

BS EN 30-1-2:2012



BSI Standards Publication

# Domestic cooking appliances burning gas — Safety

Part 1-2: Appliances having forced-  
convection ovens and/or grills

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**National foreword**

This British Standard is the UK implementation of EN 30-1-2:2012. It supersedes BS EN 30-1-2:1999 which is withdrawn.

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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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## Domestic cooking appliances burning gas - Safety - Part 1-2: Appliances having forced-convection ovens and/or grills

Appareils de cuisson domestiques utilisant les  
combustibles gazeux - Sécurité - Partie 1-2: Appareils  
comportant des fours à convection forcée

Haushalt-Kochgeräte für gasförmige Brennstoffe -  
Sicherheit - Teil 1-2: Geräte mit Umluft-Backöfen und/oder  
Strahlungsgrilleinrichtungen

This European Standard was approved by CEN on 26 February 2012.

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## Contents

Page

Foreword.....	4
1 Scope .....	6
2 Normative references .....	7
3 Terms and definitions .....	7
4 Classification.....	7
5 Constructional requirements.....	8
5.1 General.....	8
5.2 Convection fan .....	8
6 Operational requirements .....	8
6.1 General.....	8
6.2 Obtaining the nominal heat input.....	8
6.3 Failure of the cooling fan or thermostat.....	8
6.4 Ignition, cross-lighting, flame stability.....	8
6.5 Additional requirements for appliances having forced-convection ovens and/or grills.....	9
6.5.1 Abnormal conditions of convection .....	9
6.5.2 Stalled convection fan.....	9
7 Test methods.....	9
7.1 General.....	9
7.1.1 Reference and test gases .....	9
7.1.2 Test pressures .....	10
7.1.3 Test procedures .....	10
7.1.4 Pans and oven and grill accessories.....	10
7.1.5 Ovens and grill temperature .....	10
7.1.6 Appliances having a mains electrical supply .....	11
7.1.7 Appliances having one or more multi-ring hotplate burners .....	11
7.1.8 Normal conditions of convection.....	11
7.2 Verification of constructional characteristics .....	11
7.2.1 Strength .....	11
7.2.2 Strength, stability.....	11
7.2.3 Accumulation of un-burnt gas in the appliance .....	11
7.2.4 Appliances with a glass lid having a device for shutting off the gas to the hotplate burners.....	12
7.2.5 Food hygiene in time controlled ovens .....	12
7.2.6 Convection fan .....	12
7.3 Verification of operational requirements .....	12
7.3.1 General tests .....	12
7.3.2 Specific tests for hotplates .....	13
7.3.3 Specific tests for ovens and grills .....	14
7.3.4 Additional tests for appliances having forced-convection ovens and/or grills .....	15
8 Marking and instructions .....	16
8.1 Appliance marking.....	16
8.1.1 General.....	16
8.1.2 Data plates and labels .....	16
8.1.3 Other appliance marking.....	16
8.2 Marking of the packaging .....	16
8.3 Instructions .....	16
8.3.1 General.....	16
8.3.2 Technical instructions.....	16

<b>8.3.3</b>	<b>Instructions for use and maintenance .....</b>	<b>16</b>
<b>8.3.4</b>	<b>Instructions for conversion to other gases .....</b>	<b>17</b>
<b>Annex ZA</b>	<b>(informative) Relationship between this European Standard and the Essential Requirements or other provisions of EU Directive 2009/142/EC.....</b>	<b>18</b>

## Foreword

This document (EN 30-1-2:2012) 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 October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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 supersedes EN 30-1-2:1999.

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.

This standard is intended to be used together with EN 30-1-1:2008+A2:2010 on which the requirements and methods of test for appliances having forced-convection ovens and/or grills are based. In particular, this standard identifies the requirements and methods of test specific to these appliances, which are in addition to, or replace, those given in EN 30-1-1:2008+A2:2010.

This part is also intended to be used together with any other part of EN 30-1-x related to "Safety", whenever the appliances covered by this other part include a forced convection oven and/or grill.

Other European Standards covering domestic cooking appliances burning gas are as follows:

- EN 30-1-1: Domestic cooking appliances burning gas — Part 1-1: Safety — General,
- EN 30-1-3: Domestic cooking appliances burning gas — Part 1-3: Safety — Appliances having a glass ceramic hotplate,
- EN 30-1-4: Domestic cooking appliances burning gas — Safety — Part 1-4: Appliances having one or more burners with an automatic burner control system
- EN 30-2-1: Domestic cooking appliances burning gas — Part 2-1: Rational use of energy — General,
- EN 30-2-2: Domestic cooking appliances burning gas — Part 2-2: Rational use of energy — Appliances having forced-convection ovens and /or grills.

Requirements concerning the emission of NO<sub>x</sub> are not mentioned in this European Standard, taking account of the usage of the appliances and their low output, their contribution to environment pollution is negligible.

The main change since the last edition are as follows (minor changes are not listed):

- adaptation to EN 30-1-1:2008/A2:2010 and to its editorial contents.

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, Croatia, 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, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies the special constructional and operational characteristics, as well as the requirements and methods of test for safety and marking, for domestic cooking appliances having forced-convection ovens and /or grills using combustible gases, as defined in EN 30-1-1:2008+A2:2010.

Unless specifically excluded, this European Standard applies to appliances or their component parts, whether the component parts are independent or incorporated as part of the appliance, even if the other heating components use electrical energy (for example combined gas-electric cookers).

This European Standard includes requirements covering the electrical safety of equipment incorporated in the appliance that are associated with the use of gas. It does not include requirements covering the electric safety of electrically-heated components or their associated equipment<sup>1)</sup>.

This European Standard does not apply to:

- outdoor appliances;
- appliances connected to a combustion products evacuation duct;
- appliances having a pyrolytic gas oven;
- appliances having covered burners which do not comply with the constructional requirements of EN 30-1-1:2008+A2:2010, 5.2.8.2.2;
- appliances incorporating flame supervision devices and having an automatic ignition device for which the duration of the ignition attempt is limited by design;
- appliances equipped with a burner that is periodically ignited and extinguished under the control of an automatic on/off device;
- appliances equipped with a burner having a fan for the supply of combustion air or for the evacuation of the products of combustion;
- appliances supplied at pressures greater than those defined in EN 30-1-1:2008+A2:2010, 7.1.2;
- appliances equipped with an oven and/or with a grill having a fan either for the supply of combustion air or for the evacuation of the products of combustion;
- appliances equipped with a compartment in which a burner and an electric heating element can function simultaneously;
- appliances having one or more burners that are capable of remote operation (type 1 or type 2), unless the burner(s) concerned are thermostatically controlled oven burners of time-controlled ovens that are designed for a delayed start without the user being present.

This European Standard does not cover the requirements relating to third family gas cylinders, their regulators and their connection.

This European Standard only covers type testing.

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<sup>1)</sup> Refer to the electrical safety rules.



## 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+A2:2010, *Domestic cooking appliances burning gas — Part 1-1: Safety — General*

EN 60335-2-6:2003, *Household and similar electrical appliances — Safety — Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances (IEC 60335-2-6:2002, modified)*

## 3 Terms and definitions

For the purposes of this document, the definitions given in EN 30-1-1:2008+A2:2010, Clause 3 and the following apply.

### 3.1

#### **conventional oven**

closed compartment for cooking roasts, pastries, etc., in which the transmission of heat is carried out by natural convection

### 3.2

#### **conventional grill**

appliance or part of an appliance that allows cooking by radiant heat from a surface which is raised to a high temperature and for which a fan is not used for the transmission of heat

### 3.3

#### **forced-convection oven or grill**

oven or grill equipped with a fan intended to assist the transmission of heat by creating a forced circulation of air or products of combustion; this fan is not intended to supply combustion air

### 3.4

#### **dual purpose oven or grill**

forced-convection oven or grill capable of being used as a conventional oven or grill

### 3.5

#### **normal conditions of convection**

conditions of convection that correspond to the operation of a forced-convection oven or grill that can be used with or without the fan in operation in accordance with the manufacturer's instructions

### 3.6

#### **abnormal conditions of convection**

abnormal conditions that relate to operating conditions of the appliance, if this is possible, in which the burner or burners that are not intended to function without the convection fan are capable of being put into operation when the convection fan has failed

## 4 Classification

The classification of EN 30-1-1:2008+A2:2010, Clause 4 shall be applied.

## 5 Constructional requirements

### 5.1 General

The appliance shall comply with the requirements of EN 30-1-1:2008+A2:2010, Clause 5, any verifications in the form of tests being carried out in accordance with Clause 7 of this European Standard rather than the corresponding clauses of EN 30-1-1:2008+A2:2010.

The appliance shall also satisfy the following requirements.

### 5.2 Convection fan

Moving parts of the fan of forced-convection ovens and grills shall be arranged or protected in such a way that in normal use appropriate protection of persons against accidents is assured.

The removal of any parts allowing access to moving parts of the fan shall not be possible without tools unless the procedure employed to reach these moving parts causes the fan to stop automatically, for example by shutting off the electrical supply, or by mechanical locking of the rotor.

Under the conditions of EN 60335-2-6:2003, 20.2, after application of a force on the parts preventing access to moving parts of the fan, any deformations or alterations of position caused shall not allow the moving parts of the fan to be touched with the test finger.

## 6 Operational requirements

### 6.1 General

Unless specifically modified hereafter, the appliance shall comply with the requirements of EN 30-1-1:2008+A2:2010, Clause 6 when it is operating under the normal conditions of convection, any verifications in the form of tests being carried out in accordance with Clause 7 of this European Standard rather than those of the corresponding clauses of EN 30-1-1:2008+A2:2010.

The appliance shall also satisfy the special requirements in 6.5.

### 6.2 Obtaining the nominal heat input

EN 30-1-1:2008+A2:2010, 6.1.2.1 applies with the addition of the following:

For dual purpose ovens or grills, the manufacturer can declare:

- either a single nominal heat input, common to both modes of operation with or without fan;
- or two nominal heat inputs, corresponding to each mode of operation with or without fan.

### 6.3 Failure of the cooling fan or thermostat

For forced-convection ovens or grills, the requirements of EN 30-1-1:2008+A2:2010, 6.1.9 and 6.1.10 apply under the normal conditions of convection.

### 6.4 Ignition, cross-lighting, flame stability

EN 30-1-1:2008+A2:2010, 6.3 shall apply, with the following modification:

The second paragraphs of EN 30-1-1:2008+A2:2010, 6.3.1.1 and 6.3.1.2 are replaced by the following text:

After ignition under these conditions and under the normal conditions of convection, the flames shall be stable and quiet. A slight tendency to flame lift is permitted on ignition but the flames shall be stable 120 s after ignition.

## **6.5 Additional requirements for appliances having forced-convection ovens and/or grills**

### **6.5.1 Abnormal conditions of convection**

#### **6.5.1.1 Ignition, cross-lighting, flame stability**

If the design of the appliance is such that ignition of a forced-convection oven or grill is possible under abnormal conditions of convection, the oven or grill is lit in still air under the conditions of test in 7.3.4.1.2. It shall be verified that ignition and cross lighting are carried out smoothly within 5 s, starting from the moment when the control handle is in the full-on position or in the ignition position, if this exists.

After ignition under these abnormal conditions of convection, the flames shall be stable and quiet. A slight tendency to flame lift is permitted on ignition but the flames shall be stable 120 s after ignition.

#### **6.5.1.2 Combustion**

For forced-convection ovens and/or grills that are not intended to be used without the fan and which are not equipped with a device interrupting the gas supply in the event of fan failure, it shall be verified under the conditions of 7.3.4.1.3 that the volume concentration of CO in the dry, air-free products of combustion does not exceed 0,20 % after 15 min before operation at the full-on rate.

#### **6.5.1.3 Safety device in the event of failure of the convection fan**

For forced-convection ovens and/or grills that are not intended to be used without the fan and which are equipped with a device for interrupting the gas supply in the event of convection fan failure, it is verified under the condition of 7.3.4.1.1 that operation of the burner, or burners, which are only intended to operate with the fan, is not possible when the fan is out of action.

### **6.5.2 Stalled convection fan**

For an appliance having one or more forced convection ovens and/or grills, the temperature of auxiliary equipment that can be affected by overheating of the motor in the event of stalling the convection fan shall not exceed the temperature specified by the manufacturer under the conditions defined in 7.3.4.2.

## **7 Test methods**

### **7.1 General**

The requirements in 7.1.1. to 7.1.7 modify the general conditions of tests given in EN 30-1-1:2008+A2:2010, 7.1.1 to 7.1.7 in order that they are suitable for appliances having forced-convection ovens and/or grills. These general conditions are to be applied even when references are made to the methods of test given in EN 30-1-1:2008+A2:2010.

#### **7.1.1 Reference and test gases**

##### **7.1.1.1 Characteristics of the test gases**

EN 30-1-1:2008+A2:2010, 7.1.1.1 shall apply.

#### 7.1.1.2 Conditions for producing test gases

EN 30-1-1:2008+A2:2010, 7.1.1.2 shall apply.

#### 7.1.1.3 Practical methods of test

EN 30-1-1:2008+A2:2010, 7.1.1.3 shall apply.

#### 7.1.2 Test pressures

EN 30-1-1:2008+A2:2010, 7.1.2 shall apply.

#### 7.1.3 Test procedures

EN 30-1-1:2008+A2:2010, 7.1.3, and its sub-clauses, shall apply with the following addition to 7.1.3.2.4:

For dual purpose ovens or grills,

- if a single nominal heat input is declared, the initial adjustment of the burner is carried out with the fan in operation and this adjustment is retained for the tests with the fan stopped;
- if two nominal heat inputs are declared, the tests shall be carried out with the initial adjustment corresponding to the conditions of operation of the convection fan.

#### 7.1.4 Pans and oven and grill accessories

##### 7.1.4.1 Individual tests

EN 30-1-1:2008+A2:2010, 7.1.4 shall apply.

##### 7.1.4.2 Simultaneous tests

EN 30-1-1:2008+A2:2010, 7.1.4.2 shall apply.

##### 7.1.4.3 Oven and grill accessories

When a forced-convection oven or grill accessory shall, in accordance with the instructions for use and maintenance, be placed in a fixed position in order to assure the safety of operation of the oven or grill,

- the accessory shall carry a specific marking, in accordance with 8.1.3;
- all the tests of this standard shall be carried out with the accessory placed in each of the extreme positions of horizontal displacement.

#### 7.1.5 Ovens and grill temperature

For conventional ovens or grills, EN 30-1-1:2008+A2:2010, 7.1.5 shall apply.

For dual-purpose ovens or grills, EN 30-1-1:2008+A2:2010, 7.1.5 shall apply when the fan is not in operation.

When a forced-convection oven or grill operates with the convection fan in operation, the following conditions apply:

- a) for an oven with a thermostat, the control handle is positioned in order to obtain an average temperature of 210 °C at the centre of the oven with reference gas at the normal test pressure;

- b) for an oven without thermostat, the control handle is positioned at the highest setting until an average temperature of about 210 °C is obtained at the centre of the oven with reference gas at the normal test pressure. The control handle is then placed in the position allowing the temperature of 210 °C to be maintained;
- c) for all ovens:
- 1) if the oven temperature control is not continuous in action, the control handle is set in the position corresponding to the nearest possible temperature above 210 °C;
  - 2) if a temperature of 210 °C at the centre of the oven cannot be achieved, the control handle is set in the position corresponding to the maximum temperature;
- d) for grills, the control handle is set to the position corresponding to the maximum temperature.

#### **7.1.6 Appliances having a mains electrical supply**

EN 30-1-1:2008+A2:2010, 7.1.6 shall apply.

#### **7.1.7 Appliances having one or more multi-ring hotplate burners**

EN 30-1-1:2008+A2:2010, 7.1.7 shall apply.

#### **7.1.8 Normal conditions of convection**

If, in accordance with the instructions, the forced-convection oven or grill:

- is not usable without the convection fan, the normal conditions of convection relate to operation only with the fan;
- is usable without the convection fan, the normal conditions of convection relate to operation with and without the fan.

### **7.2 Verification of constructional characteristics**

#### **7.2.1 Strength**

EN 30-1-1:2008+A2:2010, 7.2.1 shall apply.

#### **7.2.2 Strength, stability**

EN 30-1-1:2008+A2:2010, 7.2.2 shall apply.

#### **7.2.3 Accumulation of un-burnt gas in the appliance**

##### **7.2.3.1 Examination of the construction**

EN 30-1-1:2008+A2:2010, 7.2.3.1 shall apply with the following additions:

- to the second paragraph, add
- 4) Appliances having forced-convection ovens and/or grills: items A), B), C), D), E) and F).
- to Table 10, the following item F):

Items	Factors
F)	Normal and abnormal conditions of convection

### 7.2.3.2 Test

EN 30-1-1:2008+A2:2010, 7.2.3.2 shall apply.

### 7.2.4 Appliances with a glass lid having a device for shutting off the gas to the hotplate burners

EN 30-1-1:2008+A2:2010, 7.2.4 shall apply.

### 7.2.5 Food hygiene in time controlled ovens

EN 30-1-1:2008+A2:2010, 7.2.5 shall apply.

### 7.2.6 Convection fan

The requirements of 5.2 shall be verified.

## 7.3 Verification of operational requirements

### 7.3.1 General tests

#### 7.3.1.1 Soundness

EN 30-1-1:2008+A2:2010, 7.3.1.1 shall apply.

#### 7.3.1.2 Obtaining the rates

##### 7.3.1.2.1 Obtaining the nominal heat input

EN 30-1-1:2008+A2:2010, 7.3.1.2.1 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

##### 7.3.1.2.2 Obtaining the reduced heat input

EN 30-1-1:2008+A2:2010, 7.3.1.2.2 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

#### 7.3.1.3 Flame supervision device

EN 30-1-1:2008+A2:2010, 7.3.1.3 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

#### 7.3.1.4 Safety of operation

EN 30-1-1:2008+A2:2010, 7.3.1.4 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

#### **7.3.1.5 Heating**

EN 30-1-1:2008+A2:2010, 7.3.1.5 shall apply with the following additions:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

To the paragraph "Ovens" in EN 30-1-1:2008+A2:2010, 7.3.1.5.2.1, when the tests require that the convection fan is in operation, the temperature of 200 °C is replaced by 180 °C or the maximum temperature that it is possible to achieve, if this is less than 180 °C.

#### **7.3.1.6 Overheating of the LPG cylinder and its compartment**

EN 30-1-1:2008+A2:2010, 7.3.1.6 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

#### **7.3.1.7 Total input rate of the appliance**

EN 30-1-1:2008+A2:2010, 7.3.1.7 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection corresponding to the highest nominal heat input.

#### **7.3.1.8 Regulator performance**

EN 30-1-1:2008+A2:2010, 7.3.1.8 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection corresponding to the highest nominal heat input.

### **7.3.2 Specific tests for hotplates**

#### **7.3.2.1 Ignition, cross-lighting, flame stability**

EN 30-1-1:2008+A2:2010, 7.3.2.1 shall apply, with the addition of the following text to 7.3.2.1.1:

If the appliance has a forced-convection oven and/or grill, the tests are carried out under the normal conditions of convection.

If the appliance has two forced-convection ovens and/or grills situated under the hotplate that are capable of operating simultaneously, the tests requiring their operation are carried out under all combinations of the normal conditions of convection.

#### **7.3.2.2 Resistance to draught**

EN 30-1-1:2008+A2:2010, 7.3.2.2 shall apply.

#### **7.3.2.3 Resistance to liquid spillage**

EN 30-1-1:2008+A2:2010 7.3.2.3 shall apply.

#### **7.3.2.4 Combustion**

EN 30-1-1:2008+A2:2010, 7.3.2.4 shall apply with the addition of the following text to test N°4 of 7.3.2.4.1:

For dual-purpose ovens or grills, the tests are carried out under the normal conditions of convection.

### **7.3.3 Specific tests for ovens and grills**

#### **7.3.3.1 Ignition, cross-lighting, flame stability**

##### **7.3.3.1.1 General**

EN 30-1-1:2008+A2:2010, 7.3.3.1.1 shall apply with the following addition:

For forced-convection ovens and/or grills, the tests are carried out under the normal conditions of convection.

##### **7.3.3.1.2 Cold ignition and cross-lighting**

EN 30-1-1:2008+A2:2010, 7.3.3.1.2 shall apply.

##### **7.3.3.1.3 Hot ignition and cross-lighting**

EN 30-1-1:2008+A2:2010, 7.3.3.1.3 shall apply.

##### **7.3.3.1.4 Rate reduction**

EN 30-1-1:2008+A2:2010, 7.3.3.1.4 shall apply.

##### **7.3.3.1.5 Operation of the oven door**

EN 30-1-1:2008+A2:2010, 7.3.3.1.5 shall apply with the following addition:

If the appliance has a forced-convection oven and/or grill, the tests are carried out under the normal conditions of convection.

If the appliance has two forced-convection ovens and/or grills that are capable of operating simultaneously, the tests requiring their operation are carried out under all combinations of the normal conditions of convection.

##### **7.3.3.1.6 Operation of the building-in unit door**

EN 30-1-1:2008+A2:2010, 7.3.3.1.6 shall apply.

##### **7.3.3.1.7 Grill in the oven compartment**

EN 30-1-1:2008+A2:2010, 7.3.3.1.7 shall apply.

##### **7.3.3.1.8 High level grill**

EN 30-1-1:2008+A2:2010, 7.3.3.1.8 shall apply.

##### **7.3.3.1.9 Influence between two ovens or grills**

EN 30-1-1:2008+A2:2010, 7.3.3.1.9 shall apply with the following addition:

If the appliance has one or more forced-convection ovens and/or grills that are capable of operating simultaneously, the tests are carried out under all combinations of the normal conditions of convection.

##### **7.3.3.1.10 Built-in ovens**

EN 30-1-1:2008+A2:2010, 7.3.3.1.10 shall apply.



### **7.3.3.2 Combustion**

EN 30-1-1:2008+A2:2010, 7.3.3.2 shall apply with the following addition:

For forced-convection ovens and/or grills, this subclause applies under the normal conditions of convection.

EN 30-1-1:2008+A2:2010, 7.3.3.2.8 shall apply with the following addition:

If the grill is intended to be operated with the door open this subclause applies.

## **7.3.4 Additional tests for appliances having forced-convection ovens and/or grills**

### **7.3.4.1 Abnormal conditions of convection**

#### **7.3.4.1.1 General**

The verification of the compliance with the requirements in 6.5.1 is made by applying the requirements in 7.3.4.1.2 and 7.3.4.1.3 as applicable.

#### **7.3.4.1.2 Ignition, cross-lighting, flame stability**

EN 30-1-1:2008+A2:2010, 7.3.3.1.1, 7.3.3.1.2 and 7.3.3.1.3 shall apply, only carrying out the tests for which reference gas is used at the normal test pressure.

These tests are carried out with the convection fan put out of action.

#### **7.3.4.1.3 Combustion**

EN 30-1-1:2008+A2:2010, 7.3.3.2.3 shall apply for forced-convection ovens and/or grills which are not intended to be used without the fan, under the following special conditions.

The fan is put out of action and it is verified that the requirements described in 6.5.1.2 are satisfied, with each of the reference gases at the normal test pressure.

### **7.3.4.2 Stalled convection fan**

An appliance having one or more forced-convection ovens and/or grills is submitted to tests N°1 and N°2 described in EN 30-1-1:2008+A2:2010, 7.3.1.5.2.3.

If operation of the burner(s) that are only intended to be operated with the convection fan is not possible under the conditions of 7.3.4.1.2 and 7.3.4.1.3, the requirements of 6.5.1.3 are satisfied.

At the start of the test, the convection fan is supplied with voltage, but the normal rotation of the blades is prevented by a mechanical means. The temperatures of the auxiliary equipment are measured during the test in accordance with EN 30-1-1:2008+A2:2010, 7.3.1.5. The maximum temperatures attained during each test are recorded, in order to verify their conformity with the requirement of 6.5.2.

If the appliance is equipped with more than one convection fan, the above tests are carried out by locking the rotation of the blades of each fan successively.

## 8 Marking and instructions

### 8.1 Appliance marking

#### 8.1.1 General

EN 30-1-1:2008+A2:2010, 8.1 shall apply.

#### 8.1.2 Data plates and labels

EN 30-1-1:2008+A2:2010, 8.1.1 shall apply with the following addition to the text, at the last indent:

Where two nominal heat inputs are declared in accordance with 6.2, only the maximum heat input shall be stated.

#### 8.1.3 Other appliance marking

EN 30-1-1:2008+A2:2010, 8.1.2 shall apply with the following addition:

If, in accordance with the instructions for use and maintenance, a forced-convection oven or grill accessory is to be maintained in a fixed position in order to assure the safety of operation of the oven or grill, this accessory shall carry a permanent marking indicating that it is to be retained in the required position e.g. leave in the lowest runner.

### 8.2 Marking of the packaging

EN 30-1-1:2008+A2:2010, 8.2 shall apply.

### 8.3 Instructions

#### 8.3.1 General

EN 30-1-1:2008+A2:2010, 8.3.1 shall apply.

#### 8.3.2 Technical instructions

EN 30-1-1:2008+A2:2010, 8.3.2 shall apply with the following addition to 8.3.2.2:

Where two nominal heat inputs are indicated in relation to the conditions of convection, they shall be identified in relation to the mode of operation of the fan.

#### 8.3.3 Instructions for use and maintenance

EN 30-1-1:2008+A2:2010, 8.3.3 shall apply with the following addition:

They shall include:

- the instructions concerning the use of the fan at the time of ignition;
- the mode of operation of the convection fan, stating clearly if the oven or grill can also be used without the fan;
- the instructions allowing the user to carry out dismantling and re-assembly operations for the purpose of normal cleaning and maintenance in a safe manner and, in particular, specifying the disconnection of the electrical supply before any such operations;

- the action to be taken in the event of fan failure, and, in particular, to inform the user of the means of detecting such a failure.

The total nominal heat input indicated by the manufacturer shall correspond to the sum of the highest heat inputs. For the different nominal heat inputs of the burners it is the highest nominal rate which has to be taken into account.

In addition, if the oven and/or grill is designed only for use with the fan in operation, the instructions for use and maintenance shall contain the following warning:

**WARNING : Do not use the oven (and/or the grill) if the fan is not working.**

Moreover, when an accessory of an oven or grill is required to be maintained in a fixed position in order to assure the safety of operation of the oven or grill, the instructions shall identify it and give details in relation to the marking carried by the accessory, in accordance with 8.1.3.

#### **8.3.4 Instructions for conversion to other gases**

EN 30-1-1:2008+A2:2010, 8.3.4 shall apply.

## **Annex ZA** (informative)

### **Relationship between this European Standard and the Essential Requirements or other provisions of EU Directive 2009/142/EC**

This European Standard has been under a mandate given to CEN by the European Commission and the European Free Trade Association and supports essential requirements of the EU Directive 2009/142/EC on the approximation of the Laws of Member States concerning gas appliances.

**WARNING : Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.**

The following clauses of this standard are likely to support requirements of EU Directive 2009/142/EC on the approximation of the Laws of Member States concerning gas appliances.

Compliance with clauses of this standard is one of the means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

Table ZA.1 (1 of 3)

Essential requirement	Subject	Requirements of the standard		Comments
		Clause of EN 30-1-1:2008+A2:2010 <sup>a</sup>	Clause of EN 30-1-2:2012	
<b>1</b>	<b>Annex 1</b>  <b>General conditions</b>			
1.1	Safety of operation	1 - 2 - 3 - 5.1.1 - 5.1.3 - 5.1.9 - 5.2.2  (except 5.2.2.2) - 5.2.3 - 6.1.5.1.3 - 6.1.5.1.4 - 6.1.5.1.5 - 6.1.7 - 6.1.8 - 6.1.6.1	1 - 2 - 3 - 5.1 - 5.2 - 6.2	Requirement of EN 30-1-1:2008+A1:2010, 6.1.6.1 is only applicable to appliances with an incorporated LPG cylinder
1.2	<b>Marking and instructions</b> Instructions for the installer Instructions for the user Warnings Official languages		) ) 8 ) )	
1.2.1	Information in the technical instructions		8.3.1 and 8.3.2	
1.2.2	Content of the instructions for use and maintenance		8.3.1 and 8.3.3	
1.2.3	Marking on the appliance and packaging		8.1 8.2	
1.3	<b>Fittings</b>	2 - 5.2.4 - 5.2.6 - 5.2.7		
<b>2</b>	<b>Materials</b>			
2.1	Characteristics	5.1.2		
2.2	Guarantee	1 and foreword		
<b>3</b>	<b>Design and construction</b>			
<b>3.1</b>	<b>General</b>			
3.1.1	Durability	5.1.2 - 5.1.4 - 5.1.6 - 5.1.7 - 5.1.8 - 5.2.1 - 5.2.8 - 5.2.9 - 5.2.10 - 6.1.4.1		
3.1.2	Condensation	5.1.2, 2nd paragraph, 2nd indent		
3.1.3	Risk of explosion	5		
3.1.4	Penetration of water and air	5.1.5 - 6.1.1		"Penetration of water" : not applicable
3.1.5	Normal fluctuation of auxiliary energy	5.1.10 - 6.2.2 - 6.3.2		

"to be continued"

Table ZA.1 (2 of 3)

Essential requirement	Subject	Requirements of the standard		Comments
		Clause of EN 30-1-1:2008+A2:2010 <sup>a</sup>	Clause of EN 30-1-2:2012	
3.1.6	Abnormal fluctuation of auxiliary energy	5.1.10 - 6.2.2 - 6.3.2		
3.1.7	Electrical safety	5.1.11		
3.1.8	Parts under pressure	5.1.2 - 6.1.6.2		Only applicable to appliances with an incorporated LPG cylinder
3.1.9	Failure of a safety device : - flame supervision device - regulator - thermostat - cooling fan - convection fan	5.2.6 - 6.1.3 5.2.7 - 6.1.8 5.2.4 - 6.1.10 5.2.11 - 6.1.9	6.3 - 6.5.1.3 - 6.5.2	
3.1.10	Safety/control	5.2.6		
3.1.11	Protection of parts adjusted by the manufacturer	5.2.3 - 5.2.7		
3.1.12	Marking of adjusting and control devices	5.2.2.2 - 5.2.4	7.2.3.1	
<b>3.2</b>	<b>Unburnt gas release</b>			
3.2.1	Risk of gas leakage	5.1.5 - 5.1.6 - 6.1.1.1 6.1.4.2.1		
3.2.2	Risk of accumulation in the appliance	5.2.6 - 5.2.9.1.4 - 5.2.12 -, 6.1.3 - 6.2.1 - 6.3.1 - 6.1.4.2.2	6.5.1.1	
3.2.3	Risk of accumulation in the space	5.2.6 - 6.1.3	8.1 - 8.2 - 8.3.2.1 - 8.3.3	
3.3	<b>Ignition</b>			
	Ignition	5.2.5 - 5.2.9.2 - 5.2.12.2 6.2.1 - 6.3.1	6.3 - 6.4 - 6.5.1.1	
	Re-ignition	5.2.12.3 6.2.1 of EN 30-1-1:2008+A2:2010 in the tests conditions of 7.3.2.1.3 of EN 30-1-2:2012 6.3.1 of EN 30-1-1:2008+A2:2010 in the tests conditions of 7.3.3.1.3 of EN 30-1-2:2012		
	Cross-lighting	6.2.1 - 6.3.1	6.5.1.1	

"to be continued"

**Table ZA.1 (3 of 3)**

Essential requirement	Subject	Requirements of the standard		Comments
		Clause of EN 30-1-1:2008+A2:2010 <sup>a</sup>	Clause of EN 30-1-2:2012	
<b>3.4</b>	<b>Combustion</b>			
3.4.1	Flame stability Concentration of harmful substances in the combustion products	6.2.1 - 6.3.1 5.2.9.3 - 6.2.2 - 6.3.2 (see foreword)	6.4 - 6.5.1.1 6.3 - 6.5.1.2	
3.4.2	Release of combustion products			Not applicable
3.4.3	Release of combustion products into the space (for appliances having a flue, in the event of abnormal draught)			Not applicable
3.4.4	CO limit in the space			Not applicable
<b>3.5</b>	<b>Rational use of energy</b>		See EN 30-2-2:1999	
<b>3.6</b>	<b>Temperatures</b>			
3.6.1	Floor and adjacent surfaces	6.1.5.2	6.3	
3.6.2	Control handles	6.1.5.1.6 - 6.1.5.1.7		
3.6.3	External surface temperatures	6.1.5.1.1 - 6.1.5.1.2		
<b>3.7</b>	<b>Foodstuffs and water used for sanitary purposes</b>	5.1.2 - 5.2.13		"Water used for sanitary purposes" : not applicable
<sup>a</sup> In conformity with the dispositions specified EN 30-1-2:2012, Clauses 5 and 6, the applicable requirements of EN 30-1-1:2008+A2:2010 are verified under the test conditions of EN 30-1-2:2012, Clause 7.				

**Table ZA.2**

	Subject	Requirements of the standard	Comments
	<b>Annexe II of the Directive</b>	EN 30-1-1:2008+A2:2010, Clause 1 and Foreword	

**Table ZA.3**

	Subject	Requirements of the standard	Comments
	<b>Annex III of the Directive</b>	EN 30-1-2:2012, 8.1	







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