

Australian/New Zealand Standard™

**Household and similar electrical
appliances—Safety**

**Part 2.79: Particular requirements for
high pressure cleaners and steam
cleaners**



AS/NZS 60335.2.79:2012

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-002, Safety of Household and Similar Electrical Appliances and Small Power Transformers. It was approved on behalf of the Council of Standards Australia on 8 October 2012 and on behalf of the Council of Standards New Zealand on 27 September 2012.

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Consumer Electronic Suppliers Association, Australia
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Australian/New Zealand Standard™

Household and similar electrical appliances—Safety

Part 2.79: Particular requirements for high pressure cleaners and steam cleaners

Originated as AS/NZS 3350.2.79:1996.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

AS/NZS 60335.2.79:2012**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2.79: Particular requirements for high pressure cleaners and steam cleaners****Foreword**

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-002- Safety of Household and Similar Electrical Appliances and Small Power Transformers to supersede AS/NZS 60335.2.79:2002 three years from the date of publication. During this period it is anticipated that regulatory authorities will approve high pressure cleaners and steam cleaners to either standard.

The principal changes in this edition as compared with the second edition of IEC 60335-2-79 are as follows (minor changes are not listed).

- the scope has been revised editorially to avoid misunderstandings;
- terms and definitions has been revised with regard to the requirements revised;
- the standard has been revised in general and updated regarding state-of-the-art, as far as necessary, in particular some changes have been made to Clauses 15, 22, and 25;
- a new Annex CC 'Emission of acoustical noise' was added;
- a new Annex DD 'Emission of vibration' was added;
- a new Annex EE with a model test report for vibration emission was added.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with safety requirements designed to give the user protection against hazards that might occur during normal operation and abnormal operation of the appliance and which may be used as the basis for approval for sale or for connection to the electricity supply mains in Australia and New Zealand

The text of IEC 60335-2-79 Ed 3, prepared by IEC Technical Committee 61J, was submitted to the Standards Australia/Standards New Zealand Combined Procedure (dual public comment and committee vote) for adoption of the IEC standard as a Standards Australia/Standards New Zealand joint standard.

This Standard is an adoption with national modifications of the third edition of IEC 60335-2-79, *Household and similar electrical appliances – Safety – Part 2-79: Particular requirements for high pressure cleaners and steam cleaners*. It has been varied as indicated to take account of Australian and New Zealand conditions.

This part 2 has to be used in conjunction with the latest edition of AS/NZS 60335.1 Household and similar electrical appliances – Safety – Part 1: General requirements and its Amendments. It was established on the basis of AS/NZS 60335.1:2011.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 60335.1 so as to convert it into the Australian/New Zealand Standard: Safety requirements for high pressure cleaners and steam cleaners.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

NOTE 1 The following numbering system is used:

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- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letters AZ.

NOTE 2 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type*;
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3.

p NOTE 3 In this document, p is used in the margin to indicate instructions for preparing a consolidated version.

The essential safety requirements in AS/NZS 3820¹ that could be applicable to requirements for high pressure cleaners and steam cleaners are covered by this standard.

The national variations to IEC 60335-2-79 Ed 3 form the Australian and New Zealand national variations for purposes of the IECEE scheme for recognition of results of testing to standards for safety of electrical equipment (the CB scheme).

There are no national variations from the IEC Standard from which this standard is adopted, other than those listed in the national variations to AS/NZS 60335.1.

¹ AS/NZS 3820 *Essential safety requirements for electrical equipment*

The text of the International Standard IEC 60335-2-79 Ed 3 was approved as a joint Australia/New Zealand Standard with the agreed national variations as given below.

AUSTRALIAN NATIONAL VARIATIONS

There are no national variations to this Part 2 other than those listed in the national variations to AS/NZS 60335.1:2011.

NEW ZEALAND NATIONAL VARIATIONS

There are no national variations to this Part 2 other than those listed in the national variations to AS/NZS 60335.1:2011.

Annex ANZ (normative)

Normative references to international publications with their corresponding joint Australia/New Zealand publications

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.

NOTE When an international publication has been modified by national variations the relevant joint Australia/New Zealand publications applies if the national variations are needed to ensure the safety of the appliance for Australia/New Zealand conditions. These international publications are indicated by (mod). If an international publication is not so indicated, then either it or the listed Australia/New Zealand publication may be used.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>AS/NZS</u>	<u>Year</u>
IEC 60364-1		<i>Low-voltage electrical installations – Part 1: Fundamental principles, assessment of general characteristics, definitions</i>	3000	
IEC 61558-2-3		<i>Safety of transformers, reactors, power supply units and combinations thereof – Part 2-3: Particular requirements and tests for ignition transformers for gas and oil burners</i>	61558.2.3	
IEC 61770	2008	<i>Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose-sets</i>		

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	9
3 Terms and definitions	9
4 General requirement.....	12
5 General conditions for the tests	12
6 Classification.....	12
7 Marking and instructions.....	13
8 Protection against access to live parts.....	18
9 Starting of motor-operated appliances	18
10 Power input and current	19
11 Heating	19
12 Void.....	20
13 Leakage current and electric strength at operating temperature.....	20
14 Transient overvoltages	20
15 Moisture resistance	20
16 Leakage current and electric strength.....	22
17 Overload protection of transformers and associated circuits	22
18 Endurance.....	22
19 Abnormal operation	23
20 Stability and mechanical hazards	25
21 Mechanical strength	26
22 Construction	28
23 Internal wiring.....	32
24 Components	32
25 Supply connection and external flexible cords	32
26 Terminals for external conductors.....	33
27 Provision for earthing	33
28 Screws and connections.....	33
29 Clearances, creepage distances and solid insulation	34
30 Resistance to heat and fire.....	34
31 Resistance to rusting.....	34
32 Radiation, toxicity and similar hazards.....	34
Annexes	37
Annex AA (normative) Requirements to avoid backsiphonage.....	38
Annex BB (normative) Analysis method for determining the necessary safety device to prevent backsiphonage	44
Annex CC (informative) Emission of acoustical noise.....	47
Annex DD (informative) Emission of vibration	49

Annex EE (informative) Model test report for vibration emission at handles of high-pressure cleaners	60
Bibliography.....	62
Figure 101 – Warning symbol	34
Figure 102 – Impact test apparatus.....	35
Figure 103 – Reactions on handle.....	36
Figure 104 – Warning symbol: Machine not suitable for connection to the potable water mains	36
Figure 105 – Warning symbol: Do not inhale fumes	36
Figure AA.1 – Arrangement for the durability test on backflow preventers with reduced pressure zone.....	43
Figure BB.1 – Example for an air break to drain.....	46
Figure DD.1 – Trigger gun	49
Figure DD.2 – Trigger gun with additional side handle	50
Figure DD.3 – Measurement locations: Spraying device, main and secondary measuring point	52
Figure DD.4 – Measurement locations: Spraying device with additional side handle, main and secondary measuring point.....	53
Figure DD.5 – Operating conditions – Position of spraying device.....	55
Table 101 – Degree of protection against harmful ingress of water	13
Table 12 – Pull force and torque	33
Table AA.1 – Nominal size versus durability test flow rate	42
Table BB.1 – Matrix of the safety devices appropriate to fluid categories	45
Table DD.1 – Description and units of the symbols used.....	51
Table EE.1 – General information and reported results	60
Table EE.2 – Measurement results for one machine	61

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-79: Particular requirements for high pressure cleaners and steam cleaners

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60335-2-79 has been prepared by subcommittee 61J: Electrical motor-operated cleaning appliances for commercial use, of IEC technical committee 61: Safety of household and similar electrical appliances.

This third edition cancels and replaces the second edition published in 2002 and its Amendments 1 (2004) and 2 (2007). It constitutes a technical revision.

The principal changes in this edition as compared with the second edition of IEC 60335-2-79 are as follows (minor changes are not listed):

- the scope has been revised editorially to avoid misunderstandings;
- terms and definitions has been revised with regard to the requirements revised;
- the standard has been revised in general and updated regarding state-of-the-art, as far as necessary, in particular some changes have been made to Clauses 15, 22, and 25;

- a new Annex CC 'Emission of acoustical noise' was added;
- a new Annex DD 'Emission of vibration' was added;
- a new Annex EE with a model test report for vibration emission was added.

The text of this standard is based on the following documents:

FDIS	Report on voting
61J/485/FDIS	61J/497/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fifth edition (2010) of that standard.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for high pressure cleaners and steam cleaners.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this standard may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-79: Particular requirements for high pressure cleaners and steam cleaners

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of high-pressure cleaners without traction drive, intended for household and commercial indoor or outdoor use, having a **rated pressure** not less than 2,5 MPa and not exceeding 35 MPa.

It also applies to steam cleaners and those parts of hot water high pressure cleaners incorporating a steam stage which have a capacity not exceeding 100 l, a **rated pressure** not exceeding 2,5 MPa and a product of capacity and **rated pressure** not exceeding 5 MPa·l.

They are not equipped with a traction drive. The following power systems of the drive for the high pressure pump are covered:

- mains powered motors up to a **rated voltage** of 250 V for single-phase machines and 480 V for other machines,
- battery powered motors,
- internal combustion engines,
- hydraulic or pneumatic motors.

This standard does not apply to

- high pressure water jet machines having a **rated pressure** exceeding 35 MPa;

NOTE 101 In Europe, those machines are covered by EN 1829-1.

- steam cleaners intended for domestic use (IEC 60335-2-54);
- hand-held and transportable motor-operated electric tools (IEC 60745 series, IEC 61029 series);
- appliances for medical purposes (IEC 60601);
- agricultural sprayers;

NOTE 102 In Europe, EN 907 gives requirements for sprayers and liquid fertilizer distributors for agricultural and forestry purposes.

- non-liquid, solid abrasive cleaners;
- machines designed to be part of a production process;
- machines designed for use in corrosive or explosive environments (dust, vapour or gas);
- machines designed for use in vehicles or on board of ships or aircraft.

NOTE 103 Attention is drawn to the fact that in many countries additional requirements on the safe use of the equipment covered can be specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.