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

GB/T 20109-2025

Replacing GB/T 20109-2006

Fresh air dehumidifiers

全新风除湿机

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Standardization Administration of the PRC**

Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.Types, Models, and Basic Parameters.....	2
7.Inspection Rule	11
10 Nameplate Contents	13

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 20109-2006 "Fresh Air Dehumidifiers". Compared with GB/T 20109-2006, the only changes are structural adjustments and editing. Aside from the sexual alterations, the main technical changes are as follows:

a) The terminology and definitions related to fresh air dehumidifiers, air volume, and dehumidification capacity have been revised, and different types of fresh air dehumidifiers have been added. Terminology and definitions for standby mode and its usage (see 3.1~3.8, 3.1~

3.4 in the.2006 edition);

b) The classification of dehumidifier types has been changed, adding classifications by dehumidification and cooling type, by structural type, and by capacity adjustment characteristics. Classification by nature, by fresh air intake temperature range, by fresh air treatment depth, by heat recovery method, and by other methods. Classification of humidity control types (see 4.1.,2006 edition);

c) The requirements for dehumidifier model designation have been changed (see 4.2, 4.3 in the.2006 edition);

d) The basic parameters and operating conditions of the dehumidifier, such as the test conditions, have been changed (see 4.3,

5.3 in the.2006 version);

e) The general requirements, appearance requirements, and control accuracy requirements for dehumidifiers have been changed, and the component requirements have been

removed (see 5.1~5.2,.2006). Versions

5.1.1 to 5.1.10, 5.4, 5.5, and 5.11);

f) The performance requirements for dehumidifiers have been changed, merging the requirements and test methods for dehumidifier condensation and condensate removal capabilities, and removing the minimum requirements. Load operation requirements and test methods (see 5.5.2~5.5.4, 6.7~6.9, 5.6.4~5.6.7, 5.6.9, 6.2.5~ in the.2006 edition). 6.2.9);

g) Increased strength and sealing requirements and test methods (see

h) Requirements and test methods for water-side pressure loss have been added (see

1 Scope

GB/T 20109-2025 is the Chinese national standard covering the dehumidifier that treats outside air rather than recirculating it - the moisture removal at the rated conditions, the energy used per kilogram of water, the frost behaviour at low temperature, and the noise and airflow. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 20109-2006.

This document specifies the types, models, basic parameters, technical requirements, and inspection rules for all-fresh-air dehumidifiers, as well as their marking, packaging, and transportation. Storage, and the corresponding experimental methods are described. This document applies to all fresh air dehumidifiers that use compressor cooling for dehumidification and/or chilled water for dehumidification.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 191 Packaging and Storage Graphic Symbols

GB/T 2423.17 Environmental testing - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 19411 and JB/T 7249, as well as the following terms and definitions, apply to this document.

3.1 Freshair dehumidifier A dehumidifier that treats all incoming outdoor fresh air (without indoor return air circulation) to control the moisture content of the fresh air.

3.2 A brand-new dehumidifier that relies solely on a vapor compression refrigeration cycle for cooling and dehumidification.

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