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Interested committees:

Title: Draft BS EN 15181 BS Measuring method of the energy consumption of gas fired ovens.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

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 draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 49.

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.

This draft European Standard was established by CEN 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.

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.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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European foreword

This document (prEN 15181:2025) has been prepared by Technical Committee CEN/TC 49 “Gas cooking appliances”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15181:2017+A1:2020.

prEN 15181:2025 includes the following significant technical changes with respect to EN 15181:2017+A1:2020:

- new Table 1 with instrumentation;
- new Table 2 with measurements;
- preparation of the test load is fully described in Clause 6.2.2;
- the former clause with “*Uncertainty and verification procedures*” is removed.

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 and Annex ZB, which are integral parts of this document.

1 Scope

This document 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 using combustible gases described in Clause 1 of EN 30-1-1:2021+A1:2023, possibly after conversion according to instructions for installation and adjustment.

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

This document also applies to domestic gas cooking appliances incorporating electrical elements, provided that these elements are not used for supplying heat for cooking during the measurement.

It is not applicable to:

- microwave combination ovens;
- small cavity ovens (as defined in 3.2);
- oven cavities not provided with devices to detect and control the temperature for the preparation of food;
- cooking modes others than those 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.

This document does not cover neither safety requirements nor other overall performance requirements.

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 30-1-1:2021+A1:2023, *Domestic cooking appliances burning gas — Part 1-1: Safety — General*

EN 30-1-2:2023+A1:2024, *Domestic cooking appliances burning gas — Part 1-2: Safety — Appliances having forced-convection ovens*

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 1: EMF specifications and tolerances (IEC 60584-1:2013)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 30-1-1:2021+A1:2023, EN 30-1-2:2023+A1:2024 or EN 30-1-4:2012 and the following apply.

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

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

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

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 oven

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 dimensions were defined considering the load described in Annex A.

3.3

multiple cavity appliance

appliance that has more than one 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 test described in 6.2.3) of any electric components that cannot be switched off from the control panel when the oven is operated in accordance with the instructions for use

4 General conditions for measurements

4.1 General

Before installation, it shall be checked that the appliance is free from damage and complies with soundness requirements given in EN 30-1-1:2021+A1:2023, 6.1.1.

The oven shall be installed according to the instructions for use installation.

Prior to every test, the whole appliance, including the insulation and the internal parts shall be at ambient temperature.

In appliances with more than one cavity, each oven cavity shall be measured separately. Only the cavity to be measured shall be switched on. Other electric heating elements shall not be switched on.

In case an oven has several cooking modes as defined in Clause 3, the manufacturer can choose the cooking mode to be tested, provided there is no use of electrical elements for supplying heat for cooking.

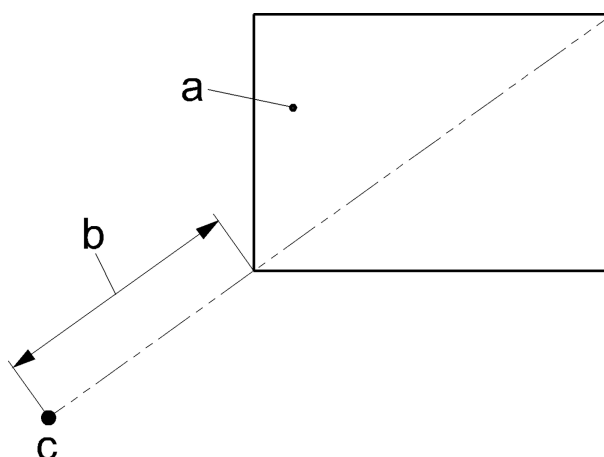
4.2 Ambient temperature

The tests are carried out in a substantially draught-free room in which the ambient temperature is maintained at $(23 \pm 2) ^\circ\text{C}$ during the complete test.

Before conducting the measurement the whole appliance, including the insulation and the internal parts, shall be at an ambient temperature of $(23 \pm 2) ^\circ\text{C}$.

This ambient temperature is measured at a point that is at the same height as the centre of the calculated oven volume of the oven cavity and at a distance between 1 and 1,5 m diagonally from one of the front edges of the appliance; see Figure 1.

The measurement of the ambient temperature shall not be influenced by the oven itself or by any other appliance in the nearby.



Key

- a oven (top view)
- b 1 to 1,5 m
- c thermocouple

Figure 1 — Position of the thermocouple

4.3 Test gases and test pressures

The appliance is adjusted to one of the reference gases indicated in EN 30-1-1:2021+A1:2023, 7.1.1.1, and then supplied with that reference gas at normal test pressure.

4.4 Electrical supply

An appliance having an electrical connection is supplied with rated voltage and frequency, which shall be maintained during the whole test within $\pm 1\%$.

If the appliance has a rated voltage range, the tests are carried out at the nominal voltage of the country where the appliance is intended to be used.