AS/NZS 3823.1.5:2015

Australian/New Zealand Standard™

Performance of electrical appliances—Air conditioners and heat pumps

Part 1.5: Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct—Testing and rating for performance

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-056, Room Air Conditioners. It was approved on behalf of the Council of Standards Australia on 24 July 2015 and on behalf of the Council of Standards New Zealand on 24 July 2015.
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The following are represented on Committee EL-056:

Airconditioning and Refrigeration Equipment Manufacturers Association of Australia
Australian Building Codes Board
Australian Industry Group
CHOICE
Clean Energy Regulator
Consumer Electronics Association of New Zealand
Consumer Electronics Suppliers Association
CSIRO
Department of Industry and Science
Electrical Compliance Testing Association
Energy Efficiency and Conservation Authority of New Zealand
Energy Safe Victoria
Institute of Refrigeration Heating and AirConditioning Engineers of New Zealand
Institution of Professional Engineers New Zealand
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This Standard was issued in draft form for comment as DR AS/NZS 3823.1.5:2015.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-056, Room Air Conditioners.

This Standard follows the testing procedures set out in AS/NZS 3823.1.1:2012, *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)*, apart from the following fundamental differences:

(a) This Standard only describes a test setup using calorimeter rooms.

(b) In the preparation of this Standard, reference was made to EN 14511-2, *Air Conditioners, Liquid Chilling Packages And Heat Pumps With Electrically Driven Compressors For Space Heating And Cooling*, Part 2: *Test Conditions*, for testing non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct by which both the indoor and outdoor test chambers are kept at the same rating conditions.

(c) In the preparation of this Standard, reference was also made to EN 15218 *Air conditioners and liquid chilling packages with evaporatively cooled condenser and with electrically driven compressors for space cooling—Terms, definitions, test conditions, test methods and requirements* for testing and rating non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct that utilise an evaporatively cooled condenser.

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

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1 SCOPE

This Standard specifies the standard conditions for capacity and efficiency ratings of non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct. Such air conditioners and heat pumps may include an evaporatively cooled condenser cooled by air and the evaporation of—

(a) condensate collected from the evaporator;

(b) external supplementary water stored in a supplementary water tank; or

(c) both (a) and (b).

This Standard also specifies the test methods for determining the capacity and efficiency ratings.

The Standard applies to equipment that is factory-made, electrically driven and uses mechanical compression. This Standard is applicable to equipment utilizing one or more refrigeration systems.

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

(i) Water-source heat pumps or water-cooled air conditioners.

(ii) Multi-split-system air conditioners and air-to-air heat pumps (see AS/NZS 3823.1.4 for the testing of such equipment).

(iii) Individual assemblies not constituting a complete refrigeration system.

(iv) Equipment using the absorption refrigeration cycle.

(v) Ducted equipment (see AS/NZS 3823.1.2 for the testing of such equipment).

(vi) Non-ducted air conditioners and heat pumps, including dual-duct ‘balanced type’ portable air conditioners (see AS/NZS 3823.1.1 for the testing of such equipment).

(vii) Evaporative coolers or any other cooling systems that are not of the vapour compression type.

(viii) Dehumidifiers.

(ix) Spot coolers.

2 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

NOTE: Documents that are referenced for informative purposes are listed in the Bibliography.

ISO
817 Refrigerants—Designation and safety classification