

STN	Bytové spotrebiče na tuhé palivo Časť 2-7: Kombinované spotrebiče spaľujúce drevené polená a pelety	STN EN 16510-2-7
		06 1241

Residential solid fuel burning appliances - Part 2-7: Combination appliances fired by wood logs and pellets

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. 11/25

Európska norma bola opravená a znova vydaná Riadiacim strediskom CEN-CENELEC.

Obsahuje: EN 16510-2-7: 2025

Oznámením tejto normy sa ruší
STN EN 16510-2-7 (06 1241) z augusta 2025

141509

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 16510-2-7

May 2025

ICS 97.100.30

English Version

**Residential solid fuel burning appliances - Part 2-7:
Combination appliances fired by wood logs and pellets**

Appareils de chauffage domestiques à combustible solide - Partie 2-7 : Appareils mixtes à bûches et à granulés de bois

Häusliche Feuerstätten für feste Brennstoffe - Teil 2-7:
Kombinationsfeuerstätten für Scheitholz und Pellets

This European Standard was approved by CEN on 18 May 2025.

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 10 September 2025.

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, 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 United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

	Page
European foreword.....	4
Introduction	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions	8
4 Essential characteristics.....	8
4.1 Load bearing capacity.....	8
4.2 Protection of combustible materials.....	8
4.3 Carbon monoxide emission (CO)	9
4.4 Nitrogen oxides (NO_x) emissions.....	10
4.5 Emission of organic gaseous compounds (OGC)	10
4.6 Particulate matter (PM) emissions.....	10
4.7 Safety and accessibility in use	11
4.7.1 General.....	11
4.7.2 Flue gas outlet temperature at nominal heat output.....	11
4.7.3 Flue gas outlet temperature at part load heat output.....	11
4.7.4 Minimum flue draught at nominal heat output.....	11
4.7.5 Minimum flue draught at part load heat output	12
4.7.6 Flue gas mass flow at nominal heat output.....	12
4.7.7 Flue gas mass flow at part load heat output.....	12
4.7.8 Fire safety of installation to the chimney	12
4.8 Energy economy and heat retention	12
4.8.1 General.....	12
4.8.2 Space heat output at nominal heat output.....	12
4.8.3 Water heat output, if existing at nominal heat output.....	13
4.8.4 Efficiency at nominal heat output	13
4.8.5 Space heat output at part load heat output	13
4.8.6 Water heat output, if existing at part load heat output.....	13
4.8.7 Efficiency at part load heat output.....	13
4.8.8 Seasonal space heating efficiency at appliance's nominal heat output.....	14
4.8.9 Energy efficiency	14
4.8.10 Electric power consumption at nominal heat output, if existing.....	14
4.8.11 Electric power consumption at part load heat output, if existing	15
4.8.12 Standby mode power consumption, if existing	15
4.9 Environmental sustainability	15
5 Descriptive features	17
5.1 Data for potential use with room ventilation systems: type of appliance (in relation to its tightness to the room)	17
5.2 Data for the building's statics: appliance's mass	17
5.3 Materials and construction elements	17
5.3.1 General.....	17
5.3.2 General stresses.....	17
5.3.3 Integral boiler or heat exchanger	18
5.4 Risk of burning fuel falling out.....	18
5.5 Temperature rise in the fuel storage	18

5.5.1	Temperature rise in the fuel hopper	18
5.5.2	Safety against back burning through the fuel conveyor system	18
5.5.3	Temperature rise in the wood log storage	18
5.6	Temperature rise of the operating components	18
5.7	Spillage of flue gases into the room	18
5.7.1	Possible spillage of CO, if relevant for the fuel type	18
5.7.2	Safety test for spillage of flue gases into the room and discharge of embers	18
5.7.3	Open operation	19
5.8	Cleanability	19
5.8.1	Heating surfaces	19
5.8.2	Flueways	19
5.8.3	Ashpan	19
5.8.4	Bottomgrate	19
5.8.5	Damper	19
5.8.6	Fan-cut-out-device	20
5.9	Strength and leak tightness of boiler shells	20
6	Assessment and verification of constancy of performance - AVCP	20
6.1	General	20
6.2	Assessment of performance	20
6.2.1	General	20
6.2.2	Test samples, testing and compliance criteria	21
6.3	Verification of constancy of performance	22
6.3.1	Factory production control (FPC)	22
6.3.2	Initial inspection of factory to validate environmental sustainability company specific data	26
6.3.3	Environmental sustainability assessment validation	26
Annex A (normative)	Test methods	27
Annex GA (normative)	Measurement positions for conveyor systems	36
Annex ZA (informative)	Relationship of this European Standard with Regulation (EU) No. 305/2011	40
ZA.1	Scope and relevant characteristics	40
ZA.2	System of Assessment and Verification of Constancy of Performance (AVCP)	46
ZA.3	Assignment of AVCP tasks	47

EN 16510-2-7:2025 (E)**European foreword**

This document (EN 16510-2-7:2025) 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 November 2025, and conflicting national standards shall be withdrawn at the latest by February 2027.

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 standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

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*;
- Part 2-7: *Combination appliances fired by wood logs and pellets*.

Other sections of Part 2 will be added to cover residential solid fuel burning appliances not included in parts 2-1 to 2-7.

Subclauses and Figures which are additional to those in EN 16510-1:2022 are numbered starting with 701. Annexes which are additional to those in EN 16510-1:2022 are numbered starting with GA.

For inset pellet/wood appliances and especially their testing, additional information from EN 16510-2-2:2022 is relevant.

For pellet appliances and especially their testing, additional information from EN 16510-2-6:2022 is relevant.

For cookers and especially their testing, additional information from EN 16510-2-3:2022 is relevant.

For appliances according to this document the same additional information regarding instructions as specified in EN 16510-1:2022, Clause 7 for appliances according to EN 16510-2-6:2022 is applicable.

Descriptive features according to EN 16510-1:2022, 4.4 for devices according to EN 16510-2-6:2022 are equally valid for devices according to this document.

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.

EN 16510-2-7:2025 (E)

Introduction

The energy efficiency classification is aligned with Commission Regulation (EU) 2015/1186, Annex II. Upon the revision of Regulation 2015/1186, the standard should be updated to reflect the new classification.

The threshold levels for OGC, CO, NO_x and PM emissions and the threshold levels for the seasonal space heating energy efficiency are aligned with Commission Regulation (EU) 2015/1185, Annex II. Upon the revision of Regulation 2015/1185, the standard should be updated to reflect the new classification.

1 Scope

This document is applicable to space heaters, inset appliances and cookers intended for mechanical fuelling with wood pellets and for manual fuelling with wood logs. They can be freestanding or inset appliances.

The intended use of the appliances is space heating in residential buildings and can be cooking. They can be fitted with a boiler (integral part of the appliance containing water to be heated up) for the supply of hot water for central heating systems.

These appliances typically use auxiliary energy which is measured in this standard as well. They are operated with natural draught and can be fan-assisted.

NOTE 1 A fan-assisted appliance does still operate under negative pressure in the flue gas system.

For inset appliances and especially their testing additional information can be necessary from EN 16510-2-2:2022.

These appliances burn wood pellets and wood logs only, in accordance with the appliance instructions. They only operate with the firedoors closed.

NOTE 2 These appliances can have an integral fuel hopper or be combined with an external fuel hopper.

These appliances can be fitted with a single or double combustion chamber having a single flue gas outlet.

This document specifies procedures for assessment and verification of constancy of performance (AVCP) of characteristics of combination appliances fired by wood logs and pellets.

This document is not applicable to appliances:

- with boiler intended for water systems having water temperatures above 110°C and 3 bar and for sanitary hot water,
- intended to be used with a pure horizontal exhaust (through the building wall),
- with flue gas condensation in the appliance,
- switching on / off for part load operation,
- with simultaneous wood and pellet operation with a single flue gas outlet,
- with non-automatic pellet loading,
- with single combustion chamber and double flue gas outlet,
- continuous burning appliances.

For clarity, all test methods are addressed in Annex A.

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 15456:2008, *Heating boilers — Electrical power consumption for heat generators — System boundaries — Measurements*

EN 16510-2-7:2025 (E)

EN 15804:2012+A2:2019, *Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products*

EN 16510-1:2022, *Residential solid fuel burning appliances — Part 1: General requirements and test methods*

EN 16510-2-2:2022, *Residential solid fuel burning appliances — Part 2-2: Inset appliances including open fires*

EN 16510-2-3:2022, *Residential solid fuel burning appliances — Part 2-3: Cookers*

EN 16510-2-4:2022, *Residential solid fuel burning appliances — Part 2-4: Independent boilers — Nominal heat output up to 50 kW*

EN 16510-2-6:2022, *Residential solid fuel burning appliances — Part 2-6: Mechanically by wood pellets fed roomheaters, inset appliances and cookers*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN