

Australian/New Zealand Standard™

**Performance of electrical appliances—
Airconditioners and heat pumps**

**Part 1.2: Test methods—Ducted
airconditioners and air-to-air heat
pumps—Testing and rating for
performance**



AS/NZS 3823.1.2:2001

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 20 October 2000 and on behalf of the Council of Standards New Zealand on 15 December 2000. This Standard was published on 9 February 2001.

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
Consumer Electronics Suppliers Association
Department of Mines and Energy, Qld
Electrical Compliance Testing Association
Energy Efficiency and Conservation Authority of New Zealand
Ministry of Energy and Utilities, New South Wales
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New Zealand Manufacturers Federation
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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 1861.2—1991, *Air-conditioning unit—Methods of assessing and rating performance, Part 2: Refrigerated package air-conditioners*.

This Standard incorporates Amendment No. 1 (August 2002), No. 2 (May 2003), No. 3 (February 2006), No. 4 (October 2008) and No. 5 (October 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.

This Standard has been adopted with national modifications and has been reproduced from ISO 13253:1995, *Ducted air-conditioners and air-to-air heat pumps—Testing and rating for performance*. This Standard does not contain a test method to determine the acoustic performance of ducted airconditioners.

The objective of this series of Standards is to promote high levels of performance and energy efficiency in ducted airconditioners.

A number of variations and additional requirements have been made in this Standard to the requirements of ISO 13253:1995. These variations and additions, which are necessary to take account of energy labelling and minimum energy performance standard legislation in Australia and New Zealand, are listed in Appendix ZZ and are indicated by a marginal bar set adjacent to the varied text.

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 and footnotes to tables are deemed to be requirements of this Standard.

As this Standard is reproduced from an international Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.
- (c) A full point substitutes for a comma when referring to a decimal marker.
- (d) The heating test condition descriptive terms ‘high’, ‘low’ and ‘extra-low’ are substituted by the terms ‘H1’, ‘H2’ and ‘H3’ respectively.
- (e) References to international Standards should be replaced by the equivalent Australian/New Zealand Standard, as follows:

<i>Reference to International Standard or other Publication</i>	<i>Australian/New Zealand Standard</i>
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ISO	AS/NZS
817 Refrigerants—Number designation	1677 Refrigerating systems 1677.1 Part 1: Refrigerant classification
A1	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
A3	62301 Household electrical appliances—Measurement of standby power

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AUSTRALIAN/NEW ZEALAND STANDARD

Performance of electrical appliances—Airconditioners and heat pumps**Part 1.2:****Test methods—Ducted airconditioners and air-to-air heat pumps—
Testing and rating for performance****1 Scope**

1.1 This International Standard establishes performance testing and rating criteria for factory-made residential, commercial and industrial, electrically driven, mechanical-compression, ducted air-conditioners using air- and water-cooled condensers and ducted air-to-air heat pumps. The requirements of testing and rating contained in this International Standard are based on the use of matched assemblies.

This International Standard is limited to systems which use a single refrigeration circuit and have one evaporator and one condenser.

1.2 This International Standard does not apply to the testing and rating of

- a) individual assemblies for separate use,
- b) equipment using the absorption refrigeration cycle,
- c) non-ducted air-conditioners or non-ducted heat pumps, or
- d) water-source heat pumps.

1.3 It does not cover the determination of either seasonal efficiencies or part-load performances which may be required in some countries because they provide a better indication of efficiency under actual operating conditions.

NOTE 1 For the purposes of this International Standard, the term "equipment" will be used to mean "ducted air-conditioner" and/or "ducted heat pumps".

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 817:—¹⁾, *Refrigerants — Number designation*.

3 Definitions

For the purposes of this International Standard, the following definitions apply. Annex J lists the symbols used to identify the terms contained in this International Standard.

3.1 standard air: Dry air at 20,0 °C, and at a standard barometric pressure of 101,325 kPa, having a mass density of 1,204 kg/m³.

3.2 heating capacity: Amount of heat that the equipment can add to the conditioned space in a defined interval of time. It is expressed in watts.

3.3 latent cooling capacity: Amount of latent heat that the equipment can remove from the conditioned space in a defined interval of time. It is expressed in watts.

3.4 sensible cooling capacity: Amount of sensible heat that the equipment can remove from the conditioned space in a defined interval of time. It is expressed in watts.

1) To be published. (Revision of ISO 817:1974)