



SLOVENSKI STANDARD
SIST EN IEC 60335-2-41:2022/A11:2022

01-marec-2022

**Gospodinjski in podobni električni aparati - Varnost - Posebne zahteve za črpalke -
Dopolnilo A11**

Household and similar electrical appliances - Safety - Particular requirements for pumps

**iTeh STANDARD
PREVIEW**

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Ta slovenski standard je istoveten z: EN IEC 60335-2-41:2021/A11:2021

SIST EN IEC 60335-2-41:2022/A11:2022

<https://standards.iteh.ai/catalog/standards/sist/b73f7152-622f-4454-8894-922d9454896d/sist-en-iec-60335-2-41-2022-a11-2022>

ICS:

13.120	Varnost na domu	Domestic safety
23.080	Črpalke	Pumps
97.180	Razna oprema za dom in trgovino	Miscellaneous domestic and commercial equipment

SIST EN IEC 60335-2-41:2022/A11:2022 en,fr

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[SIST EN IEC 60335-2-41:2022/A11:2022](https://standards.iteh.ai/catalog/standards/sist/b73f7152-622f-4454-8894-922d9454896d/sist-en-iec-60335-2-41-2022-a11-2022)

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

**EN IEC 60335-2-
41:2021/A11**

December 2021

ICS 13.120; 23.080; 97.180

English Version

Household and similar electrical appliances - Safety - Particular requirements for pumps

Appareils électrodomestiques et analogues - Sécurité -
Exigences particulières pour les pompes

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-40: Besondere Anforderungen für
elektrisch betriebene Wärmepumpen, Klimageräte und
Raumluft-Entfeuchter

This amendment A11 modifies the European Standard EN IEC 60335-2-41:2021; it was approved by CENELEC on 2021-09-20. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60335-2-41:2021/A11:2021 (E)**European Foreword**

This document (EN IEC 60335-2-41:2021/A11:2021) 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) 2022-06-24
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2024-12-24

This document is read in conjunction with EN IEC 60335-2-41:2021.

The numbering system for European clauses, subclauses, notes, tables, figures and annexes that are additional to those in the IEC standard are prefixed with the letter "Z".

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).

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

For the relationship with EU Directives see informative Annexes ZZA and ZZB, which are an integral part of this document.

<https://standards.iteh.ai/catalog/standards/sist/b73f7152-622f-4454-8894-922d9454896d/sist-en-iec-60335-2-41-2021-a11-2022>

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

TEXT of A11 of EN IEC 60335-2-41

1 Modification to the Introduction

Addition:

With this European amendment A11, the standard EN 60335-2-41:2003+A1:2004+A2:2010 is superseded.

This European amendment A11 supplements or modifies the corresponding clauses of the standards below:

- EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019 (Part 1)
- EN IEC 60335-2-41:2021 (Part 2)

2 Modifications to Clause 1, "Scope"

Replace the third paragraph starting from "Appliances not intended..." up to "- children playing with the appliance" by the follows:

"NOTE Z101 Battery-operated appliances and other d.c. supplied appliances are within the scope of this standard. Dual supply appliances, either mains-supplied or battery-operated, are regarded as battery-operated appliances when operated in the battery mode.

NOTE Z102 Examples of appliance for household environment are appliances for typical housekeeping functions used in the household environment and appliances for typical housekeeping functions used by non-expert users:

- in shops, offices and other similar working environments;
- in farm houses;
- by clients in hotels, motels and other residential type environments;
- in bed and breakfast type environments.

NOTE Z103 Household environment includes the dwelling and its associated buildings, the garden, etc.

Appliances and machines intended to be used by trained users in shops, in light industry and on farms, and appliances and machines which are declared to be for commercial use are within the scope of this document.

Additional requirements for such appliances are given in Annex ZE.

NOTE Z104 The statement from the manufacturer in the product information concerning the specific product is considered to determine the intended use of the appliance. The statement shall accurately reflect the reasonably foreseeable use of the product.

This standard deals with the reasonably foreseeable hazards presented by appliances and machines that are encountered by all persons.

However, in general, it does not take into account **children** playing with the appliances and **vulnerable people**.

EN IEC 60335-2-41:2021/A11:2021 (E)

It does not take into account the use of the following appliances by **children** and **vulnerable people**:

- Pumps for which annex ZE is applicable
- **sludge pumps;**
- **vertical wet pit pumps;**
- **deep well pumps;**
- **submersible pumps**

It does not take into account the use of the following appliances by **young children**:

- **garden pond pumps;**
- **shower-boost pumps;**

It does not take into account the use of the following appliances by **very young children**:

- **shower-boost pumps;**
- **aquarium pumps;**
- *Table fountain pumps.*

It is recognised that **very vulnerable people** may have needs beyond the level addressed in this document."

3 Modification to Clause 3, "Terms and Definitions"

3.6.3

Add a new sentence <https://standards.iteh.ai/catalog/standards/sist/b73f7152-6226-4454-8894-922494548964/sist-en-iec-60335-2-41-2022-a11-2022>

However, for sludge pumps, vertical wet pit pumps, submersible pumps, deep well pumps and for pumps intended to be used for commercial purposes by trained users test probe 18 is not applicable.

3.1.9

Modify the last sentence by the following:

Sludge pumps are tested with water unless they are vertical wet pit pumps and intended for media densities above 1000 kg/m³, in which case they are operated with sludge with a density corresponding to the intended media as described in the instructions.

3.Z101

Aquarium pump

Pump intended to be used in the container with limited volume for indoor use

3.Z102

Garden pond pump

Pump intended to use in large container for outdoor use

4 Modifications to Clause 7, "Marking and instructions"

7.12

Replace the third and the fourth paragraphs starting with "The instructions shall include... " up to "... children without supervision." by the following:

The instructions for **sludge pumps, vertical wet pit pumps, submersible pumps, deep well pumps** and for pumps intended to be used for commercial purposes by trained users shall include the substance of the following:

This appliance shall not be used by **children**. Cleaning and user maintenance shall not be carried out by children.

The instructions for **garden ponds pumps** shall include the substance of the following:

This appliance can be used by children aged from 8 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved. Cleaning and user maintenance shall not be carried out by **children** unless they are aged from 8 years and above and supervised.

The instructions for **garden pond pumps** shall indicate if the pump is protected against the effects of freezing.

The instructions for **shower-boost pumps, aquarium pumps and table fountain pumps**, shall include the following text:

This appliance can be used by children older than 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be carried out by children without supervision.

The instructions for pumps shall also include the substance of the following:

Always disconnect the appliance from the supply before assembling, disassembling or cleaning.

Appliances can be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved.

Children shall not play with the appliance.

Pumps without indication that they are protected against the effect of freezing shall not be left outside during freezing weather conditions.

5 Modification to Clause 8, "Protection against access to live parts"

8.1.1 Add at the end of the third paragraph the following new sentence:

For **sludge pumps, vertical wet pit pumps, submersible pumps, deep well pumps** and for pumps intended to be used for commercial purposes by trained users test probe 18 of EN 61032 is not applicable.

EN IEC 60335-2-41:2021/A11:2021 (E)

6 Modification to Clause 11, "Heating"**11.8**

Modify the addition starting with "For pumps marked..." by the following:

For pumps whose enclosure temperature arises from the medium being pumped, the enclosure temperature is not measured

7 Modification to Clause 20, "Stability and mechanical hazards"

20.2 *Add a new paragraph, after the second dashed item in the compliance criteria, the following:*

*For **sludge pumps, vertical wet pit pumps, submersible pumps, deep well pumps** and for pumps intended to be used for commercial purposes by trained users test probe 18 of EN 61032 is not applicable.*

8 Modification to Clause 22, "Construction"**22.Z101**

Garden pond pumps which are protected against the effects of freezing shall be constructed so that during freezing conditions, no damage is done which impairs compliance with this standard

Compliance is checked by inspection and the following test:

*A **submersible pump** is placed in a water container as in normal use and submersed fully in water ensuring also the impeller and pump housing is filled with water. The container is then cooled to -10 C and after -10 C is reached at the impeller, it is kept at -10 C for additional 4 h. Hereafter the pump is left to thaw, and shall comply with test of clause 16. Following this, the pump is disassembled and inspected for further damage which impairs compliance with this standard.*

Other pumps are operated for 1h in normal operation and while keeping the pump housing filled with water the pump is then cooled to -10 C. After -10 C is reached at the impeller, the pump is kept at -10 C for additional 4 h. Hereafter the pump is left to thaw, and shall comply with test of clause 16. Following this, the pump is disassembled and inspected for further damage which impairs compliance with this standard.

9 Modification to Clause 25, "Supply connection and external flexible cords"**25.8 Addition:**

*In the paragraph starting with "the supply cord of other **submersible pumps**..." remove the words "aquarium pumps"*

Add new additional paragraph:

The supply cord of **aquarium pumps** shall have a length of at least 0.5 m in excess of the maximum operating depth marked on the pump.

10 Modification to the Annexes

The annexes of part 1 are applicable except as follows:

Annex ZC (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Annex ZC of Part 1 applies, with the following additions:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60364-7-701	-	Low-voltage electrical installations - Part 7-701: Requirements for special installations or locations - Locations containing a bath or shower	HD 60364-7-701 +A11 +AC +A12	2007 2011 2011 2017
IEC 60364-7-702	-	Low-voltage electrical installations - Part 7-702: Requirements for special installations or locations - Swimming pools and fountains	HD 60364-7-702	2010

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EN IEC 60335-2-41:2021/A11:2021 (E)

Annex ZE (normative)

Specific additional requirements for appliances intended for commercial use

2 Normative references

Add the following references:

EN ISO 20361:2015, *Liquid pumps and pump units – Noise test code – Grades 2 and 3 of accuracy*

7 Marking and instructions

7.1

Replace the third dashed item added in part 1 Annex ZE and the NOTE ZE2 by the following:

- Designation of the pump

Note ZE2 the designation enables the identification of the pump as specified in the instructions and may be the generic denomination and function of the product, or a combination of letters and/or numbers.

7.12

Add the following: [SIST EN IEC 60335-2-41:2022/A11:2022
https://standards.iteh.ai/catalog/standards/sist/b73f7152-622f-4454-8894-922d9454896d/sist-en-iec-60335-2-41-2022-a11-2022](https://standards.iteh.ai/catalog/standards/sist/b73f7152-622f-4454-8894-922d9454896d/sist-en-iec-60335-2-41-2022-a11-2022)

The instructions shall indicate substance of the following:

“This appliance is designed to be used in commercial areas”

7.12.ZE1

Replace the sixth dashed item starting with "on airborne noise emissions,..." up to "...relevant Part 2" with the following:

- For submersible pumps, which are likely not to cause any relevant noise hazard, the instructions shall indicate that the A-weighted emission sound pressure level is less than or equal to 70 dB(A)

For other pumps the instructions shall include information on airborne noise emission determined according to EN ISO 20361.

7.12.ZE2 Replacement

At least, it shall include the substance of the following:

A warning that the pump shall be disconnected from its power source during cleaning or maintenance and when replacing parts:

- for mains operated pumps by removing the plug from the socket-outlet or;
- for battery operated pumps by safely disconnecting at least the non-earthed pole of the battery or by an equivalent method (disconnecting device) or;
- for mains operated pumps without a plug, by operating the disconnection device.