

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Hand-held motor-operated electric tools – Safety –  
Part 2-14: Particular requirements for planers**

**Outils électroportatifs à moteur – Sécurité –  
Partie 2-14: Règles particulières pour les rabots**

IEC 60745-2-14:2003

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

#### Part 2-14: Particular requirements for planers

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**IEC 60745-2-14 edition 2.2 contains the second edition (2003) [documents 61F/467/FDIS and 61F/491/RVD], its amendment 1 (2006) [documents 61F/633/FDIS and 61F/642/RVD] and its amendment 2 (2010) [documents 116/35/FDIS and 116/43/RVD].**

**A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2.**

This part of International Standard IEC 60745 has been prepared by subcommittee 61F: Safety of hand-held motor-operated electric tools, of IEC technical committee 61: Safety of household and similar electrical appliances.

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

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

This part 2 is to be used in conjunction with the latest edition of IEC 60745-1, *Hand-held motor-operated electric tools – Safety – Part 1: General requirements*, and its amendments. It was established on the basis of the third edition (2001) of that standard.

NOTE 1 When “Part 1” is mentioned in this standard, it refers to IEC 60745-1.

This part 2 supplements or modifies the corresponding clauses of IEC 60745-1, so as to convert that publication into the IEC standard: Safety requirements for electric planers.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- additional annexes are lettered AA, BB, etc.

NOTE 3 In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

The committee has decided that the contents of the base publication and its amendments 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

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

## HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

### Part 2-14: Particular requirements for planers

#### 1 Scope

This clause of Part 1 is applicable except as follows:

*Addition:*

This standard 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:

##### 3.101 planer

tool intended for removing surface material, equipped with a rotating cutting head where the axis of the cutting head is parallel to the base plate

##### 3.102 lift-off device

device which keeps the blade(s) from making contact when the planer is placed on a 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.

#### 6 Void

## 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:

- 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;
- rated no load speed.

### 8.12.1.1 Addition

#### Planer safety warnings

- **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.*  
NOTE The above warning applies only to planers without an automatic closing guard.
- **Hold the power tool by insulated gripping surfaces only, 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 work by your hand or against the body leaves it unstable and may lead to loss of control.*

### 8.12.2 Addition:

The instruction sheet shall also contain the following information:

- instructions for the changing of the blades and their adjustment to the correct position;
- types of cutting heads which can be used, if applicable.

## 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, except as follows:



#### **12.4 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 Leakage current**

This clause of Part 1 is applicable.

### **14 Moisture resistance**

This clause of Part 1 is applicable.

### **15 Electric strength**

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.

### **18 Abnormal operation**

This clause of Part 1 is applicable.

### **19 Mechanical hazards**

This clause of Part 1 is applicable except as follows:

#### **19.1 Addition:**

*For the requirements given in 19.106, 19.107 and 19.108, only the test probe shown in Figure 102 is used.*

**19.101** 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.*

**19.102** 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 side of the adjustable shoe shall not exceed 5 mm measured radially.

*Compliance is checked by measurement and by inspection.*

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

*Compliance is checked by measurement and by inspection.*

**19.104** 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 8.12.2.*

*After the test, the cutting head shall not be deformed or cracked, no screws shall be loosened and displacements of detachable 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 detachable 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.*

**19.105** The clamping screws or other tensile loaded blade fixing elements used to secure the blades in the cutter block shall be made of steel with a hardness of at least 20 HRC and a tensile strength of at least 800 N/mm<sup>2</sup>.

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

*Compliance is checked by verification of the material specification and by inspection.*

**19.106** It shall not be possible to touch rotating parts from the sides of the planer.

*Compliance is checked by the following test:*

*The planer is positioned with the shoes resting on a flat surface. The accessibility of rotating parts is checked by means of the test probe shown in Figure 102.*

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

*Compliance is checked by inspection and by applying the test probe of Figure 102 without any force with the planer in the same position as required in 19.106.*

**19.108** 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.*

**19.109** If a parallel guide is provided, its guiding and top surface shall have no openings or projections. Openings having a maximum dimension not exceeding 10 mm are disregarded.

Planers may be provided with an integrated non-detachable and non-lockable guard which automatically moves to the closed position, where it covers the whole width of the cutting head, when the planer is not in use.

The guard provided shall return automatically to the closed position at the end of the planing operation. The parallel guide and guard shall be so designed that for any cutting width the unused part of the cutting head is covered.

Any contact between guards manufactured from steel and other hard materials and the blades is to be avoided. If either the guard or parallel guide is designed in such a way that elimination of contact with the cutting head cannot be ensured, they shall be manufactured from soft material (e.g. aluminium, plastic, wood).

*Compliance is checked by inspection.*

NOTE Examples of parallel guide and guard are given in Figure 103.

**19.110** Planers shall stop within 10 s of switching off, unless the tool is fitted with an automatic closing guard.

*Compliance is checked by inspection and by measurement.*

**19.111** 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 and placed on a horizontal surface.

*Compliance is checked by inspection.*