AS 4740:2025

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Natural ventilators — Classification and performance

AS 4740:2025

This Australian Standard® was prepared by ME-062, Ventilation and Airconditioning. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 05 March 2025.

This Standard was published on 28 March 2025.

The following are represented on Committee ME-062:

Air Conditioning & Mechanical Contractors Association
Australian Industry Group
Australian Institute of Refrigeration Air Conditioning and Heating
Chartered Institution of Building Services Engineers
Consumer Electronics Suppliers Association
Construction Information Systems Limited (NATSPEC)
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This Standard was issued in draft form for comment as DR AS 4740:2024.

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ISBN 978 1 76175 126 4

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First published as AS/NZS 4740:2000.
Revised and redesignated as AS 4740:2025.

Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-62, Ventilation and Air Conditioning, to supersede AS 4740:2000.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this document is to provide requirements and performance test methods for natural ventilators for use by manufacturers, suppliers, testers, specifiers and consumers of these products.

The terms "normative" and "informative" are used in Standards to define the application of the appendices to which they apply. A "normative" appendix is an integral part of a Standard, whereas an "informative" appendix is only for information and guidance.

Contents

Australian Standard®

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1 Scope and general

1.1 Scope

This document specifies requirements for ventilators designed to provide ventilation of enclosures by means of the natural flow of air.

This document includes classification, performance and marking requirements. It also includes appendices outlining the performance test methods. It does not apply to electrically powered ventilators or smoke and heat exhaust ventilators.

1.2 Application

The method of tests used for the performance assessment of natural ventilators will depend on the required type, performance and application of the ventilator. This document should not be called up in contracts without specifying the detail to be derived from it.

NOTE 1 Purchasing guidelines are provided in Appendix A.

NOTE 2 This document is a product Standard and does not include requirements for the design or installation of natural ventilation systems. Manufacturers and suppliers should be contacted for design and installation information appropriate to their products.

1.3 Normative references

The following document is referred to in the text in such a way that some or all of its content constitutes requirements of this document.

AS 2427, *Smoke/heat release vents*

1.4 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1.4.1
core area
product of the minimum height H and minimum width W of the front opening in the louvre assembly with the louvre blades removed

Note 1 to entry: See Figure B.3.

1.4.2
core velocity
airflow rate through a louvre divided by its core area

1.4.3
discharge coefficient (coefficient of discharge)
coefficient determined for each natural ventilator by type testing in accordance with Appendix D

1.4.4
effective aerodynamic area
equivalent area of a theoretical aerodynamically perfect orifice (i.e. theoretically perfect opening with a coefficient of discharge of 1.0) and equals the throat area multiplied by the discharge coefficient