

ICS 91.140.30

CCS P 48



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

GB/T 46751-2025

**Low regeneration temperature rotary solid desiccant outdoor
air processors**

低温再生转轮调湿新风机组

Issued on: October 31, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.Classification and Labelling	2
5 General Requirements	3
6 Requirements	4
7.Test Methods	5
8 Inspection Rule	10
28 Appendix F (Normative) Test Methods for Thermal Performance.....	30

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. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China. This document was prepared by the National Technical Committee on Standardization of Heating, Ventilation, Air Conditioning and Purification Equipment (SAC/TC143) and the National Standardization Committee on Refrigeration and Air Conditioning Equipment. It is jointly managed by the Technical Committee (SAC/TC238). This document was drafted by: China Academy of Building Research Co., Ltd., Jianke Environmental Energy Technology Co., Ltd., and Huaneng Jianke (Beijing) Technology Co., Ltd. Limited Liability Company, Toyosan Industrial Technology (Shanghai) Co., Ltd., Nantong Huaxin Central Air Conditioning Co., Ltd., and Fred (Zhengzhou) Industrial Co., Ltd. Company, Tsinghua University, Tongji University, Xi'an Jiaotong University, Qingdao Hisense Hitachi Air Conditioning Systems Co., Ltd., Jiangsu Adwell Intelligent Technology Co., Ltd. The company, Guangdong Ouke Air Conditioning & Refrigeration Co., Ltd., Jiangsu Jiasheng Environmental Equipment Manufacturing Co., Ltd., and Guangdong Jirong Nuclear Power Equipment HVAC Technology Co., Ltd. The company, China Academy of Space Technology, Qingdao Pinsen Environmental Protection Technology Co., Ltd., Hefei General Machinery & Electrical Products Testing Institute Co., Ltd., Beijing Industrial... University, Shanghai Architectural Design & Research Institute Co., Ltd., China Construction Third Engineering Bureau First Construction & Installation Co., Ltd., Bynarson

Technology (Shanghai) Co., Ltd. Hangzhou Jierui Intelligent Equipment Co., Ltd., Monte Air Treatment Equipment (Jiangsu) Co., Ltd., Shanghai Carbon Balance Energy Technology Co., Ltd. company. The main drafters of this document are. Wang Lifeng, Cao Yang, Yuan Tao, Liu Quan, Yu Yue, Xie Dong, Liu Xiaohua, Su Xing, Guan Bowen, Zhang Wenqiang, and Li Yaofeng. Zhu Li, Huang Sheng, Yao Rusheng, Bai Xiaolei, Wang Jinshan, Xie Hongxi, Liu Zhongbao, Zhu Xuejin, Huang Zonghua, Jia Dongxin, Dai Yaming, Ge Jifang, Yu Bing Liu Shuo, You Xiaojing, Huang Yuhan, Zhai Hongbao, Du Zheng, Li Zeqi, Hui Haozhen. Low-temperature regenerative rotary dehumidifying fresh air handling unit

1 Scope

GB/T 46751-2025 is the Chinese national standard covering the desiccant wheel that regenerates at a temperature low enough for waste heat or a heat pump to supply - the moisture removal and the regeneration energy, the carry-over between the streams, and the performance across the humidity range. At 21,500 words. It matters because it lets latent load be handled without overcooling the air. First edition, under the Ministry of Housing and Urban-Rural Development. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document specifies the classification and marking, general requirements, requirements, and testing of low-temperature regenerative rotary dehumidifying fresh air handling units (hereinafter referred to as "units"). Methods, inspection rules, and marking, packaging, transportation and storage. This document applies to low-temperature regeneration rotary dehumidification fresh air handling units that employ rotary adsorption dehumidification and have a regeneration temperature not exceeding 70°C.

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 1236-2017 Performance Test of Standardized Air Ducts for Industrial Ventilation Fans

GB/T 4706.32 Safety of household and similar electrical appliances - Part

32.Particular requirements for heat pumps, air conditioners and dehumidifiers GB/T 14295 Air Filters

GB/T 14296 Air coolers and air heaters

GB/T 16803 Terminology for Heating, Ventilation, Air Conditioning and Purification Equipment

GB 17625.1 Electromagnetic compatibility limits - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 16803 and the following terms and definitions apply to this document.

3.1 The air temperature entering the dehumidification rotor regeneration zone.

3.2 cessor Using a dehumidifying rotor with a regeneration temperature not exceeding 70°C as the basic component, and other air handling units as auxiliary components, it can handle fresh air. Air conditioning units that perform dehumidification, humidification, cooling, heating and purification.

3.3 When performing rotary adsorption dehumidification treatment on the fresh air supplied to the room, the unit type that uses outdoor fresh air as the rotary desorption regeneration airflow.

3.4 When performing rotary adsorption dehumidification treatment on the fresh air supplied to the room, the unit type that uses indoor exhaust air as the rotary desorption regeneration airflow is used.