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Standards

Irish Standard  
I.S. EN 419-1:2009

# Non-domestic gas-fired overhead luminous radiant heaters - Part 1: Safety

## I.S. EN 419-1:2009

*Incorporating amendments/corrigenda issued since publication:*

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English Version

## Non-domestic gas-fired overhead luminous radiant heaters - Part 1: Safety

Appareils surélevés de chauffage à rayonnement lumineux  
au gaz, à usage non domestique - Partie 1 : Sécurité

Gasgeräte-Heizstrahler - Hellstrahler mit einem Brenner  
ohne Gebläse für gewerbliche und industrielle Anwendung -  
Teil 1: Sicherheit

This European Standard was approved by CEN on 19 December 2008.

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## **Foreword**

This document (EN 419-1:2009) has been prepared by Technical Committee CEN/TC 180 “Domestic and non-domestic gas fired air heaters and non-domestic gas fired overhead radiant heaters”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by July 2009, and conflicting national standards shall be withdrawn at the latest by July 2009.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 supersedes EN 419-1:1999.

In particular, it should be noted that this standard no longer includes requirements for Type B<sub>1</sub> appliances.

The test gases, test pressures and appliance categories given in this European Standard are in accordance with those specified in EN 437:2003.

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 EC Directive(s).

For relationship with EC Directive(s), see informative Annex ZA which is an integral part of this document.

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.

## **1 Scope**

This European Standard specifies the requirements and test methods for the construction, safety, classification and marking of non-domestic gas-fired overhead luminous radiant heaters for environmental comfort, incorporating an atmospheric burner system referred to in the body of the text as “appliances”.

This European Standard is applicable to Type A<sub>1</sub> appliances only (see 4.3).

This European Standard is not applicable to:

- a) appliances designed for use in domestic dwellings;
- b) outdoor appliances;
- c) appliances of heat input in excess of 120 kW (based on the net calorific value of the appropriate reference gas);
- d) appliances having fully pre-mixed gas and air burners in which:
  - 1) either the gas and all the combustion air are brought together just before the level of the combustion zone; or
  - 2) the pre-mixing of the gas and all combustion air is carried out in a part of the burner upstream of the combustion zone;
- e) appliances in which the supply of combustion air and/or the removal of the products of combustion is achieved by integral mechanical means.

This standard is applicable to appliances which are intended to be type tested. Requirements for appliances which are not intended to be type tested would need to be subject to further consideration.

Requirements concerning the rational use of energy have not been included in this European Standard.

## **2 Normative references**

The following referenced documents are indispensable for the application of this document. For dated references, only the editions cited applies. For undated referenes, the latest edition of the referenced document (including any amendments) applies.

EN 88-1:2007, *Pressure regulators and associated safety devices for gas appliances - Part 1: Pressure regulators for inlet pressures up to and including 500 mbar*

EN 125:1991, *Flame supervision devices for gas burning appliances – Thermo-electric flame supervision devices*

EN 126:2004, *Multifunctional controls for gas burning appliances*

EN 161:2007, *Automatic shut-off valves for gas burners and gas appliances*

EN 257:1992, *Mechanical thermostats for gas-burning appliances*

EN 298:2003, *Automatic gas burner control systems gas burners and gas burning appliances with or without fans*

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### EN 419-1:2009 (E)

EN 437:2003, *Test gases - Test pressures - Appliance categories*

EN 1057:2006, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 10226-1:2004, *Pipe threads where pressure-tight joints are made on the threads – Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 10226-2:2005, *Pipe threads where pressure tight joints are made on the threads – Part 2: Taper external threads and taper internal threads. Dimensions, tolerances and designation*

EN 13410:2001, *Gas-fired overhead radiant heaters - Ventilation requirements for non-domestic premises*

EN 60335-1:2002, *Household and similar electrical appliances - Safety - Part 1: General requirements*

EN 60335-2-102:2006, *Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections*

EN 60529:1991, *Degrees of protection provided by enclosures (IP code)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

EN ISO 3166-1:2006, *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes (ISO 3166-1:2006)*

EN ISO 6976:2005, *Natural gas - Calculation of the calorific value, density, relative density and Wobbe index from composition (ISO 6976:1995 including Corrigendum 1:1997, Corrigendum 2:1997 and Corrigendum 3:1999)*

ISO 7005-1:1992, *Metallic flanges - Part 1: Steel flanges*

ISO 7005-2:1988, *Metallic flanges - Part 2: Cast iron flanges*

ISO 7005-3:1988, *Metallic flanges - Part 3: Copper flanges and composite flanges*

CR 1404:1994, *Determination of emissions from appliances burning gaseous fuels during type testing*

## 3 Terms and definitions

For the purposes of this standard the following terms and definitions apply.

### 3.1 Appliance and its constituent parts

#### 3.1.1

##### **overhead luminous radiant heater**

gas-fired appliance intended for installation at a height above head level, which is designed to heat the space beneath by radiation and in which the heat is produced by means of burning the fuel at or near the outer surface of a material such as a ceramic plaque or gauze, or by means of an atmospheric burner heating a gauze or similar material

#### 3.1.2

##### **atmospheric burner**

aerated burner in which the air for combustion is entrained at atmospheric pressure



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