Australian Standard™

Evaporative airconditioning equipment

Standards Australia

This Australian Standard was prepared by Committee ME/62, Ventilation and Airconditioning. It was approved on behalf of the Council of Standards Australia on 28 April 2000 and published on 19 July 2000.

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Air Conditioning and Mechanical Contractors Association of Australia

Air-Conditioning and Refrigeration Equipment Manufacturers Association of Australia

Australasian Fire Authorities Council

Australian Building Codes Board

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PREFACE

This Standard was prepared by Standards Australia Committee ME/62, Ventilation and Airconditioning, to supersede AS 2913—1987, *Evaporative air-conditioning equipment*.

The objective of this Standard is to ensure that the data published in relation to any particular equipment are sufficiently accurate to ensure that equipment can be selected correctly for the individual application. The information required for proper selection concerns the unit's airflow, its evaporation efficiency, its electrical power consumption, its nominal rating and its sound power output, and appropriate methods for the determination of each are described. Established techniques already exist for airflow and acoustical measurements and, therefore, this Standard makes reference to them.

The airflow tests are conducted with the evaporation medium dry. This is not the actual condition of use, but there was no real alternative. Because of the length of outlet measurement duct required, downward discharge units cannot be tested in the normal upright position but must be turned horizontal, in which case the wetting provisions are inoperable. If vertical units must be tested dry, then so must all units, to be consistent. The discrepancy is not great, being of the order of 2 or 3 percent, and in any case the results are used mainly for comparison, so there is little real problem as all units are tested on the same basis. An important condition is that the evaporation efficiency tests must be done with the same evaporation pads as were in place for the airflow tests, this should offset the effect of variations from pad to pad.

Cooling performance is expressed in terms of an estimate of the sensible cooling capacity and all units are required to have their nominal rating a rating at standardized conditions, calculated so that the relative performance of different units can be compared.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard prescribes a basis for the performance rating of specified features of evaporative airconditioning equipment, and specifies the test procedures and equipment applicable for each form of rating. It also prescribes basic minimum requirements for construction.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
1199 Sampling procedures and tables for inspection by attributes
1217 Acoustics—Determination of sound power levels of noise sources
1217.2 Part 2: Precision methods for broad band sources in reverberation rooms
1217.3 Part 3: Precision methods for discrete-frequency and narrow-band sources in reverberation rooms
1217.4 Part 4: Engineering methods for special reverberation test room
1217.5 Part 5: Engineering methods for free-field conditions over a reflecting plane
1217.6 Part 6: Precision methods for anechoic and hemi-anechoic rooms
1259 Acoustics—Sound level meters
1259.1 Part 1: Non-integrating
1259.2 Part 2: Integrating—Averaging
1399 Guide to AS 1199—Sampling procedures and tables for inspection by attributes
1633 Acoustics—Glossary of terms and related symbols
4036 Corrosion of metal—Dissimilar metals in contact in seawater

AS/NZS
3666 Air-handling and water systems of buildings—Microbial control
3666.1 Part 1: Design, installation and commissioning
1474 Acoustics—Octave-band and fractional-octave-band-filters

ISO 9000 Quality management and quality assurance standards
ISO 9000.1 Part 1: Guidelines for selection and use
ISO 9004 Quality management and quality system elements
ISO 9004.1 Part 1: Guidelines

SAA
HB.18 Guidelines for third-party certification and accreditation
HB.18.28 Guide 28—General rules for model third-party certification scheme for products