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(JEMA)

**Household and similar electrical
appliances—Safety—
Part 2-4 : Particular requirements
for spin extractors**

ICS 13.120; 97.060

Reference number : JIS C 9335-2-4 : 2004 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Electrical Manufacturer's Association (JEMA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS C 9335-2-4 : 2000** is replaced with this Standard.

This revision has been made based on **IEC 60335-2-4 : 2002 *Household and similar electrical appliances—Safety—Part 2-4 : Particular requirements for spin extractors*** for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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Household and similar electrical appliances—Safety—Part 2-4 : Particular requirements for spin extractors

Introduction This Japanese Industrial Standard has been prepared based on IEC 60335-2-4 *Household and similar electrical appliances—Safety—Part 2-4 : Particular requirements for spin extractors* published in 2002 as the fifth edition with some modifications in the technical contents. This is to be read in conjunction with JIS C 9335-1 : 2003 *Household and similar electrical appliances—Safety—Part 1 : General requirements*.

In this Standard, the portions underlined with dots are the matters modified from the original International Standard. The list of modifications is given in annex 1 (informative) with the explanation being attached.

1 Scope This Standard deals with the safety of electric spin extractors for household and similar purposes that have a capacity not exceeding 10 kg of dry cloth and a drum peripheral speed not exceeding 50 m/s, their rated voltages being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 101 Spin extractors incorporated in washing machines are within the scope of this Standard, irrespective of their capacity.

Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances intended to be used by laymen in shops, in light industry and on farms, are within the scope of this Standard.

NOTE 102 Examples of such appliances are spin extractors for communal use in blocks of flats or in launderettes.

As far as practicable, this Standard deals with the common hazards presented by appliances which are encountered by all persons in and around the home. However, in general, it does not take into account

- the use of appliances by young children or infirm persons without supervision;
- playing with the appliance by young children.

NOTE 103 Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary.
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

NOTE 104 This Standard does not apply to

- appliances intended exclusively for industrial purposes;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

NOTE 105 The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

IEC 60335-2-4 : 2002 *Household and similar electrical appliances—Safety—Part 2-4 : Particular requirements for spin extractors* (MOD)

2 Normative references The normative references shall, in addition to those specified in clause 2 of **JIS C 9335-1**, be as follows:

JIS C 9811 *Electric clothes washing machines for household use—Methods for measuring the performance*

IEC 60436 *Methods for measuring the performance of electric dishwashers*

3 Definitions For the purpose of this Standard, in addition to the definitions specified in clause 3 of **JIS C 9335-1**, the definitions stated below shall apply. However, **3.1.9** shall be replaced as stated in this Standard.

3.1.9 Replacement:

normal operation operation of the appliance under the following conditions

The drum is filled with textile material having a mass in the dry condition equal to the maximum mass specified in the instructions. The textile material consists of pre-washed double hemmed cotton sheets having dimensions of approximately 70 cm × 70 cm and a specific mass between 140 g/m² and 175 g/m² in the dry condition. It is saturated with water before being evenly distributed in the drum.

NOTE 201 The test textile material may be the cloth specified in **JIS C 9811** having approximate dimensions of 91 cm × 91 cm and an unit mass of 100 g/m₂ ± 10 g/m² under dry condition.

3.101 Brake mechanism A system which brakes the drum and stops the rotation of drum when the external cover of a spin extractor is opened.

3.102 Double-lid structure Such a structure that the rotating axis of drum is vertical and it is necessary to open the two lids individually for access to the water extraction drum. The outer lid accessible during water extraction shall be such that it can not be opened during rotation of drum or the brake mechanism actuates when the lid is opened during rotation of drum. This lid is called the first lid. The lid which becomes accessible after opening of the first lid is called the second lid.

4 General requirement General requirement shall be as stated in clause 4 of **JIS C 9335-1**.

5 General conditions for the test General conditions for the tests shall be as stated in clause 5 of **JIS C 9335-1** except as follows.

5.3 Addition to 5.3 of JIS C 9335-1:

The test of **22.101** is carried out before the tests of clause **20**.

5.101 Spin extractors are tested as portable appliances, unless they are fixed appliances or are incorporated in another appliance.

6 Classification Classification shall be as stated in clause **6** of **JIS C 9335-1** except as follows.

6.1 Modification:

Appliances shall be class 0I, class I, class II or class III.

Compliance is checked visually or by associated tests.

6.2 Addition to 6.2 of JIS C 9335-1:

Appliances shall be at least IPX4.

7 Marking and instructions Marking and instruction shall be as stated in clause **7** of **JIS C 9335-1** except as follows.

7.10 Addition to 7.10 of JIS C 9335-1:

If the off position is only indicated by letters, the word “off” or the Japanese Kanji character denoting “off” shall be used.

7.12 Addition to 7.12 of JIS C 9335-1:

The instructions shall specify the maximum mass of dry cloth in kilograms, to be used in the appliance.

7.12.1 Addition to 7.12.1 of JIS C 9335-1:

If the label specified in **7.101** is supplied with the appliance, the installation instructions shall state that it has to be permanently fixed to the wall close to the appliance.

For appliances intended for communal use in blocks of flats, and having an interlock system that has to be energized in order to release the lid, the installation instructions shall state that a device for switching off the appliance automatically is not to be installed in the supply circuit.

7.101 Addition:

Appliances intended for communal use in blocks of flats, and having an interlock system that has to be energized in order to release the lid, shall be supplied with a label that states the substance of the following, unless the instruction is marked on the appliance.

This spin extractor has to be connected to the supply mains before the lid can be opened. Do not force it open.

8 Protection against access to live parts Protection against access to live parts shall be as stated in clause **8** of **JIS C 9335-1** except as follows.

8.1.1 Addition to 8.1.1 of JIS C 9335-1:

NOTE 201 For a spin extractor which also serves as a washing machine or which is build in a washing machine, the test shall be carried out without tilting provided that it is a stationary type and exceeds 40 kg when water of the maximum designed amount is filled in the washing drum.

9 Starting of motor-operated appliances Clause 9 of JIS C 9335-1 is not applicable.

10 Power input and current Power input and current shall be as stated in 10.4 of JIS C 9335-1.

11 Heating Heating shall be as stated in clause 11 of JIS C 9335-1 except as follows.

11.7 Replacement of 11.7 of JIS C 9335-1:

Appliances are operated for five periods of water extraction, the periods being separated by a rest period. Each rest period, which includes the braking time, has a duration of 1 min for each kilogram of dry textile material or 4 min, whichever is longer. During the rest period, the textile material is re-saturated with water.

For appliances incorporating a programmer or time, the water extraction period is the maximum allowed by the control.

For other appliances, the water extraction period has a duration of

- 15 min for continuous-flow rinsing appliances;
- 5 min for other appliances.

If a longer period is indicated in the instructions, this period applies instead.

NOTE 201 The cyclic temperature test of a spin extractor which also serves as a washing machine or which is build in a washing machine shall be made in accordance with 11.7 of JIS C 9335-2-7. However, the said test shall be made in accordance with this Standard when the maximum water extracting capacity stated in the instruction manual is smaller than the washing water extracting capacity.

12 Void

13 Leakage current and electric strength at operating temperature Leakage current and electric strength at operating temperature shall be as stated in clause 13 of JIS C 9335-1.

14 Transient overvoltages Transient overvoltages shall be as stated in clause 14 of JIS C 9335-1.

15 Moisture resistance Moisture resistance shall be as stated in clause 15 of JIS C 9335-1 except as follows.