

INTERNATIONAL STANDARD

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 2-14: Particular requirements for hand-held planers**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –**Part 2-14: Particular requirements for hand-held planers**

FOREWORD

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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 62841-2-14 edition 1.1 contains the first edition (2015-06) [documents 116/222/FDIS and 116/236/RVD] and its amendment 1 (2025-02) [documents 116/857/FDIS and 116/882/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 62841-2-14 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

This bilingual version (2017-12) corresponds to the monolingual English version, published in 2015-06.

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

The French version of this standard has not been voted upon.

This Part 2-14 is to be used in conjunction with the first edition of IEC 62841-1 (2014).

This Part 2-14 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC standard: Particular requirements for hand-held planers.

Where a particular subclause of Part 1 is not mentioned in this Part 2-14, 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 and its amendment 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 2-14: Particular requirements for hand-held planers

1 Scope

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

Addition:

This part of IEC 62841 applies to **planers**.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

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

Additional definitions:

3.101

planer

tool intended for removing surface material, equipped with a rotating **cutting head** where the axis of rotation of the **cutting head** is parallel to the plane of the base plate, which is the part supporting the **planer** on the workpiece

Note 1 to entry: The base plate consists of a fixed shoe and an adjustable shoe that determines the depth of cut.

3.102

lift-off device

device which keeps the blade(s) from making contact with a flat surface when the base plate of the **planer** is attempted to be placed on the flat surface

3.103

cutting head

assembly of blades, cutter block, blade fixing elements, relevant screws and spindle, the whole being ready for working

4 General requirements

This clause of Part 1 is applicable.

5 General conditions for the tests

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

5.17 Addition:

*The mass of the tool includes the **cutting head** including blades and the dust extraction adapter, if any.*

6 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable.

7 Classification

This clause of Part 1 is applicable.

8 Marking and instructions

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

8.1 Addition:

- **rated no-load speed.**

8.3 Addition:

- direction of rotation of the working spindle. This shall be indicated by an arrow, raised or sunk, or by other means no less visible and indelible.

8.14.1 Addition:

For **planers**, the additional safety instructions as specified in 8.14.1.101 shall be given. This part may be printed separately from the “General power tool safety warnings”.

8.14.1.101 Safety instructions for planers

- Wait for the cutter to stop before setting the tool down.** *An exposed rotating cutter may engage the surface leading to possible loss of control and serious injury.*
- Hold the power tool by insulated gripping surfaces, because the cutter may contact its own cord.** *Cutting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.*
- Use clamps or another practical way to secure and support the workpiece to a stable platform.** *Holding the workpiece by your hand or against the body leaves it unstable and may lead to loss of control.*

8.14.2 b) Addition:

- 101) instructions on how to adjust the entire range of the depth of cut;
- 102) instruction on the correct use of the dust collection system.

8.14.2 c) Addition:

- 101) information about types of **cutting heads** which can be used, if applicable;
- 102) instructions for the changing of the blades and their adjustment to the correct position;
- 103) instruction on how to properly clean/clear the chip ejection opening.

9 Protection against access to live parts

This clause of Part 1 is applicable.

10 Starting

This clause of Part 1 is applicable.

11 Input and current

This clause of Part 1 is applicable.

12 Heating

This clause of Part 1 is applicable.

13 Resistance to heat and fire

This clause of Part 1 is applicable.

14 Moisture resistance

This clause of Part 1 is applicable.

15 Resistance to rusting

This clause of Part 1 is applicable.

16 Overload protection of transformers and associated circuits

This clause of Part 1 is applicable. [IEC 62841-2-14:2015](https://standards.iteh.ai/catalog/standards/iec/f7a0b3fa-2c41-4ea1-a420-3568c162616a/iec-62841-2-14-2015)

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17 Endurance

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

17.101 If a **lift-off device** is provided to meet the requirements of 18.8 or 21.18.1.1, it shall be sufficiently durable.

Compliance is checked by a new tool sample completing the following test.

*The **planer** is to be set in horizontal position. The **lift-off device** is cycled through its intended range of operation for 50 000 cycles. This sequence is repeated at a rate not less than 10 cycles per minute.*

*After completion of the cycling test as specified above, the **planer** shall then comply with 19.111.*

18 Abnormal operation

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

18.8 *Replacement of Table 4 by the following:*

Table 4 – Required performance levels

| Type and purpose of SCF | Minimum Performance Level (PL) |
|--|--------------------------------|
| Power switch – prevent unwanted switch-on | c |
| Power switch – provide desired switch-off for planers with lift-off device | a |
| Power switch – provide desired switch-off for planers without lift-off device | b |
| Any electronic control to pass the test of 18.3 | a |
| Overspeed prevention to prevent output speed above 130 % of rated no-load speed | b |
| Provide desired direction of rotation | a |
| Prevent exceeding thermal limits as in Clause 18.4 and 18.5.3 | a |
| Prevent self-resetting as required in 23.3 | b |
| Lock-off function as required by 21.18.1.2 | b |

19 Mechanical hazards

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

19.1 Addition:

For the requirements given in 19.107, 19.108 and 19.109, only the test probe shown in Figure 102 is used.

19.6 This subclause of Part 1 is applicable.

19.4.101 Planers with a mass according to 5.17 exceeding 3 kg shall have at least two handles. The auxiliary handle, if any, may also be used for the depth-of-cut setting, provided the adjustment of depth of cut is achieved by a rotary action.

Compliance is checked by inspection and by measurement.

19.101 The **cutting head** shall be cylindrically shaped except for the blades, the gullet and the blade clamping means.

The maximum gullet width s shall be

$$s_{\max} = 0,235 d + 7,2 \text{ mm}$$

where d is the diameter of the rotating circle of the cutting edges. See Figure 101.

Compliance is checked by inspection and by measurement.

19.102 The blades when aligned with the fixed shoe shall not project by more than 1,1 mm radially beyond the cutter block (as per dimension “a” in Figure 101).

Compliance is checked by measurement.

19.103 At any depth of cut, the distance “b” (see Figure 101) between the rotating circle of the cutting edges and the trailing edge on the adjustable shoe shall not exceed 5 mm measured radially.

Compliance is checked by inspection and by measurement.

19.104 The blades shall be secured in the cutter block in such a way that friction alone is not relied upon to prevent the radial ejection of the blades.

Compliance is checked by inspection.

19.105 Cutting heads shall be designed and made of such materials that they withstand the forces and loads expected in **normal use**.

Compliance is checked by the following test:

*An overspeed test shall be made on a sample **cutting head**, equipped with blades for the largest cutting diameter and the largest cutting edge width, the test speed being 1,5 times the **rated no-load speed**. If applicable, tension elements such as clamping screws shall be tightened in accordance with the instructions required by 8.14.2 b).*

*After the test, the **cutting head** shall not be deformed or cracked, no screws shall be loosened and displacements of separable parts shall be less than specified in the test procedure.*

The test procedure is as follows:

- 1) Measure the **cutting head** dimensions.
- 2) Bring the **cutting head** to the **rated no-load speed**, for 1 min.
- 3) Stop and re-measure the **cutting head**; measured displacements of the separable parts of the **cutting head** shall not be greater than 0,15 mm.
- 4) Bring the **cutting head** to the test speed, for 1 min.
- 5) Stop and re-measure the **cutting head** and compare the results with those obtained from step 3. The compared displacements shall not exceed 0,15 mm.

19.106 Clamping screws or bolts shall not project beyond the cutter block as shown in Figure 101.

Compliance is checked by inspection.

19.107 It shall not be possible to inadvertently touch rotating parts from the sides of the **planer**, except for the cases covered by 19.108.

Compliance is checked by the following test:

*The **planer** is set to minimum depth of cut and is positioned with the shoes resting on a flat surface that extends beyond the **planer** by at least 100 mm in all directions. Any **lift-off device** is disabled. The accessibility is checked by means of the test probe shown in Figure 102 with a force not exceeding 5 N.*

19.108 Planers with rabbeting facilities shall be provided with a **guard** that avoids inadvertent contact at the sides with the blades.

NOTE Rabbeting is also known as rebating.

Compliance is checked by inspection and by the following test:

*The **planer** is set to minimum depth of cut and is positioned with the shoes resting on a flat surface that extends beyond the **planer** by at least 100 mm in all directions. Any **lift-off device** is disabled. The accessibility is checked by means of the test probe shown in Figure 102 without any force.*