

Specification for the installation and maintenance of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances —

**Part 2: Inset live fuel effect gas fires
of heat input not exceeding 15 kW,
and fire/back boilers (2nd and 3rd
family gases)**

ICS 97.100.20

Committees responsible for this British Standard

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- Boiler and Radiator Manufacturers Association Ltd.
- British Flue and Chimney Manufacturers Association
- BSI Consumer Policy Committee
- Catering Equipment Suppliers' Association
- Centrica plc
- Council for Registered Gas Installers
- Department of Trade and Industry
- Health and Safety Executive
- Heating and Ventilating Contractors' Association
- ICOM Energy Association
- Institute of Domestic Heating and Environmental Engineers
- Institution of Gas Engineers and Managers
- L P Gas Association
- Society of British Gas Industries
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Foreword

This part of BS 5871 has been prepared under the direction of the Gas Standards Policy Committee and is a revision of BS 5871-2:2001, which is withdrawn.

This new edition of BS 5871-2 comes into effect on 11 July 2005.

This revision provides an update of the previous standard and has been extended to cover both the new development of inset live fuel effect gas fires combined with back boilers, fires with a direct flue connection, and includes requirements for fires installed in raised builders' openings (hole-in-the-wall fireplaces). In order to improve the layout of the standard, additional requirements for the installation of fire/back boilers and fire/back circulators are now specified in Clauses 15, 16, 17 and 18. BS 5871 continues to cover the different types of fuel effect appliances in a single series of British Standards, as follows:

- BS 5871-1: *Gas fires, convector heaters, fireback boilers and heating stoves (2nd and 3rd family gases).*
- BS 5871-2: *Inset live fuel effect gas fires of heat input not exceeding 15 kW and fireback boilers (2nd and 3rd family gases).*
- BS 5871-3: *Decorative fuel effect gas appliances of heat input not exceeding 20 kW (2nd and 3rd family gases).*
- BS 5871-4: *Independent gas-fired flueless space heaters for nominal heat input not exceeding 6 kW (2nd and 3rd family gases) (in the course of preparation).*

Amendment No. 1 provides advice on the installation of the types of direct flue connection fires known in the trade as “cassette fires”, which may be available with an optional flue kit that allows them to be installed to an unlined chimney under special conditions.

The start and finish of text introduced or altered by Amendment No. 1 is indicated in the text by tags **[A1]** **[A1]**. Minor editorial changes are not tagged.

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 gas fires detailed in d) of the commentary and recommendations on Clause 5 of this standard.

The manufacturer's instructions supplied with fanned draught appliances in which the fan is either integral with the appliance or with the flue system will make reference to the appropriate part of BS 5871.

It should be noted that the only appliances covered by this part of BS 5871 are those that are “CE” marked. However, BS 5871-2 may also be referred to for the installation of used appliances, where appropriate, providing the manufacturer's instructions are available. In such circumstances, the installer should satisfy himself that the appliance is safe in construction and condition, and can be used without constituting a danger. Attention is drawn to Clause 5 concerning this particular aspect.

Arising from European standards harmonization, some British Standards appliance specifications are now being replaced by European Standards. One consequence of this process is that the reference clearance flue flow test, currently included in some of the British Standards covering the safety of appliances dealt with by BS 5871, will not be given in European appliance standards. This test has hitherto been used to determine the flue flow, under laboratory conditions, that an appliance will just clear its combustion products. The test has been used as a key factor in determining whether or not certain appliances of 7 kW¹⁾ heat input or less require purpose provided ventilation for their installation.

¹⁾ Due to tolerances, this applies to a heat input of 7 kW on both net and gross calorific value. See Clause 1, Scope, Note 3.

Although BS 5871 is an appliance installation standard, the drafting committee has decided to include the clearance flue test as an informative annex. It is hoped that this arrangement will provide Notified Test Houses under the Gas Appliance Directive with a continuing means to evaluate appliances for installation within the UK which claim that no purpose provided ventilation is necessary for their installation.

This standard allows manufacturer's instructions to specify a method of installation, testing, commissioning or maintenance which differs in points of detail from this standard. This reference to manufacturer's instructions is allowed only where it will result in at least an equivalent level of safety. In such circumstances, it is important that the manufacturer's instructions are followed.

NOTE 1 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 6501-1. 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.

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

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

In particular, attention is drawn to the following statutory regulations.

- The Gas Safety (Installation and Use) Regulations 1998 [1]
- The Gas Safety (Installation and Use) (Northern Ireland) Regulations 2004 [2]
- The Gas Appliances (Safety) Regulations 1995 [3]
- The Building Regulations 2000, as amended [4]
- The Building (Scotland) Regulations 2004 [5]
- The Building Regulations (Northern Ireland) Statutory Rules 2000, as amended [6]
- The Gas Safety (Application) Order (Isle of Man) 1996 [7]

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 48, an inside back cover and a back cover

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1 Scope

This part of BS 5871 specifies installation and maintenance requirements for inset live fuel effect gas fires of heat input not exceeding 15 kW (16.6 kW based on gross calorific value) burning 2nd and 3rd family gases for the purpose of heating rooms or spaces in domestic (see Note 5) or commercial premises. Combined appliances of the type where a fire is used in conjunction with a boiler or circulator are also covered in so far as the installation of the combined appliance is concerned.

The standard is applicable to appliances intended for installation either:

- a) within a builder's opening and/or fireplace recess and which may, additionally, be suitable for installation in a purpose designed metal flue box conforming to BS 715 and flue conforming to the constructional and temperature requirements of BS EN 1856-1 and BS EN 1856-2; or
- b) using a direct flue connection, if specified in the manufacturer's instructions; or
- c) in the case of a room sealed appliance, using a flue terminal/air duct assembly supplied by the appliance manufacturer.

This standard covers the selection of a suitable appliance, the ventilation and flueing requirements, and other measures necessary to ensure a safe installation.

The central heating and/or hot water system connected to a combined appliance is not within the scope of this standard and reference should be made to BS 5449 (see Note 6) and BS 5546 for this part of such an installation.

This standard is not applicable to mobile and portable appliances conforming to BS EN 449 or to appliances in touring caravans.

Additional requirements for the installation of fire/back boilers and fire/back circulators are specified in Clauses 15, 16, 17 and 18.

NOTE 1 Inset live fuel effect gas fires differ from decorative fuel effect gas appliances, which burn gas so as to simulate a solid fuel fire or produce other decorative effects, in that they incorporate a heat exchanger and restrict the passage of the products of combustion between the appliance firebed and the chimney or flue. The only decorative fuel effect gas appliances covered by this part of BS 5871 are those shown in Figure 1b) and detailed in 1d) of the commentary and recommendations on Clause 5 of this standard.

NOTE 2 Unless the context requires otherwise, inset live fuel effect gas fires are hereinafter referred to as fires.

NOTE 3 Heat inputs in this document are based on net calorific value. Figures based on gross calorific value are given in parenthesis where deemed necessary. See also Clause 5, commentary and recommendations g).

NOTE 4 Attention is drawn to the foreword concerning the installation of used appliances.

NOTE 5 As well as normally constructed dwellings, domestic premises include any permanently sited caravan holiday homes, residential park homes and permanently moored boats. See IGE/UP/8 [8].

NOTE 6 BS 5449 has been partly replaced by BS EN 12828 and BS EN 12831, and is to be withdrawn once BS EN 14336 and BS EN 14337 are published.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 715 to *Specification for metal flue A1 boxes for gas-fired appliances not exceeding 20 kW. A1*

BS 1289-1, *Flue blocks and masonry terminals for gas appliances — Part 1: Specification for precast concrete flue blocks and terminals.*

BS 4543-2, *Factory-made insulated chimneys — Part 2: Specification for chimneys with stainless steel flue linings for use with solid fuel fixed appliances.*

BS 4543-3, *Factory-made insulated chimneys — Part 3: Specification for chimneys with stainless steel fluelining for use with oil fired appliances.*

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

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 5449, *Specification for forced circulation hot water central heating systems for domestic premises.*

BS 5482-1, *Domestic butane- and propane-gas-burning installations — Part 1: Specification for installations at permanent dwellings.*

BS 5482-2, *Domestic butane- and propane-gas-burning installations — Part 2: Installations in caravans and non-permanent dwellings.*

BS 5546, *Specification for installation of gas hot water supplies for domestic purposes (1st, 2nd and 3rd family gases).*

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

BS 6891, *Specification for installation of low pressure gas pipework of up to 28 mm (R1) in domestic premises (2nd family gas).*

BS 7435-1, *Fibre cement flue pipes, fittings and terminals — Part 1: Specification for light quality fibre cement flue pipes, fittings and terminals.*

BS 7435-2, *Fibre cement flue pipes, fittings and terminals — Part 2: Specification for heavy quality fibre cement flue pipes, fittings and terminals.*

BS 7671, *Requirements for electrical installations — IEE Wiring Regulations.*

BS 7977-1, *Specification for safety and rational use of energy of domestic gas appliances — Part 1: Radiant convectors.*

BS 7977-2, *Specification for safety and rational use of energy of domestic gas appliances — Part 2: Combined appliances: Gas fire/back boiler.*

BS EN 1856-1, *Chimneys — Requirements for metal chimneys — Part 1: System chimney products.*

BS EN 1856-2, *Chimneys — Requirements for metal chimneys — Part 2: Metal liners and connecting flue pipes.*

BS EN 13502, *Chimneys — Requirements and test methods for clay/ceramic flue terminals.*

3 Terms and definitions

For the purposes of this part of BS 5871, the following terms and definitions apply.

3.1

air vent

non-adjustable purpose provided unit/assembly designed to allow permanent ventilation

3.2

back boiler

water heating appliance designed to fit into a fireplace recess or builder's opening to provide domestic hot water and/or central heating (space heating)

3.3

back circulator

appliance with a rated input less than 6 kW designed to fit into a fireplace recess or a builder's opening and which uses gravity circulation in the production and storage of domestic hot water

3.4

balanced-flued appliance

room-sealed appliance which draws its combustion air from a point adjacent to the point at which the combustion products are discharged, the inlet and outlet being so disposed that wind effects are substantially balanced

3.5

builder's opening

enclosure constructed by the builder to accommodate fireplace components $\square_{A1}$ and/or an appliance $\square_{A1}$

3.6**direct flue connection**

connection when an appliance is connected directly, or via an adaptor, to an open flue system, i.e. the products of combustion pass directly from the appliance into the flue

NOTE See Figure 6.

3.7**fanned flue system**

flue system in which the removal of flue products is dependent on a fan

3.8**fireplace opening**

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

3.9**fireplace recess**

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

3.10**fire surround**

purpose-designed setting for a gas fire, fitted against a wall at the base of a flue and usually incorporating a hearth

3.11**flue box**

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

3.12**flue spigot restrictor**

plate designed to be fitted to a flue spigot of a gas fire to reduce the effect of flue pull on the appliance

3.13**flue pipe**

pipe enclosing a flue; for a double walled flue system or factory made insulated system it is the inner pipe

NOTE European chimney standards refer to a flue pipe as a "chimney". This is defined in BS EN 1443 as "a structure consisting of a wall or walls enclosing a flue or flues".

[A1] 3.13a**flue kit**

assembly comprising parts designed for fitting to the direct flue connection of a fire to prevent the ingress of debris into the appliance when installed in an existing chimney and supplied or specified by the fire manufacturer for use with the appliance [A1]

3.14**infill panel**

panel of fire-resisting material having an opening to accommodate a standard closure plate, used in a fireplace opening which is too large for the closure plate alone

3.15**hearth**

slab of fire-resisting material to prevent overheating of the surface beneath the appliance

3.16**inset live fuel effect gas fire**

appliance designed to simulate a solid fuel appliance and intended to be installed so that the passage of the products of combustion from the firebed to the chimney or flue is restricted and so that the air enters the fireplace only through purpose designed openings

[A1] NOTE Some types of inset live fuel effect gas fire are also known as "cassette fires". See Commentary and Recommendations on Clause 5, item h). [A1]

3.17

installation instructions

instructions prepared by the appliance manufacturer giving detailed information and requirements on how the appliance should be installed, and checked for their validity as part of the original appliance certification

NOTE Such instructions should not be confused with other documents supplied by the appliance manufacturer, e.g. sales literature.

3.18

internal space

interior space such as a hall, passageway, stairway or landing, which is not a room

3.19

open flue system (type B)

flue system that evacuates the products of combustion to the outside air

NOTE The combustion air is drawn directly from the room or space containing the appliance.

3.20

open-flued appliance (type B)

appliance designed to be connected to an open flue system, its combustion air being drawn from the room or space in which it is installed

3.21

room-sealed appliance (type C)

appliance whose combustion system is sealed from the room in which the appliance is located and which obtains air for combustion from a ventilated uninhabited space within the premises or directly from the open air outside the premises and which vents the products of combustion directly to open air outside the premises

3.22

space heating

heating of one or more rooms or other spaces to produce a desired temperature therein

3.23

ventilation

process of supplying fresh air to, and/or removing air from a room, internal space, compartment or garage.

NOTE The air may be used or intended to be used for purposes of combustion, cooling and/or the operation of the flue.

4 Exchange of information and planning

4.1 General

Persons carrying out the work shall be competent.

The installation work shall be carried out by a business or self employed person, who is a “member of a class of persons approved for the time being by the Health and Safety Executive” (HSE) as required by the Gas Safety (Installation & Use) Regulations [1].

Persons who design the system or installation shall have a knowledge and understanding of the standards and regulations that apply to ensure that the completed plans will produce a safe and satisfactory installation.

COMMENTARY AND RECOMMENDATIONS ON 4.1

At the time of publication, the body with HSE approval to operate and maintain a register of businesses who are “members of a class of persons” is the Council for Registered Gas Installers (CORGI).

Persons deemed competent to carry out gas work are those who hold a certificate of gas safety competence acceptable to CORGI, which includes (without limitation) the Accredited Certification Scheme (ACS) and the Gas Services SINVQ that has been aligned with ACS (for electrical work, see C&R to 14.1).

4.2 Design considerations

Particular matters that shall be considered are:

- a) availability of gas supplies;
- b) type of building, form of construction and level of thermal insulation;
- c) location, orientation and exposure of building, and size, layout and purpose of rooms;
- d) assessment of heat requirements (see Clause 8 and Annex A);
- e) size, height, type and route of flue and flue termination together with materials of construction;
- f) provision of adequate ventilation;
- g) dimensions of fireplace openings and hearths together with materials of construction;
- h) position of heating appliances in relation to probable position of fixtures, furniture and curtains;
- i) electrical and water supplies (where applicable);
- j) 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 4.2

Collaboration is essential between those concerned with the design and installation, both at the planning stage and during the execution of the work. Some appliances 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 or for terminating a balanced-flued fire. Hearths for appliances should be provided where necessary.

5 Appliances

The appliance, if new, shall carry a “CE” mark, and be suitable for the gas with which it is to be supplied.

COMMENTARY AND RECOMMENDATIONS ON CLAUSE 5

This standard may be used for the installation of used appliances which do not carry “CE” mark; see foreword.

Consideration should be given to the following.

- a) *In the case of a new appliance, the installer should ensure that the packaging and the appliance itself are marked with at least the following information.*

- *The letters “GB”.*

- *The type of gas and appliance inlet pressure as follows.*

- i) *G20 and/or natural gas 20 mbar for an appliance adjusted for natural gas.*

- ii) *G30 and/or butane 29 mbar for an appliance adjusted for butane.*

- iii) *G31 and/or propane 37 mbar for an appliance adjusted for propane.*

- iv) *G30/G31 and/or butane/propane 29/37 mbar for an appliance which will burn either gas at the correct pressure.*

The data plate of an appliance will carry the designation Cat. I_{2H}, I_{3B}, I_{3P}, or I₃₊ respectively for cases i), ii), iii) and iv), together with the “CE” mark.

Where an appliance data plate carries the letters Cat. II followed by gas type designations, (i.e. 2H, 2P, 2B), then the appliance can be used for different types of gases when adjusted to do so.

The installer should ensure that the appliance is correctly adjusted. Conversion to another gas, if necessary, should be carried out strictly in accordance with the manufacturer’s instructions using the manufacturer’s supplied kit of parts.

If there is any doubt as to the suitability of an appliance for a particular gas, then the appliance manufacturer should be consulted.

Further information on the labelling of gas appliances is given in BSI draft for Development DD 221:1997 (CR 1472:1997).

b) The original packaging will generally not be available with used appliances. In this case, the installer should, by referring to the data plate and/or other means, ensure that the appliance is suitable for the pressure and type of gas to be burnt. If there is any doubt, the appliance should not be installed.

c) The output of the appliance should be borne in mind during selection. In general, the appliances described in this standard heat the room in which they are installed. A fire/back boiler normally provides central heating to the rest of the dwelling and also domestic hot water. A fire/back circulator provides domestic hot water.

d) The fires covered by this standard are open-flued and room sealed and may be available with either natural draught or fanned draught flueing.

e) Any appliance described in this standard can be used to heat 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 will be put and the period of usage.

f) In some situations, it may be desirable to provide two appliances in the same room or internal space rather than one, in order to obtain an even temperature distribution, e.g. in a long room. A fire/back boiler unit, together with a radiator supplied by the associated central heating circuit, provides an alternative arrangement for heating such a room or space. Some appliances incorporate fans to improve the circulation of convected air.

NOTE Attention is drawn to the commentary and recommendations on 9.4 in relation to multi-appliance installations.

g) Fires and fire/back boilers are available with rated heat inputs in the approximate ranges shown below. The inputs are quoted on the basis of net calorific value. Traditional UK data on the basis of gross calorific value is given in brackets for natural gas.

The installer should check the data given with an appliance to establish the basis on which the heat input is quoted.

The ratio of gross:net heat input is approximately 1.11:1, 1.09:1, and 1.08:1 for appliances burning natural gas, propane and butane respectively. [For example, to convert 9 kW input natural gas (gross c.v.) to the equivalent net c.v. heat input:

$$\frac{9}{1.11} = 8.1 \text{ kW heat input}]$$

(gross calorific value)

net calorific value

Fires:

(4.0 kW to 16.6 kW)

3.6 kW to 15.0 kW

Fire/back boilers/back circulators:

Fire (4.0 kW to 16.6 kW)

3.6 kW to 15.0 kW

Boiler (up to 22.0 kW)

20.0 kW

Circulator (up to 6.6 kW)

6.0 kW

In addition to carrying a "CE" mark, appliances may be marked to show conformance to a British Standard, a European Norm, or other International Standard.

h) Inset live fuel effect gas fires covered by this part of BS 5871 are available:

i) for installation to a chimney or flue box (see Figure 2, Figure 3 and Figure 4 and 10.3, 10.4, 10.5 and 10.6);

ii) for installation using a fanned draught flue system (see Figure 5 and 10.7);

iii) for installation with a direct flue connection (see Figure 6);

iv) for installation using a flue terminal/air duct assembly supplied by the appliance manufacturer (e.g. as in the case of room sealed appliances).

The appliances covered in ii) do not require a chimney or flue box for the evacuation of their combustion products.

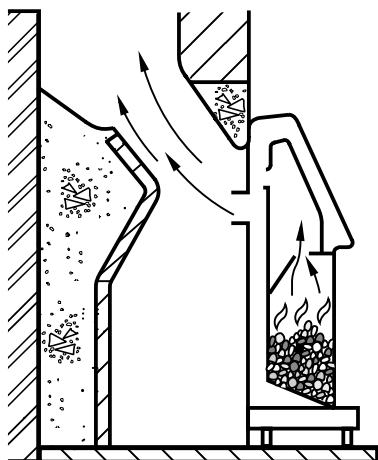
[A] Some of the fires referred to in item iii) are known as "cassette" fires. This term is generally applied to fires of the type that are characterized by the following features:

— an outer case (firebox) for building into a purpose made opening and into which the appliance is fitted;

— a top outlet flue spigot.

Cassette fires are normally fitted to a lined chimney, but some fires may be available with an optional flue kit that has been supplied or specified for use with these appliances [see 3.13a)]. The use of such kits may allow the fire to be installed to an unlined chimney under specified conditions (see 10.1 and 10.8.2). **[A]**

i) 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.



a) Gas fire

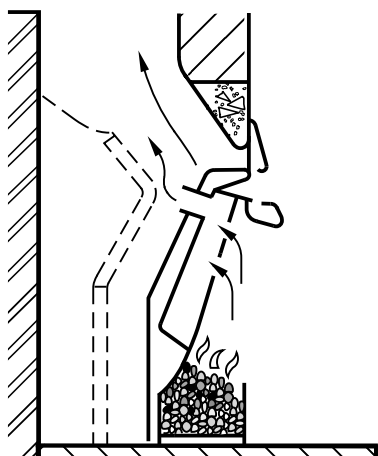
BS 5871-1

Flue size: Minimum of 125 mm across axis of flue normally required.

Location: Normally in front of closure plate which is fitted to fireplace opening.

Ventilation: Purpose provided ventilation not normally required up to 7 kW input.

NOTE For this type of appliance, the radiating surface can be in the form of either a radiant(s) or imitation fuel, the latter giving a live fuel effect.



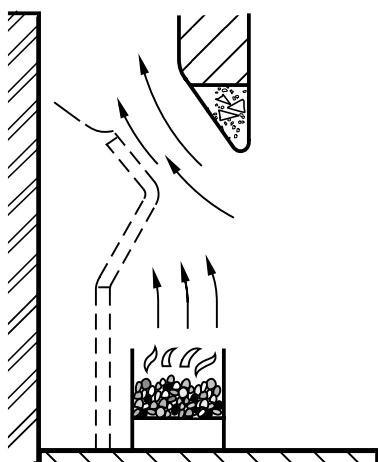
b) Inset live fuel effect gas fire

BS 5871-2

Flue size: Minimum of 125 mm across axis of flue normally required.

Location: Either fully or partially inset into builder's opening or fireplace recess. (For a recess, the chairbrick might have to be removed depending upon appliance design.)

Ventilation: Purpose provided ventilation not normally required up to 7 kW input.



c) Decorative fuel effect gas appliance

BS 5871-3

Flue size: Minimum of 175 mm across axis of flue normally required.

Location: Within builder's opening or fireplace recess or flue box, or under an associated independent canopy. (For a recess, the chairbrick may have to be removed depending upon appliance design.)

Ventilation: Purpose provided ventilation of at least 100 cm² normally required up to 20 kW input.

Figure 1 — Types of fuel effect appliances covered by BS 5871

6 Materials and components

All materials and components used in the installation shall conform to the requirements of applicable British Standards. Materials containing asbestos shall not be used. Where no British Standard exists, materials and equipment shall be of suitable quality and workmanship to fulfil their intended purpose.

COMMENTARY AND RECOMMENDATIONS ON CLAUSE 6

The Asbestos (Prohibition) Regulations (As Amended) 1999 [9] place restrictions on the use of asbestos material, including a total ban of asbestos cement and its product. New (or alterations to existing) flue systems should not be constructed from materials containing asbestos. Existing flue systems may be reused in situ as flue systems provided that they are mechanically sound and conform to the requirements of this British Standard.

7 Location

7.1 Appliances installed in a room or internal space containing or intended to contain a bath or shower shall be room sealed.

7.2 A gas appliance of greater than 12.7 kW heat input (14 kW gross) installed in a room used or intended to be used as sleeping accommodation shall be room sealed.

7.3 A gas appliance of not greater than 12.7 kW input (14 kW gross) installed in a room used or intended to be used as a sleeping accommodation shall be room sealed or 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.

COMMENTARY AND RECOMMENDATIONS ON 7.1, 7.2 AND 7.3

Any type of heater may be installed in a private garage unless the manufacturer's instructions for a particular heater state that it is unsuitable for use in such a location. A heater should not be installed in any premises where concentrations of flammable vapour could accumulate, e.g. commercial garages and workshops. Reference should be made to the British Gas publication, IM/28: Appliances in commercial garages [10].

Room-sealed appliances may be installed in any room or space provided that the installation conforms to the requirements of BS 5440-1 and BS 5440-2.

Care should be taken in the selection of non-room sealed appliances for use in sleeping accommodation bearing in mind the following.

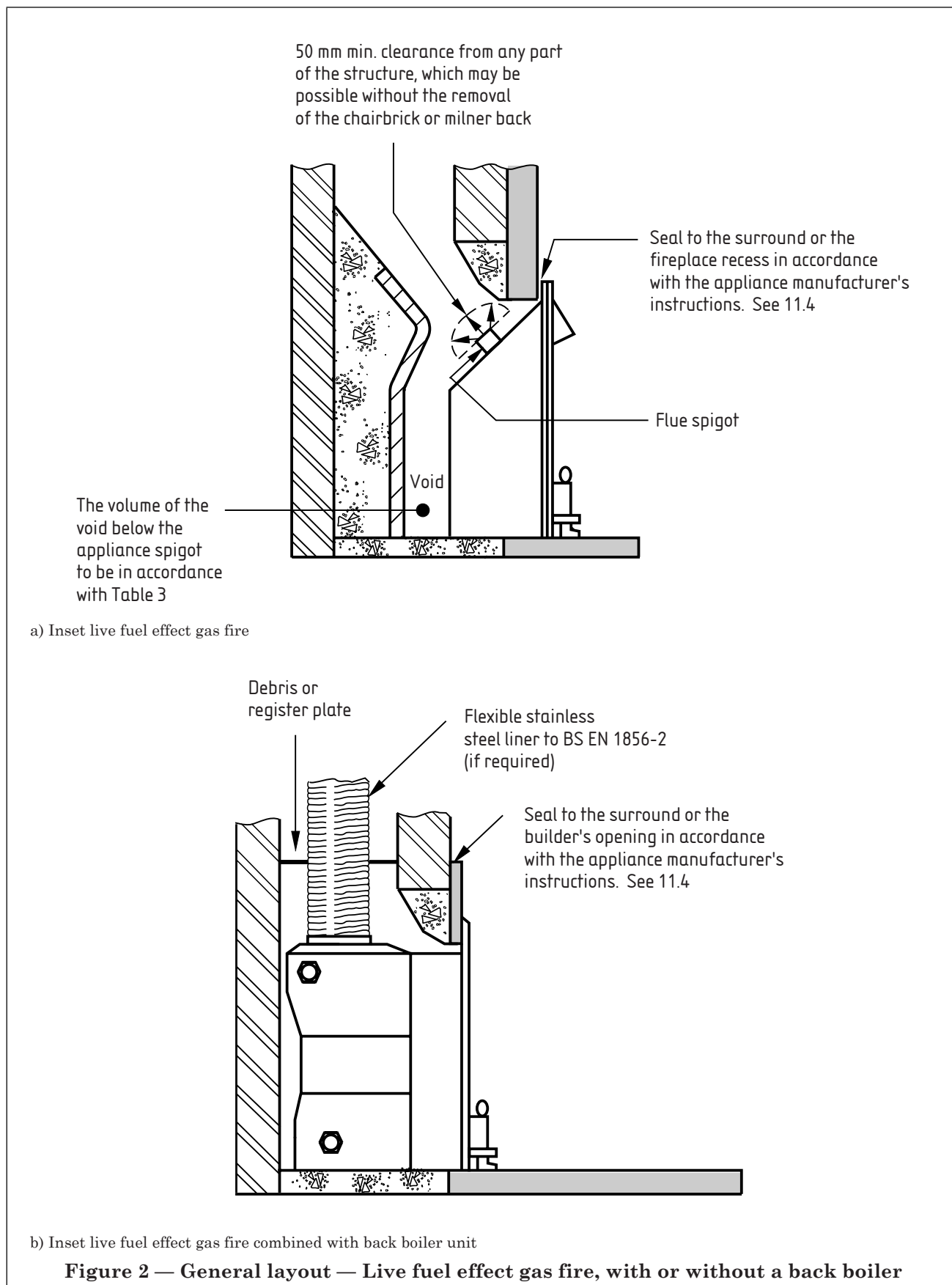
- a) An appliance not bearing a "CE" mark, purchased second hand, will not be fitted with an acceptable safety device.*
- b) Some appliances carrying a "CE" mark, purchased second hand, will not be fitted with an acceptable safety device.*
- c) New appliances will be fitted with an acceptable safety device. The user instructions should be checked to ensure they contain advice on the action necessary should the device operate.*

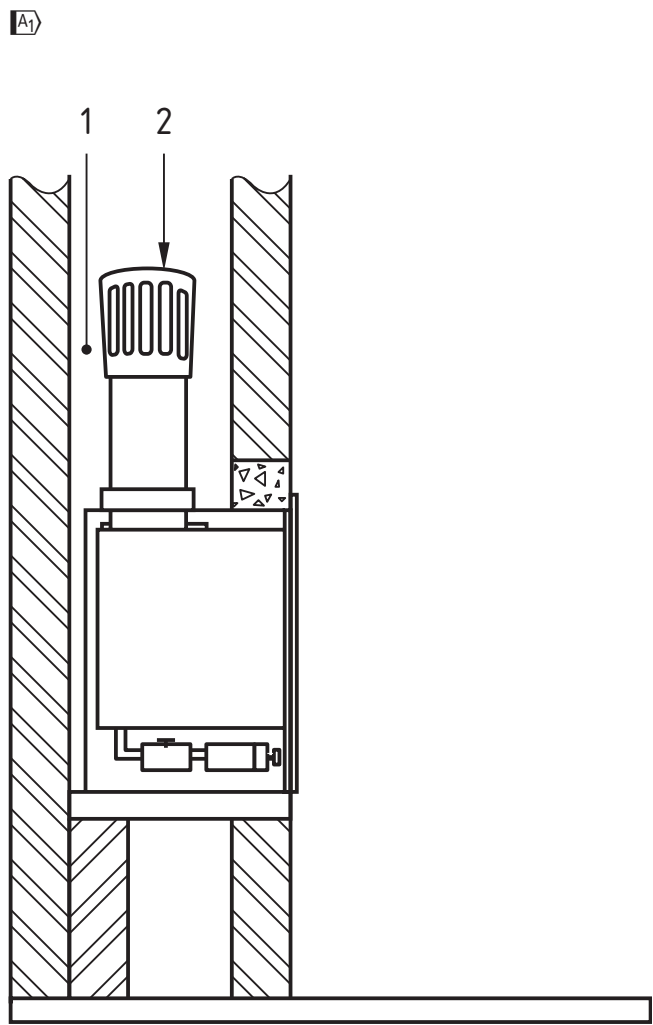
Where there is any doubt as to whether the appliance is fitted with an acceptable safety device, it should not be installed in sleeping accommodation.

7.4 An appliance for use with 3rd family gases shall not be installed in a room or internal space below ground level, e.g. in a basement or a cellar.

COMMENTARY AND RECOMMENDATIONS ON 7.4

This does not preclude the installation of such appliances into rooms which are basements with respect to one side of the building but open to ground level on the opposite side.





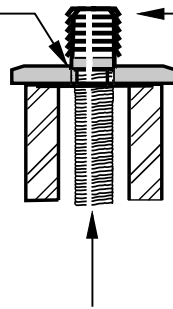
Key

- 1 The volume of the void below the lowest point of the debris collector outlet slots to be in accordance with Table 3.
- 2 Example of debris collector with outlet slots equi-spaced around the circumference of the device.

c) Example of inset live fuel effect gas fire installed in a raised builder's opening (hole-in-the-wall fireplace) using a flue kit (see 10.8.2) A1

Figure 2 — General layout — Live fuel effect gas fire, with or without a back boiler *(continued)*

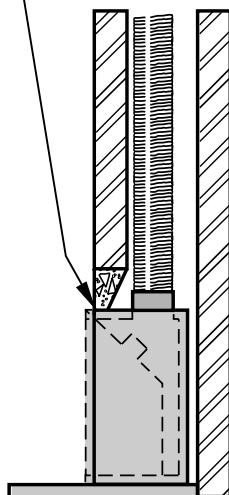
The flexible liner should be mechanically secured and sealed at the top of the chimney in accordance with the manufacturer's instructions



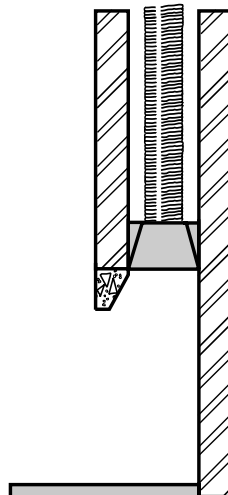
A terminal should be used to protect the end of the flue where the diameter is 170 mm or less (See C and R to 10.3).

Flue liner conforming to BS EN 1856-2

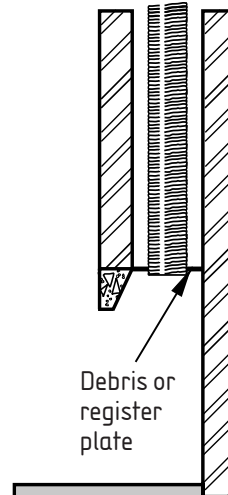
Joints to be well made where the closure plate or the flue box is sealed to the face of the opening or fire surround



A. Flue liner to BS EN 1856-2 connected to a gas flue box conforming to BS 715



B. Flue liner mechanically secured and sealed into a proprietary gather above the builder's opening



C. Flue liner mechanically secured and sealed with a clamp plate to a debris or register plate above a builder's opening. NB. The liner should not project below the plate more than a nominal 25mm. The annular space between the liner and the chimney can be sealed using mineral wool (See 11.10)

NOTE 1 If the gas supply to the appliance is to be made through the wall of the gas flue box, see 13.6.

NOTE 2 The flexible liner should rise in one continuous length as near vertically as possible from the top of the appliance, gas flue box or fireplace recess, and with no part of the flue liner forming an angle greater than 45° from the vertical.

NOTE 3 The flexible liner should be sized and installed in accordance with the manufacturer's instructions.

NOTE 4 In each of the illustrations above, the requirements are the same if a fire surround is applied to the front of the opening.

NOTE 5 For flue boxes and collectors, reference should be made to the manufacturer's instructions for compatibility.

Figure 3 — Methods of using a flue liner in a masonry chimney installation serving a gas appliance, other than a back boiler