

**Majapidamis- ja muud taolised elektriseadmed. Ohutus.  
Osa 2-79: Erinõuded kõrgsurvepuhastitele ja  
aurupuhastitele**

Household and similar electrical appliances - Safety - Part 2-79: Particular requirements for high pressure cleaners and steam cleaners

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60335-2-79:2009 sisaldab Euroopa standardi EN 60335-2-79:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 22.09.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60335-2-79:2009 consists of the English text of the European standard EN 60335-2-79:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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The standard is available from Estonian standardisation organisation.

ICS 97.080

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English version

**Household and similar electrical appliances -  
Safety -  
Part 2-79: Particular requirements  
for high pressure cleaners and steam cleaners  
(IEC 60335-2-79:2002 + A1:2004 + A2:2007, modified)**

Appareils électrodomestiques  
et analogues -  
Sécurité -  
Partie 2-79: Règles particulières  
pour les appareils de nettoyage  
à haute pression et les appareils  
de nettoyage à vapeur  
(CEI 60335-2-79:2002 + A1:2004  
+ A2:2007, modifiés)

Sicherheit elektrischer Geräte  
für den Hausgebrauch  
und ähnliche Zwecke -  
Teil 2-79: Besondere Anforderungen  
für Hochdruckreiniger und Dampfreiniger  
(IEC 60335-2-79:2002 + A1:2004 +  
A2:2007, modifiziert)

This European Standard was approved by CENELEC on 2009-09-01. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, 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: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

In the light of the necessity to adapt EN 60335-2-79 with regard to the requirements of the Machinery Directive 2006/42/EC, a draft was prepared by CENELEC TC61/WG6/J in co-operation with the MD Consultant, taking also into account the results of CENELEC TC61/WG6 work on EN 60335-1.

The approach to amend EN 60335-2-79:2004 aiming toward listing the standard under the MD was discussed and approved during the Kista meeting of CENELEC TC 61 in June 2008 (see CLC/TC 61/SEC/1649), when it was decided to submit a draft for an amendment to the Unique Acceptance Procedure.

The draft was circulated as FprAC in December 2008 and was approved by CENELEC as a new edition of EN 60335-2-79 on 2009-09-01.

This European Standard supersedes EN 60335-2-79:2004 + A1:2006 + A2:2007.

In this European Standard the common modifications to the International Standard IEC 60335-2-79:2002 + A1:2004 + A2:2007 are indicated by a vertical line in the left margin of the text.

The following dates are applicable:

- |  |       |            |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2009-12-29 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2009-12-29 |

This Part 2 has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements. It was established on the basis of the 2002 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of Part 1.

This Part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for high pressure cleaners and steam cleaners.

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies. 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 a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 2006/42/EC. See Annex ZZ.

NOTE 1 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 2 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

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.

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## Contents

Introduction .....	6
1 Scope .....	7
2 Normative references .....	8
3 Definitions .....	8
4 General requirement .....	11
5 General conditions for the tests .....	11
6 Classification .....	11
7 Marking and instructions .....	12
8 Protection against access to live parts .....	17
9 Starting of motor-operated appliances .....	17
10 Power input and current .....	17
11 Heating .....	17
12 Void .....	18
13 Leakage current and electric strength at operating temperature .....	18
14 Transient overvoltages .....	18
15 Moisture resistance .....	18
16 Leakage current and electric strength .....	20
17 Overload protection of transformers and associated circuits .....	20
18 Endurance .....	20
19 Abnormal operation .....	21
20 Stability and mechanical hazards .....	23
21 Mechanical strength .....	25
22 Construction .....	26
23 Internal wiring .....	29
24 Components .....	29
25 Supply connection and external flexible cords .....	30
26 Terminals for external conductors .....	31
27 Provision for earthing .....	31
28 Screws and connections .....	31
29 Clearances, creepage distances and solid insulation .....	31
30 Resistance to heat and fire .....	31
31 Resistance to rusting .....	32
32 Radiation, toxicity and similar hazards .....	32
Annex AA (normative) Requirements to avoid backsiphonage .....	37
Annex BB (normative) Analysis method for determining the necessary safety device to prevent backsiphonage .....	43
Annex ZAA (normative) Measurement of acoustical noise .....	46
Annex ZC (normative) Normative references to international publications with their corresponding European publications .....	48
Annex ZE (informative) Specific additional requirements for appliances and machines intended for commercial use .....	50

Annex ZZ (informative) Coverage of Essential Requirements of Directive 2006/42/EC.....	50
Bibliography.....	51
Figure 101 – Warning symbol .....	33
Figure 102 – Impact test apparatus.....	34
Figure 103 – Reactions on handle.....	35
Figure 104 – Warning symbol: Machine not suitable for connection to the potable water mains.....	35
Figure 105 – Warning symbol: Do not inhale fumes .....	36
Figure AA.1 – Arrangement for the durability test on backflow preventers with reduced pressure zone.....	42
Figure BB.1 – Example for an air break to drain.....	45

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## Introduction

It has been assumed in the drafting of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of machines when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of machines.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the machine is connected to the supply mains. However, national wiring rules may differ.

If a machine within the scope of this standard also incorporates functions that are covered by another Part 2 of EN 60335, the relevant Part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

This standard is a product family standard dealing with the safety of machines and takes precedence over horizontal and generic standards covering the same subject.

A machine that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

A machine employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

## 1 Scope

This clause of Part 1 is replaced by the following.

This European Standard deals with the safety of high pressure cleaners without traction drive, intended for household and commercial indoor or outdoor use, having a **rated pressure** not less than 2,5 MPa and not exceeding 35 MPa.

It also applies to steam cleaners and those parts of hot water high pressure cleaners incorporating a steam stage which have a capacity not exceeding 100 l, a **rated pressure** not exceeding 2,5 MPa and a product of capacity and **rated pressure** not exceeding 5 MPa·l.

The following power systems of the drive for the high pressure pump are covered:

- mains powered motors up to a **rated voltage** of 250 V for single-phase machines and 480 V for other machines,
- battery powered motors,
- internal combustion engines,
- hydraulic or pneumatic motors.

This part 2 applies in conjunction with EN 60335-1:2002 and its amendments, which is referred to in this text as "Part 1". This part 2 supplements or modifies the corresponding clauses of Part 1 as indicated in the text.

This standard does not apply to

- high pressure water jet machines as covered by EN 1829-1;
- steam cleaners intended for domestic use as covered by IEC 60335-2-54;
- machines designed to be part of a production process;
- machines designed for use in vehicles or on board of ships or aircraft;
- machines designed for use in corrosive or explosive environments (dust, vapour or gas);
- cleaners designed for medical application;
- hand-held motor-operated electric tools as covered by IEC 60745 (series);
- transportable motor-operated electric tools as covered by IEC 61029 (series);
- machines for application of coating;

NOTE Z101 EN 1953 gives requirements for atomising and spraying equipment for coating materials. EN 12621 gives requirements for machinery for the supply and circulation of coating and/or auxiliary materials under pressure.

- agricultural sprayers;

NOTE Z102 EN 907 gives requirements for sprayers and liquid fertilizer distributors for agricultural and forestry purposes.

- non-liquid, solid abrasive cleaners.

NOTE Z103 Attention is drawn to the fact that in many countries additional requirements on the safe use of the equipment covered may be specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

## 2 Normative references

This clause of Part 1 is applicable except as follows.

*Addition:*

IEC 60335-2-54, *Household and similar electrical appliances – Safety – Part 2-54: Particular requirements for surface cleaning appliances for household use employing liquids or steam*

IEC 60364-1, *Electrical installations of buildings – Part 1: Fundamental principles, assessment of general characteristics, definitions*

IEC 60745 series, *Hand-held motor-operated electric tools – Safety*

IEC 61029 series, *Safety of transportable motor-operated electric tools*

IEC 61558-2-3, *Safety of power transformers, power supply units and similar – Part 2-3: Particular requirements for ignition transformers for gas and oil burners*

IEC 61770, *Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose sets*

ISO 3743-1, *Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering method for small, movable sources in reverberant fields – Part 1: Comparison method for hard-walled test rooms*

ISO 3744, *Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Engineering method for an essentially free field over a reflecting plane*

ISO 4871, *Acoustics – Declaration and verification of noise emission values of machinery and equipment*

ISO 5349-1, *Mechanical vibration – Measurement and evaluation of human exposure to hand-transmitted vibration – Part 1: General requirements*

ISO 11203, *Acoustics – Noise emitted by machinery and equipment – Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level*

EN 1829-1, *High pressure water jet machines – Safety requirements – Part 1: Machines<sup>\*)</sup>*

## 3 Definitions

This clause of Part 1 is applicable except as follows.

### 3.1.9 Replacement:

#### normal operation

conditions under which the machine is operated in normal use

It denotes the operation at **rated flow** and **rated pressure** with the appropriate nozzle and **hose line** fitted, all strainers and filters in a clean operating condition and the **unloader valve** set to the **rated pressure**. The **water heater**, if fitted, is operated at maximum power. Electric motor driven machines are supplied at **rated voltage**.

Power outlets for accessories are loaded with a resistive load in accordance with the marking.

<sup>\*)</sup> At draft stage.