

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/16

Obsahuje: EN 15503:2009+A2:2015

Oznámením tejto normy sa od 01.10.2017 ruší STN EN 15503+A1 (47 0638) z apríla 2014

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 15503:2009+A2

December 2015

ICS 65.060.70

Supersedes EN 15503:2009+A1:2013

English Version

Garden equipment - Garden blowers, vacuums and blower/vacuums - Safety

Matériel de jardinage - Souffleurs, aspirateurs et aspirateurs-souffleurs de jardin - Sécurité

Gartengeräte - Blasgeräte, Sauggeräte und Blas-/Sauggeräte für den Garten - Sicherheit

This European Standard was approved by CEN on 22 September 2009 and includes Amendment 1 approved by CEN on 7 September 2013 and Amendment 2 approved by CEN on 7 November 2015.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Conte	ents	Page
Europe	ean foreword	5
Introd	uction	6
1	Scope	7
_	Normative references	
2		
3	Terms and definitions	
4	List of significant hazards	10
5	Safety requirements and/or protective measures	11
5.1	General	
5.2	All machines	12
5.3	Hot parts guarding	12
5.4	Fan housing strength and rigidity	13
5.4.1	Requirements	13
5.4.2	Fan housing strength and rigidity test of hand-held and backpack powered machine	
5.5	Structural integrity of vacuums	13
5.5.1	Requirements	
5.5.2	Structural integrity test	13
5.6	Handles and controls	14
5.6.1	Controls	14
5.6.2	Handles	14
5.6.3	Harness for machines other than those with back-pack power unit	15
5.7	Starting device	15
5.8	Noise	15
5.8.1	Reduction by design and protective measures	
5.8.2	Reduction by information	16
5.8.3	Noise emission measurement	16
5.9	Vibration	16
5.9.1	Reduction by design and protective measures	16
5.9.2	Reduction by information	16
5.9.3	Vibration measurement	
5.10	Protection from exhaust fumes	16
5.11	Electrical requirements	16
5.11.1	General	16
5.11.2	Ignition circuit	16
5.12	Fuel tank openings	17
5.13	Additional requirements for back-pack powered units	17
	Handgrip	
5.13.2	Back-pack support and harness	17
6	Information for use	
6.1	Instruction handbook	17
6.2	Marking	19
6.3	Warnings	19
6.4	Durability of markings and warnings	20
Annex	A (normative) Noise test code - Engineering method (Grade 2 of accuracy)	22

A.1	General	22
A.2	Machine conditions	22
A.3	Mounting and orientation of the machine	22
A.3.1	Mounting of the machine on the test fixture	22
A.3.2	Orientation of the machine for the A-weighted sound power level measurement	23
A.3.3	Position of the microphone for the A-weighted sound pressure level measurement	23
A.4	Test procedure	24
A.4.1	General	24
A.4.2	Idling	25
A.4.3	Racing	25
A.5	Information to be reported	25
A.5.1	General	25
A.5.2	Machine under test	25
A.5.3	Acoustic environment	25
A.5.4	Instrumentation	25
A.5.5	Acoustical and other data	25
A.5.6	Calculated equivalent sound levels for work cycles	27
A.6	Declaration of noise emission data	28
Annex	B (normative) Measurement of vibration values at the handles	29
B.1	General	29
B.2	Measurement direction and location	29
В.3	Adjustment of the machine before test	29
B.4	Test procedure	30
B.4.1	General	30
B.4.2	Idling	30
B.4.3	Racing	30
B.5	Information to be reported	30
B.5.1	General	30
B.5.2	Machine under test	30
B.5.3	Instrumentation	30
B.5.4	Vibration and other data	31
B.5.5	Calculation of equivalent vibration total values	31
B.6	Declaration and verification of vibration values	32
Annex	C (informative) Examples of safety signs General	34
A ₂ An	nex D (normative) (A2) Tortuous path test	36
D.1	Requirements	36
D.2	Test procedure	36

EN 15503:2009+A2:2015 (E)

D.3	Test acceptance	39
Annex	ZA (informative) Relationship between this European Standard and the Essential	
	Requirements of EU Directive 2006/42/EC	40
Biblio	graphy	41

European foreword

This document (EN 15503:2009+A2:2015) 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 June 2016, and conflicting national standards shall be withdrawn at the latest by June 2017.

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

This document includes Amendment 1 approved by CEN on 2013-09-07 and Amendment 2 approved by CEN on 2015-11-07.

This document supersedes EN 15503:2009+A1:2013 A2.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{\mathbb{A}}$ $\boxed{\mathbb{A}}$ $\boxed{\mathbb{A}}$ $\boxed{\mathbb{A}}$

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).

A) For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document. (4)

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

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

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are 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 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 specifies the safety requirements and their verification for the design and construction of hand-held combustion engine powered and back-pack combustion engine powered, garden vacuums and garden blower/vacuums with or without shredding means and garden blowers, designed for one operator only. In addition, it specifies the type of information on safe working practices (including residual risks) to be provided by the manufacturer.

Throughout this European Standard the term 'machine' is used to mean all the types of garden blowers and vacuums covered by it.

This European Standard deals, with all hazards, hazardous situations and events relevant to these machines when they are used as intended and under the conditions foreseen by the manufacturer (see Clause 4), except for:

- vibration of backpack machines;
- structural integrity for blowers and blower vacuums;
- strength for harnesses and back-pack supports.

This European Standard is not applicable to:

- walk-behind, hand-guided (support-wheeled) and ride-on machines;
- mains driven and battery powered blowers and vacuums of combinations thereof;

NOTE EN 60335-1 [1] and IEC 60335-2-100 [2] give the safety requirements for mains driven blowers and blower vacuums, vacuum cleaners for household and industrial use.

This European Standard is not applicable to machines which are manufactured before the date of its publication as EN.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. [A]

EN 1088 A) deleted text (A), Safety of machinery — Interlocking devices associated with guards — Principles for design and selection

EN 14930:2007, Agricultural and forestry machinery and gardening equipment — Pedestrian controlled and hand-held machines — Determination of accessibility of hot surfaces

EN ISO 3744:2009, 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 4871:2009, Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)

EN ISO 11201:2009, 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, including Cor 1:1997)

EN ISO 12100:2010, Safety of machinery — General principles for design — Risk assessment and risk reduction (A)

EN ISO 13849-1:2008, Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)

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 22867:2008, Forestry machinery — Vibration test code for portable hand-held machines with internal combustion engine — Vibration at the handles (ISO 22867:2004, including Cor 1:2006)

EN ISO 22868:2008, Forestry machinery — Noise test code for portable hand-held machines with internal combustion engine — Engineering method (Grade 2 accuracy) (ISO 22868:2005)

IEC 60068-2-75:1997, Environmental testing — Part 2: Tests — Test Eh: Hammer tests

IEC 61032:1997, Protection of persons and equipment by enclosures — Probes for verification

koniec náhľadu – text ďalej pokračuje v platenej verzii STN