

Australian/New Zealand Standard™

**Electric motor-operated hand-held tools,
transportable tools and lawn and garden
machinery—Safety**

**Part 2.1: Particular requirements for
hand-held drills and impact drills**



AS/NZS 62841.2.1:2018

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 5 June 2018 and by the New Zealand Standards Approval Board on 6 June 2018.

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Australian/New Zealand Standard™

Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery—Safety

Part 2.1: Particular requirements for hand-held drills and impact drills

Originated in Australia as AS C160-1959.
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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

AS/NZS 62841.2.1:2018**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS
AND LAWN AND GARDEN MACHINERY –
SAFETY –****Part 2.1: Particular requirements for hand-held drills and impact drills****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 60745.2.1:2009 three years from the date of publication.

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 62841-2-1 Ed 1, prepared by IEC Technical Committee TC 116, 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 first edition of IEC 62841-2-1 *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 2-1 Particular requirements for hand-held drills and impact drills*. 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 62841.1 Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 1: General requirements and its Amendments. It was established on the basis of AS/NZS 62841.1:2015.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 62841.1 so as to convert it into the Australian/New Zealand Standard: Safety requirements for appliances for hand-held drills and impact drills.

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:

- 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 hand-held drills and impact drills are covered by this standard.

The national variations to IEC 62841-2-1 Ed 1 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).

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

The text of the International Standard IEC 62841-2-1 Ed 1 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 in AS/NZS 62841.1:2015.

NEW ZEALAND NATIONAL VARIATIONS

There are no national variations to this Part 2 other than those listed in the national variations in AS/NZS 62841.1:2015.

**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>
ISO 185:	2005,	<i>Grey cast irons – Classification</i>		
ISO 630-2:	2011,	<i>Structural steels – Part 2: Technical delivery conditions for structural steels for general purposes</i>		

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –**Part 2-1: Particular requirements for hand-held drills and impact drills**

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 62841-2-1 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
116/321/FDIS	116/330/RVD

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

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

This Part 2-1 is to be used in conjunction with the first edition of IEC 62841-1 (2014).

This Part 2-1 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held drills and impact drills.

Where a particular subclause of Part 1 is not mentioned in this Part 2-1, that subclause applies as far as relevant. Where this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

The following print types are used:

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

The terms defined in Clause 3 are printed in **bold typeface**.

Subclauses, notes and figures which are additional to those in Part 1 are numbered starting from 101.

A list of all parts of the IEC 62841 series, under the general title: *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety*, can be found on the IEC website.

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

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

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 36 months from the date of publication.

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.

ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –

Part 2-1: Particular requirements for hand-held drills and impact drills

1 Scope

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

Addition:

This part of IEC 62841 applies to hand-held **drills** and **impact drills**, including **diamond core drills**. This standard also applies to **drills** that can be used for driving screws by attaching screwdriver bits.

This standard does not apply to rotary hammers, even if they can be used as a **drill**.

NOTE 101 Rotary hammers are covered by IEC 62841-2-6.

2 Normative references

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

Addition:

ISO 185:2005, *Grey cast irons – Classification*

ISO 630-2:2011, *Structural steels – Part 2: Technical delivery conditions for structural steels for general purposes*

3 Terms and definitions

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

Additional definitions:

3.101

drill

tool equipped with either a typical three jaw chuck or a machine taper, specifically designed to bore holes in various materials such as metal, plastics, wood, etc.

Note 1 to entry: Besides drill bits, it is possible that other **accessories** such as bits for deburring and screwdriving are used with **drills**.

3.102

impact drill

tool equipped with a chuck specifically designed to bore holes in concrete, stone and other materials, being similar in appearance and construction, to a **drill**, but which has a built-in percussion system which gives an axial percussion movement to rotating output spindle

Note 1 to entry: Some **impact drills** have a device for rendering the percussion system inoperative, so that they can be used as a conventional **drill**.

Note 2 to entry: Besides drill bits, it is possible that other **accessories** such as bits for deburring and screwdriving are used with **impact drills**.