

Australian/New Zealand Standard™

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

**Part 1.1: Non-ducted airconditioners
and heat pumps—Testing and rating for
performance (ISO 5151:2010, MOD)**



AS/NZS 3823.1.1:2012

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Australian Industry Group
Australian Retailers Association
Business New Zealand
CHOICE
Consumer Electronics Suppliers Association
Consumers Federation of Australia
Department of Climate Change and Energy Efficiency
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This Standard was issued in draft form for comment as DR AS/NZS 3823.1.1.

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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 3823.1.1:1998, *Performance of electrical appliances—Airconditioners and heat pumps, Part 1.1: Non-ducted airconditioners and heat pumps—Testing and rating for performance*.

This Standard is an adoption with national modifications and has been reproduced from ISO 5151:2010, *Non-ducted air conditioners and heat pumps—Testing and rating for performance*, and has been varied as indicated to take account of Australian/New Zealand conditions. The modifications are specified in Appendix ZZ.

Although there have been many detailed changes to ISO 5151:2010 compared with ISO 5151:1994, many of these changes were anticipated in AS/NZS 3823.1.1:1998, Appendix ZZ, so there are few net technical changes in the new edition. The most significant changes are in the more detailed test procedures for cyclic heating tests to improve the reproducibility of testing, the addition of equations for calculating the discharge coefficient of nozzles, and the introduction of uncertainty of measurement requirements.

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- (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.

The international normative reference listed in Clause 2 has not been adopted as an Australian or Australian/New Zealand Standard.

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

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AUSTRALIAN/NEW ZEALAND STANDARD

Performance of electrical appliances—Airconditioners and heat pumps

Part 1.1:

Non-ducted airconditioners and heat pumps—Testing and rating for performance (ISO 5151:2010, MOD)**1 Scope**

This International Standard specifies the standard conditions for capacity and efficiency ratings of non-ducted air-cooled air conditioners and non-ducted air to air heat pumps. This International Standard is applicable to ducted units rated at less than 8 kW and intended to operate at an external static pressure of less than 25 Pa. This International Standard also specifies the test methods for determining the capacity and efficiency ratings.

Residential, commercial and industrial single-package and split-system air conditioners and heat pumps are included. The equipment (taken to mean non-ducted air conditioners or non-ducted heat pumps, as well as ducted air conditioners and/or ducted heat pumps, rated at less than 8 kW and intended to operate at external static pressures of less than 25 Pa) shall be factory-made, electrically driven and use mechanical compression. This International Standard is applicable to equipment utilizing one or more refrigeration systems, one outdoor unit and one or more indoor units, controlled by a single thermostat/controller. It is applicable to equipment utilizing single, multiple and variable capacity components.

This International Standard is not applicable to the rating and testing of the following:

- a) water-source heat pumps or water cooled air conditioners;
- b) multi-split-system air conditioners and air-to-air heat pumps (see ISO 15042 for the testing of such equipment);
- c) mobile (windowless) units having a condenser exhaust duct;
- d) individual assemblies not constituting a complete refrigeration system;
- e) equipment using the absorption refrigeration cycle;
- f) ducted equipment except for those specified in this clause (see ISO 13253 for the testing of such equipment).

This International Standard does not cover the determination of seasonal efficiencies which can be required in some countries because they provide a better indication of efficiency under actual operating conditions.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 817, *Refrigerants — Designation system*