

AS/NZS 60745.2.21:2003  
(IEC 60745-2-21:2003, IDT)

Australian/New Zealand Standard™

HAND-HELD MOTOR-OPERATED  
ELECTRIC TOOLS – SAFETY –

Part 2.21: Particular requirements for  
drain cleaners  
(IEC 60745-2-21:2003, IDT)

## **AS/NZS 60745.2.21:2003**

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/2 - Safety of household and similar electrical appliances and small power transformers. It was approved on behalf of the Council of Standards Australia on 1 September 2003 and by the Council of Standards New Zealand on 9 September 2003. It was published on 14 November 2003.

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The following interests are represented on Committee EL/2

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Electrical regulatory authorities, Australia  
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## AUSTRALIA/NEW ZEALAND STANDARD

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### HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

#### Part 2.21: Particular requirements for drain 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 in part AS/NZS 3160:2001, *Approval and test specification – Hand-held portable tools*, 3 years from publication. During this period it is anticipated that regulatory authorities will approve hammers to either standard.

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 tool 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

This Standard is an adoption with national modifications and contains the full text of the second edition of IEC 60745-2-21:2002, *Hand-held motor-operated electric tools – Safety – Part 2-21: Particular requirements for drain cleaners*, and has been varied as indicated to take account of Australian and New Zealand conditions.

This part is to be used in conjunction with AS/NZS 60745.1:2003 and its amendments. The Parts 2 contain clauses to supplement or modify the corresponding clauses in this part to provide the relevant requirements for each type of tool.

NOTE 1 The following print types are used:

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

The numbering of clauses, subclauses, notes, tables, figures and annexes follows that of IEC 60745-2-21:2002. To allow for the introduction of additional material by the IEC, the numbers 101 to 200 have been reserved. To allow for additional material to be introduced by Australia and New Zealand, the numbers 201 to 300 are used to number further clauses, subclauses, notes, tables and figures in part 1. Additional annexes are lettered ZA, ZB and so on.

This scheme has been introduced to reduce the likelihood of the IEC and Australia and New Zealand using the same identifier for different purposes.

The use of the word VOID indicates that the IEC text is not used in Australia or New Zealand. The use of this word also avoids the need to renumber, clauses, notes, tables and figure if an earlier clause, note, table or figure is not used.

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

- (a) Its number does not appear on each page of text and its identity is shown on the cover and title page only.

- (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.

Variations to IEC 60745-2-21:2002 are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand standard are deleted. Where Australian/New Zealand tables, figures or passages of text are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

Variations made to IEC 60745-2-21:2002 form the Australian variations for the purposes of the IECEE scheme for recognition of testing to standards for safety of electrical equipment (the CB scheme). These variations have been incorporated in the body of the standard. They are listed in Annex ZZ for easy reference.

The essential safety requirements in AS/NZS 3820 that could be applicable to drain cleaners are covered by this standard.

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**HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS –  
SAFETY –****Part 2.21: Particular requirements for drain cleaners****1 Scope**

This clause of Part 1 is applicable, except as follows:

**1.1 Addition:**

This standard applies to drain cleaners.

**2 Normative references**

This clause of Part 1 is applicable.

**3 Definitions**

This clause of Part 1 is applicable, except as follows:

*Additional definition:***3.101****drain cleaner**

tool for cleaning out blocked drains

**4 General requirements**

This clause of Part 1 is applicable.

**5 General conditions for the tests**

This clause of Part 1 is applicable.

**6 Void****7 Classification**

This clause of Part 1 is applicable.