



# **UL 62841-2-14**

## **STANDARD FOR SAFETY**

**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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UL Standard for Safety for Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Part 2-14: Particular Requirements For Hand-Held Planers, UL 62841-2-14

First Edition, Dated August 12, 2016

### **Summary of Topics**

***This revision of ANSI/UL 62841-2-14 dated February 17, 2022 is being issued to update the title page to reflect the most recent designation as a Reaffirmed American National Standard (ANS). No technical changes have been made.***

***This standard is an adoption of IEC 62841-2-14, Edition 1, published by the IEC June 2015. There are no technical national differences for this standard.***

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated December 17, 2021.

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Underwriters Laboratories Inc.  
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First Edition

## Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements For Hand-Held Planers

August 12, 2016

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This national standard is based on publication IEC 62841-2-14 First Edition (2015).



ANSI/UL 62841-2-14-2016 (R2022)



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This standard is issued jointly by the Canadian Standards Association (operating as "CSA Group") and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA Group or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of CSA Group and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.

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## Preface

This is the harmonized CSA Group and UL Standard For Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers. It is the First edition of CAN/CSA-C22.2 No. 62841-2-14 and the First edition of UL 62841-2-14.

This harmonized standard is based on IEC Publication 62841-2-14: First edition Standard For Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers issued June 2015. IEC publication 62841-2-14 is copyrighted by the IEC.

Note: At the time of publication, 62841-2-14:2015 is available from IEC in English only. CSA will publish the French version when it becomes available from IEC.

This harmonized standard was prepared by CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the International Harmonization Committee (IHC) for the adoption of the IEC series of standards for Hand-Held, Motor-Operated, and Transportable Tools and Lawn and Garden Machinery UL are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

This standard was reviewed by the CSA Subcommittee on Safety of Hand-Held Motor-Operated Electric Tools, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee.

This standard has been approved as a National Standard of Canada by the Standards Council of Canada (SCC).

### Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

This CAN/CSA-C22.2 No. 62841-2-14, Standard For Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers is to be used in conjunction with the First edition of CAN/CSA-C22.2 No. 62841-1. The requirements for hand-held planers are contained in this Part 2 Standard and CAN/CSA-C22.2 No. 62841-1. Requirements of this Part 2 Standard, where stated, amend the requirements of CAN/CSA-C22.2 No. 62841-1. Where a particular subclause of CAN/CSA-C22.2 No. 62841-1 is not mentioned in CAN/CSA-C22.2 No. 62841-2-14, the CAN/CSA-C22.2 No. 62841-1 subclause applies.

This UL 62841-2-14 Standard For Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers, is to be used in conjunction with the First edition of UL 62841-1. The requirements for hand-held planers are contained in this Part 2 Standard and UL 62841-1. Requirements of this Part 2 Standard, where stated, amend the requirements of UL 62841-1. Where a particular subclause of UL 62841-1 is not mentioned in UL 62841-2-14, the UL 62841-1 subclause applies.

## Level of harmonization

This standard adopts the IEC text with editorial national differences.

This standard is published as an equivalent standard for CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

All national differences from the IEC text are included in the CSA Group and UL versions of the standard. While the technical content is the same in each organization's version, the format and presentation may differ.

## Reasons for Differences From IEC

National Differences from the IEC are being added in order to address safety and regulatory situations present in the US and Canada.

## Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

## IEC Copyright

For CSA Group, the text, figures, and tables of International Electrotechnical Commission Publication IEC 62841-2-14 Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers, copyright 2015, are used in this standard with the consent of the International Electrotechnical Commission. The IEC Foreword is not a part of the requirements of this standard but is included for information purposes only.

These materials are subject to copyright claims of IEC and UL. No part of this publication may be reproduced in any form, including an electronic retrieval system, without the prior written permission of UL. All requests pertaining to the Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers, UL 62841-2-14 Standard should be submitted to UL.

## NATIONAL DIFFERENCES

National Differences from the text of International Electrotechnical Commission (IEC) Publication 62841-2-14, Electric Motor-Operated Hand-Held Tools, Transportable Tools And Lawn And Garden Machinery – Safety – Part 2-14: Particular Requirements for Hand-Held Planers) copyright 2015 are indicated by notations (differences) and are presented in bold text. The national difference type is included in the body.

There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

**DR** – These are National Differences based on the **national regulatory requirements**.

**D1** – These are National Differences which are based on **basic safety principles and requirements**, elimination of which would compromise safety for consumers and users of products.

**D2** – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

**DC** – These are National Differences based on the **component standards** and will not be deleted until a particular component standard is harmonized with the IEC component standard.

**DE** – These are National Differences based on **editorial comments or corrections**.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

**Addition / Add** - An addition entails adding a complete new numbered clause, subclause, table, figure, or annex. Addition is not meant to include adding select words to the base IEC text.

**Modification / Modify** - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

**Deletion / Delete** - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

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## FOREWORD

### 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

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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6) All users should ensure that they have the latest edition of this publication.

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

The text of this standard is based on the following documents:

FDIS	Report on voting
116/222/FDIS	116/236/RVD

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

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

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 reasonable. 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 smaller 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 publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

**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.

**101DV DE Modification: Add the following to the IEC Foreword:**

**The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.**

**102DV DE Modification: Add the following to the IEC Foreword:**

For this Standard, all references to "Part 1" refer to CAN/CSA-C22.2 No. 62841-1 and UL 62841-1.

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# ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY – PART 2-14: PARTICULAR REQUIREMENTS FOR TRANSPORTABLE 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.

## 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 <b>planers</b> with lift-off device	a
Power switch – provide desired switch-off for <b>planers</b> 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 <a href="#">18</a>	a
Prevent self-resetting as required in 23.3	b
Lock-off function as required by <a href="#">21.18.1.2</a>	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.*

19.4.101 **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.*

19.109 It shall not be possible to touch the blades through the chip ejection opening.

Compliance is checked by testing all apertures for chip ejection with the test probe of [Figure 102](#). It shall not be possible to touch the blades in the **cutting head** at any angle of the probe.

19.110 **Planers** shall stop within 10 s after switching off.

Compliance is checked by inspection and by measurement.

#### 19.111 Lift-off device

19.111.1 If a **lift-off device** is provided to meet the requirements of [18.8](#) or [21.18.1.1](#), it shall meet the requirements of [19.111.2](#) and [19.111.3](#), which are checked only after completing the endurance test of [17.101](#).

19.111.2 If a **lift-off device** is provided, it shall be designed so that

- it is automatically activated, when the **planer** is lifted up from a horizontal surface; and
- the blade(s) do not make contact, when the **planer** is set at maximum depth of cut in accordance with [8.14.2](#) b) 101) and placed on a horizontal surface.

Compliance is checked by inspection.

19.111.3 A **lift-off device** shall provide sufficient stability.

Compliance is checked by the following test:

The **planer** is set to maximum depth of cut in accordance with [8.14.2](#) b) 101) and with the **supply cord**, if any, removed. The **planer** is then placed on a flat board of medium density fibreboard (MDF) having a density of 650 kg/m<sup>3</sup> to 850 kg/m<sup>3</sup> that is inclined at an angle of 10°, such that the rear of the **planer** is nearest to the high side of the board and allowed to rest freely for 10 s to 12 s. During the test, the **planer** is permitted to slide, however, the **lift-off device** shall not collapse such that the **planer** blades come into contact with the board.

### 20 Mechanical strength

This clause of Part 1 is applicable.

### 21 Construction

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

21.18.1.1 *Addition:*

**Planers** whose blade(s) make contact with a flat surface when the base plate is placed on the flat surface and without a **lift-off device** are regarded as tools having a risk associated with continued locked-on operation.

NOTE In Europe (EN 62841-2-14), the above text is replaced by the following:

For **planers**, the switch shall not have any locking device to lock it in the "on" position.

21.18.1.2 *Addition:*

**Planers** are regarded as tools having a risk associated with inadvertent starting.

21.35 This subclause of Part 1 is applicable.

## **22 Internal wiring**

This clause of Part 1 is applicable.

## **23 Components**

This clause of Part 1 is applicable.

## **24 Supply connection and external flexible cords**

This clause of Part 1 is applicable.

## **25 Terminals for external conductors**

This clause of Part 1 is applicable.

## **26 Provision for earthing**

This clause of Part 1 is applicable.

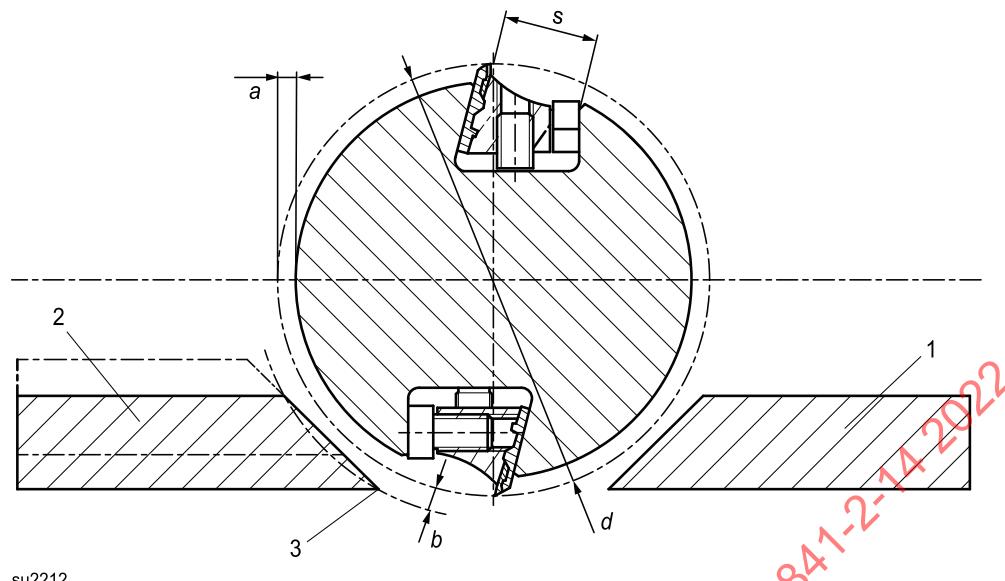
## **27 Screws and connections**

This clause of Part 1 is applicable.

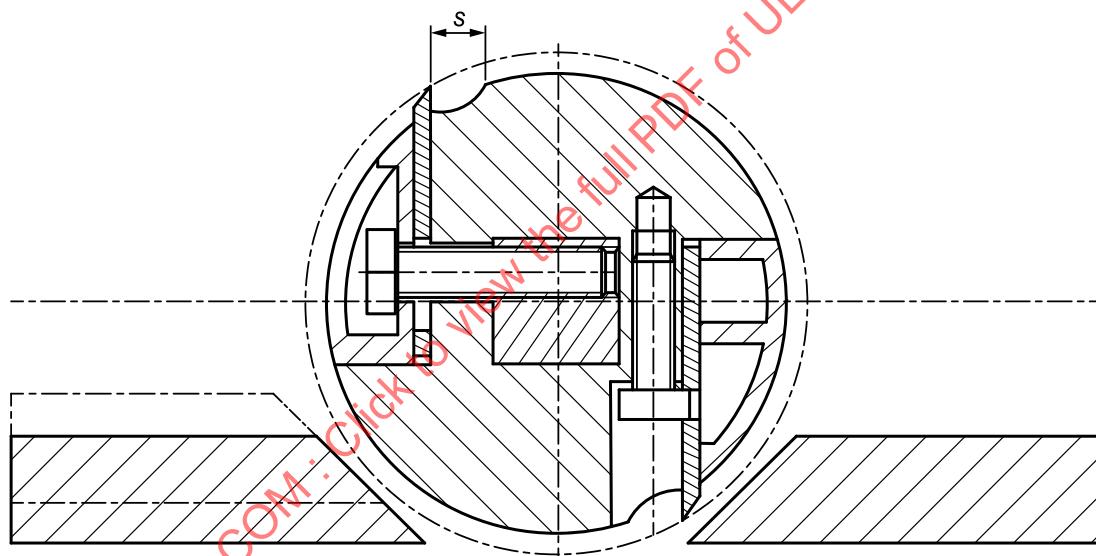
## **28 Creepage distances, clearances and distances through insulation**

This clause of Part 1 is applicable.

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a) Example 1 and explanation of basic dimensions



b) Example 2

**Key**

1 fixed shoe

2 adjustable shoe

3 trailing edge

*a* radial projection of the blades beyond the cutter block

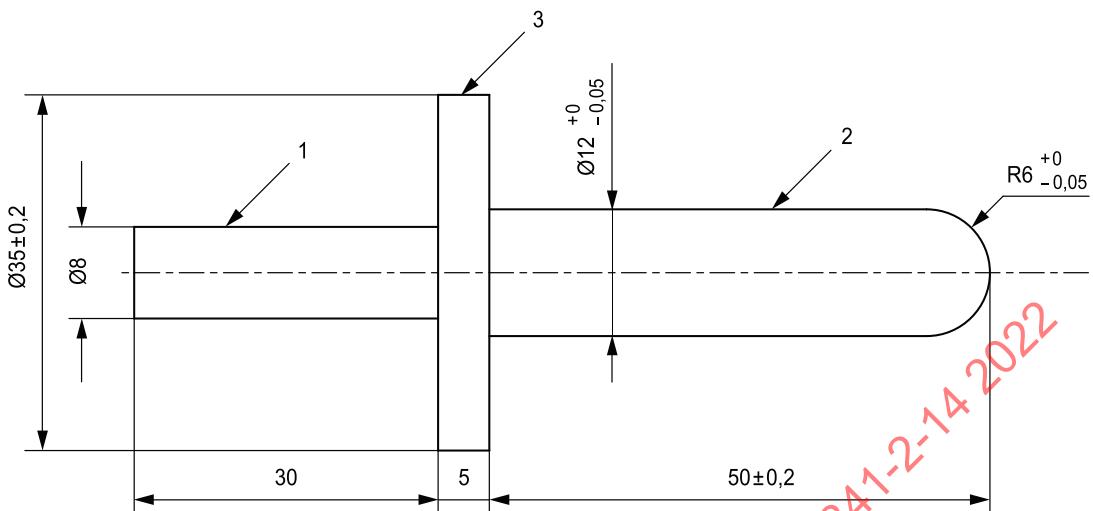
*b* distance between the rotating circle of the cutting edges and the trailing edge of the adjustable shoe

*d* diameter of the rotating circle of the cutting edges

*s* gullet width

**Figure 101**  
**Examples of cutting heads with basic dimensions**

Dimensions in millimetres



su0667a

**Key**

- 1 handle section
- 2 test section
- 3 probe's flange

**Figure 102**  
**Test probe**

## Annexes

The annexes of Part 1 are applicable except as follows.

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## Annex I (informative)

### Measurement of noise and vibration emissions

NOTE In Europe (EN 62841-2-14), Annex I is normative.

#### **I.2 Noise test code (grade 2)**

This clause of Part 1 is applicable except as follows:

##### **I.2.4 Installation and mounting conditions of the power tools during noise tests**

*Addition:*

**Planers** are held and used as specified in [I.2.5](#).

##### **I.2.5 Operating conditions**

*Addition:*

**Planers** are tested under load observing the conditions shown in [Table I.101](#).

The temperature requirements of 5.6 are not applicable.

**Table I.101**  
**Test conditions**

<b>Orientation</b>	<p>Planing along a horizontal surface of a softwood workpiece free of knots and having a residual moisture not exceeding 14 %.</p> <p>The workpiece shall have a minimum length of 600 mm, a minimum height of 90 mm and a width <math>B</math>, where <math>B</math> is the maximum planing width of the tool minus <math>(15 \pm 2)</math> mm.</p> <p>The workpiece shall be supported on resilient material and fixed vertically by screws, clamps, air cylinders or the like to a test bench of Figure I.1, see <a href="#">Figure I.101</a>. For the fixing, the workpiece may have recesses or the like; an example is shown in <a href="#">Figure I.101</a>. The resilient material shall be mounted so that it does not have any significant resonance in the frequency range that can influence the test result.</p> <p>To prevent absorption of airborne noise, the resilient material shall either</p> <ul style="list-style-type: none"> <li>– not extend the contact area between workpiece and test bench; or</li> <li>– be of non airborne-sound absorbing material, such as rubber.</li> </ul> <p>If a parallel guide is provided, this may be used.</p> <p>NOTE Examples of softwood are pine and fir.</p>
<b>Tool bit</b>	Blade as specified for planing softwood. The depth of cut shall be set to maximum capacity.

**Table I.101 Continued on Next Page**