

This document is a preview generated by EVS

**Aiapidamisseadmed. Eeslükatavad
sisepõlemismootoriga hekilõikurid. Ohutus**
Garden equipment - Walk-behind combustion engine
powered trimmers - Safety

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

| | |
|--|--|
| Käesolev Eesti standard EVS-EN 14910:2007 sisaldb Euroopa standardi EN 14910:2007 ingliskeelset teksti. | This Estonian standard EVS-EN 14910:2007 consists of the English text of the European standard EN 14910:2007. |
| Standard on kinnitatud Eesti Standardikeskuse 21.06.2007 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas. | This standard is ratified with the order of Estonian Centre for Standardisation dated 21.06.2007 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation. |
| Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kätesaadavaks tegemise kuupäev on 09.05.2007. | Date of Availability of the European standard text 09.05.2007. |
| Standard on kätesaadav Eesti standardiorganisatsionist. | The standard is available from Estonian standardisation organisation. |

ICS 65.060.70

Võtmesõnad:

Standardite reproduutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 14910

May 2007

ICS 65.060.70

English Version

Garden equipment - Walk-behind combustion engine powered
trimmers - Safety

Matériel de jardinage - Coupe-gazon à moteur et à
conducteur à pied - Sécurité

Gartengeräte - Handgeführte Trimmer mit
Verbrennungsmotor - Sicherheit

This European Standard was approved by CEN on 22 March 2007.

CEN 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 CEN Management Centre or to any CEN 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 CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

| | Page |
|---|-----------|
| Foreword | 4 |
| Introduction | 5 |
| 1 Scope..... | 6 |
| 2 Normative references | 6 |
| 3 Terms and definitions..... | 7 |
| 4 List of significant hazards..... | 8 |
| 5 Safety requirements and/or measures and means of verification..... | 9 |
| 5.1 General | 9 |
| 5.2 Guards..... | 9 |
| 5.2.1 General | 9 |
| 5.2.2 Power driven components (other than the cutting means) | 9 |
| 5.2.3 Guarding of cutting means | 10 |
| 5.2.4 Hot surfaces | 11 |
| 5.3 Protection from exhaust fumes | 12 |
| 5.4 Liquid spillage | 12 |
| 5.5 Tank openings..... | 12 |
| 5.6 Controls | 13 |
| 5.7 Electrical requirements for battery circuits and high tension ignition circuits..... | 13 |
| 5.7.1 Electrical cables | 13 |
| 5.7.2 Battery installation | 13 |
| 5.7.3 Overload protection | 13 |
| 5.7.4 Terminals and un-insulated electrical parts | 13 |
| 5.7.5 High voltage parts | 14 |
| 5.8 Engine stopping and starting | 14 |
| 5.9 Handle construction | 14 |
| 5.10 Vibration..... | 14 |
| 5.10.1 Reduction by design and protective measures | 14 |
| 5.10.2 Reduction by information..... | 15 |
| 5.10.3 Vibration measurement | 15 |
| 5.11 Noise..... | 15 |
| 5.11.1 Reduction as a safety requirement | 15 |
| 5.11.2 Noise emission measurement | 16 |
| 5.12 Cutting means | 16 |
| 5.12.1 General | 16 |
| 5.12.2 Cutting elements | 16 |
| 5.13 Mechanical strength and rigidity | 16 |
| 5.13.1 General | 16 |
| 5.13.2 Cutting means guard (mechanical strength and rigidity) | 17 |
| 5.13.3 Mechanical strength of cutting head | 17 |
| 6 Information for use | 18 |
| 6.1 Instructions for use..... | 18 |
| 6.2 Marking | 19 |
| 6.2.1 Minimum marking | 19 |
| 6.2.2 Warnings | 19 |
| 6.2.3 Cutting head | 20 |
| 6.2.4 Marking durability | 20 |
| 6.2.5 Test | 20 |

| | |
|---|----|
| Annex A (normative) Vibration (see 5.10) | 28 |
| A.1 Quantities to be measured | 28 |
| A.2 Instrumentation | 28 |
| A.2.1 General | 28 |
| A.2.2 Fastening of transducer | 28 |
| A.2.3 Calibration | 28 |
| A.3 Measurement direction and measurement location | 28 |
| A.3.1 Measurement direction | 28 |
| A.3.2 Measurement location | 28 |
| A.4 Test procedure | 29 |
| A.4.1 Determination of working procedure | 29 |
| A.4.2 Test method | 29 |
| A.5 Measurement procedure | 29 |
| A.6 Determination of the measurement result | 29 |
| Annex B (normative) Noise test code — Engineering method (grade 2) (see 5.11) | 32 |
| B.1 General | 32 |
| B.2 Scope | 32 |
| B.3 Sound power level determination | 32 |
| B.4 A-weighted emission sound pressure level determination | 34 |
| B.5 Requirements for test floor | 34 |
| B.5.1 Artificial surface | 34 |
| B.5.2 Natural grass | 35 |
| B.6 Installation, mounting and operating conditions | 35 |
| B.7 Information to be recorded and reported | 36 |
| B.8 Measurement uncertainties and declaration of noise emission values | 36 |
| Annex C (informative) Example of a material and construction fulfilling the requirements for an artificial surface as required by B.5.1 | 37 |
| C.1 Material | 37 |
| C.2 Construction | 37 |
| Annex D (normative) Calculation of kinetic energy (see 5.12.1) | 39 |
| Annex E (normative) Safety signs for use on trimmers (see 6.2.2) | 40 |
| Annex F (informative) Safety instructions | 43 |
| F.1 Introduction | 43 |
| F.2 General provisions | 43 |
| F.3 Safe operating practices | 43 |
| F.3.1 Training | 43 |
| F.3.2 Preparation | 43 |
| F.3.3 Operation | 44 |
| F.3.4 Maintenance and storage | 45 |
| Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by Directive 98/79/EC | 46 |
| Bibliography | 47 |

Foreword

This document (EN 14910:2007) has been prepared by Technical Committee CEN/TC 144 "Tractors and machinery for agriculture and forestry", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2007, and conflicting national standards shall be withdrawn at the latest by November 2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

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

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

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 provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

1 Scope

This European Standard deals with all significant hazards, hazardous situations and events relevant to walk-behind trimmers, powered by a combustion engine, with cutting means using non-metallic filament line or freely pivoting non-metallic cutter(s), of which the cutting elements rely on centrifugal force to achieve cutting with the kinetic energy of a single cutting element not exceeding 10 J, designed for cutting grass or similar plant material, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

This European Standard is not applicable to:

- a) walk-behind trimmers with cutting means other than those described above;
- b) self propelled walk-behind trimmers or walk-behind edge trimmers;
- c) lawnmowers using non-metallic filament line or freely pivoting non-metallic cutting elements with greater than 10 J kinetic energy;
- d) motor mowers using metal or other solid cutting elements.

NOTE 1 EN 836 applies for machines using non-metallic filament line or freely pivoting non-metallic cutting elements with greater than 10 J kinetic energy.

NOTE 2 EN 12733 applies for machines using metal or other solid cutting elements.

EMC and environmental hazards other than noise have not been considered in this European Standard.

This European Standard is not applicable to walk-behind trimmers which are manufactured before the date of its publication as EN.

NOTE 3 Lawn trimmers and lawn edge trimmers (electric powered) are dealt with in EN 786, grass trimmers (internal combustion engine powered) are dealt with in EN 11806 and lawn mowers (internal combustion engine powered) are dealt with in EN 836.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 294:1992, *Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs*

EN 1033:1995, *Hand-arm vibration — Laboratory measurement of vibration at the grip surface of hand-guided machinery — General*

EN ISO 354:2003, *Acoustics — Measurement of sound absorption in a reverberation room (ISO 354:2003)*

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 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)