

Australian Standard™

**Smoke/heat venting systems—Design,  
installation and commissioning**

Building Code of Australia  
Primary referenced Standard



Standards Australia

This Australian Standard was prepared by Committee ME-062, Ventilation and Airconditioning. It was approved on behalf of the Council of Standards Australia on 26 October 2001 and published on 15 November 2001.

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The following interests are represented on Committee ME-062:

Air Conditioning & Mechanical Contractors Association of Australia  
Air-Conditioning and Refrigeration Equipment Manufacturers Association of Australia  
Australasian Fire Authorities Council  
Australian Building Codes Board  
Australian Chamber of Commerce and industry  
Australian Industry Group  
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Australian Institute of Refrigeration Air Conditioning and Heating  
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Department of Contract and Management Services, W.A.  
Department of Health and Human Services Tasmania  
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Australian Standard™

**Smoke/heat venting systems—Design,  
installation and commissioning**

Originated as AS 2665—1983.  
Second edition 2001.

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Published by Standards Australia International Ltd  
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 4189 4

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-062, Ventilation and Airconditioning to supersede AS 2665—1983. Editorially, consideration has been given to the possible incorporation of this Standard in Building Regulations. The Standard does not identify those buildings in which smoke and heat vents are required. This is covered in the Building Code of Australia (BCA).

The objective of this document is to provide a standardized methodology for the design of smoke and heat vent systems for use by system owners, regulators, designers and installers.

In the preparation of this Standard consideration was given to research conducted by the Experimental Building Station and published in Report No. UP 344, Venting Fires Through Roofs, Experimental Fires in an Aircraft Hangar, and to Fire Research Technical Paper No. 10 published by U.K. Department of the Environment and Fire Officers' Committee Joint Fire Research Organization. Acknowledgment is made of the assistance received therefrom. Whereas this Standard was prepared to provide minimum requirements for a venting system, provision is also made, for the use of a nomogram from Fire Research Technical Paper No. 10 to be applied to areas in buildings of high fire load and risk.

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## FOREWORD

To gain increased efficiency in assembly line operations, large single-storey buildings without dividing walls are favoured as these restrict mobility of conveyor lines and make operational changes and expansion difficult. The result, from a fire protection viewpoint, has been to make such buildings vulnerable to a large single area of fire.

The heat and smoke contained within the large area increases both the threat to building occupants and the difficulty of firefighting as the fire brigade must enter the building to combat the fire in central sections of the plant.

Vents relieve heat and smoke from the building for a required purpose. Further information may be obtained from Appendix A.

## STANDARDS AUSTRALIA

### Australian Standard

## Smoke/heat venting systems—Design, installation and commissioning

### SECTION 1 SCOPE AND GENERAL

#### 1.1 SCOPE

This Standard sets out requirements for the design, installation and commissioning of a system of automatic smoke/heat release vents in conjunction with associated smoke reservoirs in buildings.

#### 1.2 APPLICATION

##### 1.2.1 General

Smoke/heat venting systems shall be designed and installed in accordance with Section 2 and shall be commissioned in accordance with Section 3.

##### 1.2.2 Building Code of Australia

This Standard will be referenced in the Building Code of Australia by way of BCA Amendment 10 to be published by 1 January 2002 thereby superseding the previous edition, AS 2665—1983, which will be withdrawn 12 months from the date of the publication of this edition.

#### 1.3 REFERENCED DOCUMENTS

The following Standards are referred to in this Standard:

AS

- 1170 Minimum design load on structures (known as the SAA Loading Code)
- 1170.2 Part 2: Wind loads
- 1530 Methods for fire tests on building materials, components and structures
- 1530.1 Part 1: Combustibility test for materials
- 1562 Design and installation of sheet roof and wall cladding
- 1562.1 Part 1: Metal
- 1603 Automatic fire detection and alarm systems
- 1603.2 Part 2: Point type smoke detectors
- 1603.7 Part 7: Optical beam smoke detectors
- 1603.8 Part 8: Multi-point aspirated smoke detectors
- 1603.13 Part 13: Duct sampling units
- 1890 Thermally released links
- 2047 Windows in buildings—Selection and installation
- 2118 Automatic fire sprinkler systems (series)
- 2427 Smoke/heat release vents
- 2484 Fire—Glossary of terms
- 2484.1 Part 1: Fire tests
- 2484.2 Part 2: Fire protection and firefighting equipment