

STN	Vykurovacie kotly Časť 1: Vykurovacie kotly s tlakovými horákmi Názvoslovie, všeobecné požiadavky, skúšanie a označovanie	STN EN 303-1 07 8607
------------	--	--

Heating boilers - Part 1: Heating boilers with forced draught burners - Terminology, general requirements, testing and marking

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/18

Obsahuje: EN 303-1:2017

Oznámením tejto normy sa ruší
STN EN 303-1 (07 0251) z októbra 2000

126197

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2018
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

EN 303-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2017

ICS 91.140.10

Supersedes EN 15034:2006, EN 303-1:1999

English Version

Heating boilers - Part 1: Heating boilers with forced draught burners - Terminology, general requirements, testing and marking

Chaudières de chauffage - Partie 1 : Chaudières avec brûleurs à air soufflé - Terminologie, prescriptions générales, essais et marquage

Heizkessel - Teil 1: Heizkessel mit Gebläsebrennern - Begriffe, Allgemeine Anforderungen, Prüfung und Kennzeichnung

This European Standard was approved by CEN on 26 June 2017.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Contents

	Page
European foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions, units and symbols	7
3.1 Terms and definitions	7
3.2 Units and symbols	10
3.2.1 Units	10
3.2.2 Symbols	11
4 Requirements	11
4.1 Construction requirements	11
4.1.1 General requirements	11
4.1.2 Specific requirements	23
4.2 Operational requirements	25
4.2.1 General	25
4.2.2 Verification of the nominal condensing output	25
4.2.3 Formation of condensation	25
4.2.4 Temperature of combustion products	25
4.2.5 Surface temperature	25
4.2.6 Water side resistance of the boiler	26
4.2.7 Soundness of the boiler	26
4.2.8 Temperature sensing control type TR and temperature sensing control type STB	26
4.3 Electrical equipment	26
4.3.1 Electrical safety	26
4.3.2 Electromagnetic compatibility	27
5 Tests	27
5.1 General	27
5.2 Boilers of steel or non-ferrous metal	27
5.2.1 Tests to be carried out before production	27
5.2.2 Factory production control (FPC) for steel boilers	27
5.3 Boilers of cast iron or non-ferrous metals	28
5.3.1 Test to be carried out before production	28
5.3.2 Test during production	28
5.4 Test for gas soundness	29
5.5 Water side resistance measurement	29
5.5.1 General	29
5.5.2 Test rig for the establishment of the water side resistance	29
5.6 Additional tests for low temperatures boilers	31
5.6.1 Additional tests by using of corrosion resistant coatings	31
5.6.2 Additional tests for oil-fired low temperatures boilers	31
6 Marking	31
6.1 Information on the boiler data plate	31
6.2 Requirements of the data plate	31
7 Technical documentation, scope of supply	31
7.1 General	31

7.2	Technical information (product fiche) and installation instructions	31
7.3	Operating instructions.....	33
7.4	Label	33
	Annex A (informative) Conformity evaluation.....	34
	Annex ZA (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No [813/2013] aimed to be covered.....	35
	Annex ZB (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No [811/2013] aimed to be covered.....	36
	Bibliography	37

European foreword

This document (EN 303-1:2017) has been prepared by Technical Committee CEN/TC 57 “Central heating boilers”, the secretariat of which is held by DIN.

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 March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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

This document has been prepared under a mandate M/534 and M/535 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 and Annex ZB, which are integral parts of this document.

This document supersedes EN 303-1:1999 and EN 15034:2006.

The following essential changes have been made:

- a) Construction requirements were adopted from EN 15034;
- b) Terminology of EU-Regulations 811/2013 and 813/2013 adopted;
- c) the document was completely revised technically;
- d) the document was completely revised editorially.

The following structure is intended for the European Standards for heating boilers:

- EN 303-1, *Heating boilers — Part 1: Heating boilers with forced draught burners — Terminology, general requirements, testing and marking*
- EN 303-2, *Heating boilers — Part 2: Heating boilers with forced draught burners — Special requirements for boilers with atomizing oil burners*
- EN 303-3, *Heating boilers — Part 3: Gas fired central heating boilers — Assembly comprising a boiler body and a forced draught burner*
- EN 303-4, *Heating boilers — Part 4: Heating boilers with forced draught burners — Special requirements for boilers with forced draught oil burners with outputs up to 70 kW and a maximum operating pressure of 3 bar — Terminology, special requirements, testing and marking*
- EN 303-5, *Heating boilers — Part 5: Heating boilers for solid fuels, hand and automatically fired, with a nominal heat output of up to 300 kW — Terminology, requirements, testing and marking*
- EN 304, *Heating boilers — Test code for heating boilers for atomizing oil burners*

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard applies to boilers used for central heating (heating boilers) with forced draught burners with a nominal heat output not exceeding 1 000 kW, which are operated either with negative pressure (natural draught boilers) or with positive pressure (pressurized boiler) in the combustion chamber, in accordance with the boiler instructions.

This European Standard specifies the necessary terminology, the requirements on the materials and testing of them, and marking requirements for heating boilers.

Particular requirements for boilers that can be used with open vented systems are contained in EN 303-4.

The requirements of this standard apply to heating boilers that are tested on an authorized test rig.

Boilers in accordance with this standard are designed for the heating of central heating installations in which the heat carrier is water, and the maximum allowable operating temperature of which is restricted to 100 °C. The maximum allowable operating pressure is 8 bar.

For boilers and water heaters (storage or continuous flow heater) this standard only applies to the parts which are necessarily subject to the operating conditions of the heating boiler (heating part).

This standard does not apply to gas boilers with atmospheric burners, boilers for solid fuels, boilers with oil vaporization burners. For these boilers there are further requirements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 226:1987, *Atomizing oil burners - Connecting dimensions between burners and heat generators*

EN 303-2:2017, *Heating boilers - Part 2: Heating boilers with forced draught burners - Special requirements for boilers with atomizing oil burners*

EN 303-4:1999, *Heating boilers - Part 4: Heating boilers with forced draught burners - Special requirements for boilers with forced draught oil burners with outputs up to 70 kW and a maximum operating pressure of 3 bar - Terminology, special requirements, testing and marking*

EN 304:2017, *Heating boilers - Test code for heating boilers for atomizing oil burners*

EN 10025-2:2004, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10027-2:2015, *Designation systems for steels - Part 2: Numerical system*

EN 10028-2:2017, *Flat products made of steels for pressure purposes - Part 2: Non-alloy and alloy steels with specified elevated temperature properties*

EN 10028-3:2017, *Flat products made of steels for pressure purposes - Part 3: Weldable fine grain steels, normalized*

EN 10029:2010, *Hot-rolled steel plates 3 mm thick or above - Tolerances on dimensions and shape*

EN 10088-2:2014, *Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

EN 303-1:2017 (E)

EN 10204:2004, *Metallic products - Types of inspection documents*

EN 13501-1:2007+A1:2009, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 14597:2012, *Temperature control devices and temperature limiters for heat generating systems*

EN 60335-1:2012, *Safety of household and similar electrical appliances — Part 1: General requirements (IEC 60335-1:2010)*

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60730-1:2011, *Automatic electrical controls for household and similar use - Part 1: General requirements (IEC 60730:2010), modified*

EN 60730-2-9:2010, *Automatic electrical controls for household and similar use - Part 2-9: Particular requirements for temperature sensing controls (IEC 60730-2-9:2008), modified*

EN 61000-6-2:2005, *Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments (IEC 61000-6-2:2005)*

EN 61000-6-3:2007, *Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3:2006)*

EN 60335-2-102:2016, *Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections (IEC 60335-2-102:2004, modified + A1:2008, modified + A2:2012, modified)*

EN ISO 4063:2010, *Welding and allied processes - Nomenclature of processes and reference numbers (ISO 4063:2009)*

EN ISO 6506 (all parts), *Metallic materials - Brinell hardness test*

EN ISO 9606-1:2013, *Qualification testing of welders - Fusion welding - Part 1: Steels (ISO 9606-1:2012 including Cor 1:2012)*

EN ISO 9606-2:2004, *Qualification test of welders - Fusion welding - Part 2: Aluminium and aluminium alloys (ISO 9606-2:2004)*

EN ISO/IEC 17025:2005, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2005)*

ISO 7-1:1994, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 7-2:2000, *Pipe threads where pressure-tight joints are made on the threads — Part 2: Verification by means of limit gauges*

ISO 185:2005, *Grey cast irons - Classification*

ISO 228-1:2000, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 228-2:1987, *Pipe threads where pressure-tight joints are not made on the threads — Part 2: Verification by means of limit gauges*

ISO 857-2:2005, *Welding and allied processes — Vocabulary — Part 2: Soldering and brazing processes and related terms*

ISO 2553:2013, *Welding and allied processes - Symbolic representation on drawings - Welded joints*

ISO 7005-1:2011, *Pipe flanges — Part 1: Steel flanges for industrial and general service piping systems*

ISO 7005-2:1988, *Metallic flanges — Part 2: Cast iron flanges*

ISO 7005-3:1988, *Metallic flanges — Part 3: Copper alloy and composite flanges*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN