

Specification for

**Safety of household and
similar electrical appliances**

Part 2. Particular requirements

Section 2.21 Storage water heaters

The European Standard EN 60335-2-21 : 1992 has the status of a British Standard

Sécurité des appareils électrodomestiques et
analogues
Deuxième partie. Règles particulières pour les
chauffe-eau à accumulation

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2. Besondere Anforderungen für
Wassererwärmer (Warmwasserspeicher und
Warmwasserboiler)

UDC 644.627-83 : 614.8 : 620.1

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

This British Standard, having been prepared under the direction of the Light Electrical Engineering Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 October 1992

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The following BSI references relate to the work on this standard:
Committee reference LEL 161
Draft for comment 87 23537 DC

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Amendments issued since publication

Amd. No.	Date	Text affected

Amendment No. 1
published and effective from 15 March 1995
to BS EN 60335-2-21 : 1992

Specification for safety of household and similar electrical appliances
Part 2. Particular requirements
Section 2.21 Storage water heaters

Revised text

National foreword

Delete paragraph 4 and substitute the following.

This British Standard is to be read in conjunction with BS 3456 : Part 201 : 1990

General requirements, including the amendments shown in the following table, which supplement and modify BS 3456 : Part 201. Those which apply to this British Standard are indicated by an asterisk.

Amendment to BS 3456 : Part 201 : 1990	Amendment to EN 60335-1 : 1988	Amendment to IEC 335-1 : 1976
Amendment No. 1 : 1990*	Amendment 2 : 1988 ¹⁾	Amendment No. 4 : 1984
Amendment No. 2 : 1990*	Amendment 5 : 1990 ¹⁾	Amendment No. 5 : 1986
Amendment No. 3 : 1990*	Amendment 6 : 1989 ¹⁾	Amendment No. 6 : 1988
Amendment No. 4 : 1992*	Amendment A51 : 1991	—
Amendment No. 5 : 1992*	Amendment A52 : 1992	—
Amendment No. 6 : 1992*	Amendment A53 : 1992	—
Amendment No. 7 : 1993	Amendment A54 : 1992	—
Amendment No. 8 : 1993	Amendment A55 : 1993	—
Amendment No. 9 : 1993	Corrigendum to Amendment A55 : 1993	—
Amendment No. 10 : 1994	Corrigendum to EN 60335-1 : 1988	—

¹⁾ These amendments to EN 60335-1 implement, with additions and modifications, the corresponding amendments to IEC 335-1.

AMD 8463/March 1995

Amendment No. 2
published and effective from 15 December 1995
to BS EN 60335-2-21 : 1992

Specification for safety of household and similar electrical appliances
Part 2. Particular requirements
Section 2.21 Storage water heaters

NOTE. The English language version of European Standard EN 60335-2-21 was implemented in the United Kingdom by the publication of BS EN 60335-2-21 : 1992. Amendment No. 1 made changes to the national foreword to BS EN 60335-2-21 : 1992 and this amendment implements amendment A3 to EN 60335-2-21. There are no amendments A1 and A2 to EN 60335-2-21.

This Standard together with the European Standard EN 60335-2-21 : 1992 has the status of a British Standard.

Revised text

National foreword (as amended by Amendment No. 1 to
BS EN 60335-2-21 : 1992)

In paragraph 1

line 4, after 'heaters' insert 'including amendment A3'

line 7, delete 'and Amendment 2 : 1990' and insert, 'Amendment 2 : 1990 and Amendment 3 : 1992'.

After paragraph 2 insert 'It should be noted that in **22.7** 'be provided with' was modified to 'be fitted with' but is now replaced by 'incorporate'.

After paragraph 5 insert 'The foreword of the EN Amendment A3 to EN 60335-2-21 makes reference to the 'date of withdrawal (dow) of conflicting national standards' as '1997-12-01'. In this case the relevant standard is BS EN 60335-2-21 : 1992 as amended by Amendment No.1 but the date of withdrawal relates only to those Parts of the British Standard subject to Amendment No. 2. Certificates and marks will not be awarded after this date with respect to the British Standard not incorporating Amendment No. 2. They will be awarded with respect only to the amended British Standard. However, such certificates and marks, already awarded with respect to the British Standard not incorporating Amendment No. 2 may continue to apply to production until 2002-12-07'.

AMD 8854/December 1995

EN amendment title page and foreword

Insert the attached EN amendment title page (foreword on reverse).

AMD 8854/December 1995

Text of EN 60335-2-21

Amend the text of European Standard EN 60335-2-21 in accordance with the details given on the attached pages.

AMD 8854/December 1995

UDC 644.627-83 : 614.8 : 620.1
ICS 97.180

Descriptors: Household electrical appliances, storage water heaters, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

Safety of household and similar electrical appliances Part 2: Particular requirements for storage water heaters

(IEC 335-2-21 : 1989/A3 : 1992, modified)

Sécurité des appareils électrodomestiques
et analogues
Partie 2: Règles particulières pour les
chauffe-eau à accumulation
(CEI 335-2-21 : 1989/A3 : 1992, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2: Besondere Anforderungen für
Wassererwärmer (Warmwasserspeicher und
Warmwasserboiler)
(IEC 335-2-21 : 1989/A3 : 1992, modifiziert)

This amendment A3 modifies the European Standard EN 60335-2-21 : 1992; it was approved by CENELEC on 1995-03-06. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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 to amendment A3

The proposal to endorse amendment 3 : 1992 to IEC 335-2-21 : 1989, document CLC/TC 61 (SEC) 831, was circulated under the CENELEC enquiry procedure in February 1992. This proposal was discussed during the Pettenasco meeting in September 1992, when it was decided to submit a draft for an amendment to EN 60335-2-21, : 1992 to the Unique Acceptance Procedure (UAP). As the draft prAD was not ratified, a further discussion took place during the Oslo meeting in April 1994, document CLC/TC 61 (SEC) 945, when it was decided to submit a revised draft to a second vote. This revised draft was circulated in October 1994 and was ratified by CENELEC as amendment A3 on 1995-03-06.

There are no amendments A1 and A2 to EN 60335-2-21.

This amendment has been prepared by the secretariat of CENELEC Technical Committee TC 61.

The following dates are applicable:

- latest date of publication of
an identical national standard (dop) 1995-12-01
- latest date of withdrawal of
conflicting national standards (dow) 1997-12-01

For products which have complied with EN 60335-2-21 : 1992 before 1997-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2002-12-01.

This amendment supplements or modifies the corresponding clauses of EN 60335-2-21 : 1992.

As a consequence of endorsing amendment 3 to IEC 335-2-21 the common modification in EN 60335-2-21 concerning subclause 22.7 is withdrawn.

EN 60335-2-21 : 1992 including this amendment has to be used in conjunction with EN 60335-1 : 1988, including its amendments A2 : 1988, A5 : 1989, A6 : 1989, A51 : 1991, A52 : 1992, A53 : 1992, A54 : 1992 and A55 : 1993.

There are no special national conditions causing a deviation from this amendment.

There are no national deviations from this amendment.

Endorsement notice

The text of amendment 3 : 1992 to the International Standard IEC 335-2-21 : 1989 was approved by CENELEC as an amendment to the European Standard with common modifications as given below

Common modifications

p Prefaces Delete.

P Add:

27 Provision for earthing

27.1 *Replace the first addition by:*

Metal containers of Class 1 water heaters shall be reliably connected to the earthing terminal unless the metal sheath of the heating element is reliably connected to the earthing terminal. Water inlet and outlet pipes shall be of metal and shall be reliably connected to the earthing terminal.

Page 7

PREFACE

Add to the list of differences existing in some countries:

- If heating elements of closed water heaters incorporate a thermal cut-out, they shall not be fitted by means of a 2 ¼ inch screw thread (United Kingdom) (Clause 22).

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7 Marking

7.12 Add the following text:

Closed water heaters shall be accompanied by an instruction sheet stating:

- the action to be taken if water issues from the discharge pipe of the pressure relief device;
- that the discharge pipe must be left open to the atmosphere;
- how the water heater can be drained.

The installation instructions for closed water heaters shall state that the discharge pipe connected to the pressure relief device is to be installed in a continuous downward slope.

Page 29

22 Construction

22.7 In the replacement, replace "be provided with" by "incorporate".

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22.109 In the requirement replace "water heaters" by "water heaters having a capacity of more than 15 l".

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National foreword

This British Standard has been prepared under the direction of the Light Electrical Engineering Standards Policy Committee and is the English language version of EN 60335-2-21 : 1992 *Safety of household and similar electrical appliances Part 2 : Particular requirements for storage water heaters*, published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived by CENELEC from IEC 335-2-21 : 1989 (Third edition) together with Amendment 1 : 1990 and Amendment 2 : 1990 published by the International Electrotechnical Commission (IEC).

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by a side line in the margin. The national differences from the preface of IEC 335-2-21 and parts of the original IEC text that have been modified by CENELEC have been quoted in national annex NA.

Attention is drawn particularly to annex ZY (informative) and to the UK national deviations for Clauses 22.7 and 24.102 due to legal requirements relating to UK Building Regulations Section G3.

This British Standard is to be read in conjunction with BS 3456 : Part 201 : 1990 *General requirements*, which it supplements or modifies. The many references to Part 1 should be read as references to BS 3456 : Part 201, which is the English language version of EN 60335-1 which was derived from the 1983 reprint of IEC Publication 335-1 (1976) second edition including Amendments 1, 2 and 3 to IEC 335-1.

The foreword of EN 60335-2-21 makes reference to the 'date of withdrawal', now, of the relevant national standard. In this case the relevant national standard is BS 3456 : Part 102 : Section 102.21 : 1988 which will be withdrawn on 1 January 1996 in accordance with the CENELEC Internal Regulations. Certificates and marks will not be awarded after this date with respect to the withdrawn British Standard. However such certificates and marks, already awarded, may continue to apply until 1 January 2001.

Product approval. Attention is drawn to the fact that products conforming to this British Standard may be approved by the British Electrotechnical Approvals Board for the purposes of participation in the CENELEC Certification Agreement and in the CB Scheme of the IECEE. (Details of the BEAB Approval Marks Scheme are given on the inside back cover.)

Compliance with a British Standard does not of itself confer immunity from legal obligations.

UDC 644.627-83 : 614.8 : 620.1

Descriptors: Household electrical appliances, storage water heaters, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

Safety of household and similar electrical appliances Part 2 : Particular requirements for storage water heaters

(IEC 335-2-21 : 1989 + amendments 1 : 1990 and 2 : 1990, modified)

Sécurité des appareils électrodomestiques et
analogues
Deuxième partie: Règles particulières pour les
chauffe-eau à accumulation
(CEI 335-2-21 : 1989 + modifications 1 : 1990
et 2 : 1990, modifiées)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2: Besondere Anforderungen für
Wassererwärmer (Warmwasserspeicher und
Warmwasserboiler)
(IEC 335-2-21 : 1989 + Änderungen 1 : 1990
und 2 : 1990, modifiziert)

This European Standard was approved by CENELEC on 24 March 1992. 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.

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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 proposal to endorse the third edition of IEC 335-2-21, document CLC/TC 61 (SEC) 693, was circulated under the enquiry procedure in July 1989.

This proposal was discussed during the Helsinki meeting in May 1990 when it was decided to submit a draft for EN 60335-2-21 to the voting procedure. This procedure started in January 1991.

The proposal to endorse amendment 1 to IEC 335-2-21, document CLC/TC 61 (SEC) 726, was circulated under the enquiry procedure in March 1990.

This proposal was discussed during the meetings in Athens in November 1990 and in Baden in May 1991, when it was decided to submit a draft for an amendment to prEN 60335-2-21 to the voting procedure. This procedure started in October 1991.

The proposal to endorse amendment 2 to IEC 335-2-21 was discussed during the Helsinki meeting in May 1990, when it was decided to submit a draft for an amendment to prEN 60335-2-21 to the unique acceptance procedure (UAP). This procedure started in January 1991.

The texts of these drafts were combined and ratified by CENELEC on the 24th of March 1992 as EN 60335-2-21.

This European Standard has been prepared by the secretariat of CENELEC Technical Committee TC 61.

The following dates are applicable:

- latest date of publication
of an identical national
standard (dop) 1993-01-01
- date of withdrawal of
conflicting national
standards (dow) 1996-01-01

For products which have complied with the relevant national standard before 1996-01-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2001-01-01.

This standard has to be used in conjunction with EN 60335-1 : 1988, Safety of household and similar electrical appliances, Part 1 : General requirements, including its amendments A2 : 1988, A5 : 1989, A6 : 1989, A51 : 1991, A52 : 1992 and A53 : 1992.

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

Subclauses and figures which are in addition to those in Part 1 are numbered starting with 101.

Special national conditions (snc) causing a deviation from this European Standard are listed in annex ZX and are in addition to those in EN 60335-1.

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

The following print types are used:

- requirements: in roman type
- *test specifications: in italic type*
- explanations: in small roman type