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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4706.102-2024

Replacing GB 4706.102-2010

**Safety of household and similar electrical appliances - Part 102: Particular
requirements for commercial refrigerating appliances and ice-makers with an
incorporated or remote refrigerant unit or motor-compressor**

(English Translation)

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Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 102 of GB/T 4706 "Safety of Household and Similar Electrical Appliances". GB/T 4706 has been published as follows part.

- Part 1: General requirements;
- Part 2: Particular requirements for electric irons;
- Part 121: Particular requirements for professional ice cream machines.

This document replaces GB 4706.102-2010 "Household and similar electrical appliances with built-in or remote refrigerant condensing devices" Compared with GB 4706.102-2010, in addition to structural adjustments and editorial changes, the main changes are as follows.

The technical changes are as follows.

- Changed the scope of application of the document and added ice making machine products (see Chapter 1, Chapter 1 of the 2010 edition);
- Change the definition of "refrigeration condensing unit" to "refrigeration unit", and change the definition of "professional" to "qualified person" (see 3.6.105, 3.8.102, 3.104 and 3.103 of the 2010 edition);
- Added relevant requirements for commercial ice machines (see 5.7, 5.101, 7.1, 11.8,

19.102);

--- Added individual requirements for motor-compressor testing and installation (see 5.2, 5.10, 19.1);

--- Added 8 climate types and related requirements for appliances (see 5.7, 6.101, 7.1, 11.8);

--- Added relevant requirements for appliances using R-744 refrigerant (see 5.10, 7.1, 7.12.1, 22.7, 22.109);

--- Added relevant requirements for transcritical refrigeration systems (see 3.1.101, 3.1.102, 3.7.101, 7.6, 7.12.1, 24.1.4, 24.101);

--- Added "connect to drinking water source", "pressure", "minimum room area" signs and requirements, and changed the "beware of fire" sign to Warning signs W021 (2011-05) specified in ISO 7010 (see 7.6);

--- Added the description requirement of "explosives, such as combustion-supporting sprays, should not be stored in the apparatus" and the symbols specified in ISO 7000 1701 (2004-01) and the description requirements of warning signs W021 (2011-05) specified in ISO 7010 (see 7.12);

--- Added the font of the flammable insulation foaming gas sign and the height of the rectangle in symbol 6412 (2019-03) specified in IEC 60417 Requirements (see 7.14);

--- Deleted the requirements on whether the bulb should be removed and replaced when adjusting the appliance (see 8.1.1 of the 2010 edition);

--- Deleted the requirement that if the temperature of any part of the appliance in the heating test is higher than the limit value given in 11.8 (see 2010 version 11.101);

--- Added mechanical strength test of the shelf (see 21.102);

--- Changed the requirements for accessible glass panels (see 22.103, 22.104 of the 2010 edition);

--- Change "refrigeration system" to "cooling system" (see 22.111, 22.112, 22.106, 22.107 of the 2010 edition);

--- Changed some refrigerant ignition temperature values and refrigerant lower explosion limits in Table 102 (see 22.114, 22.109 of the 2010 edition);

--- Added conductor bending strength test (see 23.3);

--- Added the provisions for the ambient temperature of the 96h aging test for the connection joint marked with a maximum temperature of 25°C (see 24.7);

--- Added requirements for appliances with a flammable refrigerant charge exceeding 150g (see 7.1, 21.103, 22.108, 22.110, 22.116, 22.117, 22.118, 22.119, 22.120, 22.121,

Appendix CC);

--- Change the title of Appendix D to "Motor thermal protector" (see Appendix D, see Appendix D of the 2010 edition);

--- Changed the title of Appendix BB to "'n' type non-sparking electrical equipment", and changed the content of the appendix (see Appendix BB, see 2010 edition Appendix BB);

--- Added special requirements for software evaluation (see Appendix R);

This document is equivalent to IEC 60335-2-89:2019 "Safety of Household and Similar Electrical Appliances Part 2-89. Electrical Equipment with Built-in or Remote Mounting Particular requirements for commercial refrigerating appliances and ice-making machines using either a two-stage refrigeration unit or a motor-compressor.

The following minimal editorial changes were made to this document.

--- The name of the standard was changed to "Safety of Household and Similar Electrical Appliances Part 102: Electrical Appliances with Embedded or Remote Refrigeration Units or Electric Particular requirements for commercial refrigeration appliances and ice-making machines with compressors and compressors to enhance the coordination of the standard system;

--- This document incorporates the survey results of IEC 60335-2-89:2019/COR1.2019 and IEC 60335-2-89:2019/COR2.2021.

For incorrect content, the outer margin of the clause involved is marked with a vertical double line (||).

Introduction

GB/T 4706 "Safety of Household and Similar Electrical Appliances" adopts most of IEC 60335. On this basis, GB/T 4706 refers to the structure of IEC 60335 is divided into several parts, consisting of general requirements and special requirements. Part 1 is general requirements, and the other parts are for products covered by special requirements, their safety requirements are general requirements used in combination with the special requirements.

The requirements include supplements and modifications to the corresponding clauses in the general requirements to provide complete requirements for each product.

This document is the protection requirements for electrical, mechanical, thermal, fire and radiation risks when the appliance is used normally in accordance with the instructions.

This document also covers abnormal conditions that may occur during use and considers how electromagnetic interference may affect the safe operation of the equipment.

This document has taken into account the requirements specified in GB/T 16895 "Low