SLOVENSKI STANDARD
SIST EN 15502-2-1:2013/oprA1:2014

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Plinski kotli za centralno gretje - 2-1. del: Poseben standard za tip kotlov C in tipe kotlov B2, B3 in B5 z imensko močjo do vključno 1000 kW - Dopolnilo A1

Gas-fired central heating boilers - 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

Heizkessel für gasförmige Brennstoffe - Teil 2-1: Heizkessel der Bauart C und Heizkessel der Bauarten B2,B3 und B5 mit einer Nennwärmebelastung nicht größer als 1 000 kW

Chaudières de chauffage utilisant les combustibles gazeux - Partie 2-1: Norme spécifique pour les appareils de type C et les appareils de types B2, B3 et B5 dont le débit calorifique nominal est inférieur ou égal à 1 000 kW

Ta slovenski standard je istoveten z: **EN 15502-2-1:2012/prA1**

ICS:

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97.100.20	Plinski grelniki	Gas heaters

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2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

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English Version

Gas-fired central heating boilers - 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

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

This draft amendment A1, if approved, will modify the European Standard EN 15502-2-1:2012. 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.

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Foreword

This document (EN 15502-2-1:2012/prA1:2014) 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 CEN Enquiry.

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.

1 Modifications to the Foreword

The flowing text is added in the foreword of EN 15502-2-1:2012 after the changes mentioned in EN 15502-2-1:

1)

The requirements for type $C_{(10)}$ and $C_{(11)}$ boilers are now added to this draft standard.

Explanatory Text:

Normally type C4 and type C8 boilers connected to common duct systems are functioning designed to function with natural draught in the common flue duct system. If a common duct system, is applied at positive pressure , new examination aspects are requested. For example: Boilers which are suitable for application in such a duct system shall contain devices (valves) which prevents back flow of the combustion products of the other boilers.

The boiler shall maintain its functionality and general safety level at positive and negative pressure.

If a system is a complete combined system including boilers, valves and the applied common duct system, this system is examined according to the Gas Appliance Directive.

In the case $C_{(10)}$ the appliances are evaluated on its own. The applied common duct system is designed by another party, for example an installer, who takes the responsibility of the functioning of the complete system.

Starting points during the development of these requirements are:

— The approved technical content of the AHG-CO was drafted in a version of prEN 155502-2-1 dating from October 2009. In this draft this technical content is added in the publication of EN 15502-2-1:2012.

— The definitions used for, $C_{(10)}$ and type $C_{(11)}$ boilers are the definition as drawn up by SFG-U/WG 1 for the use in the next version of CEN/TR 1749 (part of the these definitions are still draft definitions).

— A non-return valve must prevent the back flow of combustion gas through boilers which are not running. The non-return valve must be tested (Clause 5.102 and 8.104).

— When a tested open/close valve is used the boiler must be tested for resistance to condensate (safe operation on short and long term). (Clause 8.104).

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— One of the most critical situations is the influence of the positive pressure on the good working of the gas-air-ratio control/gasvalve at minimum heat input. In this case the gas-air-ratio control/gasvalve can be out of its working range. As a result of this a significant amount of CO can be produced. This item is dealt with in Clause 8.12.2.102 and 8.12.3.101.8 and 8.12.101.9."

2 Modifications to the Introduction

The last 2 paragraphs of the introduction of EN 15502-2-1:2012:

"After the DOW (3 years after publication of both EN 15502-1 and EN 15502-2-1 in the OJEU) the standards specified in Annex AA, for the appliance types covered in EN 15502-2-1, are withdrawn.

Annex AA lists those existing appliance types for which CEN/TC109 standards are intended to be replaced by EN 15502-2-2. The standards listed in Annex AA are to be used until EN 15502-2-2 specifies that the standards are withdrawn for the appliance types indicated. "

Are replaced by the following text:

After the DOW (3 years after the DAV of both EN 15502-1 and EN 15502-2-1) the standards specified in Annex AA, for the appliance types covered in EN 15502-2-1, are withdrawn.

Annex AA also lists those existing appliance types for which CEN/TC109 standards are intended to be replaced by EN 15502-2-2. The standards (that are intended to be replaced by EN 15502-2-2) listed in Annex AA are to be used until EN 15502-2-2 specifies that the standards are withdrawn for the appliance types indicated.

3 Modifications to '1 Scope'

The following text is added after the 3rd paragraph of the scope of EN 15502-2-1:2012:

"In this draft new text is added for the new types $C_{(10)}$ and $C_{(11)}$, is included. In all 2 cases the definitions for these types are still draft definitions in the draft TR 1749 (date: Feburary 2013)."

The text under p) of the scope of EN 15502-2-1:2012:

"p) Appliances designed to become connected to a combined flue duct system that is designed to operate under overpressure (for example Ca));"

Is replaced by the following text:

"p) Appliances designed to become connected to or incorporating to a combined flue duct system that is designed to operate under overpressure (for example Ca));

- without a gas-air ratio control

- which are non-condensing appliances

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- which are C(12) or C(13) appliances"

The item q) of the scope of EN 15502-2-1:2012 is deleted

"q) Appliances incorporating a combined combustion products circuit that is designed to operate under overpressure (for example Cb));"

4 Modifications to '3 Terms, definitions and symbols'

Under clause 3.1.3.106 of EN 15502-2-1:2012,

the items a) and b)

"

a) the air supply and combustion products evacuation ducts to a single shared duct for type C_2 boilers;

b) the air supply and combustion products evacuation ducts to two ducts of a shared duct system for type C_4 boilers;"

are replaced by the following text:

"

a) the air supply and combustion products evacuation ducts to a single common duct for type C_2 boilers;

b) the air supply and combustion products evacuation ducts to two ducts of a common duct system for type C4, C10 and C11 boilers;"

After the last clause 3.1.3.116 of EN 15502-2-1:2012,

The following text is added:

***"*3.1.10.102**

A.1 Type $C_{(10)}$ boiler
A type C appliance connected via its two ducts to a common duct system designed for more than one appliance. This common duct system consists of two ducts connected to a terminal, which at the same time admits fresh air to the burner and discharges the products of combustion to the outside through orifices that are either concentric or close enough to come under similar wind conditions.
The $C_{(10)}$ appliance is designed to become connected to a common duct system that is designed to operate under the conditions where the static pressure in the common flue duct might exceed the static pressure in the common air duct."

Add the traditional footnote (becomes n.9) "This common duct system is part of the building and not a part of the appliance" (take this note for all related definitions – C4, C8…)

3.1.10.103
Type $C_{(11)}$ boiler (temporary definition – to be removed at publication – then in TR 1749(2013?)
A type C appliance connected via its two ducts to its common ducts which are designed for more than one appliance. These common ducts consist of two ducts connected to their terminals, which at the same time admit fresh air to the burner and discharge the products of combustion to the outside through orifices that are either concentric or close enough to come under similar wind conditions.
The $C_{(11)}$ appliance is designed to become connected to its common ducts where the static pressure in the common flue duct might exceed the static pressure in the common air duct."

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Add the traditional footnote "The $C_{(11)}$ appliance is designed and/or specified as an integral part of a specific combined system including a number of type C appliances and its complete air/flue ducts and terminals. This complete system is evaluated and certified under the GAD (in analogy with the types C_1, C_3, C_5)."

3.1.12.101
Nominal heat input for central heating
The value of the heat input for the central heating function as declared in the installation instructions

Symbol: Q_{nh}

Unit: kilowatt (kW)

3.1.12.102
Maximum nominal heat input
The highest value of the maximum nominal heat input for central heating (Q_{nh}) and the nominal domestic hot water heat input (Q_{nw}).

Symbol: $Q_{n,max}$
Unit: kilowatt (kW)

3.1.12.103
Minimum adjustable heat input

The minimum value to which the nominal heat input can be adjusted according to the technical instructions for boilers fitted with a range-rating device.

Symbol: $Q_{min,a}$

Unit: kilowatt (kW)

3.1.12.104
Minimum controlled heat input

The minimum value of the heat input which is allowed by the control system for modulating boilers.

Symbol: $Q_{min,c}$

Unit: kilowatt (kW)

3.1.12.105
Minimum heat input allowed by the controls

The lowest value of the minimum adjustable heat input $Q_{min,a}$ and the minimum controlled heat input $Q_{min,c}$.

Symbol: Q_{min}

Unit: kilowatt (kW)

3.1.12.106
Maximum safety pressure difference at maximum heat input:
declared maximum pressure difference in the installation instructions between combustion products outlet and air inlet for safety aspects, when n appliances are running at maximum nominal heat input ($Q_{n,max}$).

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Symbol: $\Delta p_{max, saf(max)}$
Unit: Pascal (mbar)

3.1.12.107
Maximum safety pressure difference at minimum heat input:
declared maximum pressure difference in the installation instructions between combustion products outlet and air inlet for safety aspects, when n-1 appliances are running at maximum nominal heat input ($Q_{n,max}$) and 1 appliance at the minimum heat input allowed by the controls. (Q_{min})

Symbol: $\Delta p_{max, saf(min)}$
Unit: Pascal (mbar)

3.1.12.108
Maximum safety pressure difference at start:
declared maximum pressure difference in the installation instructions between combustion products outlet and air inlet for safety aspects, when n-1 appliances are running at maximum nominal heat input ($Q_{n,max}$) and 1 appliance off.

Symbol: $\Delta p_{max, saf(start)}$
Unit: Pascal (mbar)

3.1.12.109
Maximum functional pressure difference at maximum heat input:
declared maximum pressure difference in the installation instructions between combustion products outlet and air inlet for functional aspects, when n appliances are running at a mix of inputs created by heating function ($Q_{nh)}$ and hot water function (Q_{nw})

Symbol: $\Delta p_{max, func(max)}$
Unit: Pascal (mbar)

3.1.12.110
Minimum safety pressure difference
declared minimum (most negative) pressure difference in the installation instructions between combustion products outlet and air inlet for safety aspects.

Symbol: $\Delta p_{min, saf}$
Unit: Pascal (mbar)

5 Modifications to '5 Construction'

NOTE: Layout under 5.4.6 to be corrected of the integral publication of EN 15502-2-1:2012+A1:201x

After the last clause 5.101 of EN 15502-2-1:2012,

The following text is added:

"5.102 Additional requirements for non-return valves in type $C_{(10)}$ and $C_{(11)}$ boilers

Requirements:

1) A non-return valve must be applied;

2) The non-return valve must be a part of the appliance."