



**SLOVENSKI STANDARD**  
**SIST EN 50416:2005/A1:2015**  
**01-november-2015**

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**Gospodinski in podobni električni aparati - Varnost - Posebne zahteve za komercialne električne prenosne pomivalne stroje - Dopolnilo A1**

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

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

Appareils électrodomestiques et analogues - Sécurité - Règles particulières pour les lave-vaisselle à convoyeur à usage collectif

<https://standards.iteh.ai/catalog/standards/sist/94152dbf-3123-4759-9f14-298dca141587/sist-en-50416-2005-a1-2015>

**Ta slovenski standard je istoveten z: EN 50416:2005/A1:2015**

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**ICS:**

97.040.40 Pomivalni stroji Dishwashers

**SIST EN 50416:2005/A1:2015 en,fr**

**iTeh STANDARD PREVIEW**  
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[SIST EN 50416:2005/A1:2015](#)

<https://standards.iteh.ai/catalog/standards/sist/94152dbf-3123-4759-9f14-298dca141587/sist-en-50416-2005-a1-2015>

EUROPEAN STANDARD

**EN 50416:2005/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2015

ICS 97.040.40

English Version

## Household and similar electrical appliances - Safety - Particular requirements for commercial electric conveyor dishwashing machines

Appareils électrodomestiques et analogues - Sécurité - Règles particulières pour les lave-vaisselle à convoyeur à usage collectif

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

This amendment A1 modifies the European Standard EN 50416:2005; it was approved by CENELEC on 2015-08-10. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

[SIST EN 50416:2005/A1:2015](#)

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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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## European foreword

This document (EN 50416:2005/A1:2015) 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) 2016-08-10
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2018-08-10

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, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive 2006/42/EC, see informative Annex ZZ, which is an integral part of this document.

**iTeh STANDARD PREVIEW**

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.

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.

**EN 50416:2005/A1:2015 (E)****1 Modification to Foreword**

*Replace the first paragraph after the application dates by the following:*

This European Standard applies in conjunction with EN 60335-1:2012 and its amendments, which is referred to in this document as “Part 1”. This European Standard supplements or modifies the corresponding clauses of Part 1 as indicated in the text.

**2 Modification to Introduction**

*Replace the text of the Introduction by the following:*

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 falling within the scope of this European Standard.

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

This European Standard recognizes the level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of commercial electric **conveyor dishwashing 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 dishwashing machines.

A commercial electric **conveyor dishwashing machine** that complies with the text of this European 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 European 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.

Pressurized components incorporated in machines within the scope of this European Standard are pressure equipment that is classified no higher than category I of the Pressure Equipment Directive (93/68/EU). According to Article 1, item 3.6 of the Pressure Equipment Directive, this equipment is excluded from its scope.

The requirements of Annex CC of this European Standard do not support a relevant ESHR of the Machinery Directive 2006/42/EC.

**3 Modification to Clause 1 Scope**

*Delete NOTE 103.*

**4 Modification to Clause 2 Normative references**

*Delete EN ISO 12100-1:2003 and EN ISO 12100-2:2003.*

*Replace EN 954-1:1996 by:*

EN ISO 13849-1:2008, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design (ISO 13849-1:2006)*

Replace EN 61770:1999 by:

EN 61770:2009, *Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose-sets (IEC 61770:2008)*

Replace ISO 1817:1999 by:

ISO 1817:2011, *Rubber, vulcanized or thermoplastic – Determination of the effect of liquids*

*Addition:*

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 4871:2009, *Acoustics – Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

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 11204, *Acoustics – Noise emitted by machinery and equipment – Determination of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections (ISO 11204)*

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

ISO 3864-1, *Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings*

## 5 Modification to Clause 3 Definitions

### 3.1.9 Replacement:

#### **normal operation**

appliances intended to be connected to a water supply are connected to a water supply having the pressure and temperature specified in the instructions.

If a range of temperatures and pressures is specified in the instructions then the water supply is at the conditions within the range that will give the most unfavourable temperature results.

Water inlets intended for cold water only are connected to a source supplying water at a temperature of  $15\text{ °C} \pm 5\text{ °C}$ .

The appliance is filled with the maximum quantity of water for which it is designed, without detergents or rinsing agents. The appliances are tested without dishes.

The appliances are operated continuously.

**EN 50416:2005/A1:2015 (E)**

For **normal operation** conditions, the appliance is operated as follows:

- appliances are operated in accordance with the instructions for use, but with the controls intended to be set by the user set at maximum or that setting giving the most unfavourable temperature results.

*Add the following:*

**3.105****guard**

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

**3.106****operator**

person installing, operating, adjusting, maintaining, cleaning or moving the appliance

**3.107****workstation**

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

EXAMPLE The location where the **operator** loads the appliance.

**6 Modification to Clause 4 General requirement**

*Replace by the following:*

This clause of Part 1 is applicable *except as follows:*

*Replace the first paragraph by the following:*

Appliances shall be constructed so that they function safely so 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.

**7 Modification to Clause 7 Marking and instructions**

**7.1** *Replace the fourth and fifth dashed items of Part 1 by the following:*

- business name and full address of the manufacturer and, where applicable, his authorized 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.

*Add a new dashed item:*

- designation of the appliance. The designation may be a combination of letters and/or numbers and should enable to identify the machine as specified in the instructions.

*Delete the first and the second dashed items of the addition.*



**7.12** Add the following before the second paragraph in Part 1:

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

CAUTION: Read the instructions before using the machine.

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

*Replace the addition by the following:*

If symbols IEC 60417-5021, ISO 7000-0434 and ISO 7000-0790 are used on the product or in the instructions, their meaning shall be explained.

The instructions shall contain at least the following information:

- business name and full address of the manufacturer or where applicable his authorized representative;
- model or type reference of the appliance as marked on the appliance itself, except for the serial number;
- general description of the appliance, when needed due to the complexity of the appliance;
- designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers;
- intended **use of the appliance** as covered by the scope of this European Standard;
- meaning of the symbols used on the appliance and in the instructions;
- drawings, diagrams, descriptions and explanations necessary for the safe use, maintenance and repair of the appliance and for checking its correct functioning;
- information regarding putting into service, safe operation, handling, transportation, storage of the appliance taking into account its weight and, if necessary, instructions for the training of **operators**;
- instructions to enable adjustment and maintenance to be carried out safely, including the protective measures that should be taken during these operations;
- conditions in which the appliance meets the requirement of stability during use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns;

NOTE 101 General rules on schedules concerning transportation requirements and tests can be found in EN ISO 4180.

- operating method to be followed in the event of accident or breakdown to prevent unsafe actions;
- possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe **use of the appliance**.

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.