

**Kodumajapidamises kasutatavad pesupesemismasinad.
Toimimisnäitajate mõõtemetodid**

Clothes washing machines for household use - Methods for measuring the performance

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 60456:2011 sisaldab Euroopa standardi EN 60456:2011 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 29.07.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 08.07.2011.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 60456:2011 consists of the English text of the European standard EN 60456:2011.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 29.07.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 08.07.2011.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English version

**Clothes washing machines for household use -
Methods for measuring the performance**
(IEC 60456:2010, modified)

Machines à laver le linge pour usage domestique -
Méthodes de mesure de l'aptitude à la fonction
(CEI 60456:2010, modifiée)

Waschmaschinen für den Hausgebrauch -
Verfahren zur Messung der Gebrauchseigenschaften
(IEC 60456:2010, modifiziert)

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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

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of the International Standard IEC 60456:2010, prepared by SC 59D, Home laundry appliances, of IEC TC 59, Performance of household and similar electrical appliances, together with common modifications prepared by the Technical Committee CENELEC TC 59X, Performance of household and similar electrical appliances, was submitted to the formal vote and was approved by CENELEC as EN 60456 on 2011-03-21.

This document supersedes EN 60456:2005 + A11:2006 + A12:2011

Significant technical differences are

- a) a test procedure for a combined test sequence of cotton 40 °C and cotton 60 °C with full load and partial load is introduced,
- b) a test procedure for measuring power consumption in low power modes is introduced,
- c) a formula to calculate the energy consumption of washing machines including low power modes is added,
- d) the detergent dosage is reduced to 75 % for cotton and synthetic/blends,
- e) the detergent dosage of the reference machine type 1 is adjusted to maintain the washing performance level of the reference machine type 2,
- f) the reference machine type 1 is to be used for testing according to Commission Regulations with regard to energy labelling and ecodesign,
- g) control procedures for checking measured values in comparison to values declared by the manufacturer under consideration of permitted tolerances are updated.

The procedures described in this European Standard were modified substantially compared to EN 60456:2005, e.g. with regard to detergent dosage. Therefore results of tests according to this standard cannot and shall not be directly compared to results of similar procedures of previous versions. Also results based on a specific reference programme shall not be compared to results based on other reference programmes.

This European Standard also specifies, as far as necessary, the test methods which shall be applied in accordance with the COMMISSION DELEGATED REGULATION (EU) No 1061/2010 implementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household washing machines and in accordance with the COMMISSION REGULATION (EU) No 1015/2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household washing machines.

Clauses, subclauses, notes, tables and figures which are additional to those in IEC 60456:2010 are prefixed "Z".

Annexes ZA, ZB and ZC have been added by CENELEC.

Annex ZA sets out the procedure to be applied for testing according to Commission Regulations with regard to energy labelling and ecodesign and provides all necessary links to all relevant clauses of this European Standard.

Annex ZB provides control procedures for checking measured values in comparison to values declared by the manufacturer and taking into account any permitted tolerances.

Annex ZC lists normative references.

Endorsement notice

The text of the International Standard IEC 60456:2010 was approved by CENELEC as a European Standard with **common modifications printed in red letters**.

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1 Scope

This European Standard specifies methods for measuring the performance of clothes **washing machines** for household use, with or without heating devices utilising cold and/or hot water supply. It also deals with appliances for water extraction by centrifugal force (**spin extractors**) and is applicable to appliances for both washing and drying textiles (**washer-dryers**) with respect to their washing related functions. This European Standard also covers **washing machines** which specify the use of no detergent for normal use.

NOTE 1 Tumble dryer performance is assessed to IEC 61121.

The object is to state and define the principal performance characteristics of electric household **washing machines** and **spin extractors** and to describe the test methods for measuring these characteristics.

NOTE 2 This European standard applies also to **washing machines** for communal use in blocks of flats or in laundrettes. It does not apply to **washing machines** for commercial laundries. This European Standard is not intended to be used for the comparative evaluation of detergents.

NOTE 3 This European Standard does not specify acoustical noise requirements for **washing machines**. Acoustical noise measurements are specified in IEC 60704-1 and IEC 60704-2-4.

NOTE 4 This European Standard does not specify safety requirements for **washing machines**. Safety requirements are specified in IEC 60335-2-7.

2 Normative references

Void.

NOTE Z1: Normative references to the relevant European Standards are listed in Annex ZC (normative).

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the following definitions apply.

3.1.1

washing machine

appliance for cleaning and rinsing of textiles using water which may also have a means of extracting excess water from the textiles

3.1.2

test washing machine

washing machine that is subjected to part or all of the requirements in this document in order to determine its performance

NOTE **Test washing machine** may include washing machines according to 3.1.7, 3.1.8, 3.1.9 and/or 3.1.10.

3.1.3

reference machine

specially constructed **washing machine** of known performance which is used to increase repeatability and reproducibility of results

NOTE It may be used to provide a known performance level within a laboratory against which to compare selected performance parameters on test washing machines as defined in this document – refer 5.4.2.