
Stanovanjske grelne naprave na trdna goriva - 2-3. del: Štedilniki

Residential solid fuel burning appliances - Part 2-3: Cookers

Häusliche Heizgeräte für feste Brennstoffe - Teil 2-3: Herde

Equipement de chauffage domestique - Partie 2-3 : Cuisinières

Ta slovenski standard je istoveten z: prEN 16510-2-3

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Residential solid fuel burning appliances - Part 2-3: Cookers

Équipement de chauffage domestique - Partie 2-3 :
Cuisinières

Häusliche Heizgeräte für feste Brennstoffe - Teil 2-3:
Herde

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 295.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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prEN 16510-2-3:2021 (E)**European foreword**

This document (prEN 16510-2-3:2021) has been prepared by Technical Committee CEN/TC 295 “Residential solid fuel burning appliances”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document together with EN 16510-1:2021 will supersede EN 12815:2001 as amended and corrected.

This document has been prepared under a standardization request given to CEN/CENELEC by the European Commission and the European Free Trade Association.

For relationship with (EU) Regulation 305/2011, 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.*

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

This Part 2-3 supplements or modifies the corresponding clauses in prEN 16510-1:2021, so as to convert that publication into the European Standard: *Residential solid fuel burning appliances – Requirements and test methods for cookers.*

This document is expected to be used in conjunction with prEN 16510-1:2021. This document refers to Clauses of prEN 16510-1:2021 or adapts Clauses by stating “with the following modification”, “with the following addition”, “is replaced by the following” or “shall not be applicable” in the corresponding Clause. This document adds Clauses or Subclauses to the structure of prEN 16510-1:2021 which are particular to this document.

Subclauses and Figures which are additional to those in prEN 16510-1:2021 are numbered starting with 301. Annexes which are additional to those in prEN 16510-1:2021 are numbered starting with CA.

1 Scope

This document is applicable to hand fired residential cookers whose primary function is to cook and whose secondary function is to provide heat into the space in which they are installed. Additionally, where fitted with a boiler, they also provide domestic hot water and/or central heating.

These appliances can burn one or more types of the following solid fuels in accordance with the appliance manufacturer's instructions:

- wood logs;
- compressed untreated wood;
- wood pellets;
- lignite briquettes;
- solid mineral fuels;
- peat briquettes.

This document is not applicable to appliances with fan assisted combustion air or appliances that are mechanically fed.

This document is used in conjunction with prEN 16510-1 of which it is an integral part.

2 Normative references (standards.iteh.ai)

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.

prEN 16510-1:2021, Residential solid fuel burning appliances - Part 1: General requirements and test methods

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 16510-1:2021 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Descriptive features

prEN 16510-1:2021, Clause 4, shall be applicable with the following modifications.

4.4.2.2 Integral boilers constructed of steel

Addition:

Differing from the requirement given in Table 2 for walls of water backed surfaced of the combustion chamber in contact with burning fuel or products of combustion the minimum wall thickness for non-alloy steels is 4 mm for cookers.

prEN 16510-2-3:2021 (E)**4.4.7 Ashpan and ash removal**

prEN 16510-1:2021, 4.4.7, shall be applicable with the following modification.

Replacement of the 1st paragraph:

A means of removing ash residue from the appliance shall be provided. Where an ashpan is provided its capacity shall be not less than 0,3 dm³ per kW nominal output whilst retaining sufficient space above to allow adequate primary air-flow through the bottomgrate or firebed. If the ashpan resides in the appliance it shall locate in the ashpit in such a way that it allows the free passage of primary air and in such a position that it does not obstruct any primary air inlet control.

4.4.8 Bottomgrate

prEN 16510-1:2021, 4.4.8, shall be applicable with the following modification.

Add the following sentence to the 2nd paragraph:

A de-ashing mechanism shall be fitted where fuels other than wood are burnt.

4.4.11 Charging doors and ash-pit doors

prEN 16510-1:2021, 4.4.11, shall be applicable with the following additional paragraphs:

When open, firedoors shall not obstruct the firebox opening and shall be capable of opening to an angle greater than 90°.

If fitted, hotplate charging doors shall either be removable or capable of being opened to an angle greater than 90°.

Designed air inlets around the periphery of the door(s) are permitted.

Addition of the following new subclause:

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4.301 Additional requirements for cookers

4.301.1 Oven door

When open, side hinged oven doors shall not obstruct the oven opening and shall be capable of opening to an angle greater than 90°.

When drop down doors are completely open, they shall form an angle of between 85° and 90° to the vertical and remain in this position. When tested in accordance with A.4.301.5, the drop down door shall not sag by more than 15 mm, and the cooker shall not tilt.

4.301.2 Hotplate and top plate

The top plate shall incorporate a metal or ceramic surface in the form of a hotplate. Part of the hotplate shall be designed as a boiling plate area.

When the cooker is assembled in accordance with the appliance manufacturer's installation instructions, complete with any legs or plinth supplied as an integral part of the appliance, the height from the floor to the cooking surface(s) shall be between 800 mm and 930 mm.

4.301.3 Main/additional ovens

Where a compartment or compartments are provided as an oven or ovens, their purpose shall be specified in the appliance operating instructions.

At least one of the oven compartments shall be provided with at least two shelf runner positions. When tested in accordance with the test method detailed in A.4.301.4, the angle of inclination of any oven shelf when under load shall not exceed 10° from the horizontal.

4.301.4 Ashpit and ashpit cover/door

The ashpit shall be so designed that when the ashpan is in position it shall not restrict the primary air inlet.

The ashpit cover/door shall be designed to ensure that

- its closure is not prevented by spilled residue material;
- it cannot be accidentally dislodged;
- when hot it can be handled safely with the tools provided;
- the ashpit is of sufficient size to accommodate the ashpan.

4.301.5 Oven temperature indicators

For a cooker with an oven(s) to which an oven temperature indicator is fitted, the indicator shall be readable without opening the oven door.

5 Appliances Performance requirements in relation to safety

prEN 16510-1:2021, Clause 5, shall be applicable.

6 Appliances Performance requirements in relation to the appliance operation

prEN 16510-1:2021, Clause 6, shall be applicable with the following modification.

6.6 Recovery test

prEN 16510-1:2021, 6.6, shall be applicable with the following modification.

Replacement of the 2nd paragraph:

Recovery shall be deemed to be satisfactory if the refuel charge is visibly ignited under the test conditions described in A.4.9 within a time of 30 min with a flue draught of (10_0^{+2}) Pa.

6.7 Refuelling intervals

prEN 16510-1:2021, 6.7, shall be applicable with the following modification.

Replacement of Table 12:

Table 12 — Minimum refuelling intervals

Appliance type	Test fuel type (as detailed in Table B.1)	Minimum refuelling interval
At nominal heat output		
Automatically controlled Wet or dry cooker	Wood logs, lignite briquettes or peat briquettes	40 min
	All other test fuels	3 h

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Appliance type	Test fuel type (as detailed in Table B.1)	Minimum refuelling interval
Manually controlled wet or dry cooker	Wood logs, lignite briquettes or peat briquettes	40 min
	All other test fuels	2 h
At slow combustion		
Continuous operating appliance	Wood logs, lignite briquettes or peat briquettes	3 h
	All other test fuels	12 h
Intermittent operating appliance	Wood logs, lignite briquettes or peat briquettes	No requirement
	All other test fuels	No requirement

Addition of the following new subclause:

6.301 Additional requirements for cookers

6.301.1 Oven heating

When tested in accordance with A.4.301.3 at the same flue draught as used during the performance test at nominal heat output, the strips of shortbread shall be cooked through to the centre. The degree of browning of the top and bottom surfaces of the strips, when assessed against the browning chart detailed in A.4.301.3, shall be within the colour range given on the chart.

6.301.2 Boiling test

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When tested in accordance with A.4.301.2 at the same flue draught as used during the performance test at nominal heat output, the temperature of the water in the specified boiling utensil shall rise by 75 K within 20 min of the start of the test.

6.301.3 Appliances with alternative bottomgrate positions

Where the appliance has alternative lower and upper bottomgrate positions i.e. for winter/summer mode operation, the appliance shall be tested initially with the bottomgrate in its lower position, and the performance requirements specified in 6.1 to 6.4 shall be satisfied.

In addition, the following tests shall be undertaken with the bottomgrate in its upper position:

- a) a nominal heat output test conducted in accordance with A.4.7 to determine the heat outputs and to verify that the safety requirements of 6.4 to 6.6 are met.

The requirements of 6.1 to 6.4 do not apply to the heat output tests in this upper bottomgrate position and therefore only the following parameters shall be measured and recorded during this test:

- i) space heating output;
- ii) water heating output (if boiler fitted);
- iii) surface temperatures of operating knobs/handles;
- iv) temperatures of the trihedron test hearth and walls or other structure surrounding the appliance e.g. ceiling;

- v) flue gas temperature.
- b) a hotplate boiling test in accordance with A.4.301.2, when the appliance shall satisfy the requirements of 6.301.1.

7 Appliance instructions

prEN 16510-1:2021, Clause 7, shall be applicable.

8 Sustainable use of natural resources

prEN 16510-1:2021, Clause 8, shall be applicable.

9 Assessment and verification of constancy of performance - AVCP

prEN 16510-1:2021, Clause 9, shall be applicable with the following modifications.

9.3 Factory production control (FPC)

prEN 16510-1:2021, 9.3, shall be applicable with the following modification.

9.3.2.4.4 Manufacturing checks on construction and dimensions

prEN 16510-1:2021, 9.3.2.4.4, shall be applicable with addition.

Addition after l):

m) oven construction;

n) hotplate/top plate.

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10 Marking and technical datasheet

prEN 16510-1:2021, Clause 10, shall be applicable.

Annex A (normative)

Test methods

A.1 Test environment

prEN 16510-1:2021, A.1, shall be applicable.

A.2 Test assembly

prEN 16510-1:2021, A.2, shall be applicable with the following modification.

A.2.1 General

prEN 16510-1:2021, A.2.1, shall be applicable with the following modification.

Addition at the end of the subclause:

For installation of the cooker in a trihedron in accordance with manufacturer's instructions, especially take note of the given information on minimum distances from combustible material right, left of or behind the appliance including minimum distances from combustible material above the hotplate and right, left of or behind the appliance above surface area of the hotplate (see Figure A.303).

For those cookers, where the distance between ceiling / top cove (wall cupboard, overhead storage capacities) and appliance top is less than 0,75 m, it is necessary to measure the temperature of the ceiling, and the ceiling shall also be fitted in accordance with the manufacturer's installation instructions.

For the test the surrounding test structure shall have at least the same depth as the appliance (the safety reeling is not taken into account).

A.3 Measurement equipment

prEN 16510-1:2021, A.3, shall be applicable.

A.4 Test procedures

An overview of the test procedures for cookers is located in A.4.302.

prEN 16510-1:2021, A.4, shall be applicable with the following modifications.

A.4.7.1 General

prEN 16510-1:2021, A.4.7.1, shall be applicable with the following modification.