



SLOVENSKI STANDARD SIST EN 50144-2-10:1999

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Nadomešča:
SIST HD 400.3J S1:1995

Safety of hand-held electric motor operated tools - Part 2-10: Particular requirements for jig saws

Safety of hand-held electric motor operated tools -- Part 2-10: Particular requirements for jig saws

Sicherheit handgeführter motorbetriebener Elektrowerkzeuge -- Teil 2-10: Besondere Anforderungen an Stichsägen

Sécurité des outils électroportatifs à moteur -- Partie 2-10: Règles particulières pour les scies sauteuses

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Ta slovenski standard je istoveten z: EN 50144-2-10:1996

ICS:

25.080.60	Strojne žage	Sawing machines
25.140.20	Električna orodja	Electric tools

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 50144-2-10

February 1996

ICS 25.140.20; 25.080.60

Supersedes HD 400.3J S1:1981

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

English version

Safety of hand-held electric motor operated tools Part 2-10: Particular requirements for jig saws

Sécurité des outils électroportatifs
à moteur
Partie 2-10: Règles particulières
pour les scies sauteuses

Sicherheit von handgeführten
motorbetriebenen Elektrowerkzeugen
Teil 2-10: Besondere Anforderungen
für Spannvorrichtungssägen

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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 December 1993 and was approved by CENELEC as EN 50144-2-10 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 400.3J S1:1981.

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, a "modification" or "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.

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 jig saws.

NOTE - This standard does not apply to sabre saws.

2 Definitions

This clause of Part 1 is applicable except as follows:

2.2.18 Addition:

normal load for jig saws intended to cut wood: The load obtained when the saw is operated continuously with the saw blade in the vertical position, the load being such that the input, in watts, is equal to:

$$0,1 s\sqrt{n}$$

where s is the maximum cutting depth, in millimetres, marked on the saw, and n the number of reciprocations per minute under no-load conditions as marked on the saw.

3 General requirements

This clause of Part 1 is applicable.

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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 reciprocating mechanism may be replaced by a rotating gear, so that the jig saw can 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:

Jig saws intended to cut wood shall be marked with:

- maximum cutting depth in millimetres,
- number of reciprocations per minute under no-load conditions.

NOTE - The number of reciprocations under no-load conditions determined after the jig saw has been running idle for 10 min at rated voltage or at the upper limit of the rated voltage range.

7.13 Addition:

If the jig saw is fitted with a device which allows the connection of external dust collection equipment, in the instruction sheet instructions shall be given as to how to connect such a device.

8 Protection against electric shock

This clause of Part 1 is applicable.

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9 Starting

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This clause of Part 1 is applicable.

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10 Input and current

This clause of Part 1 is applicable except as follows:

10.1 Modification:

Compliance is checked by measuring the input after the jig saw has been operating for 10 min.

10.2 Addition:

The measurement should be made after the jig saw has been operating for 10 min.

11 Heating

This clause of Part 1 is applicable except as follows:

11.5 Addition:

The jig saw 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:

If jig saws are fitted with integral dust collection devices or devices which allow the connection of an external collection equipment, the tests under working conditions, orientation within the cabin and material to be worked shall be in accordance with the following:

Material	Chipboard 19 mm x 800 mm x 400 mm
Feed-speed	At a brisk pace without overloading the tool
Depth of cut	Blade to extend beyond thickness of the material being cut at all times
Width of cut-off	10 mm
Tool bit/cutter/ abrasive	New blade, as recommended by the manufacturer for chipboard, at the start of each test period
Integral collection (if any)	Emptied during 7 min rest time
Orientation	Across the cabin with the airflow from left to right of the tool.
Test cycle	10 cuts in 5 min, with pendulum action (if any) set at maximum, then 7 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:

Jig saws are tested at no-load.

13.3.7 Replacement of paragraph 1:

Jig saws are tested under load under the conditions shown in table 101, pendulum systems, if any, being set at maximum.

Table 101 - Test conditions for jig saws

<i>Orientation</i>	<i>Cutting a horizontal piece of chipboard 800 mm x 400 mm x 19 mm supported on resilient material and fixed to a bench</i>
<i>Tool bit</i>	<i>New blade, as recommended by the manufacturer for cutting chipboard</i>
<i>Feed force</i>	<i>Just sufficient to cut at a brisk pace</i>
<i>Test cycle</i>	<i>Cutting off approximately 10 mm wide strips (set by rip fence) across the 400 mm width of the chipboard</i>

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:

18.1 Replacement:

A guard shall be provided to prevent inadvertent contact with moving parts above the guide plate.

Compliance is checked by the following test:

The jig saw is set for a right angled cut. The test probe of figure 101 a) is positioned above the guide plate as shown in figure 101 b) and c). The longitudinal axis of the test probe shall be perpendicular to the toothed rim of the saw blade. The test probe shall be equally shared about the central plane of the saw blade. When the test probe is moved towards the saw blade, it should not be able to touch its toothed rim.

19 Mechanical strength

This clause of Part 1 is applicable.

20 Construction

This clause of Part 1 is applicable.

21 Components

This clause of Part 1 is applicable.

22 Internal wiring

This clause of Part 1 is applicable.