

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –  
Part 2-19: Particular requirements for hand-held jointers**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –  
Partie 2-19: Exigences particulières pour les raboteuses portatives**

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 25.140.20

ISBN 978-2-8322-9115-3

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –****Part 2-19: Particular requirements for hand-held jointers**

## FOREWORD

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IEC 62841-2-19 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 |
|--------------|------------------|
| 116/758/FDIS | 116/791/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 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 jointers.

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.

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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](http://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.

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

## Part 2-19: Particular requirements for hand-held jointers

### 1 Scope

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

*Addition:*

This document applies to hand-held **jointers** for cutting into wood or materials with similar physical characteristics such as, for example, chipboard, fibreboard and plywood.

### 2 Normative references

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

*Addition:*

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

### 3 Terms and definitions

IEC 62841-1:2014, Clause 3 is applicable, except as follows:

*Addition:*

#### 3.101

##### **jointer**

**hand-held tool** equipped with a **disc cutter** intended to cut a slot or groove

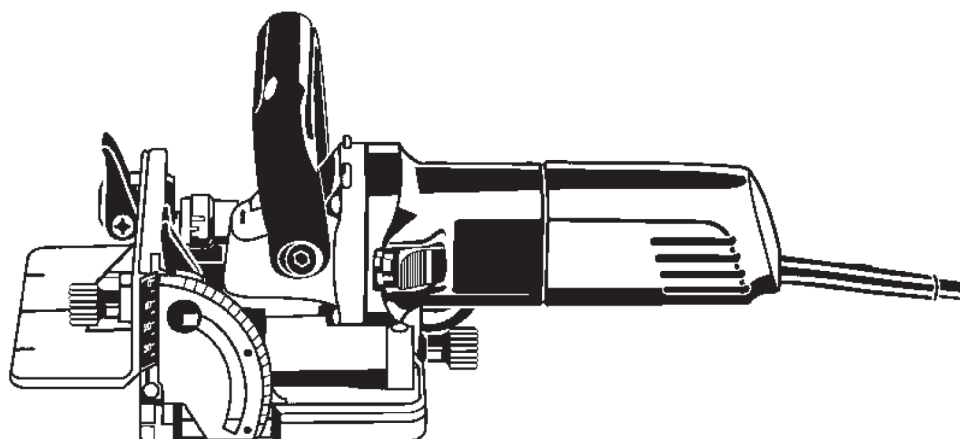
Note 101 to entry: Examples of **jointer** designs are shown in Figure 101.

#### 3.102

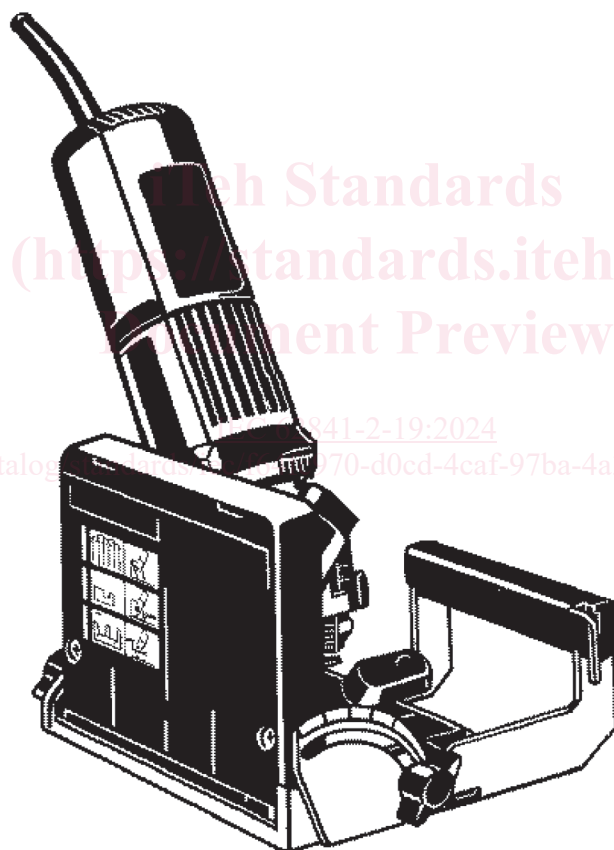
##### **disc cutter**

rotating cutting **accessory** having its main feed direction perpendicular to its axis of rotation, for working in wood or similar material intended to cut a slot or groove through chip removing, cutting on its periphery and both flanks simultaneously

Note 101 to entry: The diameter of the **accessory** is much larger than its thickness.



a) Jointer design example 1



b) Jointer design example 2

Figure 101 – Examples of jointer designs

#### 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:

### 5.17 Addition:

*The mass of a jointer includes the disc cutter guard and the handles.*

## 6 Radiation, toxicity and similar hazards

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

## 7 Classification

IEC 62841-1:2014, Clause 7 is applicable.

## 8 Marking and instructions

IEC 62841-1:2014, Clause 8 is applicable, except as follows:

### 8.1 Addition:

Tools shall also be marked with the **rated no-load speed** of the output spindle.

### 8.3 Addition:

Tools shall also be marked with:

- direction of rotation of the output spindle, this shall be indicated by an arrow, raised or recessed or by any other means no less visible and indelible; and
- recommended **disc cutter** diameter.

#### 8.14.1 Addition:

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 Jointer safety warnings

- a) **Disc cutters must be rated for at least the speed marked on the tool.** *Disc cutters running over rated speed can fly apart and cause injury.*

NOTE 101 It is possible to replace the term "disc cutter" by other terms to reflect regional differences.

- b) **Always use the guard.** *The guard protects the operator from broken disc cutter fragments and unintentional contact with the disc cutter.*

NOTE 102 It is possible to replace the term "disc cutter" by other terms to reflect regional differences.

#### 8.14.2 b) Addition:

- 101) Information on dimensions or type of **disc cutters** to be used;

NOTE 101 In Europe (EN IEC 62841-2-19), the above instruction is replaced by the following:

101) Information on dimensions or type of **disc cutters** to be used, which conform to EN 847-1:2017;

- 102) Instruction not to use blunt or damaged **disc cutters**;

- 103) Instruction to check the proper function of the **guard** retracting system before use;
- 104) Information on the correct use of the dust collection system;
- 105) Advice to wear a dust mask.

## 9 Protection against access to live parts

IEC 62841-1:2014, Clause 9 is applicable.

## 10 Starting

IEC 62841-1:2014, Clause 10 is applicable.

## 11 Input and current

IEC 62841-1:2014, Clause 11 is applicable.

## 12 Heating

IEC 62841-1:2014, Clause 12 is applicable, except as follows:

### 12.2.1 Replacement:

*The tool is operated at **rated input** or **rated current** for 30 min. The temperature rises are measured at the end of the 30 min.*

## 13 Resistance to heat and fire

IEC 62841-1:2014, Clause 13 is applicable.

## 14 Moisture resistance

IEC 62841-1:2014, Clause 14 is applicable.

## 15 Resistance to rusting

IEC 62841-1:2014, Clause 15 is applicable.

## 16 Overload protection of transformers and associated circuits

IEC 62841-1:2014, Clause 16 is applicable.

## 17 Endurance

IEC 62841-1:2014, Clause 17 is applicable.

## 18 Abnormal operation

IEC 62841-1:2014, Clause 18 is applicable, except as follows:

### 18.8.1 Replacement of Table 4:

**Table 4 – Required performance levels**

| Type and purpose of SCF  | Minimum performance level (PL) |
|--|--------------------------------|
| <b>Power switch</b> – prevent unwanted switch-on                                       | a                              |
| <b>Power switch</b> – provide desired switch-off                                       | b                              |
| Provide desired direction of rotation  | Not an <b>SCF</b>              |
| Any electronic control to pass the test of 18.3  | a                              |
| Prevent exceeding thermal limits as in 18.4 and 18.5.3                                 | a                              |
| Overspeed prevention to prevent output speed above 150 % of <b>rated no-load speed</b> | a                              |

## 19 Mechanical hazards

IEC 62841-1:2014, Clause 19 is applicable, except as follows:

### 19.4 Addition:

**Jointers** shall be provided with at least two handles. The motor casing may be considered as a handle, if suitably shaped.

*Compliance is checked by inspection.*

**19.6** This subclause of IEC 62841-1:2014 is applicable.

### 19.9 Addition:

Parts of the guarding system which have to be opened for replacement of the **disc cutter** may be opened without the aid of a tool, provided these parts remain connected with the tool.

#### 19.101 Disc cutter guard

A **jointer** shall be provided with a **guard** that automatically retracts to the closed position when not in use. There shall be no provision for locking the **guard** in the open position. The **guard** shall be so constructed that it stays in contact with the workpiece when the tool is retracted, or when released from its full open position, it shall retract to its fully closed position.

*Compliance is checked by inspection and by the following tests:*

*One sample of the tool is to be conditioned by cycling the **guard** from the fully closed position to the maximum open working position and then releasing the **guard** for 50 000 cycles at a rate not less than 10 cycles per minute.*

*Following the cycling, the tool is oriented with the weight of the tool in a direction causing the **guard** to open. The **disc cutter** shall not be accessible to a straight edge applied perpendicular to the **disc cutter**.*

The sample, or a second sample at the manufacturer's option, is to then be conditioned by making 50 plunge cuts into soft wood that has been stored indoors for 72 h prior to the sawing.

The tool is then conditioned for 24 h in a relative humidity of  $(90^{+5})$  % and at a temperature of  $(32 \pm 2)$  °C.

It is not necessary for the tool to be conditioned by wood cutting if the accumulation of saw dust will not affect the closure of the **guard**.

Following conditioning, the **guard** is to be operated through one complete cycle and the tool is oriented with the weight of the tool in a direction causing the **guard** to open. The **disc cutter** shall not be accessible to a straight edge applied perpendicular to the **disc cutter**.

### 19.102 Disc cutter changing

Provision shall be made to enable the operator to replace the **disc cutter** without difficulty.

Examples of such designs are spindle lock, flats on the outer flange or other means specified in the instructions in accordance with 8.14.2.

Compliance is checked by inspection.

NOTE 101 In Europe (EN IEC 62841-2-19), the following additional subclause applies:

#### 19.Z101 Disc cutter

The **disc cutter(s)** delivered with the tool shall be suitable for hand feed in accordance with EN 847-1:2017.

Compliance is checked by inspection.

## 20 Mechanical strength

IEC 62841-1:2014, Clause 20 is applicable, except as follows:

### 20.3.1 Addition:

This subclause of IEC 62841-1:2014 is applicable for all parts except for the **disc cutter** and the **guard**. The **disc cutter** and the **guard** shall be evaluated in accordance with 20.101.

20.5 This subclause of IEC 62841-1:2014 is not applicable.

20.101 A **jointer guard** shall have adequate mechanical strength.

Compliance is checked by the following tests, for which a separate sample may be used.

A **jointer retracting guard** shall withstand the tool being dropped one time from a height of 1 m onto a concrete surface. The tool shall be oriented to achieve the most adverse effect on the **guard**.

Following the impact, the **guard** is to be operated through one complete cycle and the tool is then oriented with the weight of the tool in a direction causing the **guard** to open. The **disc cutter** shall not be accessible to a straight edge applied perpendicular to the **disc cutter**.