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Household and similar electrical appliances - Safety -
Part 2-21: Particular requirements for storage water
heaters

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60335-2-21:2021 sisaldab Euroopa standardi EN 60335-2-21:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 60335-2-21:2021 consists of the English text of the European standard EN 60335-2-21:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.06.2021.	Date of Availability of the European standard is 18.06.2021.
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ICS 13.120, 91.140.65

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ICS 13.120; 91.140.65

Supersedes EN 60335-2-21:2003 and all of its
amendments and corrigenda (if any)

English Version

Household and similar electrical appliances - Safety - Part 2-21:
Particular requirements for storage water heaters
(IEC 60335-2-21:2012 , modified + COR1:2013)

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-21: Règles particulières pour les chauffe-eau à
accumulation
(IEC 60335-2-21:2012 , modifiée + COR1:2013)

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-21: Besondere Anforderungen für
Wassererwärmer (Warmwasserspeicher und
Warmwasserboiler)
(IEC 60335-2-21:2012 , modifiziert + COR1:2013)

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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

European foreword

This document (EN 60335-2-21:2021) consists of the text of IEC 60335-2-21:2012 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", together with the common modifications 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 (dop) 2021-12-18
national level by publication of an identical national standard or
by endorsement
- latest date by which the national standards conflicting with this (dow) 2024-06-18
document have to be withdrawn

This document supersedes EN 60335-2-21:2003, and all of its amendments and corrigenda (if any).

This document is read in conjunction with EN 60335-1:2012+A11:2014+ A13:2017+A1:2019+ A14:2019+A2:2019.

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

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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 see informative Annex ZZA, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60335-2-21:2012 was approved by CENELEC as a European Standard with agreed common modifications.

1 Modification to the Scope

Delete the note to the fourth paragraph

Replace the fifth paragraph except for notes 101 and 102 by the following:

This document 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 appliance;
- the use of the appliance by **very young children**;

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

2 Modification to Clause 7 "Marking and instructions"

7.12 Modification:

Replace in the first sentence of the fourth paragraph of Part 1 the words "8 years" by "3 years".

Add a new second sentence fourth paragraph of Part 1 the following:

Children aged from 3 to 8 years are only allowed to operate the tap connected to the water heater.

3 Modification to Clause 19 "Abnormal operation"

19.2 Addition:

Add the following sentence to Note 101:

If there are separate thermostats in the phases of a three-phase water heater with star connection (without neutral), all thermostats are short-circuited simultaneously.

4 Modification to the annexes

Modify the annexes as follows:

Annex ZA (normative)

Special national conditions

Addition:

<u>Clause</u>	<u>Special national condition</u>
---------------	-----------------------------------

22.101	Denmark, Finland, Norway and Sweden
--------	--

For closed water heaters, the minimum rated pressure is 1,0 MPa.

22.102	Denmark (Instruction AT 2.1.2-4, 1994 and AT Instruction B.4.8)
--------	--

Cold water inlets on the heated storage water heater, the safety valve and the blow out piping shall have a clear flow diameter of at least Ø 20 mm.

Annex ZB (informative) A-deviations

Addition:

<u>Clause</u>	<u>Deviation</u>
---------------	------------------

24.101	United Kingdom (Building Regulation Part G3)
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An unvented water heater shall be fitted with two independent safety devices, in addition to the thermostat used for normal temperature control. These can be a non-self-resetting thermal cut-out and a temperature relief valve according to BS 6283 Part 2 or a combined temperature and pressure relief valve according to BS EN 1490.

24.102	United Kingdom (Building Regulation Part G3)
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The water temperature of the stored water shall at no time exceed 100 °C.

Replace Annex ZZA in the part 1 by the following:

Annex ZZA (informative)

Relationship between this European Standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Compliance with this Part 2 when used together with the Part 1 provides one means of conformity with the safety objectives.

Table ZZA.1 – Correspondence between this European Standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/ Notes
1 a)	Clauses 4, 7	None
1 b)	Clauses 4, 7	None
1 c)	Clauses 4, 7	None
2 a)	Clauses 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 b)	Clauses 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
2 c)	Clauses 6, 7, 11, 15, 17, 19, 20, 21, 22, 24, 25, 30, 32	None
2 d)	Clauses 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	None
3 a)	Clauses 6, 7, 11, 17, 19, 20, 21, 22	None
3 b)	Clauses 7, 11, 15, 19, 22, 25, 32	None
3 c)	Clauses 6, 7, 9, 10, 11, 14, 17, 19, 21, 22	None

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

Annex ZZB
(informative)

Relationship between this European standard and the essential requirements of Directive 2006/42/EC aimed to be covered

Annex ZZB is not applicable

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5 Modification to the Bibliography

Add the following notes to the relevant references in the addition:

IEC 60335-2-15	NOTE Harmonized as EN 60335-2-15.
IEC 60335-2-35	NOTE Harmonized as EN 60335-2-35.
IEC 60335-2-75	NOTE Harmonized as EN 60335-2-75.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Household and similar electrical appliances – Safety –
Part 2-21: Particular requirements for storage water heaters**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-21: Règles particulières pour les chauffe-eau à accumulation**



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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Part 2-21: Particular requirements for storage water heaters**

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**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-21: Particular requirements for storage water heaters**

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This part of International Standard IEC 60335 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

This sixth edition cancels and replaces the fifth edition published in 2002 including its Amendment 1 (2004) and its Amendment 2 (2008). It constitutes a technical revision.

The principal changes in this edition as compared with the fifth edition of IEC 60335-2-21 are as follows (minor changes are not listed):

- added requirements for immersion heater units (fixed immersion heaters);
- removed reference to ISO 13732-1 from Bibliography.