

Specification for

**Installation of gas fires,
convector heaters, fire/back
boilers and decorative fuel
effect gas appliances**

**Part 3. Decorative fuel effect gas
appliances of heat input not exceeding
15 kW (2nd and 3rd family gases)**

ICS 97.100.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Gas Standards Policy Committee (GSE/-) to Technical Committee GSE/30, upon which the following bodies were represented:

- British Flue and Chimney Manufacturers' Association
- British Gas plc
- Confederation for the Registration of Gas Installers
- Consumer Policy Committee of BSI
- Department of the Environment
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Health and Safety Executive
- Institute of Domestic Heating and Environmental Engineers
- Institution of Gas Engineers
- Liquefied Petroleum Gas Industry Technical Association (UK)
- Society of British Gas Industries
- Trades Union Congress

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Decorative Gas Fire Manufacturers' Association
- National Fireplace Council Manufacturers' Association

This British Standard, having been prepared under the direction of the Gas Standards Policy committee, was published under the authority of the Standards Board and comes into effect on 30 September 1991

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Summary of pages

The following table identifies the current issue of each page. Issue 1 indicates that a page has been introduced for the first time by amendment. Subsequent issue numbers indicate an updated page. Vertical sidelining on replacement pages indicates the most recent changes (amendment, addition, deletion).

Page	Issue	Page	Issue
Front cover	2	3 to 4	original
Inside front cover	2	5	2
a	1	6	original
b	blank	7 to 22	original
1	original	Inside back cover	original
2	2	Back cover	2

Contents

Committees responsible	Inside front cover
Foreword	2
Specification	
Section 1. General	
1 Scope	3
2 Definitions	3
3 Exchange of information and planning	4
Section 2. Selection of appliances	
4 Appliances	5
5 Materials and components	5
6 Location	5
Section 3. Installation	
7 Ventilation	7
8 Flueing	9
9 Appliance fixing	14
10 Fire and related safety precautions	19
11 Gas connections	19
12 Electricity supplies and wiring	20
Section 4. Commissioning, instructions and use of fireguards, and user information	
13 Commissioning	21
14 Instructions and use of fireguards	21
15 User information	21
Figures	
1 Types of fuel effect gas appliances covered by BS 5871	6
2 Measurement of fireplace opening/canopy opening	10
3 Flue sizing chart for decorative fuel effect gas appliances with fireplace openings exceeding 0.457 m × 0.610 m	11
4 Appliance installation in a typical flue box	12
5 Unsuitable terminations	13
6 Appliance installation in a typical builder's opening	15
7 Appliance installation in a typical fireplace recess	16
8 Appliance installation under a typical associated independent canopy	17
9 Method of installing an appliance under an associated independent canopy	18

Foreword

This Part of BS 5871 has been prepared under the direction of the Gas Standards Policy Committee and is a revision of BS 6714 : 1986 which is withdrawn.

This revision closely follows those of the BS 6714 : 1986 edition but the term 'decorative gas log and other fuel effect appliance' has been changed to 'decorative fuel effect gas appliance'¹⁾ in recognition of, as a separate appliance type, inset live fuel effect gas fires. Such appliances fundamentally differ from decorative fuel effect gas appliances in that they incorporate an integral heat exchanger.

The renumbering of BS 6714 to BS 5871 : Part 3 has been carried out as part of the exercise to revise and restructure BS 5871 to reflect appliance developments which have taken place since BS 5871 was published in 1980. These include an increase in the range of fuel effect appliances which burn gas so as to simulate a solid fuel fire. The outward similarity in appearance between these appliances, coupled with the diversity of terms used to describe them, has sometimes led to problems in identifying the relevant installation criteria. Against this background, BS 5871 has been restructured into parts so as to include all fuel effect appliances in a single series of British Standards as follows.

BS 5871 : Part 1 ²⁾	Gas fires, convector heaters and fire/back boilers (1st, 2nd and 3rd family gases)
BS 5871 : Part 2	Inset live fuel effect gas fires of heat input not exceeding 15 kW (2nd and 3rd family gases)
BS 5871 : Part 3 ³⁾	Decorative fuel effect gas appliances of heat input not exceeding 15 kW (2nd and 3rd family gases)

To identify which Part of BS 5871 to use when fitting an appliance which simulates a solid fuel fire, reference should be made to figure 1 which serves to illustrate appliance types and link them to the appropriate Part of BS 5871.

It should be noted that the only fuel effect appliances covered by this Part of BS 5871 are those complying with BS 5258 : Part 12. However it is recognized that BS 5871 : Part 3 could also be referred to for the installation of decorative appliances which do not claim compliance with BS 5258 : Part 12. In such cases the installer should satisfy himself that the appliance is safe in construction, and that it can be used without constituting a danger and consideration should be given to using a flue system that would be suitable for use with a solid fuel open fire.

NOTE. In the preparation of this standard the opportunity has been taken to present it in the format of a practice specification as defined in PD 6501 : Part 1. This format allows the requirements of the specification to be supported by recommendations. To comply with this specification the user has to comply with all its requirements. He may depart from recommendations but this would be his own responsibility and he would be expected to have good reasons for doing so.

Compliance with a British Standard does not of itself confer immunity from legal obligation.

In particular, attention is drawn to the following statutory requirements:

- (a) The Gas Safety (Installation and Use) Regulations (S.I. 1998 No. 2451).
- (b) The Gas Appliances (Safety) Regulations 1995 (S.I. 1629).
- (c) The Building Regulations 1991 (S.I. 1991 No 2768 [as amended by S.I. 1994 No 1985]).
- (d) The Building Standards (Scotland) Regulations 1990 (S.I. 2179) (as amended).
- (e) Building Regulations (Northern Ireland) (Statutory Rules of Northern Ireland 1994 No 243).
- (f) The Gas Safety (Application) Order 1996 (Isle of Man).

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

¹⁾ Sometimes referred to as a decorative gas fire or DGF.

²⁾ Revision of BS 5871 : 1980.

³⁾ Revision of BS 6714 : 1986.

Section 1. General

1 Scope

This Part of BS 5871 specifies the installation requirements for decorative fuel effect gas appliances complying with BS 5258 : Part 12 of heat input not exceeding 15 kW burning 2nd and 3rd family gases in rooms or internal spaces in domestic or commercial premises, including public houses and restaurants.

The provisions contained within this standard cover the selection of a suitable appliance, the ventilation and flueing requirements, and other measures necessary to ensure a safe installation.

This standard applies to the installation of decorative fuel effect gas appliances in builder's openings, fireplace recesses, flue boxes or under associated independent canopies.

NOTE 1. Attention is drawn to the foreword concerning fuel effect appliances which burn gas so as to simulate a solid fuel fire. The only types of such appliance covered by this Part of BS 5871 are those complying with BS 5258 : Part 12. Further guidance in this respect is given in figure 1.

NOTE 2. The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 5871 the following definitions apply.

2.1 air vent

A non-adjustable purpose made grille allowing the passage of air.

2.2 air vent free area

The unobstructed cross-sectional area of an air vent, i.e. the sum of the areas of the individual apertures.

2.3 associated independent canopy

A non-combustible canopy situated at the base of the flue system and which is permanently fixed above the appliance to facilitate the passage of the products of combustion into the flue.

2.4 builder's opening

The enclosure constructed by the builder to accommodate fireplace components.

2.5 chimney breast

A projection beyond the thickness of a wall that contains the fireplace and flue.

2.6 chimney pot

A prefabricated unit fitted at the flue outlet of a chimney.

2.7 decorative fuel effect gas appliance

An appliance designed to simulate a solid fuel appliance primarily for decorative purposes and intended to be installed so that the products of combustion pass unrestricted from the firebed to the flue (see figure 1(c)).

2.8 factory made insulated chimney

The complete assembly of all the essential factory made insulated sections, fittings and accessories necessary to convey the products of combustion to the outside air.

2.9 firebed

That part of a decorative fuel effect gas appliance on which the gas burns.

2.10 fireplace opening

The aperture formed in the face of the builder's opening, fireplace recess, flue box or fire surround, if fitted.

2.11 fireplace recess

The recess formed by the inclusion of fireplace components in the builder's opening.

2.12 flue box

A non-combustible enclosure that provides a substitute builder's opening or fireplace recess.

2.13 flue system

A continuous flue, or a complete assembly of flue components, from a builder's opening, fireplace recess, flue box or associated independent canopy to a chimney pot, terminal or flue outlet.

2.14 gather

A smooth transitional reduction in area from above the builder's opening or fireplace recess into the flue.

2.15 hearth

A floor level slab of fire-resisting material to prevent overheating of the surface beneath a decorative fuel effect gas appliance.

2.16 internal space

An interior space which is not a room, such as a hall, passageway, etc.

2.17 lintel

A loadbearing beam above the builder's opening or fireplace recess.

2.18 open flue system

A flue system that is open to a room or internal space at each appliance position.

2.19 throat

A contraction located in the flue, immediately above the fireplace recess, that is designed to accelerate the flue gases.

2.20 through-room

Any room formed by the removal of an interconnecting wall between two rooms or any large room formed by two open plan smaller rooms. The opening/archway present between two smaller rooms may have sliding or intercommunicating doors.

2.21 ventilation

The process of supplying fresh air to, and removing vitiated air from, a room or internal space.

3 Exchange of information and planning

NOTE. Collaboration is essential between those concerned with the design and installation, both at the planning stage and during the execution of the work.

Particular matters that shall be considered are:

- (a) availability of gas supplies;
- (b) size, height, type and route of flue together with materials of construction;
- (c) provision of adequate ventilation;
- (d) dimensions of fireplace openings and hearths together with materials of construction;
- (e) position of appliance in relation to probable position of fixtures, furniture and curtains;
- (f) electrical supplies (where applicable);
- (g) the possibility that the user may wish to use the flue system with a solid fuel open fire in the future.

COMMENTARY AND RECOMMENDATIONS ON CLAUSE 3.

Some appliance installations may require preliminary structural work to be completed at the building carcass stage. Suitable apertures or openings should be made for connection to a built-in flue. In addition a hearth for the appliance will need to be provided (see clause 10).

Section 2. Selection of appliances

4 Appliances

The appliance selected shall comply with BS 5258 : Part 12 and be suitable for the gas with which it is to be supplied and the intended location (see clause 6).

COMMENTARY AND RECOMMENDATIONS ON CLAUSE 4.
Consideration should be given to the following.

(a) *Decorative fuel effect gas appliances covered by this standard are open-flued and may be available with either natural draught or fanned draught flueing. They are always fitted at low level, i.e. hearth-mounted in a builder's opening, fireplace recess, flue box, or hearth-mounted under an associated independent canopy.*

(b) *Any appliance described in this standard will be used primarily to provide a decorative solid fuel open fire effect in a room or internal space, but the type chosen will depend on the user's personal preference; it should be based on a knowledge of the range of the appliances available, the use to which the room or internal space will be put and the period of usage.*

(c) *For information purposes, figure 1 illustrates the types of fuel effect gas appliances covered by BS 5871 with respect to the flue size, location, ventilation and the passage of appliance combustion products to the flue serving the appliance.*

5 Materials and components

All materials and components used in the installation shall comply with the requirements of applicable British Standards. Materials containing asbestos shall not be used.

COMMENTARY AND RECOMMENDATIONS ON CLAUSE 5.
Where no British Standard exists, materials and components should be of suitable quality and workmanship to fulfil their intended purpose.

6 Location

6.1 The appliance shall not be installed in a room or internal space containing a bath or shower.

COMMENTARY AND RECOMMENDATIONS ON 6.1. *Great care is required in the location of an appliance in any premises where concentrations of flammable vapour could accumulate, e.g. commercial garages and associated workshops.*

NOTE. There is no restriction on the type or location of appliances that can be installed in a private garage.

6.2 Appliances of greater than 14 kW heat input shall not be installed in a room used or intended to be used as sleeping accommodation.

COMMENTARY AND RECOMMENDATIONS ON 6.2. *This does not preclude the installation of such appliances into rooms or internal spaces which are below ground level with respect to one side of the building but open to ground level on the opposite side.*

6.3 A gas appliance of not greater than 14 kW heat input installed in a room used or intended to be used as a sleeping accommodation shall incorporate a safety control designed to shut down the appliance before there is a build up of a dangerous quantity of the products of combustion in the room concerned.