INTERNATIONAL STANDARD

IEC 60335-2-40

2002

AMENDMENT 2
2005-05

Amendment 2

Household and similar electrical appliances – Safety –

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

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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.

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 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- withdrawn,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.

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

***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 kg/m^2 ± 0,4 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.