

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

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Consumer Electronic Suppliers Association
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Australian/New Zealand Standard™

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:

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—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.

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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 single-phase 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:

- (a) The change in scope of the mandatory energy labelling program for household 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.
- (c) Introduction of MEPS for single-phase airconditioners was 1 October 2004.
- (d) Single-phase ducted units, which are registered to any relevant MEPS level under this Standard, may carry an energy label on a voluntary basis.
- (e) Revised three-phase MEPS levels will be introduced on 1 October 2007 (no change from 2003 edition of this Standard).
- A3 (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.

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

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.

Statements expressed in mandatory terms in notes to figures, are deemed to be requirements of this Standard.

- A1 'Amendment No. 1 to this Standard makes the accelerated MEPS requirements for single phase airconditioners mandatory in New Zealand. The implementation date for New Zealand will be notified in the New Zealand gazette, but this is expected to be on or about 1 April 2006. Amendment No. 1 also introduces a voluntary system where manufacturers can claim that airconditioners are suitable for heating in cold ambient conditions, in both Australia and New Zealand.'

CONTENTS

Page

SECTION 1 SCOPE AND GENERAL

1.1	SCOPE	7
1.2	EXCLUSIONS	7
1.3	APPLICATION	8
1.4	OBJECTIVE.....	8
1.5	REFERENCED DOCUMENTS	9
1.6	DEFINITIONS	9
1.7	MEASURED QUANTITIES	11
1.8	ROUNDING.....	11
1.9	CLAIMS OF CAPACITY AND ENERGY CONSUMPTION	12

SECTION 2 CALCULATIONS FOR THE ENERGY LABEL

2.1	SCOPE	13
2.2	GENERAL	13
2.3	NUMBER OF TESTS AND PROCESSING OF DATA.....	13
2.4	COMPARATIVE ENERGY CONSUMPTION (CEC).....	14
2.5	STAR RATING INDEX (SRI)	14
2.6	STAR RATING.....	15
2.7	EXAMPLE OF ENERGY EFFICIENCY CALCULATIONS	15
2.8	ENERGY LABEL VALIDITY (CHECK TESTING).....	15
2.9	MAXIMUM COOLING TEST.....	16
A3 2.10	'Not Applicable'.....	16

SECTION 3 PERFORMANCE CRITERIA

3.1	GENERAL	17
3.2	MINIMUM ENERGY PERFORMANCE STANDARD.....	17
3.3	CLASS A EFFICIENCY AIRCONDITIONERS.....	20
3.4	TEST CONDITIONS FOR DETERMINING MINIMUM ENERGY PERFORMANCE STANDARDS AND HIGH EFFICIENCY CLAIMS.....	21
3.5	NUMBER OF TESTS AND PROCESSING OF DATA.....	21
3.6	MINIMUM ENERGY PERFORMANCE STANDARD REQUIREMENTS COMPLIANCE	22
3.7	MEPS VALIDITY (CHECK TESTING).....	22
3.8	VARIABLE OUTPUT COMPRESSORS.....	23
3.9	COEFFICIENT OF PERFORMANCE AT LOW TEMPERATURE.....	23
3.10	STANDBY POWER AND CRANK CASE HEATERS	23
3.11	LOAD CONTROL CAPABILITY	24
3.12	POWER FACTOR.....	24

SECTION 4 APPLICATION AND TEST RESULT FORMATS

4.1	APPLICATION FOR REGISTRATION	25
A1 4.2	PRODUCT LISTING	26
4.3	DATE OF MANUFACTURE INFORMATION.....	27

SECTION 5 PRINTING AND PLACEMENT OF ENERGY LABELS

5.1	PLACEMENT	28
5.2	MATERIAL AND SHAPE	28
5.3	COLOURS	28
5.4	LABEL REQUIREMENTS	29
5.5	SAMPLE LABELS.....	29

APPENDICES

A	EXAMPLES OF ENERGY EFFICIENCY CALCULATIONS	35
B	FORMAT OF APPLICATION FOR REGISTRATION OF AN AIRCONDITIONER FOR ENERGY LABELLING AND MEPS.....	39
C	FORMAT OF SUMMARY TEST RESULTS FOR AN ENERGY LABELLING AND/OR MEPS APPLICATION WHERE FULL TEST REPORTS ARE NOT PROVIDED	58
D	ENERGY LABEL DIMENSIONS	62
E	ENERGY LABELLING AND MEPS REQUIREMENTS FOR VARIOUS AIRCONDITIONING EQUIPMENT CONFIGURATIONS	71
F	NEW ENERGY LABELLING ALGORITHMS	75

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Australian/New Zealand Standard**Performance of electrical appliances—Airconditioners and heat pumps****Part 2: Energy labelling and minimum energy performance standard (MEPS) requirements**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

A3 | This Standard specifies the energy labelling requirements for single-phase non-ducted airconditioners of the vapour compression type and the minimum energy performance standard (MEPS) requirements for single-phase and three-phase airconditioners of the vapour compression type up to a rated cooling capacity of 65 kW and that fall within the scope of AS/NZS 3823.1.1 or AS/NZS 3823.1.2 or AS/NZS 3823.1.3.

Particular regulatory requirements for different categories of airconditioning equipment and validity dates are summarized in Appendix E of this Standard.

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This Standard does not specify electrical safety requirements.

This Standard specifies the following values for cooling and heating, as applicable:

- (a) Rated power (input).
- (b) Rated capacity (output).
- (c) Energy efficiency ratio (EER) for cooling.
- (d) Coefficient of performance (COP) for heating.
- (e) Comparative energy consumption (CEC).
- (f) Star Rating Index (SRI).
- (g) Star rating.
- (h) Some of the requirements for energy label validity.
- (i) The performance criteria for energy labelling validity.
- (j) Test report format.
- (k) Printing requirements for airconditioner appliance energy labels.
- (l) Minimum energy performance standard requirements.

1.2 EXCLUSIONS

The following equipment is excluded from the scope of this Standard:

- (a) Close controlled airconditioners, pending the development of MEPS levels for these products.
- (b) Multi-split systems (i.e., those having more than one indoor unit with an independent control for each indoor unit) pending the development of a suitable test method.