

Installation of flues and ventilation for gas appliances of rated input not exceeding 60 kW (1st, 2nd and 3rd family gases) —

Part 2: Specification for installation of ventilation for gas appliances

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 Standards Advisory 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
- Co-opted members

This British Standard, having been prepared under the direction of the Gas Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1990

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The following BSI references relate to the work on this standard:
Committee reference GSE/30
Draft for comment 85/79059 DC

ISBN 0 580 18005 0

Amendments issued since publication

Amd. No.	Date of issue	Comments
8128	15 March 1994	Indicated by a sideline in the margin

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Foreword

This Part of BS 5440 has been prepared under the direction of the Gas Standards Policy Committee. It is a revision of BS 5440-2:1976, which is withdrawn.

In this revision of BS 5440-2 greater detail has been included regarding the positioning of air vents, and the requirements for flueless appliances have been simplified, where experience has shown that room volume limits and associated air vent free areas can be safely rounded. At the same time in line with policy on metrication the use of imperial units has been discontinued.

This revision recognizes investigative work carried out by British Gas plc and other bodies into the magnitude of adventitious ventilation openings, which are always present in rooms to some degree. This work shows that the lower limit of 35 cm² applied in the preparation of BS 5440-2:1976 remains valid and this figure has been allowed for in this revision in specifying the ventilation requirements for open-flued appliances.

NOTE This standard has been written in the form of a practice specification (see clause 6 of PD 6501-1:1982). To comply with this specification, the user has to comply with all its requirements. He may depart from recommendations, but this would be on his own responsibility and he would be expected to have good reasons for doing so.

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.

Compliance with a British Standard does not of itself confer immunity from legal obligations. In particular, attention is drawn to the following.

- a) Statutory Instrument 1358:1984: The Gas Safety (Installation and Use) Regulations 1984
- b) Statutory Instrument 1065:1985 (as amended): Building Regulations 1985
- c) Statutory Instrument 1596:1981 (as amended): The Building Standards (Scotland) Regulations 1981

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 5440 specifies the installation requirements for the ventilation of new or replacement gas appliances for domestic or non-domestic purposes utilizing 1st, 2nd or 3rd family gases and with a rated heat input not exceeding 60 kW but excluding:

- a) installations covered by the requirements of BS 5482-2 and BS 5482-3;
- b) decorative fuel effect gas appliances of the type covered by BS 6714¹⁾.

NOTE 1 Additional standards that should be consulted are listed in appendix A.

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 5440 the definitions given in BS 1179:1967 and BS 1179-6 apply, together with the following.

2.1

air vent

a non-adjustable purpose-made grille designed to allow the passage of air at all times

2.2

air vent free area

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

2.3

internal space

an interior space which is not a room, such as a hall, passage-way, etc

2.4

protected shaft

a stairway, lift, escalator, chute, duct or other shaft which enables persons, things or air to pass from one compartment to another

2.5

room volume

the nominal (gross) volume of a room or internal space, i.e. the product of the area bounded by the walls and the height

2.6

ventilation

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

3 Materials for air vents and ducts

Air vents and ducts shall be such that they are dimensionally stable and corrosion resistant and suitable for their intended use. When selecting an air vent or duct due consideration shall be given to its siting and environment.

Components containing asbestos shall not be used.

4 Size and position of air vents

4.1 General

4.1.1 Air vents communicating directly with outside air

4.1.1.1 A ventilation opening across a cavity wall shall include a continuous duct across the cavity. The duct shall be installed in such a way that it does not impair the water resistance of the cavity.

4.1.1.2 Where an air vent is sited so that any part of it is vertically above a balanced flue terminal it shall not be less than 300 mm from the terminal whether or not the flue is fitted with a fan.

Where an air vent is sited adjacent to an open flue terminal it shall be not less than:

- a) 600 mm from any part of the terminal on a natural draught flue;
- b) 300 mm from any part of the terminal on a fanned draught flue.

COMMENTARY AND RECOMMENDATIONS ON 4.1.1. *The air vent should not be located in a position where it is likely to be easily blocked, e.g. by leaves or snow, or flooded, or where contaminated air can be expected, e.g. car ports.*

An air vent should be located so that the air currents produced will not pass through normally occupied areas of a room. This can be achieved by:

- a) *siting the appliance in a compartment having vents communicating directly with outside air;*
- b) *siting the vent at or near ceiling height;*
- c) *siting the vent at a point adjacent to the appliance.*

The apertures of an air vent should be such as to prevent the entry of a 10 mm diameter ball but allow entry of a 5 mm diameter ball. No gauze or screen should subsequently be incorporated or fitted.

4.1.2 Air vents not communicating directly with outside air

¹⁾ In course of revision.