

INTERNATIONAL STANDARD

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety -
Part 4-11: Particular requirements for edgers**

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IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Electric motor-operated hand-held tools, transportable tools and
lawn and garden machinery - Safety -
Part 4-11: Particular requirements for edgers**

FOREWORD

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IEC 62841-4-11 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
116/945/FDIS	116/974/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 the first edition of IEC 62841-1:2014 and IEC 62841-1:2014/AMD1:2025.

This document supplements or modifies the corresponding clauses in IEC 62841-1:2014, so as to convert it into the IEC Standard: Particular requirements for edgers.

Where a particular subclause of IEC 62841-1:2014 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;*
- notes: in small roman type.

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

Subclauses, notes, tables and figures which are additional to those in IEC 62841-1:2014 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.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations can 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.

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.

1 Scope

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

Addition:

This document applies to the following types of **edgers**

- **hand-held edgers** having at least one ground-support;
- **walk-behind edgers** and **walk-beside edgers**, where the plane of the **blade-tip circle** is designed to operate at not more than 15° from the vertical.

The **edgers** to which this document applies have a **blade-tip circle** diameter of not more than 305 mm, and are equipped with a

- **cutting accessory**; or
- **cutting means** with one or more **cutting elements** pivotally mounted on a generally circular drive unit and have a kinetic energy for each single **cutting element** of greater than 10 J.

NOTE 101 Machines having **cutting elements** with a kinetic energy not exceeding 10 J are considered to be lawn edge trimmers and are covered by IEC 62841-4-4.

This document does not apply to

- lawn trimmers, lawn edge trimmers, grass trimmers, brush cutters and brush saws;
- scissor type **edgers** and brush cutters; and
- machines equipped with metallic **cutting accessories** consisting of more than one piece, e.g. pivoting chains or flail blades.

NOTE 102 Lawn trimmers, lawn edge trimmers, brush cutters and brush saws are covered by IEC 62841-4-4.

NOTE 103 Scissor type **edgers** and brush cutters will be covered by a future part of IEC 62841.

NOTE 104 In Europe (EN IEC 62841-4-11), this document does not apply to **edgers** equipped with **integral batteries**.

2 Normative references

IEC 62841-1:2014, Clause 2 and IEC 62841-1:2014/AMD1:2025, Clause 2 are applicable, except as follows.

Replacement:

ISO 3744:2025, *Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane but the listed edition applies*

IEC 60664-1:2020, *Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests*

ISO 11201:2010, *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*

Addition:

IEC 60112:2020, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*¹

IEC 60664-3:2016, *Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution*

IEC 60664-4:2005, *Insulation coordination for equipment within low-voltage systems - Part 4: Consideration of high-frequency voltage stress*

IEC 62841-1:2014, *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements*
IEC 62841-1:2014/AMD1:2025

ISO 354:2003, *Acoustics - Measurement of sound absorption in a reverberation room*

ISO 683-4:2016, *Heat-treatable steels, alloy steels and free-cutting steels - Part 4: Free-cutting steels*

ISO 9773:2024, *Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small flame ignition source*

ISO 22868:2021, *Forestry and gardening machinery - Noise test code for portable hand-held machines with internal combustion engine - Engineering method (Grade 2 accuracy)*

3 Terms and definitions

IEC 62841-1:2014, Clause 3 and IEC 62841-1:2014/AMD1:2025, Clause 3 are applicable, except as follows.

Replacement:

3.43

rated speed

output speed assigned to the machine by the manufacturer

Addition:

3.101

blade-tip circle

path described by the outermost point of the **cutting means** or **cutting accessory** cutting edge as it rotates about its **shaft** axis

Note 101 to entry: See Figure 107 and Figure 112.

3.102

cutting accessory

rigid cutting device made of metallic or non-metallic material

¹ This document has been replaced by IEC 60112:2025, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*.

3.103

cutting element

single freely pivoting non-metallic cutter

3.104

cutting head

support and retention system for the **cutting means**

3.105

cutting means

assembly of freely pivoting non-metallic cutter(s) that rotates about an axis normal to the cutting plane, used to provide the cutting action by one or more **cutting elements**

3.106

debris deflector

additional guarding made of flexible material fitted to the unit as an extension of the **guard** to protect the operator from thrown debris

3.107

depth of cut

vertical location of the **blade-tip circle** relative to the surface level

3.108

edger

grass/soil trimming machine where the **cutting means** or **cutting accessory** operates in a plane approximately perpendicular to the ground

Note 101 to entry: See Figure 101 for an example **hand-held edger**, Figure 102 for an example of a **walk-behind edger**, Figure 103 for an example of a **walk-beside edger**.

3.109

guide handle

front **handle** of a **hand-held** machine by which the operator partially supports the machine

Note 101 to entry: See Figure 101.

3.110

handle

structure that enables the operator to hold and control the unit during operation

3.111

hand-held edger

edger that is supported by hand, possibly assisted by wheel(s) or skids

Note 101 to entry: See Figure 101 for an example of a **hand-held edger**.

3.112

maximum speed

highest output speed attainable under all conditions of **normal use**, including no load

3.113

operator presence sensor

device to detect the presence of an operator's hand

3.114

shaft

structural part of the machine that distances the **cutting means** or **cutting accessory** from the **handles**

3.115

walk-behind edger

edger normally controlled by an operator walking behind the **handle** of a ground-supported machine

Note 101 to entry: See Figure 102 for an example of a **walk-behind edger**.

3.116

walk-beside edger

edger normally controlled by an operator walking beside the **handle** of a ground-supported machine

Note 101 to entry: See Figure 103 for an example of a **walk-beside edger**.

3.117

code protected disabling device

device which, when activated, prevents operation of the machine and requires a coded input (such as via a keypad) before it is deactivated and the machine can operate

Note 301 to entry: See K.21.302.

3.118

removable disabling device

detachable part, such as for example a key, which prevents operation of the machine when it is removed

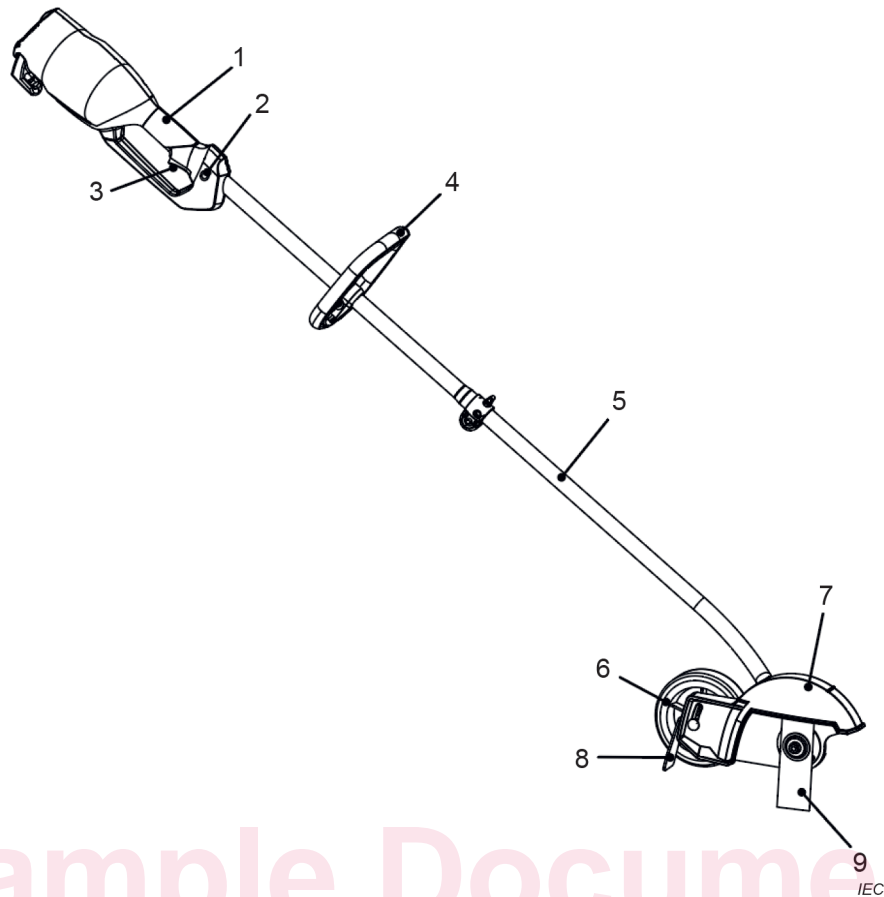
Note 301 to entry: See K.21.302.

3.119

switched circuit

circuit that is a low-power circuit when the **power switch** is in the "off" position

Note 301 to entry: The requirements for a low-power circuit are given in Annex H.



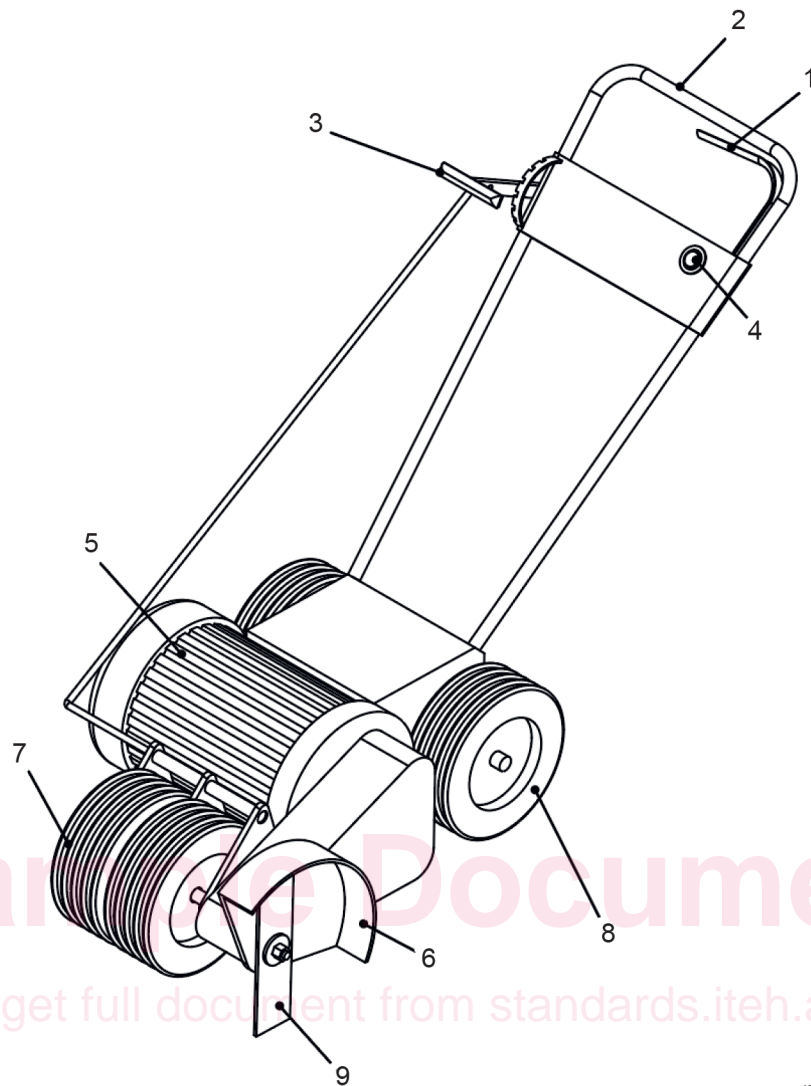
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Key

- 1 **handle**
- 2 lock-off device
- 3 **power switch**
- 4 **guide handle**
- 5 **shaft**
- 6 support wheel (depth wheel)
- 7 **guard**
- 8 **debris deflector**
- 9 **cutting accessory**

Figure 101 – Example of a hand-held edger

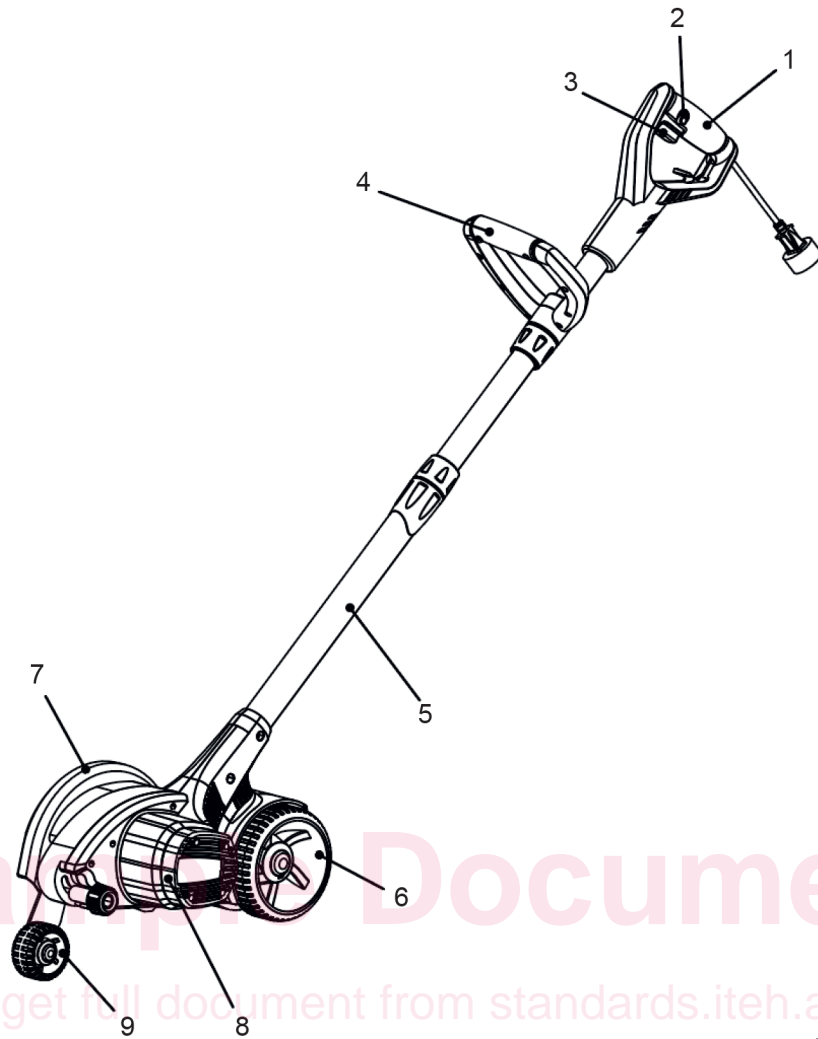


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Key

- 1 **power switch**
- 2 **handle**
- 3 height adjustment
- 4 lock-off device
- 5 motor
- 6 **guard**
- 7 height adjustment wheel
- 8 ground support wheel
- 9 **cutting accessory**

Figure 102 – Example of a walk-behind edger



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Key

- 1 **handle**
- 2 lock-off device
- 3 **power switch**
- 4 **guide handle**
- 5 **shaft**
- 6 ground support wheel
- 7 **guard**
- 8 motor
- 9 height adjust wheel

Figure 103 – Example of a walk-beside edger

4 General requirements

IEC 62841-1:2014, Clause 4 is applicable.

5 General conditions for the tests

IEC 62841-1:2014, Clause 5 is applicable, except as follows:

5.4 Addition:

Handle positions that are used for storage or transportation purposes are not included in this requirement.

5.7.2 Replacement:

Machines are tested at **rated voltage**. Machines having more than one **rated voltage** or having a **rated voltage range** are tested at the highest voltage.

5.17 Addition:

For **edgers** with a **cutting accessory**, the mass of the machine includes the heaviest **cutting accessory** in accordance with 8.14.2 a) 104), but excludes the harness and hip pad, if any.

For **edgers** with a **cutting means**, the mass of the machine includes the **cutting head**

- with freely pivoting non-metallic cutters, if any; and
- with a bobbin for non-metallic filament line, if any;
- without the non-metallic filament line, if any;

and for **hand-held edgers**, wheels or skids, if any.

5.101 The tests are carried out on the machine as supplied. However, a machine constructed as a single machine but supplied in an unassembled state is tested after assembly in accordance with 8.14.2.

5.102 Unless otherwise specified, for Clauses 19 and 21, machines are tested in each operating configuration as described in 8.14.2.

5.103 The manufacturer may provide special hardware and/or software for tests that are performed at **maximum speed** and no-load.

6 Radiation, toxicity and similar hazards

IEC 62841-1:2014, Clause 6 is applicable.

7 Classification

IEC 62841-1:2014, Clause 7 is applicable, except as follows:

7.1 Replacement:

Machines shall be a **class II tool** (machine) or **class III tool** (machine).

Compliance is checked by inspection and by the relevant tests.