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Gasutrustning – Metod att mäta energiåtgång för gasspisar

Measuring method of the energy consumption of gas fired ovens

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Denna standard ersätter SS-EN 15181:2008, utgåva 1.

The European Standard EN 15181:2017 has the status of a Swedish Standard. This document contains the official version of EN 15181:2017.

This standard supersedes the Swedish Standard SS-EN 15181:2008, edition 1.

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EUROPEAN STANDARD

EN 15181

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 97.040.20

Supersedes EN 15181:2008

English Version

Measuring method of the energy consumption of gas fired ovens

Méthode de mesurage de la consommation d'énergie
des fours à gaz

Bestimmung des Energieverbrauchs von Gasbacköfen

This European Standard was approved by CEN on 16 January 2017.

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



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

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SS-EN 15181:2017 (E)

European foreword

This document (EN 15181:2017) has been prepared by Technical Committee CEN/TC 49 “Gas cooking appliances”, the secretariat of which is held by UNI.

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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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 15181:2008.

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.

The main changes to the previous version of EN 15181:2008 are the following:

- the implementation of Annex ZA which shows the coverage of Regulation 66/2014 concerning Ecodesign requirements for domestic ovens, hobs and range hoods and of Delegated Regulation 65/2014 on the Energy Labelling of domestic ovens and range hoods;
- the verification procedure for ensuring that the temperature inside the oven cavity reaches the temperature setting of the thermostat and/or the oven control display within the duration of the test cycle for measuring the energy consumption;
- the revision of Clause 9, Uncertainty and verification procedures;
- the amending of Clause 6, Calculated oven volume and mass, to ensure high reproducibility.

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

Introduction

The object of this European Standard is to specify, in accordance with Regulation 66/2014 concerning Ecodesign requirements for domestic ovens, hobs and range hoods and of Delegated Regulation 65/2014 on the Energy Labelling of domestic ovens and range hoods:

- energy consumption using a standardized load during a standardized procedure,
- some performance characteristics (like volume, correspondence between set and measured oven temperature, permitted tolerances to values declared by the manufacturer and control procedures for checking the declared values).

SS-EN 15181:2017 (E)

1 Scope

This European Standard specifies the method of test for determining the gas energy consumption in gas-fired domestic ovens when they are being used in one or more of the oven cooking modes defined in 3.1. It applies to the gas-fired domestic ovens which are capable of utilizing gases of group H or group E, possibly after conversion according to instructions for use.

This European Standard applies to these gas-fired domestic ovens, whether they are separate appliances or component parts of domestic cooking appliances.

This European Standard also applies to domestic appliances that can utilize gas and/or electrical energy to provide heat for cooking when the ovens are utilizing gas energy to provide heat for cooking, but not when electric energy is used to provide any or all of the heat for cooking in the oven.

It is not applicable to:

- microwave combination ovens;
- small cavities ovens (3.2);
- oven cavities not provided with devices to detect and control the temperature for the preparation of food;
- cooking modes others than defined in 3.1.1 and 3.1.2;
- ovens connected to a chimney in which the gas energy for cooking provides, by design, also space and/or water heating;
- appliances designed for use with gases of the third family only.

This European Standard is concerned neither with safety nor with overall performance requirements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 30-1-1:2008+A3:2013, *Domestic cooking appliances burning gas - Part 1-1: Safety - General*

EN 30-1-2:2012, *Domestic cooking appliances burning gas - Safety - Part 1-2: Appliances having forced-convection ovens and/or grills*

EN 30-1-4:2012, *Domestic cooking appliances burning gas - Safety - Part 1-4: Appliances having one or more burners with an automatic burner control system*

EN 60584-1:2013, *Thermocouples — Part 2: Tolerances (IEC 60584-1)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 30-1-1:2008+A3:2013, EN 30-1-2:2012 or EN 30-1-4:2012, provided the appliance falls within the scope of that standard, and the following apply.

3.1 oven cooking modes

3.1.1

conventional oven cooking mode

operation of the oven for cooking roasts, pastry, etc., in which the transmission of heat is achieved by natural convection and radiation

3.1.2

forced-convection oven cooking mode

operation of the oven for cooking roasts, pastry, etc., in which the transmission of heat by convection is assisted by means of a fan

3.2

small cavity ovens

oven with the following dimensions related to the usable volume:

- both width and depth < 250 mm
- or height < 120 mm

Note 1 to entry: The definition of small cavity ovens in this standard is due to the size of the artificial standard load.

3.3

multiple cavity appliances

appliance that has more than one separate oven cavity in which food is cooked and which can be controlled independently, but cannot be installed separately

3.4

auxiliary electrical energy

electrical energy consumption (during the brick test) of any electric components that cannot be switched off from the control panel by the user when using the oven in accordance with the instructions for use

4 List of measurements

4.1 Dimensions and mass

Dimensions of the calculated oven volume (see 6.2) and mass of the oven (see 6.3).

4.2 Energy consumption and heating time

Heating of the load (7.2).