AS/NZS 3823.2:2005 (Incorporating Amendment Nos 1, 2 and 3)

Australian/New Zealand Standard™

Performance of electrical appliances— Airconditioners and heat pumps

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





#### AS/NZS 3823.2:2005

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 8 December 2005 and on behalf of the Council of Standards New Zealand on 21 December 2005.

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The following are represented on Committee EL-015:

Australian Association of Certification Bodies Australian Consumers Association Australian Electrical and Electronic Manufacturers Association Australian Industry Group Australian Retailers Association Business New Zealand **Consumer Electronic Suppliers Association** Department of Minerals and Energy, Qld Department of Industrial Relations, Qld **Electrical Compliance Testing Association** Energy Efficiency and Conservation Authority New Zealand Ministry of Energy and Utilities, New South Wales National Appliance and Equipment Energy Efficiency Committee National Association of Testing Authorities Australia New Zealand Manufacturers Federation Office of the Chief Electrical Inspector, Victoria Office of the Technical Regulator, South Australia

Additional Interests:

Air Conditioning and Refrigeration Equipment Manufacturers Association Institute of Refrigeration Heating and Air Conditioning Engineers of New Zealand Institution of Professional Engineers New Zealand Primary Industries and Resources, South Australia Testing Interest Australia

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This Standard was issued in draft form for comment as DR 05316.

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Australian/New Zealand Standard<sup>™</sup>

Performance of electrical appliances— Airconditioners and heat pumps

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

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### PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-15, Quality and Performance of Household Electrical Appliances, to supersede AS/NZS 3823.2:2003 (including Amendment 1).

This Standard incorporates Amendment No. 1 (June 2006), Amendment No. 2 (August 2006) and Amendment No. 3 (February 2008). 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:

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- 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—Testing and rating for performance: Water-to-air and brine-to-air heat pumps
- 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 airconditioners 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 airconditioners and heat pumps, to be used in conjunction with Part 2.
- (b) Part 1.2 includes performance test procedures for rating ducted airconditioners 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 airconditioners 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 airconditioners of the vapour compression type up to a rated cooling capacity of 65 kW, for minimum energy performance standard (MEPS) requirements, in lieu of physical tests.
- <sup>A3</sup> This edition also includes references to Part 1.3 for water sourced heat pumps.

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 singlephase units (units which do not carry an energy label). Only physical tests can be used to demonstrate compliance with energy labelling. Suppliers of three-phase, single-phase ducted and single-phase commercial units may choose to fix energy labels to products; if so, then all of the usual requirements for energy labelling will apply (including the requirement for a physical test). The status of energy labelling and minimum energy performance standard (MEPS) Australian regulatory programs and their date of implementation, for the various airconditioning equipment configurations, is provided in Appendix E.

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.

Key regulatory dates in this Standard and other changes are as follows:

- The change in scope of the mandatory energy labelling program for household (a) airconditioners and heat pumps from a 7.5 kW cooling requirement to a single-phase requirement was 1 October 2001.
- (b) Introduction of MEPS for three-phase airconditioners was 1 October 2001.
- Introduction of MEPS for single-phase airconditioners was 1 October 2004. (c)
- Single-phase ducted units, which are registered to any relevant MEPS level under this (d) Standard, may carry an energy label on a voluntary basis.
- Revised three-phase MEPS levels will be introduced on 1 October 2007 (no change (e) from 2003 edition of this Standard).
- (f) More stringent single-phase MEPS levels for some categories of products were introduced on 1 April 2006 while MEPS levels for remaining single-phase products became more stringent on 1 October 2007.
  - (g) Class A efficiency levels will be valid for the next iteration of MEPS after 2008.
  - (h) A minor change to the wording on the energy label for variable output compressors.

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

A3 Amendment No. 3 to this Standard deletes single-phase MEPS requirements for all products from 2008 which were included in the 2005 revision of this Standard. These levels will be reviewed and a new implementation date proposed following the release of new Regulatory Impact Statement (RIS) due in late 2007. This will be confirmed once it has been approved by the Ministerial Council for Energy.

Amendment No. 3 introduces more stringent requirements for variable output airconditioners where these products do not meet MEPS at rated output. There are also additional reporting requirements for variable output products.

Amendment No. 3 requires a specific written approval from regulators where a supplier is seeking an exemption from energy labelling for commercial non-ducted single-phase airconditioners. Amendment No. 3 also provides an updated indicative timing of the likely transition to a new energy label algorithm in 2009.

New Zealand Energy Efficiency (Energy Using Products) Regulations 2002 had a A1 commencement date of 1 April 2002 for energy performance labelling of single-phase airconditioners and 1 July 2002 for MEPS for three-phase airconditioners.

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