

# Measuring method of the energy consumption of gas fired ovens

ICS 97.040.20

# National foreword

This British Standard is the UK implementation of EN 15181:2008.

The UK participation in its preparation was entrusted to Technical Committee GSE/35, Gas cooking appliances (domestic).

A list of organizations represented on this committee can be obtained on request to its secretary.

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**EN 15181**

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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 13 September 2008.

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## Contents

Page

|                                                                                           |    |
|-------------------------------------------------------------------------------------------|----|
| Foreword.....                                                                             | 3  |
| Introduction .....                                                                        | 4  |
| 1 Scope .....                                                                             | 5  |
| 2 Normative references .....                                                              | 5  |
| 3 Terms and definitions .....                                                             | 5  |
| 4 List of measurements.....                                                               | 6  |
| 4.1 Dimensions.....                                                                       | 6  |
| 4.2 Energy consumption and heating time .....                                             | 6  |
| 5 General conditions for measurements .....                                               | 6  |
| 5.1 General.....                                                                          | 6  |
| 5.2 Ambient temperature.....                                                              | 7  |
| 5.3 Test gases and test pressures .....                                                   | 8  |
| 5.4 Electrical supply .....                                                               | 8  |
| 5.5 Load .....                                                                            | 8  |
| 5.6 Instrumentation.....                                                                  | 8  |
| 5.7 Positioning of the appliance.....                                                     | 9  |
| 5.8 Auxiliary electrical energy .....                                                     | 9  |
| 6 Useful oven volume .....                                                                | 9  |
| 7 Energy consumption and time .....                                                       | 9  |
| 7.1 Measurement of oven temperature .....                                                 | 9  |
| 7.2 Energy consumption and time for heating a load .....                                  | 9  |
| 7.2.1 Purpose.....                                                                        | 9  |
| 7.2.2 Preparation .....                                                                   | 10 |
| 7.2.3 Measurement.....                                                                    | 10 |
| 8 Data to be provided for the technical file .....                                        | 13 |
| 9 Uncertainty and verification procedures.....                                            | 14 |
| 9.1 Energy consumption .....                                                              | 14 |
| 9.2 Oven volume .....                                                                     | 14 |
| Annex A (normative) Description of the test brick and position of the thermocouples ..... | 16 |
| A.1 Specification.....                                                                    | 16 |
| A.2 Position of the thermocouples .....                                                   | 16 |
| Annex B (informative) Explanation of the formulae.....                                    | 18 |
| B.1 Explanation of the Formulae Subscripts.....                                           | 18 |
| B.2 Explanation of the Formulae Superscripts .....                                        | 18 |
| Annex C (normative) Calculation sheet .....                                               | 19 |
| Annex D (informative) Example of Supplier and Order Specification.....                    | 21 |
| Bibliography .....                                                                        | 22 |

## Foreword

This document (EN 15181:2008) 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 April 2009, and conflicting national standards shall be withdrawn at the latest by April 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document is suitable for direct comparison and is considered sufficiently reproducible within given limits for the purpose of energy labelling according to the European Union Directive 92/75/EEC on “Indication by labelling and standard product information of the consumption of energy and other resources by household appliances”.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

The object of this European Standard is to specify, in accordance with the European Union Directive 92/75/EEC on "Indication by labelling and standard product information of the consumption of energy and other resources by household appliances":

- energy consumption using a standardised load during a standardised procedure;
- some performance characteristics (like volume....);
- permitted tolerances to values declared by the manufacturer and control procedures for checking the declared values.

## 1 Scope

This 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 utilising gases of group H or group E, possibly after conversion according to manufacturer's instructions.

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

It also applies to domestic appliances that can utilise gas and/or electrical energy to provide heat for cooking when the ovens are utilising 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 cavity ovens (3.2);
- ovens without adjustable temperature control;
- 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 also, by design, provides space and/or water heating;
- appliances designed for use with gases of the third family only.

This standard is concerned neither with safety nor with performance requirements.

## 2 Normative references

The following referenced documents are indispensable for the application 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 30-1-1:2008, *Domestic cooking appliances burning gas fuel – Part 1-1: Safety – General*

EN 30-1-2:1999, *Domestic cooking appliances burning gas – Part 1-2: Safety – Appliances having forced-convection ovens and/or grills*

EN 30-1-4:2002, *Domestic cooking appliances burning gas – Part 1-4: Safety – Appliances having one or more burners with an automatic burner control system*

EN 60584-2, *Thermocouples – Part 2: Tolerances (IEC 60584-2:1982)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 30-1-1:2008, EN 30-1-2:1999 or EN 30-1-4:2002 and the following apply.

NOTE EN 30-1-1:2008, EN 30-1-2:1999 or EN 30-1-4:2002 apply if the appliance falls within the scope of that standard.

### **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 < 250mm
- or height < 120 mm

NOTE 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 manufacturer's instructions

## **4 List of measurements**

### **4.1 Dimensions**

Dimensions of the useful oven volume (see Clause 6).

### **4.2 Energy consumption and heating time**

Heating of the load (see Subclause 7.2).

## **5 General conditions for measurements**

### **5.1 General**

According to good laboratory practice, before installation, it shall be checked that the appliance is free from damage and complies with 6.1.1: leakage, of EN 30-1-1:2008, EN 30-1-2:1999 or EN 30-1-4:2002, as applicable.

The manufacturer's instructions regarding installation of the oven shall be followed.