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

GB/T 17758-2010

**Unitary air conditioners
(English Translation)**

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Foreword

This standard is the revision of GB/T 17758-1999 "Unitary air conditioner". As compared with GB/T 17758-1999, the main changes of this standard are as follows.

- ADD the definitions of the Refrigerating integrated part load value IPLC (C), Seasonal energy efficiency ratio SEER, and Annual performance factor APF;
- ADD the ultra-low temperature operating conditions to the test conditions (SEE Table C.1);
- ADD the requirements for the minimum limit value of performance factor (SEE Table 3);
- ADD the test and calculation of the refrigerating integrated part load value IPLV (C) of the unitary air conditioner, including the calculation equation and examples for the part load nominal operating conditions, part load curve, and the part load performance factor;
- ADD the test and calculation of the seasonal energy consumption of the unitary air conditioner (SEE Appendix C).

This standard shall, from the date of implementation, replace GB/T 17758-1999.

Appendix A, Appendix B, Appendix C and Appendix D of this standard are normative annexes.

This standard was proposed by the China Machinery Industry Federation.

This standard shall be under the jurisdiction of the National Refrigeration and Air Conditioning Equipment Standardization Technical Committee (SAC/TC 238).

The responsible drafting organizations of this standard. Hefei General Machinery Research Institute, Tsinghua University, Nanjing Wuzhou Refrigeration Group Co., Ltd., Zhuhai Gree Electric Co., Ltd., Guangdong Jirong Air-conditioning Equipment Company, Shanghai Mitsubishi Electric - Shangling Electric Co., Ltd., Emerson Environmental Optimization Technology (Suzhou) Co., Ltd., Daikin Air Conditioning (Shanghai) Co., Ltd.

Unitary air conditioners

1 Scope

This standard specifies the terms and definitions, types and basic parameters, requirements, tests, inspection rules, marking, packaging, transportation and storage of unitary air conditioners (hereinafter referred to as "air conditioners").

This standard applies to the unitary air conditioner of nominal cooling capacity greater than or equal to 7000 W.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

For undated references, the latest edition of the referenced document applies.

GB/T 191 Packaging - Pictorial marking for handling of goods (GB/T 191-2008, ISO 780.1997, MOD)

GB/T 2828.1-2003 Sampling procedures for inspection by attributes - Part 1. Sampling scheme indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1.1999, IDT)

GB/T 3785-1983 Sound level meter - Electroacoustic performance and test method

GB/T 5773 The method of performance test for positive displacement refrigerant compressors (GB/T 5773-2004, ISO 917.1989, MOD)

GB/T 6388 Transportation packaging collection and delivery marking

GB/T 13306 Signs

GB/T 18430.1 Water chilling (heat pump) packages using the vapor compression cycle - Part 1. Water chilling (heat pump) packages for industrial & commercial and similar application

GB/T 18836 Ducted air-conditioning (heat pump) units (GB/T 18836-2002, ISO 13253.1995, NEQ)

GB/T 18837 Multi-connected air-condition (heat-pump) unit

GB/T 19409 Water-source heat pumps (GB/T 19409-2003, ISO 13256.1998, NEQ)

GB/T 19411 Dehumidifier

GB/T 19413 Unitary air conditioner for computer and data processing room

GB/T 19569 Air conditioning unit for clean operating room

GB/T 19842 Air-conditioning units for railbound vehicles

GB/T 20108 Low temperature unitary air conditioners

GB/T 20738 Rooftop air conditioning unit

GB 25130 Safety requirements for unitary air-conditioners

JB/T 7249 Terminology of refrigeration equipment

3 Terms and definitions

The terms and definitions as established in JB/T 7249 AND the following terms and definitions apply to this standard.

3.1

Unitary air conditioners

It refers to the equipment directly supplying the conditioned air to a confined space, room, or area. It mainly includes refrigeration systems and air circulation and purification devices, and it may also include heating, humidification and ventilation devices.

3.1.1

Ducted air-conditioning (heat pump) units

It refers to the equipment directly supplying the centralized conditioned air through air duct to a confined space, room, or area. It mainly includes refrigeration systems and air circulation and purification devices, and it may also include heating, humidification and ventilation devices.

It refers to the total amount of heat removed from (supplied into) the confined space, room or area by the air conditioner in the unit time under the specified cooling (heating) capacity test conditions, in the unit of W.

3.4

Cooling (heating) power input

It refers to the total power as consumed by the air conditioner during operation under the specified cooling (heating) capability test conditions, in the unit of W.

3.5

Energy efficiency ratio (EER)

It refers to the ratio between the cooling capacity of the air conditioner and the cooling power input under the specified refrigeration capacity test conditions, the value of which is expressed in W/W.