SLOVENSKI STANDARD
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Safety of hand-held electric motor operated tools - Part 2-14: Particular requirements for planers

Safety of hand-held electric motor operated tools -- Part 2-14: Particular requirements for planers

Sicherheit handgeführter motorbetriebener Elektrowerkzeuge -- Teil 2-14: Besondere Anforderungen an Hobel

Sécurité des outils électroportatifs à moteur -- Partie 2-14: Règles particulières pour les rabots

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Descriptors: Hand-held electric motor operated tools, planers, safety requirements, protection against electric shocks, fire protection, protection against mechanical hazards

English version

Safety of hand-held electric motor operated tools
Part 2-14: Particular requirements for planers

Sécurité des outils électroportatifs à moteur
Partie 2-14: Règles particulières pour les rabots

Sicherheit von handgeführten motorbetriebenen Elektrowerkzeugen
Teil 2-14: Besondere Anforderungen für Hobelmaschinen

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard has been prepared by the Technical Committee 61F, Hand-held and transportable electric motor operated tools.

The text of the draft was submitted to the Unique Acceptance Procedure (UAP) in February 1994 and was approved by CENELEC as EN 50144-2-14 on 1994-10-04.

A draft for an amendment was submitted to the Unique Acceptance Procedure in April 1994 and was approved by CENELEC on 1994-10-04 for inclusion into the European Standard.

This European Standard replaces HD 400.3M S2:1992.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	1996-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	1996-12-01

As far as certification is concerned, CENELEC Memorandum 6 applies.

This standard is divided into two parts

Part 1: General Requirements, comprising clauses of a general character.

Part 2: Particular Requirements, dealing with particular types of appliances. The clauses of these particular requirements supplement or modify the corresponding clauses in Part 1. Where the text of Part 2 indicates an "addition" to or a "replacement" of the relevant requirement, test specification or explanation of Part 1, these changes are made to the relevant text of Part 1, which then becomes part of the standard. Where no change is necessary, the words "This clause of Part 1 is applicable" are used in Part 2.

Subclauses, tables and figures which are additional to those in Part 1 are numbered starting from 101.

NOTE - In this standard the following print types are used:
- Requirements proper: in roman type;
- *Test specification: in italic type*;
- Explanatory matter: in smaller roman type.

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1 Scope

This clause of Part 1 is applicable except as follows:

1.1 *Addition:*

This standard applies to planers with a cutting width up to 150 mm.

NOTE - For planers with a cutting width above 150 mm other requirements may apply.

2 Definitions

This clause of Part 1 is applicable except as follows:

2.2 *Replacement:*

18 normal load: The load obtained when the planer is operated continuously, the load being such that the input, in watts, is equal to rated input.

NOTE - The normal load is based on the rated voltage or on the upper limt of the rated voltage range.

Addition:

101 cutting head: The assembly of blades, drums, blade fixing elements, relevant screws and spindle, the whole being ready for working.

3 General requirements

This clause of Part 1 is applicable.

4 General conditions for the tests

This clause of Part 1 is applicable except as follows:

4.10 *Addition:*

For tests carried out under normal load, the spindle of the motor may be loaded by means of a brake.

5 Rating

This clause of Part 1 is applicable.

6 Classification

This clause of Part 1 is applicable.

7 Marking

This clause of Part 1 is applicable except as follows:

7.1 *Addition*:

Planers shall be marked with:

— rated no-load speed in revolutions per minute.

NOTE - The rated no-load speed is the speed measured on the cutting head obtained after the planer has been running idle for 10 min .

— indication of direction of rotation.

The direction of rotation of the cutting head shall be clearly indicated by an arrow, raised or sunk, or by any other means no less visible and indelible.

7.13.1 *Addition:*

The instruction sheet shall contain also the following information:

— instructions for the fitting of the blades and their adjustment to the correct position;
— types of cutting heads which can be used.

Moreover, if a planer is suitable for and is used in an inverted position as a fixed tool, the instruction sheet shall contain also the following information:

— use of the movable guard;
— machining of a small work-piece with a push stick;
— disconnection of the tool from mains supply before fitting a planer to a support for use in the inverted position;
— use of the mains switch.

7.13.2 *Addition:*

Instructions shall also include the substance of the following:

— Use only sharp blades.

— Wait for complete run-down before putting the tool aside.

8 Protection against electric shock

This clause of Part 1 is applicable.

9 Starting

This clause of Part 1 is applicable.

10 Input and current

This clause of Part 1 is applicable except as follows:

10.1 This subclause is not applicable.

10.2 *Addition:*

Compliance is checked by measuring the current after the planer has been operating for 10 min.

11 Heating

This clause of Part 1 is applicable except as follows:

11.5 *Addition:*

The planer is operated for 30 min.

12 Leakage current

This clause of Part 1 is applicable.

13 Environmental requirements

This clause of Part 1 is applicable except as follows:

13.1 *Addition:*

The test under working conditions, orientation within the cabin and material to be worked shall be in accordance with the following:

Material	Beech – sawn section 400 mm x B x 90 mm, where B = maximum planing width less 15 mm
Feed-speed	At a brisk pace without overloading the tool
Depth of cut	1 mm or 50% of the maximum depth of cut, whichever is the lower
Width of cut-off	Not applicable
Tool bit/cutter/ abrasive	New blades, as recommended by the manufacturer, at the start of each test
Integral collection (If any)	Emptied during 10 min rest time
Orientation	Across the cabin with the airflow from left to right of the tool
Test cycle	10 cuts along the 400 mm length for 2 min with a 10 min rest time (total 12 min)
Test period	5 complete cycles (total 1 h)

13.2.3 *Replacement of paragraphs 1, 2, 3 and 4*:

Planers are tested at no-load.

13.2.4 *Addition:*

The base plate shall be horizontal.

13.3.7 *Replacement of paragraph 1:*

Planers are tested under load under the conditions shown in table 101.

Table 101 - Test conditions

Material	*Softwood 400 mm x B x 90 mm where B is the maximum planing width less 15 mm*
Orientation	*Planing along the 400 mm x B surface of the material which is fixed to the bench*
Tool bit	*Blades as recommended by the manufacturer*
Feed force	*Just sufficient to cut at a brisk pace*
Test cycle	*Depth of cut to be 1 mm, or as near as possible as the design allows*

Paragraph 3 is not applicable.

14 Moisture resistance

This clause of Part 1 is applicable.

15 Insulation resistance and electric strength

This clause of Part 1 is applicable.

16 Endurance

This clause of Part 1 is applicable.

17 Abnormal operation

This clause of Part 1 is applicable.

18 Mechanical hazards

This clause of Part 1 is applicable except as follows:

18.6 *Addition:*

When the support is fixed as recommended by the manufacturer, a force of 100 N is applied to the front edge of the tool in the direction of the feed. The tool shall not move or overturn.

Additional subclauses:

18.101 Cutting heads must have a circular section along the whole cutting width except for the blades, the fixing screws and full chip clearance area.

18.102 The blades when aligned with the fixed shoe shall not project by more than 1,1 mm radially beyond the drum (as per dimension "a" in figure 101).

Compliance is checked by measurement.