

## Heating boilers - Special requirements for oil fired room sealed units up to 70 kW

## Chaudières de chauffage central - Exigences spécifiques aux chaudières au fioul étanches de puissance inférieure ou égale à 70 kW

# Heizkessel - Besondere Anforderungen an ölbefeuerte Units für den raumluftunabhängigen Betrieb bis einschließlich 70 kW

## National Foreword

This European Standard EN 15035:2006 was adopted as Luxembourgish Standard ILNAS-EN 15035:2006.

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**Heating boilers - Special requirements for oil fired room sealed  
units up to 70 kW**

Chaudières de chauffage - Système de circuit de  
combustion étanche des chaudières au fioul

Heizkessel - Besondere Anforderungen an ölbefeuerte  
Units für den raumluftunabhängigen Betrieb bis  
einschließlich 70 kW

This European Standard was approved by CEN on 4 November 2006.

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.

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## Foreword

This document (EN 15035:2006) 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of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

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(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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

## 1 Scope

This European Standard applies to type C<sub>x3</sub> central heating boilers as specified in 4.1, equipped with atomizing oil burners:

- type C<sub>13</sub>, type C<sub>33</sub>, and type C<sub>53</sub> boilers, including their combustion air supply and combustion products evacuation ducts and their terminals;
- type C<sub>43</sub> boilers including their connection ducts but without the chimney which is erected as a shared duct system and which is part of the building;
- type C<sub>63</sub> boilers, including the connecting piece as specified in 3.7, if not integrated into the boiler;
- type C<sub>83</sub> boilers, including their connection ducts but without the chimney which is part of the building;
- that have a nominal useful heat output below or equal to 70 kW;
- where the temperature of the water does not exceed 100 °C during normal operation;
- where the maximum water-side operating pressure does not exceed 8 bar.

This European Standard is intended to establish specific requirements and test methods for type C atomizing oil burning central heating boilers with respect to construction, safety, fitness for purpose, rational use of energy, classification and marking.

This European Standard covers only standard tests.

For boilers that produce domestic hot water by a drum or a heat exchanger, integrated or juxtaposed, (by accumulation of instant production), this standard only applies to hot water reheating system components that are not subject to operating conditions applicable to the boiler heating system.

This European Standard covers units consisting of boilers equipped with burners that meet the requirements of EN 267, with the following exceptions:

- maximum NO<sub>x</sub> and CO emission values, estimated for boilers according to the classes defined in EN 303-2;
- air factor value, defined by the manufacturer and stated in the boiler's technical specifications;
- marking and/or burner data plate which may provide information for the boiler data plate;
- installation recommendations for installing the burner on the boiler included in the boiler operating instructions.

This European Standard modifies EN 303-1, EN 303-2, EN 304 and specifies supplementary requirements only for room sealed operations.

## 2 Normative references

The following referenced documents are indispensable for the application 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 267, *Forced draught oil burners — Definitions, requirements, testing, marking*

EN 303-1, *Heating boilers — Part 1: Heating boilers with forced draught burners — Terminology, general requirements, testing and marking*

EN 303-2:1998, *Heating boilers — Part 2: Heating boilers with forced draught burners — Special requirements for boilers with atomizing oil burners*

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 304:1992, *Heating boilers — Test code for heating boilers for atomizing oil burners*

EN 1443, *Chimneys — General requirements*

EN 1457, *Chimneys — Clay/Ceramic Flue Liners - Requirements and test methods*

EN 1856-1, *Chimneys — Requirements for metal chimneys — Part 1: System chimney products*

EN 1856-2, *Chimneys — Requirements for metal chimneys — Part 2: Metal liners and connecting flue pipes*

EN 13063-1, *Chimneys — System chimneys with clay/ceramic flue liners — Part 1: Requirements and test methods for sootfire resistance*

EN 13063-2, *Chimneys — System chimneys with clay/ceramic flue liners — Part 2: Requirements and test methods under wet conditions*

EN 13216-1, *Chimneys — Test methods for system chimneys — Part 1: General test methods*

EN 14471, *Chimneys — System chimneys with plastic flue liners — Requirements and test methods*

EN 15034, *Heating boilers — Condensing heating boilers for fuel oil*

## 3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

### 3.1

#### **required draught**

difference in pressure between the static pressure of the air in the area where the boiler is installed and the static pressure of combustion products leaving the boiler (combustion products measuring hole), required to ensure good working order

### 3.2

#### **room-sealed boiler**

boiler in which the combustion circuit is sealed off from the area where the boiler is installed

**3.3****combustion circuit**

circuit including the air supply duct, burner, combustion chamber, heat exchanger, combustion products evacuation duct and either the connection piece or terminal connection (where applicable)

**3.4****air supply and combustion products evacuation ducts**

means for transporting combustion air to the burner and combustion products to the terminal or connection piece.

It is necessary to distinguish between:

- completely surrounded ducts: combustion products evacuation duct is surrounded by combustion air throughout its length;
- separate ducts: combustion products evacuation duct and the combustion air supply duct are neither concentric nor completely surrounded ducts

**3.5****terminal**

device fitted to the outside of a building, to which are connected:

- air supply and combustion products evacuation ducts for type C<sub>13</sub> and type C<sub>33</sub> boilers (one device);
- air supply duct and the combustion products evacuation duct for type C<sub>53</sub> boilers (two devices);
- air supply duct for type C<sub>83</sub> boilers (no device)

**3.6****terminal guard**

device that protects the terminal from mechanical damage from outside influences

**3.7****connection piece**

device which allows the fitting of a sealed boiler to any system for combustion air supply and combustion products boiler classification

**4 Boiler classification****4.1 General**

A type C boiler is a boiler in which the combustion circuit is sealed from the area of the building where the boiler is installed.

The air supply and combustion products evacuation ducts and the terminal or the fitting piece which is used to connect the boiler to a chimney or duct system may or may not be part of the unit as stated in 4.2. They admit fresh air from outside the building to the burner as well as discharge the combustion products to the outside.

Boilers are classified into several types according to the combustion products mode of evacuation and supply of combustion air (see examples attached in Annex A).