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

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. 08/15

Obsahuje: CLC/TS 50640:2015

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# TECHNICAL SPECIFICATION
# SPÉCIFICATION TECHNIQUE
# TECHNISCHE SPEZIFIKATION

**CLC/TS 50640**

April 2015

ICS 97.060

English Version

# Clothes washing machines for commercial use - Methods for measuring the performance

Waschmaschinen für den gewerblichen Gebrauch -
Verfahren zur Messung der Gebrauchseigenschaften

This Technical Specification was approved by CENELEC on 2015-01-26.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. CLC/TS 50640:2015 E

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# Foreword

This document (CLC/TS 50640:2015) has been prepared by CLC/TC 59X "Performance of household and similar electrical appliances".

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

This is a new Technical Specification, but it is based on portions from EN 60456:2011.

This Technical Specification is the main body of a forthcoming European Standard for measuring the performance of non-household washing machines. The content of this Technical Specification will be added with the Annex ZZ when the details regarding Ecodesign regulations are defined.

The procedures described in this Technical Specification are modified substantially compared to the procedures described in EN 60456. Therefore, results of tests according to this Technical Specification cannot and are bound not to be compared to results of similar procedures of EN 60456.

Significant technical differences from EN 60456 are:

a) test procedures for washing machines of any size on the market;

b) the method includes procedures for measuring steam heated and gas heated washing machines;

c) the introduction of a new type of base load;

d) a new reference programme.

NOTE CLC/TS 50640:2015 is planned to be a European Standard for the energy measurement of gas heated laundry equipment.

A bilingual version of this publication may be issued at a later date.

# 1 Scope

This Technical Specification specifies methods for measuring the performance of clothes **washing machines** for **commercial** use utilizing cold and/or hot water supply and without heating or with heating devices for electricity, steam or gas. It also deals with appliances for both washing and drying textiles (**washer-dryers**) with respect to their washing related functions. This Technical Specification covers top, front and side loaded non household **washing machines** with horizontal or vertical axis and with one or more wash compartments.

NOTE 1 Non household tumble dryer performance is assessed to CLC/TS 50594.

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

NOTE 2 This Technical Specification does not apply to continuous batch **washing machines** (e.g. tunnel washers) or **washing machines** only possible to operate with automatic loading and unloading.

NOTE 3 This Technical Specification does not specify safety requirements for **non-household washing machines**. Safety requirements are specified in EN 50571 and the EN ISO 10472 series.

# 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.

EN 12127, *Textiles — Fabrics — Determination of mass per unit area using small samples*

EN 12953-10, *Shell boilers — Part 10 : Requirements for feedwater and boiler water quality*

EN 50571, *Household and similar electrical appliances — Safety — Particular requirements for commercial electric washing machines*

EN 60734, *Household electrical appliances — Performance — Water for testing (IEC 60734)*

EN ISO 2060, *Textiles — Yarn from packages — Determination of linear density (mass per unit length) by the skein method (ISO 2060)*

EN ISO 2061, *Textiles — Determination of twist in yarns — Direct counting method (ISO 2061)*

EN ISO 3759, *Textiles — Preparation, marking and measuring of fabric specimens and garments in tests for determination of dimensional change (ISO 3759)*

EN ISO 11664-2, *Colorimetry — Part 2: CIE standard illuminants (ISO 11664-2)*

EN ISO 80000-1:2013, *Quantities and units — Part 1: General (ISO 80000-1:2009 + Cor 1:2011)*

IEC 60456, *Clothes washing machines for household use — Methods for measuring the performance*

DIN 53923, *Testing of textiles; determination of water absorption of textile fabrics*

CIE 015:2004[1)], *Colorimetry (3rd edition)*

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IAPWS-IF97, *IAPWS Industrial Formulation 1997 for the Thermodynamic Properties of Water and Steam* [International Association for the Properties of Water and Steam]