominal output (Pn), add the following definition:

"

….	…
Useful output at the arithmetic mean	*P*a
…	…

"

In Table 1, after the symbol for Useful efficiency (η_U), add the following definitions:

"

Seasonal space heating energy efficiency GCV	η_S
Water heating energy efficiency GCV	η_{WH}
Weighted value of the NOx concentration, in milligrams per kilowatt-hour (mg/kWh) GCV	$NO_{x,pond\ Hs}$
Weighted value of the NO_x concentration, in milligrams per kilowatt-hour (mg/kWh) NCV	$NO_{x,pond}$
The useful efficiency at 30 % of the nominal heat input GCV	η_1
The useful efficiency at nominal heat input GCV	η_4
The useful efficiency at 30 % of the nominal heat input NCV	η_{30}
The useful efficiency at nominal heat input NCV	η_{100}
Auxiliary electricity consumption at nominal heat input [kW]	el_{max}

Auxiliary electricity consumption at 30 % of the nominal heat input [kW]	el_{min}
Auxiliary electricity consumption at stand-by [kW]	P_{SB}

"

4 Modifications to Clause 4, Classification

4.1 Modification to 4.2, Mode of air supply and evacuation of the combustion products

Replace "CEN/TR 1749:2009" *with* "CEN/TR 1749:2014".

5 Construction *(existing – no change)*

6 Electrical safety *(existing – no change)*

7 Controls *(existing – no change)*

8 Modifications to Clause 8, Operational requirements

8.1 Modifications to 8.13, NOx

8.1.1 Modifications to 8.13.1, Requirement

Replace the existing text of this subclause with the following:

"The NO_x class of the boiler is to be stated in the technical instructions according to Table 4. The test and calculation conditions below shall be applied. The permissible NO_x concentration assigned to this class in the dry, air free products of combustion shall not be exceeded.

Table 4 – NO_x classes

NO_x-Classes	**Limit NO_x concentration mg/kWh based on NCV**	**Limit NO_x concentration mg/kWh based on GCV**
1	260	
2	200	
3	150	
4	100	
5	70	
6		56

"

8.1.2 Modifications to 8.13.2, Test methods

8.1.2.1 Modifications to 8.13.2.1, General

In the 4th paragraph before the end of the subclause,

After the definition of the symbols for the second formula in 8.13.2.1 add the following line (please note the indent):

"Annex J provides the factors to be used for correcting dry flue measurement values to mg/kWh".

8.1.2.2 Modification to 8.13.2.2,Weighting

In the tenth line of the existing text, add "on a NCV basis*" to read*:

"$NO_{x,pond}$ weighted value of the NO_x concentration, in milligrams per kilowatt-hour (mg/kWh) on a NCV basis"

8.1.3 Addition of a subclause 8.13.3

Add the following subclause after the existing subclause 8.13.2.6:

"8.13.3NO_x requirement for Eco-design regulation

Requirement: