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## **Vacuum cleaners for household use - Methods of measuring the performance**

Vacuum cleaners for household use - Methods  
of measuring the performance

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN 60312:2008 sisaldab Euroopa standardi EN 60312:2008 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 60312:2008 consists of the English text of the European standard EN 60312:2008.</p>
<p>Standard on kinnitatud Eesti Standardikeskuse 24.03.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 24.03.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
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<p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>The standard is available from Estonian standardisation organisation.</p>

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Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

English version

**Vacuum cleaners for household use -  
Methods of measuring the performance  
(IEC 60312:2007)**

Aspirateurs de poussière  
à usage domestique -  
Méthodes de mesure de l'aptitude  
à la fonction  
(CEI 60312:2007)

Staubsauger für den Hausgebrauch -  
Prüfverfahren zur Bestimmung  
der Gebrauchseigenschaften  
(IEC 60312:2007)

This European Standard was approved by CENELEC on 2008-02-01. 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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 59F/163/FDIS, future edition 4 of IEC 60312, prepared by SC 59F, Floor treatment appliances, of IEC TC 59, Performance of household electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60312 on 2008-02-01.

This European Standard supersedes EN 60312:1998 + A1:2000 + A2:2004.

The following subclauses have been updated:

- 2.9 on performance with partly filled receptacle;
- 2.10 on determination of dust emission of the vacuum cleaners;
- 4.14 on energy consumption.

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) 2008-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-02-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60312:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60335-1 + A1 + A2	NOTE Harmonized as EN 60335-1:2002 (modified) + A11:2004 + A1:2004 + A12:2006 + A2:2006
IEC 60335-2-2 + A1 + A2	NOTE Harmonized as EN 60335-2-2:2003 (modified) + A1:2004 + A2:2006 (modified)

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60704-1	1982	Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances - Part 1: General requirements	EN 60704-1 <sup>1)</sup>	1994
IEC 60704-2-1	1984	Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances - Part 2-1: Particular requirements for vacuum cleaners	EN 60704-2-1 <sup>2)</sup>	1994
ISO 554	1976	Standard atmospheres for conditioning and/or testing - Specifications	-	-
ISO 679	1989	Methods of testing cements - Determination of strength	-	-
ISO 2439	1997	Flexible cellular polymeric materials - Determination of hardness (indentation technique)	EN ISO 2439	2000
ISO 3386-1	1986	Polymeric materials, cellular flexible - Determination of stress-strain characteristics in compression - Part 1: Low-density materials	EN ISO 3386-1	1997
ISO 5167	Series	Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full	EN ISO 5167	Series
CIE 15.2	1986	Colorimetry	-	-

<sup>1)</sup> EN 60704-1 is superseded by EN 60704-1:1997, which is based on IEC 60704-1:1997.

<sup>2)</sup> EN 60704-2-1 is superseded by EN 60704-2-1:2001, which is based on IEC 60704-2-1:2000.

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# VACUUM CLEANERS FOR HOUSEHOLD USE – METHODS OF MEASURING THE PERFORMANCE

## Section 1: General

### 1.1 Scope

This International Standard is applicable to vacuum cleaners for household use in or under conditions similar to those in households.

The purpose of this standard is to specify essential performance characteristics of vacuum cleaners being of interest to the users and to describe methods for measuring these characteristics.

NOTE Due to the influence of environmental conditions, variations in time, origin of test materials and proficiency of the operator, most of the described test methods will give more reliable results when applied for comparative testing of a number of appliances at the same time, in the same laboratory and by the same operator.

For safety requirements, reference is made to IEC 60335-1 and IEC 60335-2-2.

### 1.2 Normative references

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

IEC 60704-1:1982, *Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances – Part 1: General requirements*

IEC 60704-2-1:1984, *Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances – Part 2-1: Particular requirements for vacuum cleaners*

ISO 554:1976, *Standard atmospheres for conditioning and/or testing – Specifications*

ISO 679:1989, *Methods of testing cements – Determination of strength*

ISO 2439:1997, *Flexible cellular polymeric materials – Determination of hardness (indentation technique)*

ISO 3386-1:1986, *Polymeric materials, cellular flexible – Determination of stress-strain characteristics in compression – Part 1: Low-density materials*

ISO 5167:2003 (all parts), *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full*

CIE 15.2:1986, *Colorimetry*

### 1.3 Definitions

For the purposes of this International Standard, the following definitions apply: