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ILNAS-EN 12815:2001

**Residential cookers fired by solid fuel -
Requirements and test methods**

Herde für feste Brennstoffe -
Anforderungen und Prüfung

Cuisinières domestiques à combustible
solide - Exigences et méthodes d'essai

06/2001



National Foreword

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Residential cookers fired by solid fuel - Requirements and test methods

Cuisinières domestiques à combustible solide - Exigences
et méthodes d'essai

Herde für feste Brennstoffe - Anforderungen und Prüfung

This European Standard was approved by CEN on 7 April 2001.

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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 Management Centre 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 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of an identical text or by endorsement, at the latest by December 2001, and conflicting national standards shall be withdrawn at the latest by December 2002.

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 European Standard specifies requirements relating to the design, manufacture, construction, safety and performance (efficiency and emission), instructions and marking together with associated test methods and test fuels for type testing residential cooking appliances fired by solid fuel.

This Standard is applicable to hand fired appliances 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 may burn either solid mineral fuels, peat briquettes, natural or manufactured wood logs or be multi-fuel in accordance with the appliance manufacturer's instructions.

This standard is not applicable to hopper fed or mechanically fired appliances or those appliances having fan assisted combustion air.

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 applies (including amendments).

EN 1561:1997	Founding - Grey cast irons
EN 1563:1997	Founding - Spheroidal graphite cast iron
EN 10025:1993	Hot rolled products of non-alloy structural steels - Technical delivery conditions
EN 10027-2:1992	Designation systems for steels - Part 2: Numerical system
EN 10028-2:1992	Flat products made of steels for pressure purposes - Part 2: Non-alloy and alloy steels with specified elevated temperature properties
EN 10029:1991	Hot rolled steel plates 3 mm thick or above - Tolerances on dimensions, shape and mass
EN 10088-2:1995	Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip for general purposes
EN 10111:1998	Continuously hot-rolled low carbon steel sheet and strip for cold forming - Technical delivery conditions
EN 10120:1996	Steel sheet and strip for welded gas cylinders
ISO 7-1: 1994	Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation
ISO 7-2: 2000	Pipe threads where pressure-tight joints are made on the threads - Part 2: Verification by means of limit gauges
ISO 228-1: 2000	Pipe threads where pressure-tight joints are not made on the threads - Part 1: Designation, dimensions and tolerances

ISO 228-2: 1987	Pipe threads where pressure-tight joints are not made on the threads - Part 2: Verification by means of limit gauges
ISO 331:1983	Coal - Determination of moisture in the analysis sample - Direct gravimetric method
ISO 334:1992	Solid mineral fuels - Determination of total sulfur - Eschka method
ISO 351:1996	Solid mineral fuels - Determination of total sulfur - High temperature combustion method
ISO 501:1981	Coal - Determination of the crucible swelling number
ISO 562:1998	Hard coal and coke - Determination of volatile matter
ISO 609:1996	Solid mineral fuels - Determination of carbon and hydrogen - High temperature combustion method
ISO 687:1974	Coke - Determination of moisture in the analysis sample
ISO 1171:1997	Solid mineral fuels - Determination of ash content
ISO 1928:1995	Solid mineral fuels - Determination of gross calorific value by the bomb calorimetric method, and calculation of net calorific value

3 Terms and definitions

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

3.1

air inlet control

manual or automatic device to control the quantity of air supplied for combustion

3.2

ashpan

removable receptacle shaped to receive the residue falling from the firebed

3.3

ashpit

enclosed chamber designed to receive the residue or the ashpan

3.4

basic firebed

quantity of glowing embers which ensures ignition of the test fuel to be charged

NOTE The basic firebed may be specified by the manufacturer.

3.5

boiler

vessel in which water is heated, intended for fitting in or forming an integral part of a solid fuel appliance

3.6

boiler waterways

space within a boiler which contains water

3.7

bottomgrate

part of the appliance at the base of the firebox which supports the firebed through which the residue falls into the ashpan or ashpit and through which combustion air and/or combustion gases may be drawn

3.8

burning rate

reduction in the mass of fuel per unit of time

3.9

charging door

door which covers the refuelling opening

3.10

combustion air

air supplied to the fire-box, which is entirely or partially used to burn the fuel

3.11

combustion air selector

device for adjusting the primary and/or secondary air according to the type of fuel burnt

3.12

combustion control device

mechanism for setting the primary and/or secondary air in accordance with the burning rate required

3.13

combustion gases

compounds in gaseous form produced inside an appliance when fuel is burned

3.14

damper

mechanism to change the resistance to flow of the combustion gases

3.15

de-ashing

process of clearing a fuelbed and discharging the residue into the collecting receptacle

3.16

de-ashing mechanism

device to agitate or disturb the ash to facilitate its removal from the firebed

NOTE It may also be used to change the bottomgrate operating position on some appliances.

3.17**direct water system**

hot water system in which stored domestic hot water is heated directly by hot water circulating from the boiler

3.18**draught regulator**

inlet device for admission of air downstream of the firebed, enabling the flue draught to be controlled

3.19**dry cooker**

appliance which primarily provides the facility to cook by means of a hotplate and/or oven

NOTE It also provides heat to the room in which it is installed.

3.20**efficiency**

ratio of total heat output to total heat input during the test period expressed as a percentage

3.21**firebed ; fuelbed**

fuel contained in the firebox

3.22**firebox; combustion chamber**

that part of the appliance in which fuel is burned

3.23**firebox opening**

aperture in the firebox through which an appliance may be fuelled

3.24**firedoor**

door through which the fire may be viewed and which may be opened to allow refuelling of the firebed

3.25**flue draught**

differential between the static air pressure in the place of installation and the static pressure at the flue gas measurement point

3.26**flue gases**

gaseous compounds leaving the appliance flue spigot and entering the flue gas connector

3.27**flue gas adaptor**

fitting which allows for variations in size and shape of the flue components

3.28**flue gas connector**

duct through which flue gases are conveyed from the appliance into the chimney flue