

# Installation of domestic heating and cooking appliances burning solid mineral fuels

## Part 2. Specification for installing and commissioning on site

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## Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Engineering Sector Board to Technical Committee RHE/28, upon which the following bodies were represented:

Association of British Solid Fuel Appliance Manufacturers  
 British Ceramic Tile Council  
 British Coal Corporation  
 Consumer Policy Committee of BSI  
 Department of Energy (Energy Efficiency Office)  
 Department of the Environment  
 HETAS Ltd  
 Incorporated Association of Architects and Surveyors  
 Low Temperature Coal Distillers of Great Britain Ltd.  
 METCOM  
 National Fireplace Manufacturers' Association  
 National Society for Clean Air  
 Real Fire Association  
 Solid Smokeless Fuels Federation  
 Waterheater Manufacturers' Association  
 Coopted members

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 Committee reference RHE/28  
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# Contents

	Page
Committees responsible	Inside front cover
Foreword	2
<hr/>	
<b>Specification</b>	
<b>1</b> Scope	3
<b>2</b> Definitions	3
<b>3</b> References	3
<b>4</b> Exchange of information	3
<b>5</b> Checking, handling and site storage of materials and components	3
<b>6</b> Co-ordination of work and installation preparation	3
<b>7</b> Installation work on site	4
<b>8</b> Commissioning of the installation	4
<b>9</b> Handover	4
<hr/>	
<b>List of references</b>	Inside back cover
<hr/>	

## Foreword

This Part of BS 8303 has been prepared under the direction of the Engineering Sector Board and together with BS 8303 : Parts 1 and 3 supersedes BS 8303 : 1986 which is withdrawn.

BS 8303 covers the installation of domestic heating and cooking appliances burning solid mineral fuel.

BS 8303 : Part 1 details the design specification to be followed by the installation designer, when developing an acceptable appliance installation design for the particular application.

This Part of BS 8303 specifies the practices to be followed when installing the appliance in accordance with the design specification. It reflects good site supervision and working practices.

BS 8303 : Part 3 gives guidance and recommendations to the designer and installer on options to be identified and the methods of achieving a safe and satisfactory installation. It also gives important guidance on other matters including maintenance and cleaning.

BS 8303 does not deal with design or installation of hot water heating systems or hot water supply systems. However, where the appliance involves hot water services, attention is drawn to BS 5449 : 1990. Attention is drawn to the need to ensure compliance with all local and general regulations as they affect the installation, including the following:

- planning permission;
- Building Regulations [1];
- Clean Air Act [2];
- Gas Safety (Installation and Use) Regulations [3].

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

# Specification

## 1 Scope

This Part of BS 8303 specifies the procedures to be followed for on-site installation and testing of domestic heating and cooking appliances burning solid mineral fuels.

## 2 Definitions

For the purposes of this Part of BS 8303, the definitions given in BS 1846 : Part 1 : 1994 apply.

## 3 References

### 3.1 Normative references

This Part of BS 8303 incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this Part of BS 8303 only when incorporated in it by amendment or revision. For undated references, the latest edition applies, together with any amendments.

### 3.2 Informative references

This Part of BS 8303 refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

## 4 Exchange of information

The installer shall be in possession of the design specification, produced by the designer, for the installation of the appliance in accordance with BS 8303 : Part 1 : 1994 prior to commencing work.

## 5 Checking, handling and site storage of materials and components

### 5.1 Checking

#### 5.1.1 Delivery of materials

Delivery tickets and certificates shall be checked against the design specification. The condition of the appliance, materials and components received shall be examined. If any item is damaged, or is not as specified, the supplier shall be contacted immediately.

#### 5.1.2 Before installation

The following shall be checked before commencing work;

- the manufacturer's instructions are available on site;

- the appliance, materials and components are clean, undamaged and dry;
- sufficient quantities of all components required to complete the installation are available, including those not supplied by the appliance manufacturer. Hearths and fireplace recesses shall be checked to ensure that they are finished to the correct dimensions for the insertion of the appliance, special regard being paid to any minimum/maximum sizes quoted in BS 8303 : Part 1.

NOTE. Some appliances require a special fireplace surround, hearth or both.

### 5.2 Handling on site

The appliance and components shall be handled in a manner such as to prevent breakage and deterioration. Special care shall be taken before, during and after installation to ensure that equipment is not damaged.

NOTE 1. This is particularly important with fittings that are vitreous enamelled, plated or fitted with glass.

Any components removed during transit or storage shall be handled so that they can be identified and refitted correctly to the original equipment.

NOTE 2. This is especially important where several different appliances are stored together as some parts are individually fitted to each appliance by the manufacturer and are not interchangeable.

### 5.3 Site storage

Suitable accommodation offering safe, dry and frost free storage shall be provided for all components, e.g. appliances, pipes, ducting, fireplace surrounds, firebacks and refractory air-setting cement. All components shall be stored on a firm level base in the original packaging and in accordance with the manufacturer's instructions. Where storage is on a solid floor, components shall be stacked on a sheet of polythene, pallets or timber to prevent any rising damp affecting them. The appliance instructions and any operating, stoking and cleaning tools shall be kept safely in store until they can be handed directly to the user on completion of the installation.

## 6 Coordination of work and installation preparation

In preparing for the installation of an appliance liaison shall be established with the contractor, builder or householder to ensure that site access is available, cooperation between trades is arranged and sufficient time is allowed for completing each phase of the installation. Care shall be taken to ensure that:

- a) all accessories and materials for construction are available on site;

- b) chases are formed true to size and correctly positioned;
- c) the fireplace recess, chimney, lintels and flue-connecting blocks are installed in accordance with the design specification in their true relation to the appliance, and hearth;
- d) the pipework is ready for connection to the boiler as soon as the appliance has been fixed in place;
- e) any ducts or vents required to be formed in builder's work have been laid or constructed;
- f) the fitter's and finishing tradesmen's work is coordinated and protection is provided for vulnerable surface finishes, e.g. hearths, floors.

NOTE. The final connections between appliance and flue should be completed when the structural and appliance installation work is finished.

## 7 Installation work on site

### 7.1 General requirements

The instructions of the appliance manufacturer shall be followed in conjunction with the design specification in accordance with of BS 8303 : Part 1.

### 7.2 Chimney and fireplace recess construction and preparation

Any soot door required for cleaning the chimney shall be correctly located and fitted. (See clause 10 of BS 8303 : Part 1 : 1994).

With both new and old chimneys, and before proceeding with appliance installation, a check shall be made to ensure that the flue is clean, clear of any obstruction, in a sound condition and of adequate size to suit the appliance being installed.

### 7.3 Appliances with a boiler

The boiler shall be coupled to the hot water system by means of unions. Easy access shall be provided for removal. If flow and return pipes are taken through a fireplace recess wall they shall be sleeved for easy removal or replacement. A drain cock shall be fitted at the lowest point in the system for draining down when required.

For insert appliances fitted with a boiler it is important that connection of pipework to the boiler and leak testing shall take place before the space around the appliance is in-filled with insulating material.

### 7.4 Composition of insulating in-fill

Inset open fires and inset roomheaters shall be installed using in-fill material behind firebacks or boilers, and around roomheater casings (see BS 8303 : Part 1 : 1993, figures 1, 2, 3, 13 and 15).

NOTE. Further information is given in clause 14 of BS 8303 : Part 3 : 1994.

### 7.5 Gas supply

If a gas point is required for connecting to an ignition burner or independent gas poker it shall be installed close to the appliance.

NOTE. Attention is drawn to the Gas Safety (Installation and Use) Regulations [3].

### 7.6 Electric supply

If a supply of electricity is necessary to operate the control equipment or initiate ignition in an appliance, the electrical supply shall be installed in accordance with BS 7671 : 1992. The electrical installation shall be in accordance with BS 7671.

### 7.7 Making good

Following installation all building works etc. shall be made good.

## 8 Commissioning of the installation

### 8.1 Inspection

Preferably not less than 48 h after the appliance has been installed, it shall be examined to ensure that all fittings (in particular dampers, boiler flue pipe, flue adaptor and boiler pipes) are firmly fixed in the correct position and that no gaps allowing possible air or water leakage have appeared.

Similarly, air supply intakes and ducts shall be checked for size and position.

After installation the appliance shall not be used for burning builder's rubbish.

### 8.2 Testing

**8.2.1** Before lighting a fire, any water system connected to the appliance shall be filled. The installation shall be dried out under slow fire conditions preferably for about 2 days using the type and size of fuel recommended in the appliance manufacturer's instructions.

**8.2.2** The installer shall confirm that the fire responds to the operation of the controls and that there is no visible emission of combustion products to the room.

**8.2.3** Appliances incorporating a boiler shall be tested to ensure that the water is circulating throughout the system.

NOTE. For further information see clause 15 of BS 8303 : Part 3 : 1994.

## 9 Handover

On completion of installing and commissioning the system, the installer shall hand over the manufacturer's operating instructions to the user in order to provide full information regarding the operation and maintenance of the appliance.

## List of references (see clause 2)

### Normative references

#### BSI publications

BRITISH STANDARDS INSTITUTION, London

- |                         |   |
|-------------------------|---|
| BS 1846 :               | <i>Glossary of terms relating to solid-fuel burning equipment</i>                           |
| BS 1846 : Part 1 : 1994 | <i>Domestic appliances</i>  |
| BS 7671 : 1992          | <i>Requirements for electrical installations</i>  |
| BS 8303 :               | <i>Installations of domestic heating and cooking appliances burning solid mineral fuels</i> |
| BS 8303 : Part 1 : 1994 | <i>Specification for the design of installations</i>  |

### Informative references

#### BSI publications

BRITISH STANDARDS INSTITUTION, London

- |                         |   |
|-------------------------|---|
| BS 5449 : 1990          | <i>Specification for circulation hot water central systems for domestic premises<sup>1)</sup></i> |
| BS 8303 :               | <i>Installation of domestic heating and cooking appliances burning solid mineral fuels</i>        |
| BS 8303 : Part 3 : 1994 | <i>Recommendations for design and on-site installation</i>  |

#### Other references

- [1] GREAT BRITAIN. *Building Regulations*. London: HMSO<sup>1)</sup>
- [2] GREAT BRITAIN. *Clean Air Act*. London: HMSO<sup>1)</sup>
- [3] GREAT BRITAIN. *Gas Safety (Installation and Use) Regulations*. London: HMSO

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<sup>1)</sup> Referred to in foreword only.

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