

**Majapidamismasinate ja nendetaoliste seadmete
ohutus. Osa 2-77: Erinõuded kõndimisel
eesjuhitavatele elektritoitelistele muruniidukitele**

Safety of household and similar appliances - Part 2-77:
Particular requirements for pedestrian-controlled walk-
behind electrically powered lawn mowers

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60335-2-77:2010 sisaldab Euroopa standardi EN 60335-2-77:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.10.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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This Estonian standard EVS-EN 60335-2-77:2010 consists of the English text of the European standard EN 60335-2-77:2010.

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**Safety of household and similar appliances -
Part 2-77: Particular requirements for pedestrian-controlled walk-behind
electrically powered lawn mowers
(IEC 60335-2-77:2002, modified)**

Appareils électrodomestiques
et analogues - Sécurité
Partie 2-77: Règles particulières pour
les tondeuses à gazon fonctionnant sur
le réseau et à conducteur à pied
(CEI 60335-2-77:2002, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke -
Teil 2-77: Besondere Anforderungen
für handgeführte elektrisch betriebene
Rasenmäher
(IEC 60335-2-77:2002, modifiziert)

This European Standard was approved by CENELEC on 2010-09-01. 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.

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

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Foreword

The text of the International Standard IEC 60335-2-77:2002, prepared by SC 61F, Safety of hand-held motor-operated electric tools, of IEC TC 61, Safety of household and similar electrical appliances, together with the common modifications prepared by the Technical Committee CENELEC TC 61F, Safety of hand-held and transportable motor-operated electric tools, was submitted to the CENELEC formal vote and was approved as EN 60335-2-77 on 2010-09-01.

This document supersedes EN 50338:2006 and EN 60335-2-77:2006.

The text of EN 60335-2-77:2006 has been revised by CLC/TC 116/WG 5, Garden appliances, to add the mechanical requirements and bring this standard in line with the Machinery Directive 2006/42/EC. Additionally the safety requirements for battery powered lawnmowers have been included to replace EN 50338:2006; therefore the title is renamed.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2013-09-01

This Part 2-77 is to be used in conjunction with EN 60335-1. This Part 2-77 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Particular requirements for pedestrian-controlled walk-behind electrically powered lawn mowers.

When a particular subclause of Part 1 is not mentioned in this Part 2-77, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text of Part 1 is to be adapted accordingly.

This European Standard has been prepared under Mandate M/396 given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EU Directive 2006/42/EC. See Annex ZZ.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

There are no national deviations from this European Standard, other than those listed in Annex ZB to EN 60335-1.

Other harmonised standards referred to in this European Standard are listed in Annex ZC of Part 1 and this Part 2. 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.

The following numbering system is used:

- subclauses that are numbered starting from 101 are additional to those in Part 1;
- additional annexes are lettered AA, BB, etc.;

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

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

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Contents

Introduction	7
1 Scope	8
2 Normative references	8
3 Definitions	10
4 General requirement	13
5 General conditions for the tests	13
6 Classification	13
7 Marking and instructions	13
8 Protection against access to live parts	16
9 Starting of motor-operated appliances	16
10 Power input and current	16
11 Heating	17
12 Void	17
13 Leakage current and electric strength at operating temperature	17
14 Transient overvoltages	17
15 Moisture resistance	17
16 Leakage current and electric strength	17
17 Overload protection of transformers and associated circuits	17
18 Endurance	17
19 Abnormal operation	18
20 Stability and mechanical hazards	18
21 Mechanical strength	39
22 Construction	46
23 Internal wiring	48
24 Components	48
25 Supply connection and external flexible cords	49
26 Terminals for external conductors	49
27 Provision for earthing	49
28 Screws and connections	50
29 Clearances, creepage distances and solid insulation	50
30 Resistance to heat and fire	50
31 Resistance to rusting	50
32 Radiation, toxicity and similar hazards	50

Annexes	51
Annex B (normative) Appliances powered by rechargeable batteries	51
Annex AA (normative) Safety signs and symbols	52
Annex BB (normative) Test enclosure target panels – Corrugated fibreboard penetration test (see 20.107.3.3.2)	55
Annex CC (normative) Target panel elevation areas and suggested data sheet for thrown object test (see 20.107.3.3)	57
Annex DD (normative) Test enclosure (see 20.107.4.1)	59
Annex EE (informative) Safety instructions for lawnmowers	63
Annex FF (normative) Vibration	66
Annex GG (normative) Noise test code – Engineering method (grade 2)	71
Annex HH (informative) Example of a material and construction fulfilling the requirements for an artificial surface	77
Annex ZZ (informative) Coverage of Essential Requirements of EC Directives	79
Bibliography	80
Figures	
Figure 1 – Operator zone – Pedestrian controlled lawn mower (see 20.103)	20
Figure 2 – Foot probe test (see 20.101)	21
Figure 3 – Handle distance (see 20.107.6.1) and rear cutting means enclosure (see 20.107.1.1)	25
Figure 4 – Front opening restrictions for single spindle lawnmowers (see 20.107.1.1.2)	26
Figure 5 – Front opening restrictions for multi-spindle lawnmowers (see 20.107.1.1.2)	26
Figure 6 – Construction for front opening (see 20.107.1.1.2)	27
Figure 7 – Example of test cycle (see 20.107.2.1)	29
Figure 8 – Thrown object test fixture – General layout (see 20.107.3.3 and 20.107.4.1.3)	31
Figure 9 – Single spindle lawnmower – Test enclosure (see 20.107.4)	33
Figure 10 – Multi-spindle lawnmower – Test enclosure (see 20.107.4)	34
Figure 11 – Test of cutting cylinder guarding (see 20.108.1.1)	36
Figure 12 – Side coverage of cutting cylinders (see 20.108.1.2)	37
Figure 13 – Top coverage of cutting cylinders (see 20.108.1.3)	37
Figure 14 – Rear coverage of cutting cylinders (see 20.108.1.4)	38
Figure 15 – Cylinder mower – Throw line (see 20.108.2)	39
Figure 16 – Example of suitable impact test fixture (see 20.101.2.1)	41
Figure 17 – Structural integrity tests (see 21.101.4.1.1)	45
Figure 18 – Impact test fixture for handle insulation	47
Figure AA.1 – Pictogram illustrating “Read operator’s manual”	52
Figure AA.2 – Pictogram illustrating “Keep bystanders away”	52
Figure AA.3 – Pictogram illustrating “Beware of sharp blades. Blades continue to rotate after the motor is switched off – remove plug from mains before maintenance or if cord is damaged.” for mains operated machines	53
Figure AA.4 – Pictogram illustrating “Beware of sharp blades. Blades continue to rotate after the motor is switched off – Remove disabling device before maintenance” for battery operated machines	53
Figure AA.5 – Pictogram illustrating “Keep supply flexible cord away from cutting means” for mains operated machines	54

Figure BB.1 – Test fixture for corrugated fibreboard penetration test.....	56
Figure CC.1 – Example of data sheet for thrown object test.....	58
Figure DD.1 – Nail plan of test enclosure base.....	60
Figure DD.2 – Object test enclosure – Base detail	61
Figure DD.3 – Test enclosure walls and base.....	62
Figure FF.1 – Examples of transducer location/orientation (pedestrian controlled machines)	68
Figure FF.2 – Examples of transducer location/orientation for hand-arm vibration	69
Figure GG.1 – Microphone positions on the hemisphere (see Table GG.1).....	72
Figure HH.1 – Sketch of the measurement surface covered with an artificial surface (not to scale)....	78

Tables

Table 1 – Sizing of test fixture air inlet holes.....	43
Table GG.1 – Co-ordinates of microphone positions	73
Table GG.2 – Absorption coefficients.....	74

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Introduction

This document is a C type standard as stated in EN ISO 12100-1.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered is as indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the other standards, for machines which have been built and designed to the provisions of this type C standard.

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1 Scope

This clause of Part 1 is replaced by the following.

This European Standard specifies safety requirements and their verification for the design and construction of pedestrian controlled walk-behind electrically powered lawnmowers. This standard applies in conjunction with EN 60335-1.

This European Standard does not apply to

- lawn trimmers, lawn edge trimmers, lawn edgers, flail mowers, scrub cutters, automatic (robot) lawn mowers, sickle-bar mowers, agricultural mowers, trailing seat/sulky units, ride-on machines or non-powered lawnmowers
- rotary lawnmowers for which the cutting means is a generally circular central drive unit on which is 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,
- battery powered lawnmowers with a rated voltage of the battery more than 42 V d.c.

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

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

NOTE Combustion engine driven machines are covered by EN 836.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

EN 60320-2-3, Appliance couplers for household and similar general purposes – Part 2-3: Appliance couplers with a degree of protection higher than IPX0 (IEC 60320-2-3)

EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements (IEC 60335-1, mod.)

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

EN ISO 354:1993 ¹⁾, Acoustics – Measurement of sound absorption in a reverberation room (ISO 354:1985)

EN ISO 3744:1995, Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane (ISO 3744:1994)

EN ISO 3767-1:1995 ²⁾, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment – Symbols for operator controls and other displays – Part 1: Common symbols (ISO 3767-1:1991)

¹⁾ Superseded by EN ISO 354:2003, *Acoustics - Measurement of sound absorption in a reverberation room* (ISO 354:2003).

²⁾ Superseded by EN ISO 3767-1:2000, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays - Part 1: Common symbols* (ISO 3767-1:1998), withdrawn.

EN ISO 3767-2:1995 ³⁾, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment – Symbols for operator controls and other displays – Part 2: Symbols for agricultural tractors and machinery (ISO 3767-2:1991)

EN ISO 3767-3 ³⁾, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment – Symbols for operator controls and other displays – Part 3: Symbols for powered lawn and garden equipment (ISO 3767-3)

EN ISO 11201:1995, Acoustics – Noise emitted by machinery and equipment – Measurement of emission sound pressure levels at a work station and at other specified positions – Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995)

EN ISO 11688-1:1998, Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 1: Planning (ISO/TR 11688-1:1995)

EN ISO 12100-1:2003, Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology (ISO 12100-1:2003)

EN ISO 12100-2:2003, Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles (ISO 12100-2:2003)

EN ISO 13857:2008, Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)

EN ISO 20643:2005, Mechanical vibration – Hand-held and hand-guided machinery – Principles for evaluation of vibration emission (ISO 20643:2005)

ISO 500:1991 ⁴⁾, Agricultural tractors – Rear-mounted power take-off – Types 1, 2 and 3

ISO 2758:1983 ⁵⁾, Paper – Determination of bursting strength

ISO 3304:1985, Plain end seamless precision steel tubes – Technical conditions for delivery

ISO 3305:1985, Plain end welded precision steel tubes – Technical conditions for delivery

ISO 3306:1985, Plain end as-welded and sized precision steel tubes – Technical conditions for delivery

ISO 4046:1978 ⁶⁾, Paper, board, pulp and related terms – Vocabulary

ISO 4200:1991, Plain end steel tubes, welded and seamless – General tables of dimensions and masses per unit length

ISO 11684, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment – Safety signs and hazard pictorials – General principles

EN ISO 3767-5, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment – Symbols for operator controls and other displays – Part 5: Symbols for manual portable forestry machinery

ISO 3864, Graphical symbols – Safety colours and safety signs

ISO 7000, Graphical symbols for use on equipment – Index and synopsis

ISO 7010, Graphical symbols – Safety colours and safety signs – Safety signs used in workplaces and public areas

³⁾ Withdrawn.

⁴⁾ Superseded by ISO 500:2004 series, *Agricultural tractors – Rear-mounted power take-off types 1, 2 and 3*.

⁵⁾ Superseded by EN ISO 2758:2003, *Paper – Determination of bursting strength* (ISO 2758:2001).

⁶⁾ Superseded by ISO 4046:2002 series, *Paper, board, pulp and related terms – Vocabulary*.