

Components for smoke and heat control systems —

Part 2: Specification for powered smoke and heat exhaust ventilators

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Fire Standards Policy Committee (FSM/-) to Technical Committee FSM/14, upon which the following bodies were represented:

Association of Metropolitan Authorities	Electricity Supply Industry in England and Wales
British Fire Services' Association	Fire Brigades Union
British Gas plc	Health and Safety Executive
British Retailers' Association	Home Office
Building Employers' Confederation	Incorporated Association of Architects and Surveyors
Chartered Institution of Building Services Engineers	Institute of Building Control
Chief and Assistant Chief Fire Officers' Association	Institution of Fire Engineers
Consumer Policy Committee of BSI	Institution of Gas Engineers
Department of Education and Science	Institution of Structural Engineers
Department of Health	London Fire and Civil Defence Authority
Department of the Environment (Building Research Establishment)	Loss Prevention Council
Department of the Environment (Construction Industries Directorate)	National Council of Building Material Producers
Department of the Environment (Property Services Agency)	Royal Institute of British Architects
Department of the Environment for Northern Ireland	Royal Institution of Chartered Surveyors
	Scottish Development Department
	Timber Research and Development Association

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

Access Committee for England	Building Services Research and Information Association
Association of Consulting Engineers	Flat Glass Manufacturers' Association
Association of Rooflights Manufacturers (Arms)	Intumescent Fire Seals Association
British Automatic Sprinkler Association	London District Surveyors Association
British Council of Shopping Centres	Smoke Ventilation Association
British Fire Protection Systems Association Ltd.	Society of Fire Safety Engineers
British Property Federation	Warrington Fire Research Centre

This British Standard, having been prepared under the direction of the Fire Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 31 July 1990

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Foreword

This Part of BS 7346 has been prepared under the direction of the Fire Standards Policy Committee, and is based on a draft prepared by the Smoke Ventilation Association. It is one of a series of specifications for components of smoke and heat control systems. The other Parts are as follows:

- *Part 1: Specification for natural smoke and heat exhaust ventilators;*
- *Part 3: Specification for smoke curtains.*

The objective of determining the high temperature performance of a powered smoke and heat exhaust ventilator is to ensure, as far as possible by simulation, that the unit will operate for the temperature and time specified.

This British Standard defines the classification of powered smoke and heat exhaust ventilators in terms of proven endurance at elevated temperatures. It also describes the methods of test to be used to measure the performance of powered smoke and heat exhaust ventilators and sets the criteria for structural performance, electrical performance and aerodynamic performance at high temperatures upon which the classification is based.

The standardized temperature and time conditions used in the classification are representative of a limited range of fire conditions only, and the standard does not quantify the behaviour of a ventilator, for a precise period of time, in a real fire.

A sample ventilator test piece whose normal ambient aerodynamic performance has already been determined in accordance with BS 848-1 is exposed to a specified heating regime and its performance is monitored on the basis of the criteria described in this British Standard. Fire resistance of the test piece is expressed as the time for which the appropriate criteria have been satisfied, related to the temperature to which the test piece has been subjected. The temperature/time ratings so obtained are a measure of the adequacy of the ventilator performance under different fire conditions, but have no direct relationship with the duration of a real fire.

The test data can be used directly to show compliance with specified fire resistance requirements. The tests can also be used to study the behaviour of ventilators at high temperatures and obtain guidance on the effect of design features on performance under fire conditions.

This British Standard sets out the means by which the performance of a range of sizes of a particular design may be classified, based on the tested and proven performance of a single representative test piece from the range.

The award of a classification to a defined range of sizes of a particular design means that a representative test piece, as defined in clause 8, when tested in accordance with this standard, satisfied the criteria set out in clause 9.

Assessed capability. Users of this British Standard are advised to consider the desirability of assessment and registration of a supplier's quality systems against the appropriate part of BS 5750 by a third party certification body.

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.

Summary of pages

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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.