

Australian/New Zealand Standard™

Performance of electrical appliances— Air conditioners and heat pumps

Part 2: Energy labelling and minimum energy performance standard (MEPS) requirements



AS/NZS 3823.2:2009

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-015, Quality and Performance of Household Electrical Appliances. It was approved on behalf of the Council of Standards Australia on 24 August 2009 and on behalf of the Council of Standards New Zealand on 4 September 2009. This Standard was published on 6 October 2009.

The following are represented on Committee EL-015:

Airconditioning & Refrigeration Equipment Manufacturers Association of Australia
Australian Association of Certification Bodies
Australian Consumers Association
Australian Industry Group
Australian Institute of Refrigeration, Air Conditioning and Heating
Australian Retailers Association
Business New Zealand
CHOICE
Consumer Electronic Suppliers Association
Department of Employment and Industrial Relations (Qld)
Department of the Environment, Water, Heritage and the Arts
Department of Water and Energy (NSW)
Electrical Compliance Testing Association
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AS/NZS 3823.2:2009
(Incorporating Amendment No. 1)

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energy performance standard (MEPS)
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-015, Quality and Performance of Household Electrical Appliances, to supersede AS/NZS 3823.2:2005.

This Standard incorporates Amendment No. 1 (May 2010). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The AS/NZS 3823 series comprises five Parts, as follows:

AS/NZS

- 3823 Performance of electrical appliances—Airconditioners and heat pumps
- 3823.1.1 Part 1.1: Test methods—Non-ducted airconditioners and heat pumps—Testing and rating for performance
- 3823.1.2 Part 1.2: Test methods—Ducted airconditioners and air-to-air heat pumps—Testing and rating for performance
- 3823.1.3 Part 1.3: Water-source heat pumps—Water-to-air and brine-to-air heat pumps—Testing and rating for performance
- 3823.2 Part 2: Energy labelling and minimum energy performance standard (MEPS) requirements (this Standard)
- 3823.3 Part 3: Calculation of performance for minimum energy performance standard (MEPS) requirements

The overall objective of the AS/NZS 3823 series of Standards is to promote high levels of performance and energy efficiency in air conditioners and heat pumps. The Parts of the AS/NZS 3823 series are summarized as follows:

- (a) Part 1.1 includes performance test procedures for rating non-ducted air conditioners and heat pumps, to be used in conjunction with Part 2.
- (b) Part 1.2 includes performance test procedures for rating ducted air conditioners and heat pumps, to be used in conjunction with Part 2.
- (c) Part 1.3 includes performance test procedures for rating water-to-air heat pumps and air conditioners with water cooled condensers, to be used in conjunction with Part 2.
- (d) Part 2 specifies minimum energy performance standard (MEPS) requirements and includes algorithms for the calculation of the energy efficiency star rating, performance requirements, details of energy labels and requirements for valid applications for registration.
- (e) Part 3 specifies procedures for calculating the performance (simulation) of air conditioners of the vapour compression type up to a rated total cooling capacity of 65 kW, for minimum energy performance standard (MEPS) requirements, in lieu of physical tests.

This Standard is published with the approval of the combined state and territory regulatory authorities and is structured to be suitable for reference in legislation calling up minimum energy performance standards and also for reference in energy labelling regulatory legislation.

Similar to the previous revisions of this Standard it is possible to use either physical tests or simulated performance tests (described in AS/NZS 3823.3) to demonstrate compliance with the minimum energy performance standard requirements for three-phase and some single-phase units (units that do not carry an energy label). Only physical tests in a calorimeter can be used to demonstrate compliance for products that carry an energy label. Suppliers of three-phase, single-phase ducted and single-phase commercial units may choose to fix energy labels to those products. In such cases, the products must be registered for energy labelling and all of the usual requirements for energy labelling will apply (including the requirement for a physical test in a calorimeter). The status of energy labelling and minimum energy performance standard (MEPS) Australian regulatory programs and their date of implementation, for the various air conditioning equipment configurations, is provided in Appendix E.

The main changes in this edition of the standard are as follows:

- (i) Introduction of more stringent cooling MEPS levels for all products.
- (ii) Introduction of heating MEPS levels for all products capable of heating.
- (iii) Introduction of new efficiency metrics that includes non-operating power (such as standby and crankcase heaters) as well as EER and COP in annual efficiency values.
- (iv) Inclusion of minimum permitted power factor levels for all air conditioners.
- (v) A new energy labelling algorithm for the calculation of star ratings for labelled products.
- (vi) A new energy label design and format.
- (vii) Mandatory reporting of demand response capability during the product registration and an option to indicate demand response capability on the energy label where this is present.

The part load MEPS allowance contained in AS/NZS 3823.2:2005 Amendment 3 has been retained with the additional requirement of reporting of EER and/or COP at 50% load output.

It is anticipated that registrations (or pre-registrations) to this Standard will be accepted by regulators from the date of publication. Registrations to AS/NZS 3823.2:2005 (as amended) will be accepted for a further period of up to 2 months following the publication of this Standard.

In Australia, all appliances within the scope of this Standard, manufactured or imported for sale in Australia on or after 1 April 2010, are required to be registered to this Standard. At this time, all registrations to previous editions of this Standard will be grandfathered.

In New Zealand, this Standard is anticipated to be incorporated by reference into New Zealand law prior to 1 April 2010 to align with the Australian regulatory processes. Once incorporated all items that are within the scope of this Standard, that are manufactured in, or imported into New Zealand may not be sold to a consumer unless they comply with this Standard. At this time, all registrations to previous editions of this Standard will be grandfathered.

Registrations that do not comply with the relevant requirements of this Standard for 2011 will be grandfathered from 1 April 2011.

Section 4 of this Standard sets out the transition provisions for energy labelling and MEPS under this Standard.

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