

The Building Regulations 1991

Heat producing appliances

APPROVED DOCUMENT



J1/2/3

Heat producing appliances

The Stationery Office

Amended 1992

PART J

Heat producing appliances

APPROVED DOCUMENTS

The document in this publication has been approved by the Secretary of State as practical guidance to meeting the requirements of Part J of Schedule 1 to the Regulations.

The detailed provisions in the approved document are intended to provide guidance for some of the more common building situations. Alternative ways of demonstrating compliance may be appropriate in other circumstances.

There is no obligation to adopt any particular solution in the document if you prefer to meet the relevant requirement in some other way.

If a contravention of a requirement is alleged then, if you have followed the guidance in the document, that will be evidence tending to show that you have complied with the Regulations. If you have not followed the guidance then that will be evidence tending to show that you have not complied. It will then be for you to demonstrate by other means that you have satisfied the requirement.

Other requirements

The guidance relates only to the requirements given at the start of the document. The building work will have to comply also with the requirements of any other relevant paragraphs in Schedule 1 to the Regulations. There are Approved Documents which give guidance on the other requirements in Schedule 1.

Materials and Workmanship

Any building work to which a requirement of the regulations applies must, in accordance with Regulation 7, be carried out with proper materials and in a workmanlike manner. You may show that you have complied with this requirement in a number of ways, for example by following an appropriate British Standard or British Board of Agrément Certificate or by the appropriate use of a product bearing a CE mark as defined in the Construction Products Directive

(89/106/EEC). You will find further guidance in the Approved Document on Materials and Workmanship.

European technical specifications, British Standards and British Board of Agrément Certificates

When the document makes reference to a named Standard, the relevant version of the Standard is the one listed at the end of the publication.

Building Regulations are made for specific purposes; health and safety, energy conservation and the welfare and convenience of disabled people. European Technical Specifications (as defined in the Construction Products Directive) British Standards and Agrément Certificates are relevant guidance to the extent that they relate to these considerations. The Specifications, Standards and Certificates themselves may address, also, other aspects of performance such as serviceability or aspects which although they relate to health and safety are not covered by the regulations.

The Secretary of State has agreed with the British Board of Agrément on the aspects of performance which they need to assess in preparing their Certificates in order that the Board may demonstrate the compliance of a product or system, which has an Agrément Certificate, with the requirements of the regulations. An Agrément Certificate issued by the Board under these arrangements will give assurance that a product or system to which the Certificate relates, if properly used in accordance with the terms of the Certificate, will meet the relevant requirements. Similarly, the appropriate use of a product which complies with a European technical approval as defined in the Construction Products Directive will also meet the relevant requirements.

Approved document

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Building Regulations – the Requirement

This Approved Document which takes effect on 1st April 1990 deals with the following Requirement from PART J of Schedule 1 to the Building Regulations 1991:

Requirement	Limits on application
Air supply	
J1. Heat producing appliances shall be so installed that there is an adequate supply of air to them for combustion and for the efficient working of any flue-pipe or chimney.	The requirements in this Part apply only to fixed heat producing appliances which – (a) are designed to burn solid fuel, oil or gas; or (b) are incinerators.
Discharge of products of combustion	
J2. Heat producing appliances shall have adequate provision for the discharge of the products of combustion to the outside air.	
Protection of building	
J3. Heat producing appliances and flue-pipes shall be so installed, and fire-places and chimneys shall be so constructed, as to reduce to a reasonable level the risk of the building catching fire in consequence of their use.	

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Guidance

PERFORMANCE

In the Secretary of State's view, an installation will meet the requirements of J1, J2 and J3 if it:

- (a) receives sufficient air for the proper combustion of the fuel and operation of the flue,
- (b) is capable of normal operation without the products of combustion becoming a hazard to health, and
- (c) is capable of normal operation without causing damage by heat or fire to the fabric of the building.

Provisions meeting the requirement

Section 1

Provisions which apply generally

1.1 In this document, non-combustible means capable of being classified as non-combustible if subjected to the test for non-combustibility prescribed in BS 476, *Fire tests on building materials and structures*, Part 4: 1970 (1984): *Non-combustibility tests for materials*.

AIR SUPPLY TO APPLIANCES

1.2 Either the appliance should be room-sealed or the room or space containing it should have a ventilation opening. If this opening is to an adjoining room or space, then this should have an opening of the same size direct to external air. Ventilation openings should not be in fire resisting walls.

AIR EXTRACT FANS

1.3 If an air extract fan is fitted in a building containing a heat producing appliance (other than a room-sealed appliance), see Part F para 2.1 to 2.4.

FLUE PIPES AND CHIMNEYS

1.4 Unless an appliance is designed to operate without discharging the products of combustion to the outside air, it should have a balanced or low level flue or be connected to a flue pipe or chimney which discharges to the external air.

1.5 Provision should be made to enable a flue to be inspected and cleaned. An opening should only be made into a flue for the purpose of:

- (a) inspection or cleaning, and an opening for this purpose should have a rigid, non-combustible and gastight cover, or
- (b) fitting an explosion door, draught stabilizer or draught diverter.

1.6 A flue should not open into more than one room or space except for the purpose of inspection or cleaning, but may serve more than one appliance in the same room.

CHIMNEYS BUILT UNDER FORMER CONTROL

1.7 Chimneys constructed before 1 February 1966 may not conform in all respects with the recommendations of this Approved Document. Where this is the case, and there is no obvious indication that the chimney is unsatisfactory, it may be considered as satisfying the requirement.

Section 2

Additional provisions for solid fuel burning appliances with a rated output up to 45kW

AIR SUPPLY TO APPLIANCES

2.1 Any room or space containing an appliance should have a ventilation opening of at least the size shown in Table 1.

Table 1 Air supply to appliances

Type of appliance	Type of ventilation
Solid fuel burning open appliance	An air entry opening or openings with a total free area of at least 50% of the appliance throat opening area, – as defined in BS.8303: 1986 <i>Code of Practice for installation of domestic heating and cooking appliances burning solid mineral fuels</i> .
Other solid fuel appliance	An air entry opening or openings with a total free area of at least 550mm ² per kW of rated output above 5kW. Where a flue draught stabiliser is used the total free area should be increased by 300mm ² for each kW of rated output.

SIZE OF FLUES

2.2 Flue sizes should be at least:

- (a) for flue pipes, equal to that of the flue outlet on the appliance, or
- (b) for chimneys, at least the size shown in Table 2, but never less than the size of the flue outlet on the appliance or that recommended by the appliance manufacturer.

OUTLETS FROM FLUES

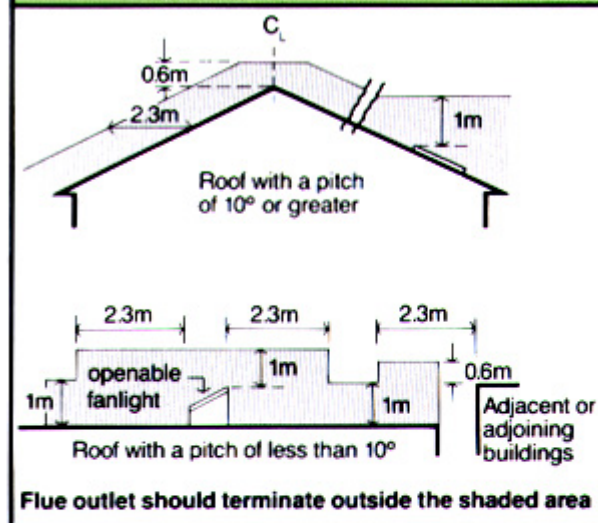
2.3 The outlet from a flue should be positioned above the roof of a building as shown in Diagram 1.

Table 2 Size of flues

Installation	Minimum flue size
Fireplace recess with an opening up to 500mm × 550mm	200mm diameter or square section of equivalent area
Fireplace recess with an opening in excess of 500mm × 550mm	a free area of 15% of the area of the recess opening
Closed appliance up to 20kW rated output burning bituminous coal	150mm diameter or square section of equivalent area
Closed appliance up to 20kW rated output	125mm diameter or square section of equivalent area
Closed appliance above 20kW and up to 30kW rated output	150mm diameter or square section of equivalent area
Closed appliance above 30kW and up to 45kW rated output	175mm diameter or square section of equivalent area

Note: Should an offset be necessary in a flue run then the flue size should be increased by 25mm on each dimension (diameter or each side of square flue).

Diagram 1 Flue outlets



DIRECTION OF FLUES

2.4 Flues should be vertical wherever possible. Horizontal flue runs should be avoided except in the case of a back outlet appliance, when the length of the horizontal section should not exceed 150mm.

2.5 Where a bend is necessary in a flue, it should not make an angle of more than 30° with the vertical.

FLUE PIPES

2.6 A flue pipe should only be used to connect an appliance to a chimney and should not pass through any roof space.

2.7 Flue pipes may be of any of the following materials:

(a) cast iron as described in BS41: 1973 (1981) *Specification for cast iron spigot and socket flue or smoke pipes and fittings*, or

(b) mild steel with a wall thickness of at least 3mm, or

(c) stainless steel with a wall thickness of at least 1mm and as described in BS1449: *Steel plate, sheet and strip*, Part 2: 1983 *Specification for stainless and heat resisting steel plate, sheet and strip* for Grade 316 S11, 316 S13, 316 S16, 316 S31, 316 S33, or the equivalent Euronorm 88-71 designation, or

(d) vitreous enamelled steel complying with BS:6999: 1989: *Specification for vitreous enamelled low carbon steel flue pipes, other components and accessories for solid fuel burning appliances with a maximum rated output of 45 kW*.

2.8 Flue pipes with spigot and socket joints should be fitted with the sockets uppermost.

SHIELDING OF FLUE PIPES

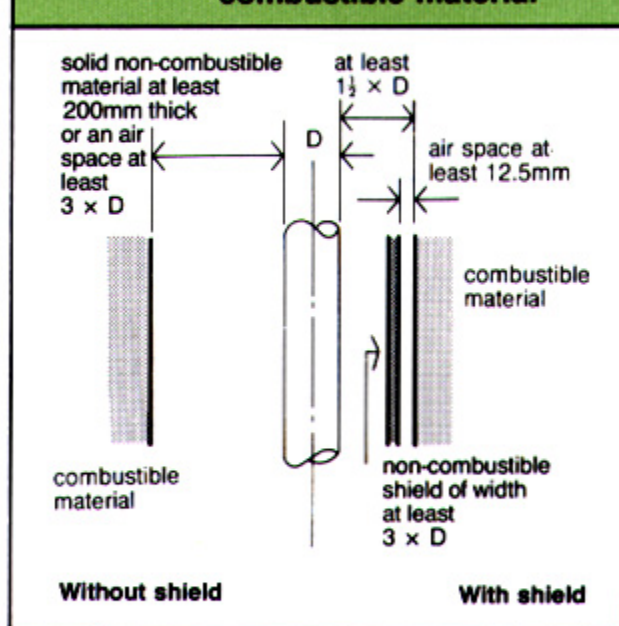
2.9 Flue pipes should be separated from combustible material by at least the distances shown in Diagram 2.

CHIMNEYS GENERALLY

2.10 Chimneys for use with solid fuel appliances should be capable of withstanding a temperature of 1100°C without any structural change which would impair the stability or performance of the chimney.

2.11 Where a chimney is not directly over an appliance, a debris collecting space should be provided which is accessible for emptying.

Diagram 2 Separating flue-pipe from surface of adjacent combustible material



BRICK CHIMNEYS

2.12 Brick Chimneys should be lined with:

(a) clay flue liners with rebated or socketed joints as described in BS1181: 1989 *Specification for clay flue linings and flue terminals*, or

(b) imperforate clay pipes with socketed joints as described in BS 65: 1981 *Specification for vitrified clay pipes, fittings and joints*, or

(c) high alumina cement and kiln burnt or pumice aggregate pipes, with rebated or socketed joints or steel collars around joints.

The linings should be fitted with the sockets or rebates uppermost. Liners should be jointed with fire-proof mortar, and any space between the liners and the brickwork should be filled with weak mortar or insulating concrete.

BLOCKWORK CHIMNEYS

2.13 Blockwork chimneys should be made of refractory material, or a combination of high alumina cement and kiln-burnt or pumice aggregates, or lined as in paragraph 2.12.

WALL THICKNESS

2.14 The thickness of the walls of a brick or blockwork chimney, excluding the thickness of any liner should be at least:

- (a) 100mm thick between one flue and another, or
- (b) 100mm thick between a flue and the outside air or between a flue and another part of the same building (but not another part which is a dwelling or is constructed as a separate fire compartment), or
- (c) 200mm thick between a flue and another compartment of the same building, another building or another dwelling.

COMBUSTIBLE MATERIAL

2.15 Combustible material should be separated from a brick or blockwork chimney by at least the following distance:

- (a) 200mm from a flue, or
- (b) 40mm from the outer surface of a brick or blockwork chimney or fireplace recess unless it is a floorboard, skirting, dado or picture rail, mantelshelf or architrave. Metal fixings in contact with combustible materials should be at least 50mm from a flue.

FACTORY-MADE INSULATED CHIMNEYS

2.16 Factory-made insulated chimneys should be:

- (a) constructed and tested to meet the relevant recommendations given in BS4543 *Factory-made insulated chimneys*, Part 1: 1990 *Methods of test for factory-made insulated chimneys* and Part 2: 1990 *Specification for chimneys with stainless steel flue linings for use with solid fuel fired appliances*, and
- (b) installed in accordance with the manufacturers' instructions or to meet the relevant recommendations of BS 6461: *Installation of chimneys and flues for domestic appliances burning solid fuel (including wood and peat)*; Part 2: 1984: *Code of practice for factory-made insulated chimneys for internal applications*.

2.17 A factory-made insulated chimney should not:

- (a) pass through any part of the building forming a separate compartment, unless it is cased in non-combustible material giving at least half the fire resistance of the compartment wall or floor (see **Approved Document B3** Internal fire spread (structure) for more information), or
- (b) be placed with its outer wall nearer to combustible material than a distance x, or
- (c) pass through a cupboard, storage space or roof space, unless it is surrounded by a non-combustible guard at a distance of at least x from the outer wall of the chimney.

For (b) and (c) above the distance x is to be found by test in accordance with BS 4543 Part 1: 1976.

CONSTRUCTIONAL HEARTHES

2.18 A constructional hearth should be provided of solid, non-combustible material at least 125mm thick (which may include the thickness of any solid, non-combustible floor under a hearth), and at least the size shown in Diagram 3.

2.19 Combustible material should not be placed under a constructional hearth unless:

- (a) it is to support the edges of the hearth, or
- (b) there is an air space of at least 50mm between the material and the underside of the hearth, or there is a distance of at least 250mm between the material and the top of the hearth (see Diagram 4).

FIREPLACE RECESSES

2.20 Fireplace recesses should be constructed of solid non-combustible material to the appropriate size given in Diagram 5.

WALLS ADJACENT TO HEARTHES

2.21 Walls which do not form part of a fireplace recess should be constructed as indicated in Diagram 6.

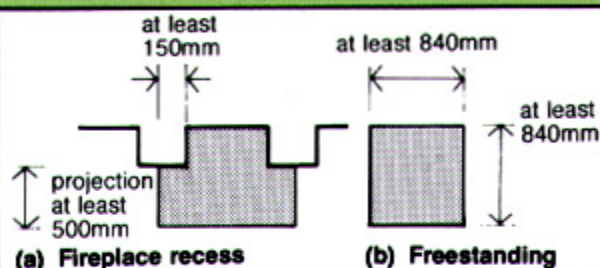
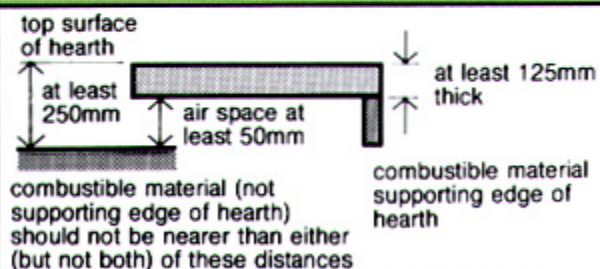
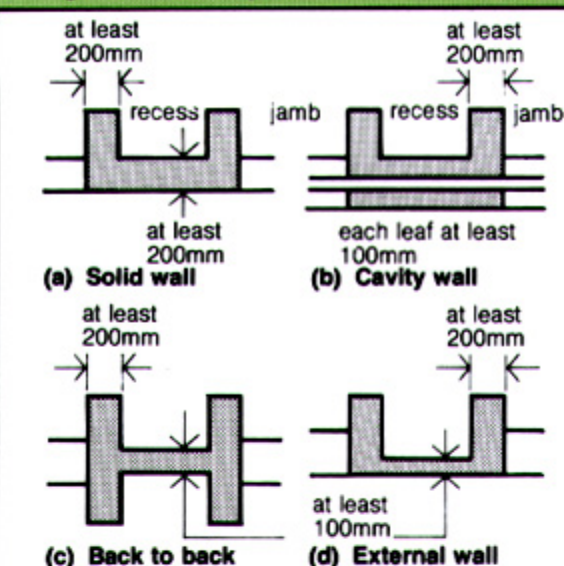
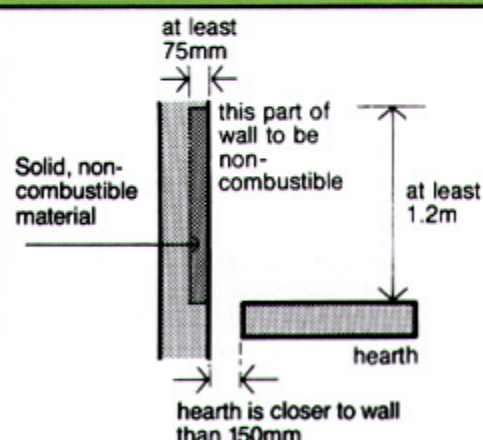
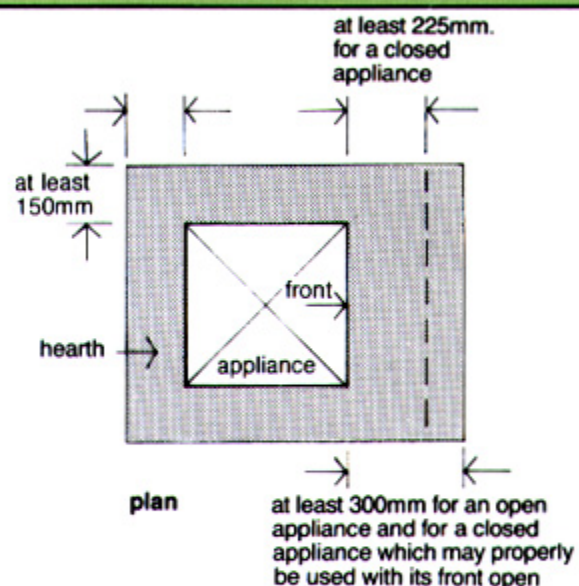
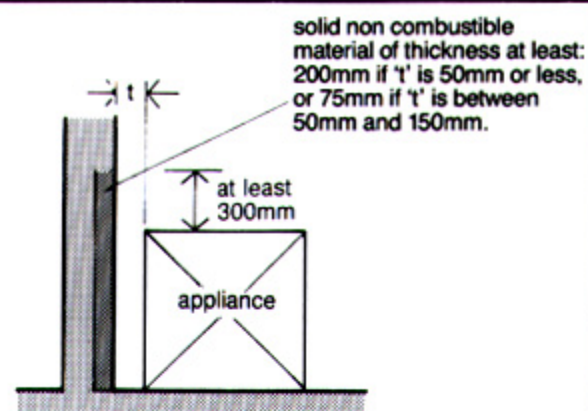
LOCATION OF APPLIANCES

2.22 An appliance:

- (a) should not be placed closer to the edges of a constructional hearth or any combustible material laid on it than shown in Diagram 7, and
- (b) should be separated from combustible materials as shown in Diagram 8.

Alternative approach

The requirement may also be met by following the relevant recommendations of BS8303: 1986 *Code of Practice for installation of domestic heating and cooking appliances burning solid mineral fuels*.

Diagram 3 Hearth sizes**Diagram 4 Combustible material under hearth****Diagram 5 Fireplace recesses****Diagram 6 Wall next hearth****Diagram 7 Placing appliance on constructional hearth****Diagram 8 Separating appliance from combustible materials in walls**

Section 3

Additional provisions for individually flued (non fan assisted) gas burning appliances with a rated input up to 60kW (and air supply for cooking appliances)

SOLID FUEL EFFECT APPLIANCES

3.1 These appliances simulate the burning of coal and wood with a live flame. Where they have been tested by an approved authority, installation may follow the manufacturers' instructions. Where this is not the case, installation should be in accordance with the relevant recommendations of BS 5871: *Specification for installation of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances*.
 Part 1: 1991 *Gas fires, convector heaters and fire/back boilers (1st, 2nd and 3rd family gases)*.
 Part 2: 1991 *Inset live fuel effect gas fires of heat input not exceeding 15kW (2nd and 3rd family gases)*.
 Part 3: 1991 *Decorative fuel effect gas appliances of heat input not exceeding 15kW (2nd and 3rd family gases) or with Section 2 of this Approved Document*.

APPLIANCES IN BATHROOMS AND GARAGES

3.2 As required by the Gas Safety (Installation and Use) Regulations 1984, any appliance in a bath or shower room or a private garage must be of the room-sealed type.

AIR SUPPLY TO APPLIANCES

(Other than for balanced flued or solid fuel effect appliances)

3.3 Any room or space containing a cooker should have an openable window or other means of providing ventilation. If the room or space has a volume less than 10m³, then, in addition, a permanent ventilation opening of at least 5000mm² should be provided.

3.4 Any room or space containing an open-flued appliance should have a permanent ventilation opening of at least 450mm² for each kW of appliance input rating exceeding 7kW.

SIZE OF FLUES

(Other than for balanced flued or solid fuel effect appliances)

3.5 The flue size should be at least that stated below:

(a) in the case of a gas fire, a cross-section area of at least 12000mm² if the flue is round, or 16500mm² if the flue is rectangular, and have a minimum dimension of 90mm or

(b) for any other appliance a cross-sectional area of at least that of the outlet from the appliance.

DIRECTION OF FLUES

(Other than balanced flues)

3.6 Horizontal flue runs should be avoided, and if a bend is necessary in a flue it should not make an angle of more than 45° with the vertical.

OUTLETS FROM FLUES

3.7 The outlet from a balanced-flued appliance should be:

(a) so situated externally as to allow free intake of air and dispersal of products of combustion, and

(b) at least 300mm from any opening into the building which is wholly or partly above the terminal, and

(c) protected with a guard if persons could come into contact with the terminal or if it could be subject to damage, and

(d) designed so as to prevent the entry of any matter which might restrict the flue.

3.8 The outlet from any other appliance should be:

(a) so situated, at roof level, that air may pass freely across it at all times, and

(b) at least 600mm from any opening into the building, and

(c) except in the case of a gas fire, fitted with a flue terminal where any dimension across the axis of the flue outlet is less than 175mm.

FLUE PIPES

3.9 Flue pipes may be of any of the following materials:

(a) sheet metal as described in BS 715: 1986: *Specification for metal flue pipes, fittings, terminals and accessories for gas-fired appliances with a rated input not exceeding 60kW*, or

(b) asbestos cement as described in BS 567: 1989 *Specification for asbestos-cement flue*

pipes and fittings, light quality, or BS 835: 1989 Specification for asbestos-cement flue pipes and fittings, heavy quality, or

(c) cast iron as described in BS 41: 1973 (1981), or

(d) any material described in Section 2 for a solid fuel appliance, or

(e) any other material fit for its intended purpose.

Flue pipes with spigot and socket joints should be fitted with the sockets uppermost.

SHIELDING OF FLUE PIPES

3.10 Flue pipes should:

(a) be at least 25mm from any combustible material, or

(b) where passing through a wall, floor or roof, be separated from any combustible material by a non-combustible sleeve enclosing an air space of at least 25mm around the flue pipe, or

(c) where passing through a compartment wall or a compartment floor, be cased with non-combustible material with at least half the fire resistance needed for the wall or floor (see Approved Document B3 Internal fire spread (structure)).

For a double-walled flue pipe, the 25mm distance may be measured from the outside of the inner pipe.

BRICK CHIMNEYS

3.11 Brick Chimneys should be lined with:

(a) clay flue liners with rebated or socketed joints as described in BS 1181: 1989,

(b) imperforate clay flue pipes as described in BS 65: 1991,

(c) any material described in Section 2 for a solid fuel appliance.

Linings should be fitted with the sockets or rebates uppermost to prevent condensate running out and to prevent any caulking material from being adversely affected. Joints between the liners and brickwork should be filled with mortar.

BLOCKWORK CHIMNEYS

3.12 Flue blocks should be as described in BS 1289: *Flue blocks and masonry terminals for gas appliances: Part 1: 1986 Specification for precast concrete flue blocks and terminals* and Part 2: 1989 *Specification for clay flue blocks and terminals*.

FLEXIBLE FLUE LINERS

3.13 A flexible flue liner may be used in a chimney if:

(a) the liner complies with the requirements of BS 715: 1989, and

(b) the chimney –

- (i) was built before 1 February 1966, or
- (ii) is already lined or constructed of flue blocks as recommended in this Approved Document.

DEBRIS COLLECTION SPACE

3.14 If the chimney is not lined or not constructed of flue blocks as recommended in this Approved Document, then a debris collection space should be provided at the bottom of the chimney with a volume of at least 0.012m³ and a depth of at least 250mm below the point of connection of the appliance with the chimney. The space should be readily accessible for clearance of debris, for example by removal of the appliance.

WALL THICKNESS

3.15 The wall thickness of a brick or blockwork chimney should be at least 25mm. Any chimney that passes through or forms part of a compartment wall or floor must have walls that achieve the same degree of fire resistance required for that wall or floor (see Approved document B3).

FACTORY-MADE INSULATED CHIMNEYS

3.16 Any factory-made insulated chimney should be as described in Section 2 or Section 4 of this Approved Document.

HEARTHES

(Other than for solid fuel effect appliances)

3.17 A hearth should always be provided for an appliance unless:

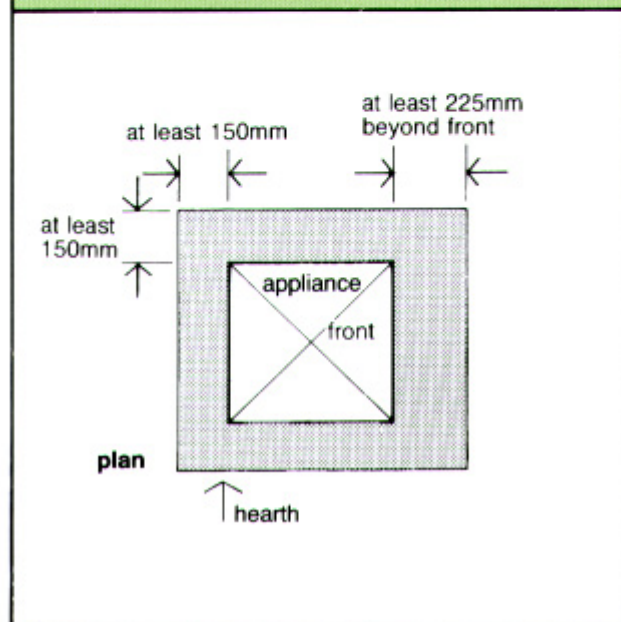
(a) every part of any flame or incandescent material in the appliance will be at least 225mm above the floor, or

(b) the appliance complies with the recommendations of the appropriate parts of BS 5258 *Safety of domestic gas appliances*, or BS 5386 *Specification for gas burning appliances for installation without a hearth*.

3.18 In case of a back boiler the hearth should be constructed:

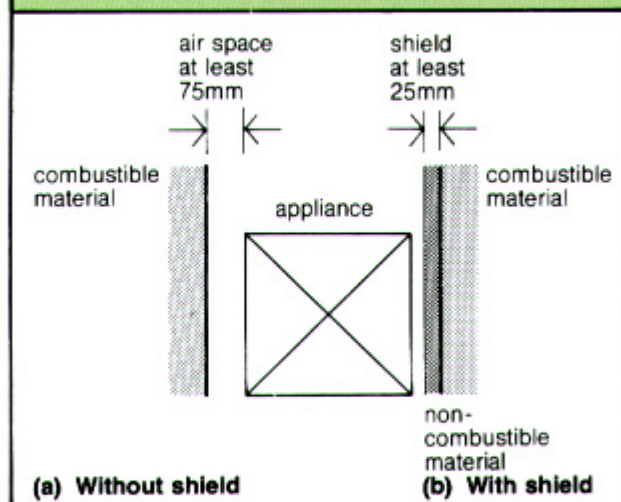
- (a) of solid, non-combustible material at least:
 - (i) 125mm thick, or
 - (ii) 25mm thick placed on non-combustible supports at least 25mm high, and
- (b) to the size given in Diagram 9.

Diagram 9 Hearth size



3.19 In the case of any other appliance, the hearth should be constructed of solid, non-combustible material at least 12mm thick and to the size given in Diagram 9.

Diagram 10 Separating appliance from combustible material



SHIELDING OF APPLIANCES

3.20 Unless the appliance complies with the relevant recommendations of the appropriate Parts of BS 5258 or BS 5386, the backs, tops and sides of appliances, and any draught-diverters should be separated from any combustible material by:

- (a) a shield of non-combustible material at least 25mm thick, or
- (b) an air space of at least 75mm (see Diagram 10).

Alternative approach

The requirement may also be met by following the relevant recommendations in the following British Standards –

BS 5440: *Installation of flues and ventilation for gas appliances of rated input not exceeding 60kW (1st, 2nd and 3rd family gases)*. Part 1: 1990 *Specification for installation of flues*.

Part 2: 1989 *Specification for installation of ventilation for gas appliances*.

BS5546: 1990 *Specification for installation of gas hot water supplies for domestic purposes (2nd family gases)*.

BS 5864: 1989 *Specification for installation of gas-fired ducted-air heaters of rated input not exceeding 60kW (2nd family gases)*.

BS 5871: *Installation of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances*.

Part 1: 1991

Part 2: 1991

Part 3: 1991.

BS 6172: 1990 *Specification for installation of domestic gas cooking appliances (1st, 2nd and 3rd family gases)*.

BS 6173: 1990 *Specification for installation of domestic gas catering appliances (1st, 2nd and 3rd family gases)*.

BS 6798: 1987 *Specification for installation of gas-fired hot water boilers of rated input not exceeding 60kW*.

Section 4

Additional provisions for oil burning appliances with a rated output up to 45kW

AIR SUPPLY TO APPLIANCES

4.1 Any room or space containing an appliance (other than a balanced-flued appliance) should have a permanent ventilation opening of free area at least 550mm² for each kW of rated output above 5kW.

SIZE OF FLUES

(Other than for balanced and low level flues)

4.2 The flue size should be at least:

- (a) for a flue pipe, the same as for the flue outlet from the appliance,
- (b) for a chimney: 100mm diameter for appliances with a rated output up to 20kW; 125mm diameter for appliances with a rated output between 20kW and 32kW; 150mm diameter for appliances with a rated output between 32kW and 45kW. If the flue is of square section, then it should have a cross-sectional area equivalent to the corresponding circular chimney.

DIRECTION OF FLUES

(Other than for balanced or low level flues)

4.3 Horizontal flue runs should be avoided, and if a bend is required in a flue it should not make an angle of more than 45° with the vertical.

OUTLETS FROM FLUES

4.4 The outlet from a balanced-flue or low level discharge appliance should be:

- (a) so situated externally as to allow the dispersal of the products of combustion and, with a balanced flue, the free intake of air, and
- (b) at least 600mm from any opening into the building, and
- (c) protected with a terminal guard if persons could come into contact with it or if it could be subject to damage, and
- (d) designed so as to prevent the entry of any matter which might restrict the flue.

4.5 The outlet from a flue serving a pressure jet appliance may be terminated anywhere above the roof line.

4.6 The outlet from a flue serving any other appliance should be positioned above the roof line as shown in Diagram 1 in Section 2 of this Approved Document.

FLUE PIPES AND BRICK AND BLOCKWORK CHIMNEYS

4.7 The provision for flue pipes and brick and blockwork chimneys will depend on the temperature of the flue gases under the worst operating conditions. If this temperature:

- (a) is likely to exceed 260°C, then the provisions of paragraphs 2.6–2.8 and 2.10–2.14 of Section 2 of this Approved Document should be applied where relevant; or
- (b) is unlikely to exceed 260°C, the provisions of paragraphs 3.9–3.15 of Section 3 should be applied where relevant.

FACTORY-MADE INSULATED CHIMNEYS

4.8 Factory-made insulated chimneys should be:

- (a) constructed and tested to meet the relevant recommendations given in BS 4543 *Factory-made insulated chimneys*
Part 1: 1990 *Methods of Test*
Part 3: 1990 *Specification for chimneys with stainless steel flue lining for use with oil-fired appliances*.
- (b) installed so as to meet the requirements of BS 6461: 1984 Part 2.

4.9 An insulated metal chimney should not:

- (a) pass through a part of the building forming a separate compartment, unless it is cased in non-combustible material giving at least half the fire resistance of the compartment wall or floor (see Approved Document B3 Internal fire spread (structure) for more information), or
- (b) be placed with its outer wall nearer to combustible material than a distance x, or
- (c) pass through a cupboard, storage space or roof space, unless it is cased in a non-combustible material at a distance of at least x from the outer wall of the chimney.

For (b) and (c) above the distance x is to be found by test in accordance with BS 4543 Part 1.

HEARTHES

4.10 If the surface temperature of the floor below the appliance is:

- (a) likely to exceed 100°C, then a constructional hearth should be provided as described in paragraphs 2.18 and 2.19 of Section 2 of this Approved Document, or

(b) unlikely to exceed 100°C, the appliance may stand on a rigid, impermeate sheet of non-combustible material without a constructional hearth.

SHIELDING OF APPLIANCES

4.11 If the surface temperature of the sides and back of an appliance is likely to exceed 100°C, the appliance should be shielded as described in paragraph 3.20 (a) or (b) of Section 3 of this Approved Document.

Alternative approach

The requirements may also be met by following the relevant recommendations of BS 5410: *Code of practice for oil firing: Part 1: 1977 Installations up to 44 kW output for space heating and hot water supply purposes*.

J 1/2/3

BS 41: 1973 (1981) Specification for cast iron spigot and socket flue or smoke pipes and fittings.

BS 65: 1991 Specification for vitrified clay pipes, fittings and ducts also flexible mechanical joints for use solely with surface water pipes and fittings.

BS 476 Fire tests on building materials and structures, Part 4: 1970 (1984). Non-combustibility tests for materials.

AMD 2483

AMD 4390

BS 567: 1973 (1989) Specification for asbestos-cement flue pipes and fittings, light quality.

AMD 5963

BS 715: 1989 Specification for metal flue pipes, fittings, terminals and accessories for gas-fired appliances with a rated input not exceeding 60kW.

AMD 6615

AMD 6335

BS 835: 1973 (1989) Specification for asbestos-cement flue pipes and fittings, heavy quality.

AMD 5964

BS 1181: 1989 Specification for clay flue linings and terminals.

BS 1289: Flue blocks and masonry terminals for gas appliances, Part 1: 1986. Specification for precast concrete flue blocks and terminals; Part 2: 1989 Specification for clay flue blocks and terminals.

BS 1449: Steel plate, sheet and strip, Part 2: 1983 Specification for stainless and heat resisting steel plate, sheet and strip.

AMD 4807

AMD 6646

BS 4543 Factory-made insulated chimneys, Part 1: 1990. Methods of test; Part 2: 1990. Specification for chimneys with stainless steel flue linings for use with solid fuel fired appliances; Part 3: 1990. Specification for chimneys with stainless steel flue linings for use with oil fired appliances.

BS 5258 Safety of domestic gas appliances, Part 1: 1986. Specification for central heating boilers and circulators; Part 4 1987. Specification for fanned-circulation ducted-air heaters; Part 5: 1989. Specification for gas fires; Part 7: 1977. Storage water heaters; Part 8: 1980. Combined appliances: gas fire/back boiler; Part 12: 1990. Specification for decorative fuel effect gas appliances (2nd and 3rd family gases); Part 13: 1986 Specification for convector heaters.

BS 5386 Specification for gas burning appliances, Part 1: 1976 Gas burning appliances for instantaneous production of hot water for domestic use, AMD 2990, AMD 5832; Part 2: 1981 (1986) Mini water heaters (2nd and 3rd family gases); Part 3: 1980 Domestic cooking appliances burning gas, AMD 4162, AMD 4405, AMD 4878, AMD 5220 and AMD 6642; Part 4: 1991 Built-in domestic cooking appliances.

BS 5410 Code of practice for oil firing, Part 1: 1977 Installations up to 44kW output capacity for space heating and hot water supply purposes, AMD 3637.

BS 5440 Installation of flues and ventilation for gas appliances of rated input not exceeding 60kW (1st, 2nd and 3rd family gases). Part 1: 1990 Specification for installation of flues; Part 2: 1989 Specification for installation of ventilation for gas appliances.

BS 5546: 1990 Specification for installation of gas hot water supplies for domestic purposes (1st, 2nd and 3rd family gases).

AMD 6656.

BS 5864: 1989 Specification for installation in domestic premises of gas-fired ducted air heaters of rated output not exceeding 60kW.

BS 5871: 1980 (1983) Specification for installation of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances. Part 3: 1991 Decorative fuel effect gas appliances of heat input not exceeding 15kW (2nd and 3rd family gases).

AMD 7033.

BS 6172: 1990 Specification for installation of domestic gas cooking appliances (1st, 2nd and 3rd family gases).

BS 6173: 1990 Specification for installation of gas fired catering appliances for use in all types of catering establishments (1st, 2nd and 3rd family gases).

BS 6461 Installation of chimneys and flues for domestic appliances burning solid fuel (including wood and peat), Part 2: 1984 Code of practice for factory-made insulated chimneys for internal applications.

BS 6798: 1987 Specification for installation of gas-fired hot water boilers of rated input not exceeding 60kW.

BS 6999: 1989 Specification for vitreous enamelled low-carbon-steel flue pipes, other components and accessories for solid fuel burning appliances with a maximum rated output of 45kW.

BS 8303: 1986 Code of practice for installation of domestic heating and cooking appliances burning solid mineral fuels, AMD 5723.

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