



# SLOVENSKI STANDARD SIST EN 50144-2-10:2002

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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 für 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 50144-2-10:2001**

**ICS:**

25.080.60	Strojne žage	Sawing machines
25.140.20	Ò\^ d ā } æ ! [ ā æ	Electric tools

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EUROPEAN STANDARD

**EN 50144-2-10**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2001

ICS 25.140.20; 25.080.60

Supersedes EN 50144-2-10:1996

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 handgeführter  
motorbetriebener Elektrowerkzeuge  
Teil 2-10: Besondere Anforderungen  
an Sticksägen

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This European Standard was approved by CENELEC on 1998-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This European Standard has been prepared by the Technical Committee CENELEC TC 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 UAP in April 1994 and was approved by CENELEC on 1994-10-04 for inclusion into the European Standard.

A further amendment was submitted to UAP in May 1996 and was approved by CENELEC as amendment A1 to EN 50144-2-10 on 1996-12-09.

Amendments to fulfill the essential requirements of the Machinery Directive were submitted to the formal vote in June 1998 and were approved by CENELEC on 1998-10-01 for inclusion, together with the earlier amendment, into a second edition of EN 50144-2-10.

This European Standard supersedes EN 50144-2-10:1996.

The following dates were fixed:

- latest date by which the EN has to be implemented at a national level by publication of an identical national standard or by endorsement (dop) 2001-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2001-12-01

This standard is divided into two parts:

Part 1: General requirements which are common to most hand-held electric motor operated tools (for the purpose of this standard referred to simply as tools).

Part 2: Requirements for particular types of tool which either supplement or modify the requirements given in Part 1 to account for the particular hazards and characteristics of these specific tools.

This European Standard has been prepared under a mandate given to CEN/CENELEC by the European Commission and the European Free Trade Association and supports the essential health and safety requirements of the Machinery Directive.

Compliance with the clauses of Part 1 together with this Part 2 provides one means of conforming with the essential health and safety requirements of the Directive.

For noise and vibration this standard covers the requirements for their measurement, the provision of information arising from these measurements and the provision of information about the personal protective equipment required. Specific requirements for the reduction of the risk arising from noise and vibration through the design of the tool are not given as this reflects the current state of the art. As with any standard, technical progress will be kept under review so that any developments can be taken into account.

CEN TC/255 is producing standards for non-electrically powered tools.

**Warning:** Other requirements and other EC Directives can be applicable to the products falling within the scope of this standard.

This standard follows the overall requirements of EN 292-1 and EN 292-2.

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

NOTE In this European Standard the following print types are used:

- Requirements proper;
- *Test specifications*;
- Explanatory matter.

## Contents

1	Scope.....	4
2	Definitions.....	4
3	General requirements.....	4
4	General conditions for the tests.....	4
5	Rating.....	4
6	Classification.....	4
7	Marking and information for use.....	5
8	Protection against electric shock.....	5
9	Starting.....	5
10	Input and current.....	5
11	Heating.....	5
12	Leakage current.....	5
13	Environmental requirements.....	6
14	Moisture resistance.....	7
15	Insulation resistance and electric strength.....	7
16	Endurance.....	7
17	Abnormal operation.....	7
18	Mechanical hazards.....	7
19	Mechanical strength.....	7
20	Construction.....	7
21	Components.....	7
22	Internal wiring.....	7
23	Supply connection and external flexible cables and cords.....	7
24	Terminals for external conductors.....	8
25	Provision for earthing.....	8
26	Screws and connections.....	8
27	Creepage distances, clearances and distances through insulation.....	8
28	Resistance to heat, fire and tracking.....	8
29	Resistance to rusting.....	8
30	Radiation.....	8
	Annexes.....	11

## 1 Scope

This clause of Part 1 is applicable except as follows:

*Addition:*

This European Standard applies to jig saws.

It does not apply to sabre saws which are covered by EN 50144-2-11.

This standard does not give requirements for the design of the tool for the reduction of the risk arising from noise and vibration.

## 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  $n$  is the number of reciprocations per minute under no load conditions as marked on the saw.

## 3 General requirements

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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 and information for use

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.

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.

### 7.13.1 Addition:

- information on the correct use of the dust collection equipment, if fitted;

## 8 Protection against electric shock

This clause of Part 1 is applicable.

## 9 Starting

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:

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### 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 is made after the jig saw has been operating for 10 min.*

This clause of Part 1 is applicable.

## 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:

#### 13.1.2 Replacement:

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

<u>Material</u>	Chipboard 19 mm x 800 mm x 400 mm.
<u>Feed-speed</u>	At a brisk pace without overloading the tool.
<u>Depth of cut</u>	Blade to extend beyond the thickness of the material being cut at all times.
<u>Width of cut-off</u>	10 mm.
<u>Tool bit/cutter/ abrasive</u>	New blade, as recommended by the manufacturer for chipboard, at the start of each test period.
<u>Integral collection (if any)</u>	Emptied during 7 minute rest time.
<u>Orientation</u>	Across the width of the cabin with the airflow from the left to the right of the operator (see Figure 101).
<u>Test cycle</u>	Ten cuts in 5 minutes, with pendulum action (if any) set at maximum, followed by 7 minutes rest time (total 12 minutes)
<u>Test period</u>	Five complete cycles (total 1 hour).

#### 13.2.3 Replacement:

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Jig saws are tested at no load.

Three consecutive tests shall be carried out and the result of the test  $L_{wa}$  shall be the arithmetic mean, rounded off to the nearest decibel, of the three tests.

The tool is suspended in such a way as to correspond to normal use.

#### 13.3.7 Replacement of paragraphs 1 and 3:

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**

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



**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 Addition:**

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 102 a) is positioned above the guide plate as shown in Figure 102 b) and c) with its longitudinal axis perpendicular to the toothed rim of the saw blade and so that it is centrally aligned about the plane of the saw blade. It shall not be possible to touch the toothed rim of the saw blade with the test probe when it is moved towards the saw blade.*

**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.

**23 Supply connection and external flexible cables and cords**

This clause of Part 1 is applicable.