

BS 6173:2009



BSI Standards Publication

# Specification for installation and maintenance of gas-fired catering appliances for use in all types of catering establishments (2nd and 3rd family gases)

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### Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 22, an inside back cover and a back cover.



## Foreword

This British Standard is published by BSI and came into effect on 31 August 2009. It was prepared by Panel GSE/30/-/11, *Catering appliances*, under the authority of Technical Committee GSE/30, *Gas Installations (1st, 2nd and 3rd family gases)*. A list of organizations represented on this committee can be obtained on request to its secretary.

## Supersession

BS 6173:2009 supersedes BS 6173:2001, which is withdrawn.

## Information about this document

The revision provides an update of the previous version and has been extended to reflect changes in installation practice and legislation.

## Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in notes in smaller italic type, and does not constitute a normative element.

## Contractual and legal considerations

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

**Compliance with this British Standard cannot confer immunity from legal obligations.**

In particular, attention is drawn to the following:

- The Gas Safety (Installation and Use) Regulations 1998 [1]
- The Gas Safety (Installation and Use) Regulations 1994, as amended and applied by the Gas Safety (Application) Order 1996 [2]
- The Gas Safety (Installation and Use) (Northern Ireland) Regulations 2004 [3]
- The Health and Safety (Gas) (Guernsey) Ordinance 2006 [4]
- The Building Regulations 2000, as amended [5]
- The Building Standards (Scotland) Regulations 2004 [6]
- The Building Regulations (Northern Ireland) 2000 [7]
- The Electricity at Work Regulations 1989 [8,9]
- The Provision and Use of Work Equipment Regulations 1998 [10]
- The Gas Appliances (Safety) Regulations 1995 [11]
- The Water Supply (Water Fittings) Regulations 1999, as amended [12]
- The Health and Safety at Work etc Act 1974 [13]
- The Regulatory Reform (Fire Safety) Order 2005 [14]
- The Food Safety (General Food Hygiene) Regulations 1995, as amended [15]

The Gas Cooking Appliances (Safety) Regulations 1989 [16]

The Dangerous Substances and Explosive Atmospheres  
Regulations 2002 [17]

*NOTE Persons working in a catering establishment need to be aware of the Food Hygiene Regulations [18,19,20,21] before they enter the establishment. In many cases, chefs/managers will not permit entry until all persons are trained and instructed under these Regulations.*

# 1 Scope

This British Standard specifies requirements for the installation, servicing and maintenance of new and previously-used gas-fired catering appliances used in catering establishments, burning 2nd or 3rd family gases.

It is not applicable to LPG catering installations where appliances are sited temporarily in the open air, marquees or tents, or to LPG installations in mobile catering vehicles (see UKLPG CoP 24, Parts 3 and 4 [22,23]).

*NOTE 1 This standard also applies to the installation of typical domestic cookers or leisure appliances such as barbecues when installed in commercial catering sites or establishments. It is not intended to apply to primarily domestic premises, e.g. those supplying a small number of clients on a "bed and breakfast" basis. However, the general rules for hygiene and personal safety should be applied.*

*NOTE 2 This standard covers a wide range of appliances, such as cookers, fish and chip frying ranges, fryers, ovens, café boilers and urns, bain-marie units, tandoori ovens, kebab grills and barbecues.*

# 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.

BS 669-2, *Flexible hoses, end fittings and sockets for gas burning appliances – Part 2: Specification for corrugated metallic flexible hoses, covers, end fittings and sockets for catering appliances burning 1st, 2nd and 3rd family gases*

BS 1179-6, *Glossary of terms used in the gas industry – Part 6: Combustion and utilization including installation at consumers' premises*

BS 1363-1, *13 A plugs, socket-outlets, adaptors and connection units – Part 1: Specification for rewirable and non-rewirable 13 A fused plugs*

BS 1363-2, *13 A plugs, socket-outlets, adaptors and connection units – Part 2: Specification for 13 A switched and unswitched socket-outlets*

BS 4800, *Schedule of paint colours for building purposes*

BS 5440-2, *Installation and maintenance of flues and ventilation for gas appliances of rated input not exceeding 70 kW (1st, 2nd and 3rd family gases) – Part 2: Specification for installation and maintenance of ventilation for gas appliances*

BS 5482-1, *Code of practice for domestic butane- and propane-gas-burning installations – Part 1: Installations at permanent dwellings, residential park homes and commercial premises, with installation pipework sizes not exceeding DN 25 for steel and DN 28 for corrugated stainless steel or copper*

BS 5546, *Specification for installation of hot water supplies for domestic purposes, using gas-fired appliances of rated input not exceeding 70 kW*

BS 6172, *Installation and maintenance of domestic gas cooking appliances (2nd and 3rd family gases) – Specification*

BS 6230, *Specification for installation of gas-fired forced convection air heaters for commercial and industrial space heating (2nd and 3rd family gases)*

BS 6700, *Design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages – Specification*

BS 7671, *Requirements for electrical installation. IEE Wiring Regulations*

BS 8494, *Electronic portable and transportable apparatus designed to detect and measure carbon dioxide in indoor ambient air – Requirements and test methods*

BS EN 12056-2, *Gravity drainage systems inside buildings – Part 2: Sanitary pipework, layout and calculation*

BS EN 12464-1, *Light and lighting – Lighting of work places – Part 1: Indoor work places*

BS EN 60309-1, *Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements*

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

CP 342-2, *Code of practice for centralized hot water supply – Part 2: Buildings other than individual dwellings*

### 3 Terms and definitions

For the purposes of this British Standard, the terms and definitions given in BS 1179-6 apply, together with the following.

#### 3.1 competent person

person who is trained, experienced and approved to perform activities relating to the installation or maintenance of gas-fired catering appliances

#### 3.2 demand-based ventilation

mechanical ventilation system which operates at variable rates determined by the varying demand placed on the ventilation system at different times

#### 3.3 downstream

that part of a gas installation after a certain point in the direction of the flow of gas

#### 3.4 flexible connections

corrugated metallic flexible hose (braided or unbraided) with a protective hygienic cover and appropriate end fittings, including self-sealing socket and matching plug, which facilitates the connection of an appliance to an installation pipe such that the appliance can be moved a short distance to permit connection and disconnection

#### 3.5 interlock

purpose-provided safety device or system to prevent the supply of gas to appliances if the mechanical ventilation system is not operating at a predetermined level

#### 3.6 mechanical extract system

system in which mechanical means are used to remove (extract) products of combustion and cooking fumes, but air is not supplied by mechanical means

**3.7 mechanical ventilation system**

ventilation system in which mechanical means are used to supply air to and extract products of combustion and fumes from the catering space

**3.8 moveable appliance**

appliance fitted with purpose-provided means of mobility, e.g. wheels or castors, for cleaning and servicing

**3.9 previously-used appliance**

appliance that has changed ownership (with or without payment) or one that has changed location from one site to another

*EXAMPLE*

*A used appliance.*

*NOTE This does not include an appliance moved to a different location within the same kitchen.*

**3.10 restraining device**

device that prohibits movement of the appliance beyond the maximum allowable distance as related to the length of the flexible hose/connection assembly

**3.11 upstream**

that part of a gas installation prior to, or before, a certain point on the downstream flow of gas

**3.12 ventilation system**

system that supplies air and removes products of combustion and cooking fumes to a safe external location

*NOTE 1 Normally, removal is via a canopy installed over catering appliances.*

*NOTE 2 Air supply will normally be natural through air vents, louvres, serving hatches, etc., but for new and upgraded installations natural supply may be fully or partially by mechanical means.*

## **4 Consultation and design of the installation**

The following information shall be obtained and used in the process of designing the installation.

- a) The means of providing adequate dispersal of combustion and cooking fume products, and combustion air and ventilation for all of the appliances and cooking processes.

*NOTE Adequate fresh air is also required in kitchens to provide air for combustion to limit the effects of heat and humidity. Reference should be made to HSE Catering Information Sheets 10 [24] and 23 [25], HVCA publication DW/172 [26] and BS 5925:1991+A1:1995, Annex B.*

- b) For new and refurbished kitchens, the provision of plans to indicate the termination points of all services, connection points, the positions of meters, the means of gas isolation, distribution board, circuit breakers, electrical controls and water and waste isolation and termination.
- c) The adequacy of the upstream gas supply, based on the energy requirements of the catering equipment to be installed.
- d) Means of ensuring that an adequate supply of gas and electricity is available to agreed positions at the appropriate time in the project (see 5.1).