AS 5102.1—2009

Australian Standard®

Performance of household electrical appliances—Swimming pool pump-units

Part 1: Energy consumption and performance

This Australian Standard® was prepared by Committee EL-015, Quality and Performance of Household Electrical Appliances. It was approved on behalf of the Council of Standards Australia on 13 October 2009.
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The following are represented on Committee EL-015:

- Australian Industry Group
- Australian Retailers Association
- Business New Zealand
- CHOICE
- Consumer Electronic Suppliers Association
- Cooper Development Centre Australia
- Department of Employment and Industrial Relations (Qld)
- Department of the Environment, Water, Heritage and the Arts
- Department of Water and Energy (NSW)
- Electrical Compliance Testing Association
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- Institution of Professional Engineers, New Zealand
- National Appliance and Equipment Energy Efficiency Committee
- National Association of Testing Authorities Australia
- Office of the Technical Regulator, South Australia
- Swimming Pool and Spa Association of NSW
- Swimming Pool and Spa Association of Victoria

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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PREFACE

This Standard was prepared by Standards Australia Committee EL-015, Quality and Performance of Household Electrical Appliances.

The AS 5102—2009 series comprises two parts, as follows:

AS	
5102	Performance of household electrical appliances—Swimming pool pump-units
5102.1	Part 1: Energy consumption and performance (this Standard)
5102.2	Part 2: Energy labelling and minimum energy performance standard requirements

The Parts of AS 5102 are defined as follows:

(a) Part 1 describes the testing required to determine the energy consumption, energy efficiency and sound levels of swimming pool pump-units.

(b) Part 2 includes algorithms for the calculation of and criteria for energy efficiency rating, star rating, details of the energy label and requirements for the valid application thereof. It also contains the minimum energy performance standards (MEPS) that swimming pool pump-units must attain to comply with this Standard.

Part 2 is published with the approval of the combined state regulatory authorities and is intended to be suitable for reference in energy labelling regulations. It refers to Part 1 for test procedures.

The following statements of intention are used in this Standard:

(i) Shall—Indicates that a statement is mandatory.

(ii) Should—Indicates a recommendation.

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

The term ‘normative’ is used to define the application of the appendix to which it applies. A normative appendix is an integral part of a Standard.

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FOREWORD

Swimming pool pump-units are significant users of electricity in homes where swimming pools are installed. Until now, specifiers and purchasers of swimming pool pump-units have had no means of comparing the relative energy efficiency of different models.

The desire of governments to improve the energy efficiency of appliances has led to the development of energy labelling and Minimum Energy Performance Standards (MEPS) for a range of products. This series of Standards describes the testing and analysis of data required for energy labelling and MEPS for swimming pool pump-units.

STANDARDS AUSTRALIA

Australian Standard

Performance of household electrical appliances—Swimming pool pump-units

Part 1: Energy consumption and performance

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard—

(a) classifies pump-units according to motor design (single-speed, two-speed, multi-speed and variable-speed) and flow rate;

(b) describes the testing of pumps for energy consumption and noise, including criteria for accuracy;

(c) describes the calculations required to determine the energy characteristics; and

(d) specifies the data to be included in the test reports.

This Standard applies to pump-units intended to be used in the operation of swimming pools and spa pools. This Standard covers all single phase pump-units that are capable of a flow rate equal to or greater than 120 L/min. This Standard applies to single-speed, dual-speed, multi-speed and variable speed pump-units with an input power of less than or equal to 2500 W for any of the available speeds.

This Standard covers pump-units for the circulation of water through pool filters, sanitisation devices, cleaning devices, water heaters (including solar) and pump-units for circulation of water through spa or jet outlets or other features forming part of the pool.

This Standard covers pump-units that form part of a complete new pool installation as well as pump-units intended for sale as replacements for existing pools.

This Standard covers all water-retaining structures designed for human use—

(i) that are capable of holding more than 680 litres of water; and

(ii) that incorporate, or are connected to, equipment that is capable of filtering and heating any water contained in it and injecting air bubbles or water into it under pressure so as to cause water turbulence.

This Standard does not cover spa baths or pump-units for use in spa baths (less than or equal to 680 litres).

1.2 APPLICATION

This Standard shall be read in conjunction with AS 5102.2.

1.3 OBJECTIVE

The objective of this Standard is to define tests and measurements to be carried out on a pool pump-unit so that it can carry a valid energy efficiency label and demonstrate compliance with MEPS as described in Part 2 of the Standard.

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