



# SLOVENSKI STANDARD

## SIST EN 50571:2014

01-januar-2014

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### Gospodinski in podobni električni aparati - Varnost - Posebne zahteve za komercialne električne pralne stroje

Household and similar electrical appliances - Safety - Particular requirements for commercial electric washing machines

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Besondere Anforderungen für elektrische Waschmaschinen für den gewerblichen Gebrauch

Appareils électrodomestiques et analogues - Sécurité - Règles particulières pour les machines à laver le linge à usage collectif

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#### **ICS:**

97.060      Aparati za nego perila      Laundry appliances

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 50571**

November 2013

ICS 97.060

English version

**Household and similar electrical appliances -  
Safety -  
Particular requirements for commercial electric washing machines**

Appareils électrodomestiques et  
analogues -  
Sécurité -  
Règles particulières pour les machines à  
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Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke -  
Besondere Anforderungen für elektrische  
Waschmaschinen für den gewerblichen  
Gebrauch

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

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

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## Foreword

This document (EN 50571:2013) has been prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-06-10
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-06-10

EN 50571:2013 is to be read in conjunction with EN 60335-1:2012 and its amendments, which is referred to in this text as "Part 1". This standard supplements or modifies the corresponding clauses of Part 1 as indicated in the text.

NOTE 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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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

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## Introduction

This European Standard has been prepared to provide a means of conforming to essential safety requirements of the Machinery Directive 2006/42/EC. Other requirements and other EU Directives may be applicable to the machines within the scope of this standard.

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

This standard recognises the level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of commercial electric **washing machines** when operated as in normal use taking into account the manufacturer's instructions. It also covers any reasonably foreseeable misuse of the machinery and takes into account the way in which electromagnetic phenomena can affect the safe operation of commercial electric **washing machines**.

A commercial electric **washing 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.

This standard takes into account the requirements of HD 60364-1 as far as possible so that there is compatibility with the wiring rules when the machinery is connected to the supply mains. However, national wiring rules may differ.

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## 1 Scope

This clause of Part 1 is replaced by the following:

This European Standard deals with the safety of electrical operated **washing machines** intended to be used by trained users in e.g. hotels, hospitals, factories, in light industry and on farms. It also covers **washing machines** declared for commercial use in **public areas** and operated by lay persons e.g. in laundrettes, communal laundry rooms. Their rated voltage being not more than 250 V for single phase and 480 V for others.

This standard also covers **washing machines** making use of other energy sources. It does not cover requirements for these other energy sources or compressed air. However the influence of these other energy sources on the machines is covered.

These **washing machines** are designed to be connected to hot and/or cold water supply.

**Washing machines** making use of steam or hot water for heating purposes are also within the scope of this standard.

This standard deals with the common hazards presented by **washing machines** that are encountered by all persons. However, in general, it does not take into account:

- a) persons (including children) whose:
  - 1) physical, sensory or mental capabilities, or
  - 2) lack of experience and knowledge,
 prevents them from using the **washing machine** safely without supervision or instruction;
- b) children playing with the **washing machine**.

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Attention is drawn to the fact that:

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- for commercial electric **washing machines** intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary,
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities,
- for commercial electric **washing machines** having a drying function, EN 50570 (commercial electric tumble dryers) is also applicable.

This European Standard does not apply to:

- c) industrial laundry machinery (EN ISO 10472-2),
- d) **washing machines** intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

For the purpose of this standard, the term “appliance” is to be read as “**washing machine** intended for commercial use.



## 2 Normative references

This clause of Part 1 is applicable except as follows:

*Addition:*

EN 60204-1:2006/A1:2009, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005/A1:2008)*

EN 60335-1:2012, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2010, modified)*

EN 60704-1:2010 *Household and similar electrical appliances — Test code for the determination of airborne acoustical noise — Part 1: General requirements (IEC 60704-1:2010)*

EN 60730-2-12:2006, *Automatic electrical controls for household and similar use — Part 2-12: Particular requirements for electrically operated door locks (IEC 60730-2-12:2005, modified)*

EN ISO 3744, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744)*

EN ISO 3746, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746)*

EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871)*

EN ISO 9614-2, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning (ISO 9614-2)*

EN ISO 11201, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201)*

EN 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 (ISO 11203)*

EN ISO 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1)*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

Replace the reference to EN 62233 by:

EN 62233:2008, *Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure (IEC 62233:2005, modified)*

## 3 Terms and definitions

This clause of Part 1 is applicable except as follows:

### 3.1.9 normal operation

*Addition:*

the appliance is filled with textile material having a mass in the dry condition equal to the maximum mass stated in the instructions, and with the maximum quantity of water for which it is constructed. However, if the power input or current is higher when only 50 % of the textile material is used, the appliance is operated with this load instead

*The temperature of the water is:*

- 65 °C ± 5 °C for appliances without heating elements,
- 15 °C ± 5 °C for other appliances,

- 15 °C ± 5 °C for appliances without heating elements and intended for connection to the cold water supply only.

If the appliance does not incorporate a programmer, the water is heated to 90 °C ± 5 °C or as high as the construction will allow if lower, before starting the first washing period.

The textile material consists of pre-washed double-hemmed cotton sheets having dimensions approximately 70 cm × 70 cm and a specific mass between 140 g/m<sup>2</sup> and 175 g/m<sup>2</sup> in the dry condition.

For impeller type appliances, if the textile material does not move properly during operation,

- the quantity of textile material may be reduced until the maximum power input of the motor is attained, or
- a textile material comprising pre-washed double-hemmed cotton sheets, having dimensions of approximately 90 cm x 90 cm and a mass between 90 g/m<sup>2</sup> and 110 g/m<sup>2</sup> in the dry condition, may be used.

However, for impeller type appliances, in case of doubt, the test should be carried out using the reduced quantity of textile material.

Addition:

### 3.1.101 washing machine

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

### 3.1.102 agitator washing machine

appliance in which the textiles are substantially immersed in the washing water, the mechanical action being produced by a device moving about or along its vertical axis with a reciprocating motion (an agitator). This device usually extends above the maximum water level

### 3.1.103 horizontal drum washing machine

appliance in which the textiles are placed in a horizontal or inclined drum and partially immersed in the washing water, the mechanical action being produced by rotation of the drum about its axis, the movement being either continuous or periodically reversed

### 3.1.104 impeller washing machine

appliance in which the textiles are substantially immersed in the washing water, the mechanical action being produced by a device rotating about its axis continuously or reversing after a number of revolutions (an impeller). The uppermost point of this device is substantially below the minimum water level

### 3.1.105 washer-dryer

appliance which includes also a means for drying the textiles, usually by heating and tumbling

### 3.1.106 spin extraction

water-extracting function by which water is removed from textiles by centrifugal force. This is usually included as a function of an appliance

### 3.1.107 guard

part of the appliance specifically designed to provide protection by means of a physical barrier

### 3.1.108 operator

person or persons installing, operating, adjusting, maintaining, cleaning, repairing or moving appliances

### 3.1.109 workstation

place, as defined in the instructions of the relevant appliance, where the **operator** has to be in attendance to operate, or to adjust, or to control the appliance

Note 1 to entry: Example is the location where the **operator** loads the appliance.

### 3.1.110

#### public area

area in which the general public including children can enter

Note 1 to entry: Examples are launderettes, communal laundry rooms.

## 4 General requirement

This clause of Part 1 is applicable except as follows.

*Replace the first paragraph with the following:*

Appliances shall be constructed so that they function safely as to cause no danger to persons or surroundings during normal use, even in the event of carelessness, and during installation, adjusting, maintenance, cleaning, repairing or transportation.

## 5 General conditions for the tests

This clause of Part 1 is applicable except as follows:

### 5.2 Addition:

*The second and third sentence of the requirement are not applicable.*

### 5.3 Addition:

*The test of 15.101 is carried out before the test of 15.3.*

*The relevant tests of 21.101 and 21.102 are carried out before the test of Clause 18. The test of 22.104 is carried out after the test of Clause 18.*

### 5.7 Addition:

*Doubt is considered to exist if the temperature of the water is within 6 K of the boiling point and the difference between the temperature rise of the relevant part and the limit specified does not exceed 25 K minus the room temperature.*

## 6 Classification

This clause of Part 1 is applicable except as follows:

### 6.2 Addition:

Appliances shall be at least IPX4.

## 7 Marking and instructions

This clause of Part 1 is applicable except as follows:

### 7.1 Addition:

Appliances shall be marked in addition with:

- business name, and full address of the manufacturer and, where applicable, his authorised representative,
- model or type reference, serial number if any and production year,

NOTE 101 Production year is the year when the production process is completed. The production year can be a part of the serial number.

- designation of the appliance;

NOTE 102 The designation may be a combination of letters and/or numbers and shall enable to identify the appliance as specified in the instructions.

- the water supply pressure or range of pressures, in kilopascals (kPa), for appliances intended to be connected to a water supply, unless this is indicated in the instruction sheet,
- the maximum permissible steam supply pressure, in kilopascals (kPa), unless this is indicated in the instruction sheet,

- the maximum permissible hot water supply pressure, in kilopascals (kPa), unless this is indicated in the instruction sheet,
- the maximum permissible water, steam and hot water supply temperatures in degrees Celsius, unless this is indicated in the instruction sheet.

Appliances without automatic water level control shall be marked with the maximum water level.

Appliances not intended for connection to the hot water supply and not provided with heating elements shall be marked with the substance of the following:

CAUTION: Do not connect to the hot water supply.

#### 7.10 Addition:

If the **off position** is only indicated by letters, the word "off" shall be used.

#### 7.12 Replace the first sentence in the requirement of Part 1 with the following:

Instructions shall be provided with the appliance so that the appliance can be used safely.

The instructions shall contain at least the following information:

- the business name and full address of the manufacturer and, where applicable, his authorised representative;
- model or type reference of the appliance as marked on the appliance itself, except for the serial number;
- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers, the designation shall enable the identification of the appliance as specified in the instructions;
- the general description of the appliance, when needed due to the complexity of the appliance;
- specific precautions if required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving; <https://standards.iteh.ai/catalog/standards/sist/a04d4459-c1af-4d7d-b8ca-31812014>
- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance;
- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance.

The manufactures shall declare if the appliance is also intended to be used in **public areas**. If the appliance is not suitable for use in **public areas** the instruction shall include the substance of the following warning:

CAUTION This appliance shall not be installed where the public has access

The front cover of the instructions shall include the substance of the following warning:

CAUTION Read the instructions before using the appliance.

This wording may be replaced by symbols ISO 7000-0434 and ISO 7000-0790.

If symbols ISO 7000-0434 and ISO 7000-0790 are used, their meaning shall be explained.

The words 'Original instructions' shall appear on the language version(s) verified by the manufacturer or by the authorised representative.

When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence 'Translation of the original instructions' has to appear in the relevant instructions delivered with the appliance.

The instructions needed for maintenance/service to be done by specialised personnel, mandated by the manufacturer or the authorised representative, and may be supplied in only one Community language which the specialised personnel understand.

The instructions shall indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures.

The instructions shall specify the maximum mass of dry cloth in kilograms to be used in the appliance.