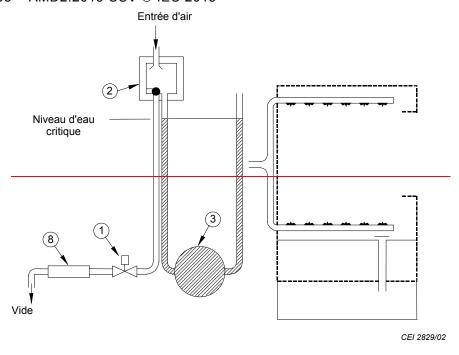


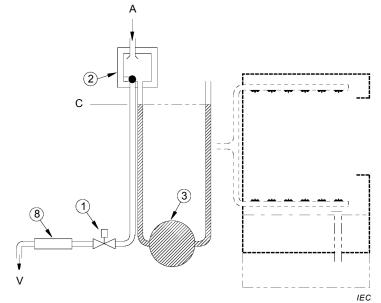
Légende

- 1 électrovanne vanne électromagnétique
- 2 clapet anti-retour
- 3 chaudière
- 4 bras de rinçage
- 5 dispositif d'évacuation normal
- 6 trop-plein dans une situation défectueuse
- 7 point de branchement
- 8 tuyau transparent
- A entrée d'air
- C niveau d'eau critique
- M niveau d'eau maximal
- N niveau d'eau normal

Figure CC.101 – Configuration Montage pour la détermination du niveau d'eau maximal et critique pour les clapets anti-retour (voir 3.9 de l'Annexe CC)

+AMD1:2008 + AMD2:2015 CSV © IEC 2015





Légende

- 1 électrovanne vanne électromagnétique
- 2 clapet anti-retour
- 3 chaudière
- 4 bras de rinçage
- 5 dispositif d'évacuation normal
- 6 trop-plein dans une situation défectueuse
- 7 point de branchement
- 8 tuyau transparent
- A entrée d'air
- C niveau d'eau critique
- V vide

Figure CC.102 – Montage pour l'essai de retour d'eau par siphonage pour les clapets antiretour

Bibliographie

La bibliographie de la Partie 1 est applicable avec l'exception suivante.

Addition:

IEC 61010-2-040, Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire – Partie 2-040: Exigences particulières pour stérilisateurs et laveurs désinfecteurs utilisés pour traiter le matériel médical

ISO 4046:1978 2002, Papier, carton, pâtes et termes connexes – Vocabulaire – Partie 4: Catégories et produits transformés de papier et de carton

This is a preview. Click here to purchase the full publication.



Edition 3.2 2015-04

FINAL VERSION

VERSION FINALE

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

Appareils électrodomestiques et analogues – Sécurité – Partie 2-58: Règles particulières pour les lave-vaisselle électriques à usage collectif



CONTENTS

FΟ	REWORD	4
INT	FRODUCTION	6
1	Scope	7
2	Normative references	7
3	Terms and definitions	8
4	General requirement	9
5	General conditions for the tests	9
6	Classification	9
7	Marking and instructions	9
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	12
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	17
23	Internal wiring	20
24	Components	21
25	Supply connection and external flexible cords	21
26	Terminals for external conductors	22
27	Provision for earthing	22
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	23
Anı	nexes	25
Anı	nex AA (normative) Detergent and rinsing agent	25
Anı	nex BB (normative) Ageing test for elastomeric parts	26
Anı	nex CC (normative) Requirements to avoid backsiphonage	28
Bib	oliography	32

IEC 60335-2-58:2002	- 3 -	
+AMD1:2008+AMD2:2015 CSV © IEC 201	5	
Figure 101 – Splash apparatus		24
Figure CC.101 – Arrangement for the dete dynamic backflow preventers	rmination of maximum water level for	30
· ·	gement for dynamic backflow preventers	

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

DISCLAIMER

This Consolidated version is not an official IEC Standard and has been prepared for user convenience. Only the current versions of the standard and its amendment(s) are to be considered the official documents.

This Consolidated version of IEC 60335-2-58 bears the edition number 3.2. It consists of the third edition (2002-11) [documents 61E/406/FDIS and 61E/418/RVD], its amendment 1 (2008-02) [documents 61E/598/FDIS and 61E/613/RVD] and its amendment 2 (2015-04) [documents 61/4842/FDIS and 61/4897/RVD]. The technical content is identical to the base edition and its amendments.

This Final version does not show where the technical content is modified by amendments 1 and 2. A separate Redline version with all changes highlighted is available in this publication.

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.

The French version of this standard has not been voted upon.

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 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).

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

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 and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

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.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

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.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

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.

+AMD1:2008+AMD2:2015 CSV © IEC 2015

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

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

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electrically operated dishwashing machines for washing plates, dishes, glassware, cutlery and similar articles, with or without means for water heating or drying, not intended for household use, their **rated voltage** being not more than 250 V for single-phase appliances connected between one phase and neutral and 480 V for other appliances.

NOTE 101 These appliances are used for example in restaurants, canteens, hospitals, and commercial enterprises such as bakeries, butcheries, etc.

NOTE 102 Examples of such appliances are

- conveyor dishwashers;
- batch dishwashers;
- brush machines.

Requirements to avoid backsiphonage of non-potable water into the water mains are specified in Annex CC.

The electrical part of appliances making use of other forms of energy is also within the scope of this standard.

As far as is practicable, this standard deals with the common hazards presented by these types of appliances.

NOTE 103 Attention is drawn to the fact that:

- for appliances 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;
- in many countries additional requirements are specified for pressure appliances.

NOTE 104 This standard does not apply to:

- appliances designed exclusively for industrial purposes, for example machines used in the food industry for cleaning receptacles that serve as packaging for final products (e.g. bottle-cleaning machines), and machines used in manufacturing processes;
- sterilizers and washer-disinfectors used to treat medical materials (IEC 61010-2-040);
- dishwashers that do not form one functional unit, for example where a transportation device transfers the load from one separate unit to another;
- separately driven transport devices not confined in the appliance;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

2 Normative references

This clause of Part 1 is applicable except as follows.