

---

---

**Gospodinjski in podobni električni aparati - Varnost - 2-58. del: Posebne zahteve za komercialne električne pomivalne stroje (IEC 60335-2-58:2002; spremenjen)**

Household and similar electrical appliances - Safety -- Part 2-58: Particular requirements for commercial electric dishwashing machines

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 60335-2-58:2005](https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ae99-20420c6c56b8/sist-en-60335-2-58-2005)

<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ae99-20420c6c56b8/sist-en-60335-2-58-2005>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 60335-2-58:2005

<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ae99-20420c6c56b8/sist-en-60335-2-58-2005>

EUROPEAN STANDARD

**EN 60335-2-58**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2005

ICS 97.040.40

Supersedes EN 60335-2-58:1997 + A1:1999

English version

**Household and similar electrical appliances –  
Safety**  
**Part 2-58: Particular requirements for commercial electric  
dishwashing machines**  
(IEC 60335-2-58:2002, modified)

Appareils électrodomestiques  
et analogues –  
Sécurité

Partie 2-58: Règles particulières  
pour les lave-vaisselle électriques  
à usage collectif  
(CEI 60335-2-58:2002, modifiée)

Sicherheit elektrischer Geräte  
für den Hausgebrauch und ähnliche  
Zwecke

Teil 2-58: Besondere Anforderungen  
für elektrische Spülmaschinen  
für den gewerblichen Gebrauch  
(IEC 60335-2-58:2002, modifiziert)

[SIST EN 60335-2-58:2005](https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-20420c6c56b8/sist-en-60335-2-58-2005)

<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-20420c6c56b8/sist-en-60335-2-58-2005>

This European Standard was approved by CENELEC on 2004-12-07. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of the International Standard IEC 60335-2-58:2002, prepared by the IEC Technical Committee 61, together with the common modifications prepared by CENELEC TC 61, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60335-2-58 on 2004-12-07.

This European Standard replaces EN 60335-2-58:1997 + A1:1999.

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) 2005-09-01
- date on which national standards conflicting with the EN have to be withdrawn (dow) 2007-12-01

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 commercial electric dishwashing machines.

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

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.

National deviations from this European Standard are listed in Annex ZB and are in addition to those in EN 60335-1.

- p NOTE In this document, p is used in the margin to indicate instructions for preparing the printed version.
-

## Introduction

p Add:

An investigation by CENELEC TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 73/23/EEC. For products having mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 98/37/EC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

---

## Endorsement notice

The text of the International Standard IEC 60335-2-58:2002 was approved by CENELEC as a European Standard with agreed common modifications as given below.

### COMMON MODIFICATIONS

#### 1 Scope

p Delete the first dashed item of note 102.

p Add the following to note 104:

- conveyor dishwashers (EN 50416).

#### 3 Definitions

p 3.1.9 In the sixth paragraph, replace "Conveyor dishwashers and brush" by "**Brush**".

p 3.101 Replace the text by "Void".

#### 11 Heating

p 11.2 Delete ", except conveyor dishwashers,".

p 11.5 Delete the addition.

p 11.8 Delete the addition.

#### 13 Leakage current and electric strength at operating temperature

p 13.1 Delete the addition.

#### 19 Abnormal operation

p 19.1 Delete the second paragraph.

p 19.13 Delete the first paragraph.

**20 Stability and mechanical hazards**

p 20.106 Replace the test by "Void".

**22 Construction**

p 22.6 Delete the second sentence of the second paragraph of the test specification.

p Add:

---

**Annex ZB**  
(informative)

**A-deviations**

*Addition:*

Clause      Deviation

7.15      **Austria** (Elektroschutzverordnung 1995 - BGBl. Nr. 706/1995, § 7.15)

**iTeh STANDARD PREVIEW**  
(standardsite.com)

If the marking of fixed appliances is not visible after the appliance has been installed, the relevant information shall also be included in the instructions and on an additional label which can be fixed near the appliance after installation.

[SIST EN 60335-2-58:2005](https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-20420c6c56b8/sist-en-60335-2-58-2005)

<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-20420c6c56b8/sist-en-60335-2-58-2005>

**Annex ZC**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60436	1981	Methods for measuring the performance of electric dishwashers	EN 50242 <sup>1)</sup> + corr. February	1998 2000
IEC 61770	1998	Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose-sets	EN 61770	1999
ISO 1817	1999	Rubber, vulcanised – Determination of the effect of liquids	–	–

---

<sup>1)</sup> EN 50242:1998 is related to, but not directly equivalent with, IEC 60436.

# INTERNATIONAL STANDARD

# IEC 60335-2-58

Third edition  
2002-11

---

---

## Household and similar electrical appliances – Safety –

### Part 2-58: Particular requirements for commercial electric dishwashing machines

ITeH STANDARD PREVIEW

(standards.iteh.ai)

*Appareils électrodomestiques et analogues –  
Sécurité* – [SIST EN 60335-2-58:2005](https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-2020-c56b8/sist-en-60335-2-58-2005)

<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-2020-c56b8/sist-en-60335-2-58-2005>

*Partie 2-58:  
Règles particulières pour les lave-vaisselle  
électriques à usage collectif*

© IEC 2002 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland  
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: [inmail@iec.ch](mailto:inmail@iec.ch) Web: [www.iec.ch](http://www.iec.ch)



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

PRICE CODE

V

For price, see current catalogue

## CONTENTS

FOREWORD .....	4
INTRODUCTION .....	6
1 Scope .....	7
2 Normative references .....	8
3 Definitions .....	8
4 General requirement .....	9
5 General conditions for the tests .....	9
6 Classification .....	9
7 Marking and instructions .....	10
8 Protection against access to live parts .....	11
9 Starting of motor-operated appliances .....	11
10 Power input and current .....	11
11 Heating .....	11
12 Void .....	12
13 Leakage current and electric strength at operating temperature .....	12
14 Transient overvoltages .....	12
15 Moisture resistance .....	13
16 Leakage current and electric strength .....	14
17 Overload protection of transformers and associated circuits .....	14
18 Endurance .....	14
19 Abnormal operation .....	14
20 Stability and mechanical hazards .....	16
21 Mechanical strength .....	17
22 Construction .....	18
23 Internal wiring .....	20
24 Components .....	21
25 Supply connection and external flexible cords .....	21
26 Terminals for external conductors .....	21
27 Provision for earthing .....	21
28 Screws and connections .....	22
29 Clearances, creepage distances and solid insulation .....	22
30 Resistance to heat and fire .....	22
31 Resistance to rusting .....	22
32 Radiation, toxicity and similar hazards .....	22
Annexes .....	24
Annex AA (normative) Detergent and rinsing agent .....	24
Annex BB (normative) Ageing test for elastomeric parts .....	25
Annex CC (normative) Requirements to avoid backsiphonage .....	27



Bibliography.....	31
Figure 101 – Splash apparatus.....	23
Figure CC.101 – Arrangement for the determination of maximum and critical water level for dynamic backflow preventer (see 3.9 of Annex CC) .....	29
Figure CC.102 – Backsiphonage test .....	30

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 60335-2-58:2005

<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ae99-20420c6c56b8/sist-en-60335-2-58-2005>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –  
SAFETY –**

**Part 2- 58: Particular requirements for commercial  
electric dishwashing machines**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by IEC subcommittee 61E: Safety of electrical commercial catering equipment, of IEC technical committee 61: Safety of household and similar electrical appliances.

This third edition cancels and replaces the second edition published in 1995 and its amendment 1 (1998). It constitutes a technical revision.

The text of this part of IEC 60335 is based on the second edition and the following documents:

FDIS	Report on voting
61E/406/FDIS	61E/418RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fourth edition (2001) of that standard.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for commercial electric dishwashing machines.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 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 3 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 of Part 1 concerns an adjective, the adjective and the associated noun are also in bold .

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

ITeH STANDARD PREVIEW  
(standards.iteh.ai)

The following differences exist in the countries indicated below.

- 6.1: Class 01 appliances are allowed (Japan).
- 6.2: For appliances intended to be installed in a kitchen, an appropriate degree of protection against harmful ingress of water is required according to their height of installation (France).
- 13.2: Leakage current limits are different (Japan).
- 16.2: Leakage current limits are different (Japan).
- Clause 21: For appliances intended to be installed in a kitchen, different values of impact energy are applicable according to the height of the impact point (France).

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

## INTRODUCTION

It has been assumed in the drafting of this International 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 appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice.

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 appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 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 appliances and takes precedence over horizontal and generic standards covering the same subject.

An appliance 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.

An appliance 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.

ITEH STANDARD PREVIEW  
(standards.iteh.ai)  
SIST EN 60335-2-58:2005  
<https://standards.iteh.ai/catalog/standards/sist/30dc084d-a62d-4b29-ac99-20420c6c56b8/sist-en-60335-2-58-2005>