

**Varnost gospodinjskih in podobnih električnih aparatov – Posebne zahteve za ročno vodene baterijske vrtno kosilnice**

Safety of household and similar electrical appliances - Particular requirements for pedestrian-controlled battery powered electrical lawn mowers

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English version

**Safety of household and similar electrical appliances -  
Particular requirements for pedestrian-controlled battery powered  
electrical lawn mowers**

Sécurité des appareils  
électrodomestiques et analogues -  
Règles particulières pour les tondeuses  
à gazon alimentées par batterie et  
à conducteur à pied

Sicherheit elektrischer Geräte  
für den Hausgebrauch und  
ähnliche Zwecke -  
Besondere Anforderungen für  
handgeführte batteriebetriebene  
Rasenmäher

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This European Standard was approved by CENELEC on 2005-09-13. 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.

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, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

The texts of EN 50338:2000 and its amendment A1:2003, prepared by the Technical Committee CENELEC TC 61F, Safety of hand-held and transportable motor-operated electric tools, have been revised by WG5, Garden appliances, with the aim to delete the non-electrical requirements and refer in that case to EN 836. In addition this draft has been brought in line with EN 60335-1:2002. A first draft was submitted to the Unique Acceptance Procedure in February 2004.

A new draft was submitted to the formal vote and was approved by CENELEC as EN 50338 on 2005-09-13.

This European Standard supersedes EN 50338:2000 + corrigendum December 2000 + A1:2003.

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) 2007-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-10-01

This standard has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements and EN 836, Garden equipment – Powered lawnmowers – Safety.

This standard supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety of household and similar electrical appliances – Particular requirements for pedestrian-controlled battery powered lawn mowers.

When a particular subclause of EN 60335-1 is not mentioned in this standard, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text of EN 60335-1 is to be adapted accordingly.

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

Other harmonised standards referred to this European Standard are listed in Annex ZC of EN 60335-1 and in this standard. The annex lists the valid edition of those documents at the time of issue of this EN. All references are however to be understood as references to the latest edition.

NOTE 1 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in EN 60335-1;
- unless notes are in a new subclause or involve notes in EN 60335-1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 2 In this standard the following print types are used:

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

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## 1 Scope

This clause of EN 60335 Part 1 is replaced by the following:

This standard specifies safety requirements and their verification for the design and construction of pedestrian controlled battery powered electrical cylinder or rotary lawnmowers with a rated voltage of the battery being not more than 42 V d.c.

This standard does not apply to

- non-powered lawnmowers,
- rotary lawnmowers for which the cutting means is a generally circular central drive unit on which are mounted, either one or more non-metallic filaments or one or more non-metallic, pivotally mounted cutting elements. These cutting elements rely on centrifugal force to achieve cutting, with the kinetic energy of a single cutting element not exceeding 10 J,
- mains operated electrical lawnmowers.

Requirements for battery chargers, including those incorporated into the machine, are dealt with in EN 60335-2-29.

This standard is not applicable to lawnmowers which are manufactured before the date of publication of this document by CENELEC.

## 2 Normative references

This clause of EN 60335-1 is applicable except as follows.  
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*Addition:*

EN 836, *Garden equipment – Powered lawnmowers – Safety*

EN ISO 12100-1; *Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology and methodology*

EN ISO 12100-2, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles*

EN 60335-2-29, *Household and similar electrical appliances – Safety – Part 29: Particular requirements for battery chargers* (IEC 60335-2-29)

## 3 Definitions

This clause of EN 60335-1 is applicable except as follows.

*Addition:*

### 3.101 disabling device

a part which is removable from the lawnmower, such as for example a key, which prevents operation of the lawnmower when it is removed

### 3.102

#### **removable battery**

a battery that is removable without tools

**3.103** The definitions of EN 836, Clause 3, apply, except for any definitions which are specifically for combustion engine driven machines.

## 4 General requirement

This clause of EN 60335-1 is applicable.

## 5 General conditions for the tests

This clause of EN 60335-1 is applicable except as follows:

### 5.5 Addition:

*During the tests the cutting means are adjusted and lubricated in accordance with the manufacturer's instructions specific to the test.*

NOTE For example, cylinder mower cutting means may not be able to run for extended periods at normal adjustment because of lack of lubrication etc. normally provided by the grass.

### 5.6 Addition:

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Electronic speed control devices are set for the highest speed.

### 5.8.1 Replacement:

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Unless otherwise specified, a fully charged battery shall be used for each test. Where for consecutive tests the same battery is specified there shall be a minimum of 1 min rest time between tests.

## 6 Classification

This clause of EN 60335-1 is applicable except as follows.

### 6.1 Replacement:

Machines shall be of one of the following classes with respect to protection against electric shock:

Machines incorporating battery chargers shall be class II, other machines shall be class III.

*Compliance is checked by inspection and by the relevant tests.*

### 6.2 Addition:

Class II machines shall be at least IPX4. Class III machines with electronic devices shall be at least IPX1.

## 7 Marking and instructions

This clause of EN 60335-1 is applicable except as follows.

### 7.1 Addition:

The machines shall be marked with the following minimum information:

- year of construction;
- controls, whose purpose is not obvious to the user, shall have the function, direction and/or method of operation clearly identified;
- mass in kilograms (if over 25 kg);
- for integrated chargers, the power input of the charger.

The requirements of EN 836, Subclause 5.2.2, apply, except for any requirements which are specifically for combustion engine driven machines.

The substance of the following warning shall be placed in a prominent position on the machine. If a pictogram is used it shall be that shown in Annex AA. It shall be in contrasting colours to the base material. If it is embossed, stamped or cast colours are not required. Markings or symbols giving cautionary information shall be located close to the hazard.

WARNING: Beware of sharp blades. Blades continue to rotate after the motor is switched off –  
Remove disabling device before maintenance

### 7.12 Replacement:

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An instruction sheet shall be supplied with the machine.

These instructions shall include

- a) the requirements of EN 836, Subclause 5.1, except for any requirements which are specifically for combustion engine driven machines,
- b) a repeat of all the information presented on the machine and an explanation of its meaning,
- c) at least the sense of and in proper order the following instructions for preparation, safe use, operation and maintenance of the machine:
  - instructions where to inspect the machine for damage and how to make repairs. In case of abnormal vibrations, instructions how to proceed;
  - information on how to start the machine safely, especially with a view to necessary tilting of the machine and keeping both hands in the operating position before returning the machine to the ground;
  - when and how to replace safety parts subjected to regular wear and tear;
  - instructions that batteries are charged using the correct charger. Information that incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery.

d) the following warnings:

- not to touch the blades before the disabling device has been removed and the blades have come to a complete stop;
- to remove the disabling device
  - whenever leaving the machine unattended,
  - before clearing a blockage,
  - before checking, cleaning or working on the machine,
  - after striking a foreign object,
  - whenever the machine starts vibrating abnormally.

e) to carefully read the instructions for the safe operation of the machine.

## 8 Protection against access to live parts

This clause of EN 60335-1 is applicable except as follows.

### 8.2 Addition:

For class II rotary mowers access to the surface of basic insulation or metal parts separated from live parts by basic insulation shall be permitted when the cutting means is removed if a tool is required for its removal.

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## 9 Starting a motor-operated appliance

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This clause of EN 60335-1 is not applicable.

## 10 Power input and current

This clause of EN 60335-1 is not applicable.

## 11 Heating

This clause of EN 60335-1 is not applicable.

## 12 Void

## 13 Leakage current and electric strength at operating temperature

This clause of EN 60335-1 is applicable for class II machines.

## 14 Transient overvoltages

This clause of EN 60335-1 is applicable.