INTERNATIONAL STANDARD

IEC 60335-2-75

1995

AMENDMENT 1

1998-11

Amendment 1

Safety of household and similar electrical appliances –

Part 2-75: Particular requirements for commercial dispensing appliances and vending machines

Amendement 1

Sécurité des appareils électrodomestiques et analogues –

Partie 2-75: Règles particulières pour les distributeurs commerciaux avec ou sans moyen de paiement

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FOREWORD

This amendment has been prepared by 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
61/1482/FDIS	61/1523/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.

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FOREWORD

Add to the list of differences existing in some countries:

– 13.2: Leakage current limits are different (Japan).
– 16.2: Leakage current limits are different (Japan).
– 27.2: Not applicable (USA).

1 Scope

NOTE 1

Add the following dashed item:

– commercial liquid heaters.

NOTE 2

Add the following dashed item:

– coffee grinding (IEC 60335-2-64).

NOTE 5

Add the following dashed item:

– commercial electric bains-marie (IEC 60335-2-50).

Delete the following dashed item:

– commercial electric water boilers and liquid heaters (IEC 60335-2-63).

Add the following note:

NOTE 6 – Appliances used by trained personnel are within the scope of this standard.

2 Definitions

2.2.9 *Add the following:*

Lids and covers of **appliances of the professional type** and of **appliances of the supervised type** are placed in their intended positions.

2.7.2 *Replace the text by the following:*

detachable part
part which can be removed without the aid of a **tool**, a part which is removed in accordance with the instructions for use or the **instructions for maintenance** even if a **tool** or **access key** is needed for removal, or a part which does not fulfill the test of 22.11.

NOTE 1 – If for installation purposes a part has to be removed, this part is not considered to be detachable even if the instructions state that it is to be removed.

NOTE 2 – A part which can be opened is considered to be a part which can be removed.

2.109 *Add the following notes:*

NOTE 1 – The **user area** of **appliances of the supervised type** is determined with **detachable parts** and other movable parts, such as doors and lids, in position as in normal use.

NOTE 2 – **Appliances of the professional type** have no **user area**.

Add the following subclauses:

2.112
appliance of the professional type
dispensing appliance which is only intended to be used by trained personnel such as kitchen or bar staff

2.113
appliance of the supervised type
dispensing appliance which is intended to be maintained by trained personnel but may be used by other persons in a location where its use is overseen

NOTE – Dining rooms in restaurants are examples of such locations.

4 General conditions for the tests

Add the following subclause:

4.104 ***Appliances of the professional type and appliances of the supervised type*** *are tested as* ***heating appliances*** *even if they incorporate a motor.*

NOTE – If these appliances do not contain heating elements, they are tested as **motor-operated appliances**.

7 Marking and instructions

7.1 *Add the following:*

Appliances intended to be partially immersed in water for cleaning shall be marked with the maximum level of immersion and with the substance of the following:

Do not immerse beyond this level.

Add the following:

7.6 *Addition:*

..... equipotentiality (symbol 60417-2-IEC-5021)

Add the following:

7.8 *Addition:*

Terminals for equipotential bonding shall be indicated by the equipotentiality symbol.

This symbol shall not be placed on screws, removable washers or other parts which can be removed when conductors are being connected.

7.12.1 *Add the following:*

The instructions for installation of **appliances of the professional type** shall state that the appliance is only to be installed in locations where use and maintenance is restricted to trained personnel.

The instructions for installation of **appliances of the supervised type** shall state that the appliance is only to be installed in locations where it can be overseen by trained personnel.

The instructions for installation of **class I appliances of the professional type** which are intended to be permanently connected to fixed wiring, the leakage current of which may exceed 10 mA, shall state that the installation of a residual current device (RCD) having a rated residual operating current not exceeding 30 mA is advisable.

11 Heating

Add the following:

11.4 *Addition:*

If the temperature rise limits are exceeded in appliances incorporating motors, transformers or ***electronic circuits****, and if the power input is lower than the* ***rated power input****, the test is repeated with the appliance supplied at 1,06 times the* ***rated voltage****.*

11.8 *Add the following:*

*The temperature rise limits of motors, transformers, components of **electronic circuits**, and parts directly influenced by them, may be exceeded when the appliance is operated at 1,15 times the **rated power input**.*

13 Leakage current and electric strength at operating temperature

Replace the text by the following:

This clause of part 1 is applicable except as follows.

13.2 *Modification:*

*Instead of the leakage current limits specified for **stationary class I heating appliances**, the following applies:*

– *for **stationary class I appliances of the professional type** intended to be permanently connected to fixed wiring*	*1 mA per kW **rated power input** of the appliance, with no maximum;*
– *for other **stationary class I appliances of the professional type***	*1 mA per kW **rated power input** of the appliance, with a maximum of 10 mA;*
– *for other **stationary class I heating appliances***	*0,75 mA or 0,75 mA per kW **rated power input** of the appliance, whichever is greater, with a maximum of 5 mA.*

15 Moisture resistance

Add the following:

15.1.1 *Addition:*

***Appliances of the professional type** classified IPX3 or lower and intended to be placed on a kitchen floor are subjected to the following test for 5 min using the apparatus shown in figure 102.*

The water pressure is regulated so that the water splashes 150 mm above the bottom of the bowl. The bowl is placed on the floor and moved around the appliance in order to splash it from all directions.

NOTE – Care is to be taken to ensure that the appliance is not hit by the direct jet of water.

15.2 *Add the following:*

***Detachable parts** in the **user area** are removed or kept in position, whichever is more unfavourable.*

NOTE – **Detachable parts** in the **maintenance area** are placed in their normal position following a **maintenance operation**.

15.2.8 *Replace the text by the following:*

Appliances having external surfaces on which it is possible to place a vessel, such as a cup or jug, are tested by rapidly pouring 0,5 l of water over the surface. The quantity of water is increased to 5 l for ***appliances of the professional type*** *which have their highest surface lower than 1,5 m after installation.*

NOTE 1 – The test is carried out even if the appliance does not dispense liquid.

NOTE 2 – If there is more than one surface, they are tested in turn.

Add the following subclauses:

15.101 Appliances having a tap to provide water for filling or cleaning, shall be constructed so that the water cannot come into contact with **live parts** or affect their electrical insulation.

Compliance is checked by the following test.

The appliance is connected to the water mains, the pressure being adjusted to the maximum static water pressure marked on the appliance. Tiltable and movable parts, including lids, are tilted or placed in the most unfavourable position. The tap is fully opened for 1 min, swivel outlets having been adjusted to direct the water in the most unfavourable direction. The appliance shall then withstand the electric strength test of 16.3.

15.102 Appliances intended to be partially or completely immersed in water for cleaning shall have adequate protection against the effects of immersion.

Compliance is checked by the following tests.

The appliance is operated under ***normal operation*** *at 1,15 times the* ***rated power input*** *until steady conditions are established.*

The connector is then withdrawn or the supply otherwise switched off and the appliance is immediately completely immersed in water having a temperature between 10 °C and 25 °C, unless it is marked with the maximum level of immersion, in which case it is immersed 5 cm beyond this level.

After 1 h the appliance is removed from the water, dried and subjected to the leakage current test of 16.2.

NOTE – Care is to be taken to ensure that all moisture is removed from the insulation around the pins of appliance inlets.

The appliance shall then withstand the electric strength test of 16.3, the voltage however being reduced to 1 000 V.

The appliance is operated under ***normal operation*** *for a period of 240 h during which it is allowed to cool to approximately room temperature four times at regular intervals.*

After this period, the connector is withdrawn or the supply otherwise switched off and the initial test is repeated.

Inspection shall show that there is no trace of water on insulation which could result in a reduction of ***clearances*** *and* ***creepage distances*** *below the values specified in clause 29.*

16 Leakage current and electric strength

Replace the text by the following:

This clause of part 1 is applicable except as follows.

16.2 *Modification:*

*Instead of the leakage current limits specified for **stationary class I heating appliances**, the following applies:*

– for **stationary class I appliances of the professional type** intended to be permanently connected to fixed wiring	2 mA per kW **rated power input** of the appliance, with no maximum;
– for other **stationary class I appliances of the professional type**	2 mA per kW **rated power input** of the appliance, with a maximum of 10 mA;
– for other **stationary class I heating appliances**	0,75 mA or 0,75 mA per kW **rated power input** of the appliance, whichever is greater, with a maximum of 5 mA.

19 Abnormal operation

19.1 *Replace the first paragraph by the following:*

Appliances are also subjected to the tests of 19.101 to 19.103, if applicable.

Add the following:

Appliances provided with a control limiting the pressure during the tests of clause 11 are also subjected to the tests of 19.4 with this control rendered inoperative.

19.4 *Replace the note by the following:*

NOTE – If a control also performs other functions, only the part controlling the temperature or pressure is rendered inoperative.

19.11.2 *Replace the first line by:*

Instead of the duration specified for the tests, the following applies.

19.102 *Add the following:*

*This test is not carried out on **appliances of the professional type** and **appliances of the supervised type**.*

Add the following subclause:

19.103 *Appliances incorporating a **thermal cut-out** of the capillary type are tested as specified in 19.4 but with the capillary tube ruptured.*

22 Construction

22.7 *Add the following:*

The pressure relief device shall be constructed so that it cannot be rendered inoperative or set to a higher pressure without the aid of a **tool** which is normally only available to the manufacturer.

Add the following subclause:

22.13 *Addition:*

Appliances shall be constructed so that scalding by steam is prevented when a lid is opened.

22.105 *Replace the text by the following:*

Appliances shall be constructed so that it is not possible to open draw-off taps and drain valves, or to withdraw drain plugs inadvertently.

Compliance is checked by inspection and by manual test.

NOTE – Valves which return automatically to the closed position when released, those of the wheel type or those placed in a recess comply with this requirement.

Add the following subclauses:

22.109 Appliances shall be protected in such a manner that moisture, grease and products used in the appliance will not collect in such a way as to affect **clearance** and **creepage distance** values.

Compliance is checked by inspection.

22.110 Lights indicating a warning against a hazard shall only be coloured red.

Compliance is checked by inspection.

22.111 Appliances having pressurized containers shall be constructed so that the lid cannot be removed while the pressure within the container is excessive. They shall incorporate a means to release the pressure within the container to a value such that the lid can be removed without risk.

Compliance is checked by the following test.

The appliance is operated as specified in clause 11 until the pressure regulator operates for the first time.

The appliance is then disconnected from the supply and the pressure within the container allowed to decrease until the pressure is 4 kPa. A force of 100 N is applied to the most unfavourable point where the lid or its handle can be gripped. It shall not be possible to remove the lid.

The internal pressure is then gradually reduced further, the force of 100 N being mainained. There shall be no hazardous displacement of the lid when it is released.

This test is not made on appliances where the lid is secured by screw clamps or other devices which ensure that the pressure within the container is automatically reduced in a controlled manner before the lid can be removed.

24 Components

24.102 *Replace the text by the following:*

Thermal cut-outs *which are necessary for compliance with clause 19 shall be non-self-resetting with a trip-free mechanism if they disconnect heating elements or motors, the unexpected starting of which may cause a hazard to the user or* ***maintenance person****.*

Compliance is checked by inspection and manual test.

Add the following subclause:

24.103 Appliance couplers incorporating **thermostats**, **thermal cut-outs** or fuses in the connector, shall comply with IEC 60320 except that:

– the earthing contact of the connector is allowed to be accessible, provided that this contact is not likely to be gripped during insertion or withdrawal of the connector;

– the temperature required for the test of clause 17 of IEC 60320 is that measured on the pins of the appliance inlet during the heating test of clause 11;

– the breaking-capacity test of clause 18 of IEC 60320 is carried out using the inlet of the appliance;

– the temperature rise of current-carrying parts specified in clause 20 of IEC 60320 is not determined.

NOTE – Thermal controls are not allowed in connectors complying with the standard sheets of IEC 60320.

27 Provision for earthing

Replace the text by the following:

This clause of part 1 is applicable except as follows.

27.2 *Addition:*

Stationary class I appliances of the professional type intended to be installed in kitchens shall incorporate a terminal for the connection of an external equipotential conductor. This terminal shall be connected to all fixed **accessible metal parts** of the appliance and shall allow the connection of a conductor having a nominal cross-sectional area of 2,5 mm^2 to 10 mm^2. It shall be located so that the connection of the conductor can be made after installation of the appliance.

NOTE – This requirement does not apply to small parts such as nameplates.