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European foreword

This document (EN 16510-1:2022) has been prepared by Technical Committee CEN/TC 295 “Residential solid fuel burning appliances”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by November 2025.

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 supersedes EN 16510-1:2018, EN 12815:2001, EN 13240:2001, EN 13229:2001 and EN 12809:2001 as amended and corrected.

In relation to EN 16510-1:2018 the following changes have been made:

- modifications to align the document with the standardisation request M/577 and the parts 2 (to be harmonized);
- emission test procedures optimized;
- new test procedure for particulate matter (PM) measurement integrated;
- Clause 8 “Environmental sustainability” completely revised;
- Annex J “A-deviations” deleted.

The structure of EN 16510, *Residential solid fuel burning appliances*, is as follows:

- *Part 1: General requirements and test methods;*
- *Part 2-1: Roomheaters;*
- *Part 2-2: Inset appliances including open fires;*
- *Part 2-3: Cookers;*
- *Part 2-4: Independent boilers — Nominal heat output up to 50 kW;*
- *Part 2-5: Slow heat release appliances;*
- *Part 2-6: Mechanically by wood pellets fed roomheaters, inset appliances and cookers.*

Other sections of Part 2 will be added to cover residential solid fuel burning appliances not included in parts 2-1 to 2-6.

EN 16510-1 is used in conjunction with the appropriate Part 2. The Parts 2-1 to 2-6 contain clauses that supplement or modify the corresponding clauses in this Part 1. Part 1 together with the relevant Part 2 provides the requirements for each type of appliance.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document is applicable to residential solid fuel burning appliances of which the nominal space heat output is more than 6 % of the combined nominal space heat output and nominal water heat output (total heat output).

This document specifies requirements relating to the design, manufacture, construction, safety and performance (efficiency and emission) of appliances fired by solid fuel (hereafter referred to as “appliance(s)”) and provides instructions for them. Furthermore, it also gives provisions for the evaluation of conformity, i.e. initial type testing (ITT) and factory production control (FPC) and marking of these appliances.

This document specifies CO, NO_x, OGC and particulate matter (PM) emission test methods.

This document is as well applicable to appliances intended to carry the load of a chimney.

Appliances receiving combustion air through ductwork from outside the external envelope, which is not air tight, are not considered roomsealed.

This document is not applicable to appliances with boiler parts in contact with fire or flue gases other than when the boiler parts are manufactured from steel or cast iron.

This document is not applicable to appliances with a boiler intended for water systems having:

- water temperatures above 110 °C and/or an operating pressure of more than 300 kPa (3 bar);
- direct contact with sanitary hot water.

This document is not applicable to appliances to be operated with ventilating systems which are intended to operate with pressure below -15 Pa in the room of installation of the appliance in relation to the outside atmosphere.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 303-5:2021, *Heating boilers — Part 5: Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW — Terminology, requirements, testing and marking*

EN 613:2000¹, *Independent gas-fired convection heaters*

EN 1561:2011, *Founding — Grey cast irons*

EN 1563:2018, *Founding — Spheroidal graphite cast irons*

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

EN 12828:2012+A1:2014, *Heating systems in buildings — Design for water-based heating systems*

EN 13384-2:2015+A1:2019, *Chimneys — Thermal and fluid dynamic calculation methods — Part 2: Chimneys serving more than one combustion appliance*

¹ As impacted by EN 613:2000/A1:2003.