



# SLOVENSKI STANDARD SIST EN 50144-2-15:1999

01-julij-1999

Nadomešča:  
SIST HD 400.3N S2:1995

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## Safety of hand-held electric motor operated tools - Part 2-15: Particular requirements for hedge trimmers

Safety of hand-held electric motor operated tools -- Part 2-15: Particular requirements for hedge trimmers

Sicherheit handgeführter motorbetriebener Elektrowerkzeuge -- Teil 2-15: Besondere Anforderungen für Heckenscheren

Sécurité des outils électroportatifs à moteur -- Partie 2-15: Règles particulières pour les taille-haies

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### ICS:

25.140.20	Električna orodja	Electric tools
65.060.70	Vrtnarska oprema	Horticultural equipment

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 50144-2-15**

January 1997

ICS 25.140.20; 65.060.80

Partly supersedes HD 400.3N S2:1992

Descriptors: Hand-held motor-operated tools, particular requirements on safety, hedge trimmers

English version

**Safety of hand-held electric motor operated tools  
Part 2-15: Particular requirements for hedge trimmers**

Sécurité des outils électroportatifs  
à moteur  
Partie 2-15: Règles particulières  
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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.

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**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 61F, Hand-held and transportable electric motor operated tools.

The text of the draft was submitted to the Unique Acceptance Procedure (UAP) in July 1994 and was approved by CENELEC as EN 50144-2-15 on 1995-03-06.

This European Standard partly replaces HD 400.3N 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) 1997-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1997-12-31

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

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and supports essential requirements of EC Directives

- 73/23/EEC (Low voltage directive);
- 89/392/EEC (Machinery directive).

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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 hedge trimmers which are designed for use by one operator, for trimming hedges and bushes utilizing one or more linear reciprocating cutter blades.

NOTE - This standard is not applicable to hedge trimmers with rotating blade or hedge trimmers powered by back-pack or other external source.

## 2 Definitions

This clause of Part 1 is applicable except as follows:

### 2.2 Replacement:

**18 normal load:** Continuous operation with no external load applied the cutting devices being adjusted as for normal use.

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

### Addition:

**101 blade tooth:** The part of the cutter blade which is sharpened to perform the shearing action, see figures 101 and 102.

**102 cutter blade:** The part of the cutting device having blade teeth which cut the hedge by shearing action either against other blade teeth or against an unsharpened shear plate, see figures 101 and 102.

**103 cutting device:** The part of the assembly of cutter blade and shear plate or the cutter blade together with any supporting part, which performs the cutting action. This may be either single or double sided. See figures 101 and 102.

**104 cutting length:** The effective cutting length of the cutting device measured from the inside edge of the first blade tooth or shear plate tooth to the inside edge of the last blade tooth or shear plate tooth, see figure 103.

NOTE - Where both blades move the measurements shall be taken when the first and last teeth are furthest apart.

**105 front handle:** A handle located at or towards the cutting device. See figure 104.

**106 rear handle:** A handle located furthest from the cutting device. See figure 104.

**107 blade control:** A device activated by the operator's hand or fingers for controlling the cutter blade movement.

**108 blunt extension:** An extending blunt part of the cutting device or an extending part of an unsharpened plate fitted to the cutting device. See figures 101 and 102.

**109 run-down time:** The elapsed time from the release of the blade control until the cutter blade stops.

**110 maximum speed:** The highest motor speed obtainable when adjusted in accordance with the manufacturer's specifications and/or instructions with the cutting device engaged.

### 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:

#### 4.3 Addition:

For the test of subclause 18.104 additional samples shall be provided.

### 5 Rating

This clause of Part 1 is applicable.

### 6 Classification

This clause of Part 1 is applicable.

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### 7 Marking

This clause of Part 1 is applicable except as follows:

#### 7.1 Addition:

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Hedge trimmers shall be marked with safety recommendations and warnings of the following substance or symbols.

They shall be written in one of the official language(s) of the country in which they are to be sold.

- Read the instructions

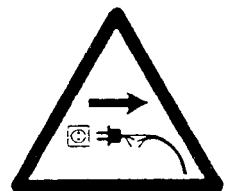


- Do not expose to rain

NOTE: For hedge trimmers other than those of ordinary type this warning need not be marked on the electric tool itself.



- Remove plug from the mains immediately if cable is damaged or cut.



This requirement also applies to hedge trimmers or accessories which can be fitted to multi-purpose tools.

Marking giving cautionary information shall be located as close as practicable to the relevant hazard.

Applicable pictograms/symbols shall be in contrasting colours. If the marking is cast, embossed or stamped colours are not required.

#### 7.13.2 *Addition:*

The sheet shall include, as a minimum, information under the following headings:

- 1) Identification and nomenclature of parts involved in safety provisions.
- 2) Assembly instructions (if the tool is supplied with parts to be assembled by the user).
- 3) Meaning of the symbols used on the tool.
- 4) Operating instructions including at least the following:
  - starting and stopping with reference to safety;
  - supply cable, extension cord, type of plug and socket and recommendation for the use of a residual current device;
  - ensuring a stable position of the body;
  - warning about damp operating conditions;
  - regular maintenance, replacement, sharpening;
  - use of gloves.
- 5) Holding the tool in use, distance, access to work cutting height.
- 6) In addition, the substance of the following shall be given:
  - Always ensure all handles and guards are fitted when using the tool. Never attempt to use an incomplete machine or one fitted with an unauthorised modification.
  - Before cleaning the hedge trimmer switch off the tool and remove the plug from the mains supply.
  - Check cutting blades regularly for damage, and if damaged repair immediately.
  - Keep cable away from the cutting area.
  - Check cable for damage before starting work and replace if necessary.
  - Never allow children to use the tool.
  - After use the tool should be stored so that the blade is not exposed.

## 8 Protection against electric shock

This clause of Part 1 is applicable, except as follows:

#### *Additional subclauses:*

**8.101** For Class II hedge trimmers, handles shall be either of insulating material or of metal having a fixed insulating covering complying with the requirements of 15.3 carried out after the test specified in 19.3, for supplementary insulation.

The handles shall be so designed that when held as in normal use the risk of any part of a hand of the user coming into contact with metal parts which are in electrical contact with the shear blades is obviated.



These requirements also apply to hedge trimmer attachments for use in conjunction with multi-purpose tools.

*Compliance is checked by inspection and by the tests of 15.3 and 19.3.*

Moreover the covering of insulation material of metal handles shall comply with the following test:

A sample of the covered part is conditioned at a temperature of  $70\text{ °C} \pm 2\text{ °C}$  for 7 days (168 h). After conditioning, the sample is allowed to attain approximately room temperature.

Inspection shall show that the covering has not shrunk to such an extent, that the required insulation is no longer given or that the covering has not peeled off, so that it may move longitudinally.

After this, the sample is maintained for 4 h at temperature of  $-10\text{ °C} \pm 2\text{ °C}$ .

While still at this temperature, the sample is then subjected in a device as shown in figure 105, to impact applied by means of a weight "A", having a mass of 300 g and falling from a height of 350 mm onto a chisel "B" of hardened steel, the edge of which is placed on the sample as shown in figure 105.

One impact is applied to each place where the covering is likely to be weak or is likely to be damaged in normal use, the distance between the points of impact being at least 10 mm.

After this test, inspection shall show that the covering has not peeled off and an electric strength test is made between metal parts and metal foil wrapped round the covering of the handle shaft.

The test voltage of 2 500 V is applied for 1 min.  
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During this test, no flashover or breakdown shall occur.

## 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.

## 11 Heating

This clause of Part 1 is applicable, except as follows:

**11.1 Addition:**

The hedge trimmer is operated for 30 min.

## 12 Leakage current

This clause of Part 1 is applicable.