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EXTENDED VERSION

Handhållna och transportabla elverktyg samt trädgårdsmaskiner – Säkerhet –

Del 2-22: Särskilda fordringar på handhållna kapmaskiner

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

Part 2-22: Particular requirements for hand-held cut-off machines

En så kallad ”Extended Version” (EXV) innehåller både standarden som fastställts som SS och den utökade IEC-standard (EXV) på engelska. Den utökade versionen av IEC-standard innehåller även refererad text från en annan standard och ger användaren ett mer komplett innehåll. SEK Svensk Elstandard kan bara ge ut EXV i de fall den finns tillgänglig från IEC.



IEC 62841-2-22

Edition 1.0 2025-06
EXTENDED VERSION

INTERNATIONAL STANDARD

This full version of IEC 62841-2-22:2025 includes the content of the references made to IEC 62841-1:2014

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 2-22: Particular requirements for hand-held cut-off machines**

CONTENTS

FOREWORD.....	5
INTRODUCTION.....	8
1 Scope.....	9
2 Normative references	10
3 Terms and definitions	15
4 General requirements	27
5 General conditions for the tests	27
6 Radiation, toxicity and similar hazards.....	29
7 Classification.....	30
8 Marking and instructions.....	30
9 Protection against access to live parts.....	46
10 Starting	48
11 Input and current	48
12 Heating.....	48
13 Resistance to heat and fire	53
14 Moisture resistance	54
15 Resistance to rusting.....	58
16 Overload protection of transformers and associated circuits	59
17 Endurance	59
18 Abnormal operation	60
19 Mechanical hazards.....	68
20 Mechanical strength	78
21 Construction	86
22 Internal wiring.....	98
23 Components	99
24 Supply connection and external flexible cords	104
25 Terminals for external conductors.....	110
26 Provision for earthing	112
27 Screws and connections	115
28 Creepage distances, clearances and distances through insulation.....	117
Annex A (normative) Measurement of creepage distances and clearances	125
Annex B (normative) Motors not isolated from the supply mains and having basic insulation not designed for the rated voltage of the tool	130
Annex C (normative) Leakage current.....	132
Annex D (normative) Electric strength.....	136
Annex E (informative) Methods of applying ISO 13849-1 to power tools.....	138
Annex F (informative) Rules for routine tests	140
Annex G Void	142
Annex H (normative) Determination of a low-power circuit	143
Annex I (informative) Measurement of noise and vibration emissions.....	144
Annex J Void	169
Annex K (normative) Battery tools and battery packs	170

Annex L (normative) Battery tools and battery packs provided with mains connection or non-isolated sources.....	191
Bibliography.....	210
Figure 101 – Examples of cut-off machines.....	24
Figure 102 – Example of a flush cutter with diamond cutting wheel.....	25
Figure 103 – Example of a power cutter.....	25
Figure 104 – Example of a utility cutter.....	26
Figure 105 – Example of a wall chaser.....	26
Figure 106 – Examples of segmented diamond cutting wheel constructions.....	44
Figure 107 – Design examples for wheel guards.....	72
Figure 108 – Principal dimensions of flanges.....	75
Figure 109 – Type 41 cut-off wheel.....	76
Figure 110 – Type 42 cut-off wheel.....	76
Figure 111 – Cut-off machine drop position 1.....	79
Figure 112 – Cut-off machine drop position 2.....	80
Figure 113 – Cut-off machine drop position 3.....	80
Figure 114 – Guard strength test: explanation of guard positions.....	84
Figure 115 – Guard strength test: preparation of the cut-off machine.....	85
Figure 116 – Measurement of handle gripping length.....	92
Figure 117 – Measurement of handle gripping length.....	93
Figure 118 – Measurement of handle gripping length for a handle with finger grips or similar superimposed profiles.....	93
Figure 1 – Test fingernail.....	122
Figure 2 – Flexing test apparatus.....	123
Figure 3 – Overload test of a class II armature.....	124
Figure A.1 – Clearance gap for parallel sided and V-shaped groove.....	126
Figure A.2 – Clearance gap for rib and uncemented joint with groove.....	127
Figure A.3 – Clearance gap for uncemented joint and diverging-sided groove.....	128
Figure A.4 – Clearance gap between wall and screw.....	129
Figure B.1 – Simulation of fault conditions.....	131
Figure C.1 – Diagram for leakage current measurement for single-phase connection and three-phase tools suitable for single-phase supply.....	134
Figure C.2 – Diagram for leakage current measurement for three-phase connection.....	135
Figure C.3 – Circuit of the leakage current meter.....	135
Figure H.1 – Example of an electronic circuit with low-power points.....	143
Figure I.101 – Test set up (side view).....	151
Figure I.102 – Test set up (top view).....	151
Figure I.103 – Noise set up for wall chasers (side view).....	153
Figure I.104 – Side view cutting-off steel.....	155
Figure I.105 – Top view cutting-off steel.....	156
Figure I.106 – Positions of transducers for cut-off-machines.....	161
Figure I.107 – Vibration test set-up for wall chasers (side view).....	165
Figure I.1 – Test bench.....	167

Figure I.2 – Positions of a hand-held power tool and microphones for the hemispherical / cylindrical measurement surface	168
Figure I.3 – Microphone positions on a cubic measurement surface	168
Figure I.4 – Directions of vibration measurement	168
Figure K.1 – Measurement of clearances	190
Figure L.1 – Measurement of clearances	209
Table 1 – Maximum normal temperature rises (1 of 2).....	51
Table 2 – Maximum outside surface temperature rises.....	53
Table 3 – Maximum winding temperature	61
Table 4 – Required performance levels	67
Table 101 – Torques for testing flanges	77
Table 5 – Impact energies.....	78
Table 6 – Test torques	81
Table 102 – Guard thickness for diamond cutting wheels	82
Table 7 – Switch trigger force	90
Table 8 – Minimum cross-sectional area and AWG sizes of supply cords.....	106
Table 9 – Pull and torque value	108
Table 10 – Quick-connect terminals for earthing conductors	113
Table 11 – Torque for testing screws and nuts	116
Table 12 – Minimum creepage distances and clearances	119
Table D.1 – Test voltages	136
Table F.1 – Test voltages for the electric strength test	141
Table I.101 – Operating conditions for cut-off machines other than wall chasers and other than tools only intended for cutting metal	150
Table I.102 – Noise test conditions for wall chasers.....	152
Table I.103 – Operating conditions for cut-off machines only intended for cutting metal.....	154
Table I.104 – Concrete specifications	156
Table I.105 – Detailed example of a concrete formulation that fulfils the requirements of Table I.104	157
Table I.106 – Depth setting and width setting for noise and vibration testing of wall chasers.....	157
Table I.107 – Vibration test conditions for wall chasers.....	164
Table K.1 – Minimum creepage distances and clearances between parts of opposite polarity	189
Table L.1 – Minimum creepage distances and clearances between parts of opposite polarity	208

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-22: Particular requirements for hand-held cut-off machines

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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- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

This extended version (EXV) of the official IEC Standard provides the user with the full content of the Standard.

IEC 62841-2-22:2025 EXV includes the content of IEC 62841-2-22:2025, and the references made to IEC 62841-1:2014.

The specific content of IEC 62841-2-22:2025 is displayed on a blue background.

IEC 62841-2-22 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools. It is an International Standard.

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

Draft	Report on voting
116/870/FDIS	116/887/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be used in conjunction with IEC 62841-1:2014.

This document supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held cut-off machines.

Where a particular subclause of IEC 62841-1 is not mentioned in this document, that subclause applies as far as reasonable. Where this document states "addition", "modification" or "replacement", the relevant text in IEC 62841-1 is to be adapted accordingly.

The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- terms defined in Clause 3: **in bold type**
- notes: in small roman type.

Subclauses, notes, tables and figures which are additional to those in IEC 62841-1 are numbered starting from 101.

Subclauses, notes, tables and figures in Annex K and Annex L which are additional to those in the main body of this document are numbered starting from 301.

A list of all parts in the IEC 62841 series, published 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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.

INTRODUCTION

Individual countries may wish to consider the application of this Part 1 of IEC 62841, so far as is reasonable, to tools not mentioned in an individual part of IEC 62841-2, IEC 62841-3 or IEC 62841-4 and to tools designed on new principles.

Examples of standards dealing with non-safety aspects of **hand-held tools, transportable tools and lawn and garden machinery** are

- standards dealing with EMC aspects;
- standards dealing with environmental aspects.

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

Part 2-22: Particular requirements for hand-held cut-off machines

1 Scope

This International Standard deals with the safety of electric motor-operated or magnetically driven:

- **hand-held tools** (IEC 62841-2);
- **transportable tools** (IEC 62841-3);
- **lawn and garden machinery** (IEC 62841-4).

The above listed categories are hereinafter referred to as “tools” or “machines”.

The **rated voltage** is not more than 250 V for single-phase a.c. or d.c. tools, and 480 V for three-phase a.c. tools.

The limits for the applicability of this standard for battery tools are given in K.1 and L.1.

This standard deals with the hazards presented by tools which are encountered by all persons in the **normal use** and reasonably foreseeable misuse of the tools.

Tools with electric heating elements are within the scope of this standard.

Requirements for motors not isolated from the supply, and having **basic insulation** not designed for the **rated voltage** of the tools, are given in Annex B. Requirements for rechargeable battery-powered motor-operated or magnetically driven tools and the battery packs for such tools are given in Annex K. Requirements for such tools that are also operated and/or charged directly from the mains or a non-isolated source are given in Annex L.

Hand-held electric tools, which can be mounted on a support or working stand for use as fixed tools without any alteration of the tool itself, are within the scope of this standard and such combination of a **hand-held tool** and a support is considered to be a **transportable tool** and thus covered by the relevant Part 3.

This standard does not apply to:

- tools intended to be used in the presence of explosive atmosphere (dust, vapour or gas);
- tools used for preparing and processing food;
- tools for medical purposes;

NOTE 1 IEC 60601 series covers a variety of tools for medical purposes.

- tools intended to be used with cosmetics or pharmaceutical products;
- heating tools;

NOTE 2 IEC 60335-2-45 covers a variety of heating tools.

- electric motor-operated household and similar electrical appliances;

NOTE 3 IEC 60335 series covers a variety of electric motor-operated household and similar electrical appliances.

- electrical equipment for industrial machine-tools;

NOTE 4 IEC 60204 series deals with electrical safety of machinery.

- small low voltage transformer operated bench tools intended for model making, e.g. the making of radio controlled model aircraft or cars, etc.

NOTE 5 In the United States of America, the following conditions apply:

This standard deals with tools used in non-hazardous locations in accordance with the National Electrical Code, NFPA 70.

NOTE 6 In Canada, the following conditions apply:

This standard deals with tools used in non-hazardous locations in accordance with the Canadian Electric Code, Part 1, CSA C22.1, and General Requirements – Canadian Electrical Code, Part II, CAN/CSA-C22.2 No. 0.

This document applies to hand-held **cut-off machines** fitted with

- one **bonded reinforced wheel** of Type 41 or Type 42; or
- one or more **diamond cutting wheels** with peripheral gaps, if any,
 - having no positive rake angle; and
 - not exceeding 10 mm for **cut-off machines** other than **flush cutters, power cutters** and **wall chasers**;

and with

- a **rated no-load speed** not exceeding a peripheral speed of the wheel of 100 m/s at **rated capacity**; and
- a **rated capacity** not exceeding 430 mm.

NOTE 101 An example of a permitted **diamond cutting wheel** construction is shown in Figure 106.

These tools are intended to cut materials such as metals, concrete, masonry, glass and tile.

This document does not apply to:

- **cut-off machines** that can be converted to a grinder, sander or polisher, which are covered by IEC 62841-2-3;
- circular saws which are covered by IEC 62841-2-5; and
- die grinders and small rotary tools which are covered by IEC 62841-2-23;
- tools intended to cut wood, except for **utility cutters**;
- **cut-off machines** fitted with a **bonded reinforced wheel** of Type 42 with a diameter exceeding 230 mm.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60061, *Lamp caps and holders together with gauges for the control of interchangeability and safety*, available at <http://std.iec.ch/iec60061>

IEC 60065:2001, *Audio, video and similar electronic apparatus – Safety requirements*¹
Amendment 2:2010
Amendment 1:2005

¹ There exists a consolidated version (Edition 7.2:2011) which includes IEC 60065:2001 and its Amendment 1 (2005) and Amendment 2 (2010).

IEC 60068-2-75:1997, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC/TR 60083, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60085:2007, *Electrical insulation – Thermal evaluation and designation*

IEC 60127 (all parts), *Miniature fuses*

IEC 60227 (all parts), *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V*

IEC 60238, *Edison screw lampholders*

IEC 60245 (all parts), *Rubber insulated cables – Rated voltages up to and including 450/750 V*

IEC 60252-1, *AC motor capacitors – Part 1: General – Performance, testing and rating – Safety requirements – Guidance for installation and operation*

IEC 60320 (all parts), *Appliance couplers for household and similar general purposes*

IEC 60320-1, *Appliance couplers for household and similar general purposes – Part 1: General requirements*

IEC 60335-1:2010, *Household and similar electrical appliances – Safety – Part 1: General requirements*

IEC 60384-14, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification – Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

IEC 60417, *Graphical symbols for use on equipment*, available at [http://www.graphical-symbols.info/graphical-symbols/equipment/db1.nsf/\\$enHome?OpenForm](http://www.graphical-symbols.info/graphical-symbols/equipment/db1.nsf/$enHome?OpenForm)

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*²
Amendment 1:1999
Amendment 2:2013

IEC 60664-1, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 60695-2-13:2010, *Fire hazard testing – Part 2-13: Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials*

IEC 60695-10-2:2003, *Fire hazard testing – Part 10-2: Abnormal heat – Ball pressure test*

IEC 60695-11-10:2013, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

² There exists a consolidated version (Edition 2.2:2013) which includes IEC 60529:1989 and its Amendment 1 (1999) and Amendment 2 (2013).

IEC 60730-1:2010, *Automatic electrical controls for household and similar use – Part 1: General requirements*

IEC 60825-1:2007, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 60884 (all parts), *Plugs and socket-outlets for household and similar purposes*

IEC 60906-1, *IEC system of plugs and socket-outlets for household and similar purposes – Part 1: Plugs and socket-outlets 16 A 250 V a.c.*

IEC 60990:1999, *Methods of measurement of touch current and protective conductor current*

IEC 60998-2-1, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units*

IEC 60998-2-2, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units*

IEC 60999-1:1999, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm² up to 35 mm² (included)*

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test³*
Amendment 1:2007
Amendment 2:2010

IEC 61000-4-4:2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5:2005, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61000-4-6:2008, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-11:2004, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

IEC 61008-1:2010, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules⁴*

³ There exists a consolidated version (Edition 3.2:2010) which includes IEC 61000-4-3:2006 and its Amendment 1 (2007) and Amendment 2 (2010).

⁴ There exists a consolidated version (Edition 3.2:2013) which includes IEC 61008-1:2010 and its Amendment 1 (2012) and Amendment 2 (2013).

IEC 61008-1:2010/AMD1:2012

IEC 61008-1:2010/AMD2:2013

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61056-1, *General purpose lead-acid batteries (valve-regulated types) – Part 1: General requirements, functional characteristics – Methods of test*

IEC 61058-1:2000, *Switches for appliances – Part 1: General requirements*⁵

Amendment 1:2001

Amendment 2:2007

IEC 61210, *Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements*

IEC 61540:1997, *Electrical accessories – Portable residual current devices without integral overcurrent protection for household and similar use (PRCDs)*⁶

Amendment 1:1998

IEC 61558-1, *Safety of power transformers, power supplies, reactors and similar products – Part 1: General requirements and tests*

IEC 61558-2-4, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers*

IEC 61558-2-6, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers*

IEC 61558-2-16, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units*

IEC 61951-1, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Portable sealed rechargeable single cells – Part 1: Nickel-cadmium*

IEC 61951-2, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Portable sealed rechargeable single cells – Part 2: Nickel-metal hydride*

IEC 61960, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications*

IEC 61984, *Connectors – Safety requirements and tests*

IEC 62133, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications*

IEC 62233, *Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure*

⁵ There exists a consolidated version (Edition 3.2:2008) which includes IEC 61058-1:2000 and its Amendment 1 (2001) and Amendment 2 (2007).

⁶ There exists a consolidated version (Edition 1.1:1999) which includes IEC 61540:1997 and its Amendment 1 (2001).

IEC 62471, *Photobiological safety of lamps and lamp systems*

IEC/TR 62471-2:2009, *Photobiological safety of lamps and lamp systems – Part 2: Guidance on manufacturing requirements relating to non-laser optical radiation safety*

IEC 62841-1:2014, *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 1: General requirements*

ISO 1463, *Metallic and oxide coatings – Measurement of coating thickness – Microscopical method*

ISO 2178, *Non-magnetic coatings on magnetic substrates – Measurement of coating thickness – Magnetic method*

ISO 2768-1, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 3744, *Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering methods for an essentially free field over a reflecting plane*

ISO 3864-2, *Graphical symbols – Safety colours and safety signs – Part 2: Design principles for product safety labels*

ISO 3864-3, *Graphical symbols – Safety colours and safety signs – Part 3: Design principles for graphical symbols for use in safety signs*

ISO 4871:1996, *Acoustics – Declaration and verification of noise emission values of machinery and equipment*

ISO 5347 (all parts), *Methods for the calibration of vibration and shock pick-ups*

ISO 5349-1, *Mechanical vibration – Measurement and evaluation of human exposure to hand-transmitted vibration – Part 1: General requirements*

ISO 5349-2, *Mechanical vibration – Measurement and evaluation of human exposure to hand-transmitted vibration – Part 2: Practical guidance for measurement in the workplace*

ISO 7000:2012, *Graphical symbols for use on equipment – Index and synopsis*

ISO 7010, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

ISO 7574-4, *Acoustics – Statistical methods for determining and verifying stated noise emission values of machinery and equipment – Part 4: Methods for stated values for batches of machines*

ISO 8041, *Human response to vibration – Measuring instrumentation*

ISO 9772:2012, *Cellular plastics – Determination of horizontal burning characteristics of small specimens subjected to a small flame*

ISO 11201, *Acoustics – Noise emitted by machinery and equipment – Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections*

ISO 11203, *Acoustics – Noise emitted by machinery and equipment – Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level*

ISO 12100, *Safety of machinery – General principles for design – Risk assessment and risk reduction*

ISO 13849-1, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design*

ISO 13850, *Safety of machinery – Emergency stop – Principles for design*

ISO/TR 11690-3, *Acoustics – Recommended practice for the design of low-noise workplaces containing machinery – Part 3: Sound propagation and noise prediction in workrooms*

ISO 16063-1, *Methods for the calibration of vibration and shock transducers – Part 1: Basic concepts*

ISO 19432-1:2020, *Building construction machinery and equipment – Portable, hand-held, internal combustion engine-driven abrasive cutting machines – Part 1: Safety requirements for cut-off machines for centre-mounted rotating abrasive wheels*

EN 12096, *Mechanical vibration – Declaration and verification of vibration emission values*

ASTM B 258, *Standard specification for standard nominal diameters and cross-sectional areas of AWG sizes of solid round wires used as electrical conductors*

UL 969, *Standard for marking and labeling systems*

NOTE 1 In the United States of America, the following normative reference applies:

US, Code of Federal Regulations (CFR) Title 21, *Food and Drugs*.

NOTE 2 In Canada, the following normative reference applies:

C.R.C., c. 1370, Radiation Emitting Devices Regulations

NOTE 3 In Europe (EN 62841-1), the following normative references apply:

CR 1030-1, *Hand-arm vibration – Guidelines for vibration hazards reduction – Part 1: Engineering methods by design of machinery*

EN ISO 11688-1, *Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 1: Planning (ISO/TR 11688-1)*

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Handhållna och transportabla elverktyg samt trädgårdsmaskiner – Säkerhet –

Del 2-22: Särskilda fordringar på handhållna kapmaskiner

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

Part 2-22: Particular requirements for hand-held cut-off machines

Som svensk standard gäller europastandarden EN IEC 62841-2-22:2025. Den svenska standarden innehåller de officiella engelska språkversionerna av EN IEC 62841-2-22:2025 och EN IEC 62841-2-22:2025/A11:2025.

Nationellt förord

Europastandarden EN IEC 62841-2-22:2025

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62841-2-22, First edition, 2025 - Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 2-22: Particular requirements for hand-held cut-off machines**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 62841-1, utg 1:2015 och dess separat utgivna tillägg, ändringar och rättelser.

Tidigare fastställd svensk standard SS-EN 60745-2-22, utg 1:2011 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2029-12-31.

ICS 25.140.20

Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1042, 172 21 Sundbyberg
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Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

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SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

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EUROPEAN STANDARD

EN IEC 62841-2-22

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2025

ICS 25.140.20

Supersedes EN 60745-2-22:2011; EN 60745-2-22:2011/A11:2013

English Version

**Electric motor-operated hand-held tools, transportable tools and
lawn and garden machinery - Safety - Part 2-22: Particular
requirements for hand-held cut-off machines
(IEC 62841-2-22:2025)**

Outils électroportatifs à moteur, outils portables et machines
pour jardins et pelouses - Sécurité - Partie 2-22: Exigences
particulières pour les tronçonneuses portatives
(IEC 62841-2-22:2025)

Elektrische motorbetriebene handgeführte Werkzeuge,
transportable Werkzeuge und Rasen- und
Gartenmaschinen - Sicherheit - Teil 2-22: Besondere
Anforderungen für handgeführte Trennschleifmaschinen
(IEC 62841-2-22:2025)

This European Standard was approved by CENELEC on 2025-11-10. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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Ref. No. EN IEC 62841-2-22:2025 E

SEK Svensk Elstandard

SS-EN IEC 62841-2-22+A11, utg 1:2026

European foreword

The text of document 116/870/FDIS, future edition 1 of IEC 62841-2-22, prepared by TC 116 "Safety of motor-operated electric tools" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62841-2-22:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2026-12-31 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2029-12-31 document have to be withdrawn

This document supersedes EN 60745-2-22:2011 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document is read in conjunction with EN IEC 62841-2-22:2025/A11:2025 and EN 62841-1:2015 and all of its amendments and corrigenda (if any).

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of EN IEC 62841-2-22:2025/A11:2025.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62841-2-22:2025 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

- IEC 62841-2-3 NOTE Approved as EN IEC 62841-2-3
- IEC 62841-2-5 NOTE Approved as EN 62841-2-5
- IEC 62841-2-23 NOTE Approved as EN IEC 62841-2-23 ¹

¹ Under preparation. Stage at the time of publication: FprEN IEC 62841-2-23 :2024..

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 2-22: Particular requirements for hand-held cut-off machines**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –
Partie 2-22: Exigences particulières pour les tronçonneuses portatives**

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	7
3 Terms and definitions	7
4 General requirements	12
5 General conditions for the tests	12
6 Radiation, toxicity and similar hazards.....	12
7 Classification.....	12
8 Marking and instructions.....	13
9 Protection against access to live parts.....	18
10 Starting	18
11 Input and current	18
12 Heating.....	18
13 Resistance to heat and fire.....	18
14 Moisture resistance	18
15 Resistance to rusting.....	21
16 Overload protection of transformers and associated circuits	21
17 Endurance.....	21
18 Abnormal operation	22
19 Mechanical hazards.....	23
20 Mechanical strength	31
21 Construction	37
22 Internal wiring.....	40
23 Components	40
24 Supply connection and external flexible cords	41
25 Terminals for external conductors.....	42
26 Provision for earthing	42
27 Screws and connections.....	42
28 Creepage distances, clearances and distances through insulation.....	42
Annexes	43
Annex I (informative) Measurement of noise and vibration emissions.....	44
Annex K (normative) Battery tools and battery packs	56
Annex L (normative) Battery tools and battery packs provided with mains connection or non-isolated sources.....	59
Bibliography.....	60
Figure 101 – Examples of cut-off machines.....	10
Figure 102 – Example of a flush cutter with diamond cutting wheel	10
Figure 103 – Example of a power cutter.....	11
Figure 104 – Example of a utility cutter	11
Figure 105 – Example of a wall chaser.....	12
Figure 106 – Examples of segmented diamond cutting wheel constructions	17

Figure 107 – Design examples for wheel guards	25
Figure 108 – Principal dimensions of flanges	28
Figure 109 – Type 41 cut-off wheel	29
Figure 110 – Type 42 cut-off wheel	29
Figure 111 – Cut-off machine drop position 1	32
Figure 112 – Cut-off machine drop position 2	32
Figure 113 – Cut-off machine drop position 3	33
Figure 114 – Guard strength test: explanation of guard positions	35
Figure 115 – Guard strength test: preparation of the cut-off machine	36
Figure 116 – Measurement of handle gripping length	39
Figure 117 – Measurement of handle gripping length	39
Figure 118 – Measurement of handle gripping length for a handle with finger grips or similar superimposed profiles.....	40
Figure I.101 – Test set up (side view)	46
Figure I.102 – Test set up (top view)	46
Figure I.103 – Noise set up for wall chasers (side view)	48
Figure I.104 – Side view cutting-off steel	50
Figure I.105 – Top view cutting-off steel	51
Figure I.106 – Positions of transducers for cut-off-machines	53
Figure I.107 – Vibration test set-up for wall chasers (side view)	55
Table 4 – Required performance levels	22
Table 101 – Torques for testing flanges	30
Table 102 – Guard thickness for diamond cutting wheels	34
Table 8 – Minimum cross-sectional area and AWG sizes of supply cords	41
Table I.101 – Operating conditions for cut-off machines other than wall chasers and other than tools only intended for cutting metal	45
Table I.102 – Noise test conditions for wall chasers	47
Table I.103 – Operating conditions for cut-off machines only intended for cutting metal	49
Table I.104 – Concrete specifications	51
Table I.105 – Detailed example of a concrete formulation that fulfils the requirements of Table I.104	52
Table I.106 – Depth setting and width setting for noise and vibration testing of wall chasers	52
Table I.107 – Vibration test conditions for wall chasers	54

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –**Part 2-22: Particular requirements for hand-held cut-off machines**

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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IEC 62841-2-22 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools. It is an International Standard.

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

Draft	Report on voting
116/870/FDIS	116/887/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be used in conjunction with IEC 62841-1:2014.

This document supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held cut-off machines.

Where a particular subclause of IEC 62841-1 is not mentioned in this document, that subclause applies as far as reasonable. Where this document states "addition", "modification" or "replacement", the relevant text in IEC 62841-1 is to be adapted accordingly.

The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- terms defined in Clause 3: **in bold type**
- notes: in small roman type.

Subclauses, notes, tables and figures which are additional to those in IEC 62841-1 are numbered starting from 101.

Subclauses, notes, tables and figures in Annex K and Annex L which are additional to those in the main body of this document are numbered starting from 301.

A list of all parts in the IEC 62841 series, published 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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.

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

Part 2-22: Particular requirements for hand-held cut-off machines

1 Scope

IEC 62841-1:2014, Clause 1 is applicable, except as follows:

Replacement of the third paragraph:

The **rated voltage** is not more than 250 V for single-phase a.c. or d.c. tools, and 480 V for three-phase a.c. tools.

Addition:

This document applies to hand-held **cut-off machines** fitted with

- one **bonded reinforced wheel** of Type 41 or Type 42; or
- one or more **diamond cutting wheels** with peripheral gaps, if any,
 - having no positive rake angle; and
 - not exceeding 10 mm for **cut-off machines** other than **flush cutters, power cutters** and **wall chasers**;

and with

- a **rated no-load speed** not exceeding a peripheral speed of the wheel of 100 m/s at **rated capacity**; and
- a **rated capacity** not exceeding 430 mm.

NOTE 101 An example of a permitted **diamond cutting wheel** construction is shown in Figure 106.

These tools are intended to cut materials such as metals, concrete, masonry, glass and tile.

This document does not apply to:

- **cut-off machines** that can be converted to a grinder, sander or polisher, which are covered by IEC 62841-2-3;
- circular saws which are covered by IEC 62841-2-5; and
- die grinders and small rotary tools which are covered by IEC 62841-2-23;
- tools intended to cut wood, except for **utility cutters**;
- **cut-off machines** fitted with a **bonded reinforced wheel** of Type 42 with a diameter exceeding 230 mm.

2 Normative references

IEC 62841-1:2014, Clause 2 is applicable, except as follows:

Addition:

IEC 61008-1:2010, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules*¹

IEC 61008-1:2010/AMD1:2012

IEC 61008-1:2010/AMD2:2013

IEC 62841-1:2014, *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 1: General requirements*

ISO 19432-1:2020, *Building construction machinery and equipment – Portable, hand-held, internal combustion engine-driven abrasive cutting machines – Part 1: Safety requirements for cut-off machines for centre-mounted rotating abrasive wheels*

¹ There exists a consolidated version (Edition 3.2:2013) which includes IEC 61008-1:2010 and its Amendment 1 (2012) and Amendment 2 (2013).