

; cgdcX]b'g_]]b'dcXcVb]`YY_f] b]`UdUfUf]!'J Ufbcgh!'&(\$"XY.'DcgYVbY'nU hYj Y nUY_Y_f] bY'hd'c'fbY' fdU_YZ`_ja Ufg_Y'bUdfUj Y]b'gi ý]b]_YnfU_UfU7 '* \$ ') !& (\$.&\$ &.&\$) žgdfYa Yb^YbŁ

Household and similar electrical appliances - Safety -- Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-40: Besondere Anforderungen für elektrisch betriebene Wärmepumpen, Klimageräte und Raumluft-Entfeuchter
(standards.iteh.ai)

Appareils électrodomestiques et analogues - Sécurité -- Partie 2-40: Règles particulières pour les pompes à chaleur électriques, les climatiseurs et les déshumidificateurs
SIST EN 60335-2-40:2003/A2:2009
<https://standards.iteh.ai/catalog/standards/sist/60335-2-40-2003/a2-2009>

Ta slovenski standard je istoveten z: EN 60335-2-40:2003/A2:2009

ICS:

23.120	Zi:æ } ä äX^d } ä äS ä æ\^ } æ!æ^	Ventilators. Fans. Air-conditioners
27.080	V[] [q ^Á!] æ\^	Heat pumps

SIST EN 60335-2-40:2003/A2:2009 en

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(standards.iteh.ai)

SIST EN 60335-2-40:2003/A2:2009

<https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e44c51d2d1bf/sist-en-60335-2-40-2003-a2-2009>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60335-2-40/A2

March 2009

ICS 23.120

English version

**Household and similar electrical appliances -
Safety -
Part 2-40: Particular requirements for electrical heat pumps,
air-conditioners and dehumidifiers
(IEC 60335-2-40:2002/A2:2005, modified)**

Appareils électrodomestiques
et analogues -
Sécurité -
Partie 2-40: Règles particulières
pour les pompes à chaleur électriques,
les climatiseurs et les déshumidificateurs
(CEI 60335-2-40:2002/A2:2005, modifié)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke -
Teil 2-40: Besondere Anforderungen
für elektrisch betriebene Wärmepumpen,
Klimageräte und Raumluft-Entfeuchter
(IEC 60335-2-40:2002/A2:2005,
modifiziert)

[SIST EN 60335-2-40:2003/A2:2009](https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e4fe51d2d11f/sist-en-60335-2-40-2003-a2-2009)

[https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-](https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e4fe51d2d11f/sist-en-60335-2-40-2003-a2-2009)

This amendment A2 modifies the European Standard EN 60335-2-40:2003; it was approved by CENELEC on 2009-03-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 61D/136C/FDIS, future amendment 2 to IEC 60335-2-40:2002, prepared by SC 61D, Appliances for air-conditioning for household and similar purposes, of the IEC TC 61, Safety of household and similar electrical appliances, was submitted to the IEC-CENELEC parallel vote. During the ratification process, CENELEC TC 61 became aware that a modification was needed to align the amendment with the common modifications in EN 60335-2-40:2003. The issue was discussed during the Brughes meeting in June 2005, when it was decided to submit a new draft to the formal vote.

The draft was circulated in June 2008 and was approved by CENELEC as amendment A2 to EN 60335-2-40:2003 on 2009-03-01.

The following dates are applicable:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-03-01
- date on which national standards conflicting with the amendment have to be withdrawn (dow) 2012-03-01

This amendment supplements or modifies the corresponding clauses of EN 60335-2-40:2003.

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

There are no national deviations from this amendment.

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

Endorsement notice

The text of amendment 2:2005 to the International Standard IEC 60335-2-40:2002 was approved by CENELEC as an amendment to the European Standard with the agreed common modification as given below.

COMMON MODIFICATION

- p **15.1 Delete** the replacement.
-



IEC 60335-2-40

Edition 4.0 2005-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

Household and similar electrical appliances – Safety –
Part 2-40: Particular requirements for electrical heat pumps, air-conditioners
and dehumidifiers

Appareils électrodomestiques et analogues – Sécurité –
Partie 2-40: Règles particulières pour les pompes à chaleur électriques, les
climatiseurs et les déshumidificateurs

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

E

ICS 23.120

ISBN 2-8318-8590-6

FOREWORD

This amendment has been prepared by sub-committee 61D: Appliances for air-conditioning for household and similar purposes, of IEC technical committee 61: Safety of household and similar electrical appliances.

This bilingual version, published in 2006-05, corresponds to the English version.

The text of this amendment is based on the following documents:

FDIS	Report on voting
61D/136C/FDIS	61D/142/RVD

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

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result 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.

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[SIST EN 60335-2-40:2003/A2:2009](https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e44c51d2d1bf/sist-en-60335-2-40-2003-a2-2009)

<https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e44c51d2d1bf/sist-en-60335-2-40-2003-a2-2009>

1 Scope

Add to the third line of the first paragraph, after the word "...motor-compressors", the words "and hydronic room fan coils".

3 Definitions

Add the following new definition:

3.120

fan coil

air handling unit

factory-made assembly which provides one or more of the functions of forced circulation of air, heating, cooling, dehumidification and filtering of air, but which does not include the source of cooling or heating

NOTE The device is normally designed for free intake of air from a room and delivery of air into the same room, but may be applied with duct work. This device may be designed for furred-in application or with an enclosure for application within the conditioned space.

7 Marking and instructions

7.1 *Add, as the sixth dash, the following:*

- the maximum operating pressure for the **heat exchanger** for hydronic **fan coil/air handling units**.

11 Heating

11.2 Add, at the end of the second dash, the following:

...except for **fan coils** where the flow rates and liquid temperatures shall be the maximum specified in the manufacturer's instructions;

Table 3 – Temperature limits

Replace the fourth line by the following:

Parts	Temperature °C
External enclosure of appliances with or without supplementary heaters	85

15 Moisture resistance

15.1 Replace the last paragraph by the following new paragraph:

The motor-compressor is not operated and **detachable parts** are removed during the tests of 15.2 and 15.3.

Add the following new subclause:

15.101 Spillage test

[SIST EN 60335-2-40:2003/A2:2009
https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e44c51d2d1bf/sist-en-60335-2-40-2003-a2-2009](https://standards.iteh.ai/catalog/standards/sist/be3d4fef-b9f2-4a4e-96c4-e44c51d2d1bf/sist-en-60335-2-40-2003-a2-2009)

Indoor floor or wall mounted units accessible to the general public are tested as follows.

The appliance is installed according to the manufacturer's installation instructions but not operated.

Covers which provide access for manual operation of electrical controls are set in the open position, unless such covers are of the self-closing type.

A solution of 0,25 l of water containing 0,25 g of ordinary table salt is poured onto the unit in a manner which is most likely to cause entrance of water into or on electrical controls or uninsulated **live parts**.

After spillage is completed, the appliances shall withstand the tests of Clause 16.

The spillage test is not applicable to units if the minimum linear dimension of a horizontal or near horizontal top surface of the cabinet is 75 mm or less.

A unit whose top, when installed, has a height of greater than 2 m, need not be tested.

NOTE The intent is that a 75 mm diameter glass cannot be placed on the surface of the appliance and spill.

19 Abnormal operation

Add the following after 19.10.

19.10.101 The test of 19.10 is repeated on **class 0I appliances** and **class I appliances** incorporating tubular sheathed or embedded heating elements. However, controls are not short-circuited but one end of the element is connected to the sheath of the heating element.

The test is repeated with the polarity of the supply to the appliance reversed and with the other end of the element connected to the sheath.

The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an **all-pole disconnection** occurs during the test of 19.10.

NOTE 1 Appliances with a neutral are tested with the neutral connected to the sheath.

NOTE 2 For embedded heating elements, the metal enclosure is considered to be the sheath.

19.14 Amend the first sentence of the first paragraph to read:

During the tests of 19.2 to 19.10.101 and 19.11, 19.12 and 19.13 if appropriate, the appliances shall not emit flames or molten metal, or poisonous or ignitable gas in hazardous amounts.

Add the following new subclause.

19.101 All appliances provided with **supplementary heaters** and with free air discharge are subjected to the following test in each mode of operation.

Appliances are operated under the conditions specified in Clause 11, with any controls which limit the temperature during the test of Clause 11 short-circuited, and with the appliance covered.

The covering is made with felt strips each having a width of 100 mm and lined with a single layer of textile material.

The felt has a specified mass of $4 \text{ kg/m}^2 \pm 0,4 \text{ kg/m}^2$ and a thickness of 25 mm.

The textile material consists of a prewashed double-hemmed cotton sheet having a mass between 140 g/m^2 and 175 g/m^2 in the dry condition.

Thermocouples are attached to the back of small blackened disks of copper or brass, 15 mm in diameter and 1 mm thick.

The disks are spaced 50 mm apart and placed between the textile material and the felt on the vertical centre line of each strip.

The disks are supported in such a way as to prevent them from sinking into the felt.

The strips are applied with the textile material in contact with the appliance so that they cover the whole vertical dimension of the front, pass over the top and extend down the rear surface.

If the appliance is constructed to stand away from the wall or if it is for fixing to a wall so that the gap between the heater and the wall exceeds 30 mm and the horizontal components of the distance between any two fixing points or spacers or between such points and the end of the appliance exceed 100 mm, the rear surface of the appliance shall be completely covered.