

**Küttekatlad. Sundtõmbepõletitega küttekatlad.
Osa 1: terminoloogia, üldnõuded, testimine ja
märgistus**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 303-1:2000 sisaldab Euroopa standardi EN 303-1:1999 ingliskeelset teksti.

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ICS 91.140.10

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EUROPEAN STANDARD

EN 303-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 1999

ICS 01.040.91; 91.140.10

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Descriptors: central heating, boilers, definitions, specifications, equipment specification, materials, steels, cast iron, production control, chemical composition, mechanical properties, welded joints, welding, dimensions, safety, tests, marking, name plates

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 Gebläsebrenner -
Begriffe, allgemeine Anforderungen, Prüfung und
Kennzeichnung

This European Standard was approved by CEN on 21 August 1998.

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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 57 "Central heating boilers", the secretariat of which is held by DIN.

This European Standard supersedes EN 303-1:1992.

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 July 1999, and conflicting national standards shall be withdrawn at the latest by July 1999.

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

prEN 303-1

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

prEN 303-2

Heating boilers – Part 2: Heating boilers with forced draught burners – Special requirements for boilers with atomizing oil burners

prEN 303-3

Heating boilers – Part 3: Gas fired central heating boilers – Assembly comprising a boiler body and a forced draught burner

prEN 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

prEN 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

Concerning the required extension of the heat output from 300 kW up to 1000 kW the following essential changes were agreed:

- a) modification of clause 1;
- b) amendments of table 3 and table 7;
- c) amendment in 4.1.5.8 "burner matching dimensions";
- d) revision of table 1 .

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

1 Scope

This standard is applicable to heating boilers with burners using fans up to a nominal heat output of 1000 kW. They are operated, either with negative pressure (natural draught boiler) or with positive pressure (pressurised boiler) in the combustion chamber, in accordance with the boiler manufacturer's instructions.

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

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

The requirements of this standard apply to heating boilers which are tested on an authorised 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 with a built-in or attached water heater (storage or continuous flow heater) this standard only applies to the parts of the water heater 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, oil or gas fired condensation boilers, boilers with oil vaporisation burners and low temperature boilers. For these boilers there are further requirements.

NOTE: Low temperature boilers are those operating with a (water) variable temperature up to 40 °C or less, or those which cannot be set at a temperature higher than 55 °C.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 226

Atomizing oil burners – connecting dimensions between burners and heat generators

EN 287-1

Approval testing of welders – fusion welding – Part 1: steels

EN 287-2

Approval testing of welders – fusion welding – Part 2: aluminium and aluminium alloys

prEN 303-4

Heating boilers – Heating boilers with forced draught burner – Part 4: 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

Heating boilers – test code for heating boilers for atomizing oil burners

EN 10003-1

Metallic materials – Brinell hardness test – Part 1: Test method

EN 10021

General technical delivery requirements for steel and iron products

EN 10025

Hot rolled products of non-alloy structural steels - Technical delivery conditions (includes amendment A1 : 1993)

EN 10027-2

Designation systems for steels - Part 2: Numerical system

EN 10028-2

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

- EN 10029
Hot-rolled steel plates 3 mm thick or above - Tolerances on dimensions, shape and mass
- EN 10088-2
Stainless steels – Part 2: Technical delivery conditions for sheet/plate and strip for general purposes
- EN 10120
Steel sheet and strip for welded gas cylinders
- EN 24063
Welding, brazing, soldering and braze welding of metals; nomenclature of processes and reference numbers for symbolic representation on drawings (ISO 4063 : 1990)
- EN 60335-1
Safety of household and similar electrical appliances – Part 1: General requirements
- EN 60529
Degrees of protection provided by enclosures (IP-Code) (IEC 529:1989)
- EN 60730-2-9
Automatic electrical controls for household and similar use – Part 2: Particular requirements for temperature sensing controls (IEC 730-2-9:1992, modified)
- ISO 7-1
Pipe threads where pressure-tight joints are made on the threads – Part 1: Dimensions, tolerances and designation
- ISO 7-2
Pipe threads where pressure-tight joints are made on the threads – Part 2: Verification by means of limit gauges
- ISO 185
Grey cast iron - Classification
- ISO 228/1
Pipe threads where pressure-tight joints are not made on the threads – Part 1: Dimensions, tolerances and designation
- ISO 228/2
Pipe threads where pressure-tight joints are not made on the threads – Part 2: Verification by means of limit gauges
- ISO 857
Welding, brazing and soldering processes - Vocabulary
- ISO 2553
Welded, brazed and soldered joints - Symbolic representation on drawings
- ISO 7005-1
Metallic flanges - Part 1: Steel flanges
- ISO 7005-2
Metallic flanges - Part 2: Cast iron flanges
- ISO 7005-3
Metallic flanges - Part 3: Copper alloy and composite flanges

3 Definitions

For the purposes of this standard, the following definitions apply.

3.1 operating pressure: the maximum allowable pressure at which the boiler is to be normally operated. The operating pressure is less than the test pressure and the type test pressure.