

STN	Metódy merania spotreby energie plynových rúr na pečenie na plynné palivá	STN EN 15181 06 1402
------------	--	--

Measuring method of the energy consumption of gas fired ovens

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/17

Obsahuje: EN 15181:2017

Oznámením tejto normy sa ruší
STN EN 15181 (06 1402) z augusta 2009

125381

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	7
4 List of measurements	7
4.1 Dimensions and mass	7
4.2 Energy consumption and heating time	7
5 General conditions for measurements.....	8
5.1 General.....	8
5.2 Ambient temperature.....	8
5.3 Test gases and test pressures	9
5.4 Electrical supply	9
5.5 Load.....	9
5.6 Instrumentation	9
5.7 Positioning of the appliance.....	10
5.8 Auxiliary electrical energy.....	10
6 Calculated oven volume and mass	10
6.1 Calculation of the oven volume	10
6.2 General.....	10
6.2.1 Introduction	10
6.2.2 Usable height	12
6.2.3 Usable width	12
6.2.4 Usable depth	12
6.2.5 Calculated volume.....	13
6.3 Mass of the oven.....	13
7 Energy consumption and time.....	13
7.1 Measurement of oven temperature.....	13
7.2 Energy consumption and time for heating a load.....	13
7.2.1 Purpose.....	13
7.2.2 Preparation	13
7.2.3 Measurement.....	14
8 Data to be provided for the technical file	18
9 Uncertainty and verification procedures.....	19
9.1 Energy consumption	19
9.2 Oven volume	19
9.3 Measured oven temperature	19
9.4 Mass of the oven.....	19
Annex A (normative) Description of the test brick and position of the thermocouples	20
A.1 Specification.....	20
A.2 Position of the thermocouples	20
Annex B (informative) Explanation of the formulae	21

B.1	Explanation of the Formulae Subscripts	21
B.2	Explanation of the Formulae Superscripts.....	21
Annex C (normative)	Calculation sheet	22
Annex D (informative)	Marking the temperature setting for checking the oven temperature	24
Annex ZA (informative)	Coverage of Requirements of Delegated Regulation (EC) No 65/2014/EU and of Commission Regulation No 66/2014/EU	25
Bibliography	26

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).

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)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN