

ICS 23.120
CCS K65



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

GB/T 42827-2023

**A.C. ventilating fans and regulators for household and similar
purposes - Methods for measuring performance**

家用和类似用途的交流换气扇及其调速器 性能测试方法

Issued on: August 6, 2023

Implemented on: March 1, 2024

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

Table of Contents

1 Scope	1
2 Normative reference documents	1
3 Terms and Definitions	1
4 Bearing 2 5 speed regulator 3 6 logo	3
7 Test	3
5 Reference	12

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 is equivalent to IEC 60665.2018 "Performance Test Method for AC Ventilation Fans and their Regulators for Household and Similar Purposes". Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by China Light Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Household Appliances (SAC/TC46). This document was drafted by: Weikai Testing Technology Co., Ltd., Guangdong Midea Environmental Electrical Manufacturing Co., Ltd., Airmate Electrical Appliances (Shenzhen) Co., Ltd. Co., Ltd., Foshan Nanhai District Electric Fan Industry Association, Xiamen Yangmai Electric Co., Ltd., Guangdong Jinling Intelligent Electrical Appliance Co., Ltd., Guangdong Panasonic Environmental Systems Co., Ltd., Ningbo Bull Life Electric Co., Ltd., Aopu Home Furnishing Co., Ltd., Guangdong Green Island Wind and Air System Co., Ltd. Co., Ltd., Jiangmen Jinling Exhaust Fan Manufacturing Co., Ltd., Zhejiang Nupai Electric Co., Ltd., Foshan Jixing Home Appliances Co., Ltd., China Electric Appliances Scientific Research Institute Co., Ltd., Guangdong Product Quality Supervision and Inspection Research Institute, Huizhou NVC Optoelectronics Technology Co., Ltd., Zhongshan Aochuangtong Wind Equipment Co., Ltd., Jiangmen Jinling Fan Manufacturing Co., Ltd., Guangdong Triangle Electric Co., Ltd., Guangdong Bailang Fresh Air System Co., Ltd. Co., Ltd., China Institute of Technology (Beijing) Testing and Certification Co., Ltd. The main drafters of this document. Gu Zebo, He Zhenbin, Du Yajun, Qiu Qin, Chen Shuangjie, Xing Jun, Chen Qicai, Chen Jian, Liang Jianzhong, Yang Jingtao, Zhao Kefeng, Zhang Xinyu, Xie Bochao, Liu Xiang, Zhou Xiaofeng, Huang Baochai, Zhu Guang, Wu Lijuan, Lai Tiqiang, Xiong Fei, Li Winan, Zhao Jianjiang, Xie Peng, Wu Min, Anson Duo, Zhang Zhaoming. AC ventilating

fans for household and similar purposes and their Speed governor performance test method

1 Scope

GB/T 42827-2023 gives the performance test methods for household AC ventilating fans and their speed regulators, equivalent to IEC 60665. A ventilating fan is sold on an air volume figure, and that figure is meaningless without the pressure it was measured against: the same fan moves a great deal of air into open space and very little through the duct and grille it will actually be fitted to. The standard therefore ties the measurement to a defined test rig. It sets the requirements and tests for the bearings, the speed regulator and the marking, the tests themselves, and the tolerance allowed on the rated air volume, with a normative annex giving the air performance test method for ventilating fans. It took effect on 1 March 2024.

This document stipulates that it is used on single-phase AC circuits not exceeding 250V, and the input power does not exceed 125W (including the corresponding speed regulator). Performance and relative performance of AC ventilation fans for household and similar purposes driven by single-phase AC motors and used for forced ventilation and their speed regulators appropriate test method. This document applies to ventilation fans, such as partition-type ventilation fans and duct-type ventilation fans embedded in windows and walls.

Note. This document does not apply to.

---Safety of household and similar electrical appliances Part

2.Special requirements for fans (GB 4706.27);

---Comfort fan performance test method (IEC 60879);

---Cooking range hood performance test method (IEC 61591);

---Special requirements for fans in noise test methods for household and similar electrical appliances (GB/T 4214.9);

---Electromagnetic compatibility requirements for household appliances, power tools and similar appliances Part

1.Emissions (GB 4343.1);

---Electromagnetic compatibility requirements for household appliances, power tools and similar appliances Part

2.Immunity (GB/T 4343.2);

---Electromagnetic compatibility limits Part

1.Harmonic current emission limits (equipment input current $\leq 16\text{A}$ per phase) (GB

17625.1);

---Electromagnetic compatibility limits apply to the voltage changes and Limitations on voltage fluctuations and flicker (GB/T 17625.2).

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 1236-2017 Standardized air duct performance test for industrial fans (ISO 5801.2007, IDT)

3 Terms and definitions

The following terms and definitions apply to this document.

Note. Unless otherwise specified, the terms "voltage" and "current" used refer to the corresponding root mean square.

3.1 fan fan The fan blades are installed on the motor, and the motor drives the fan blades to rotate. It is an appliance used to accelerate the flow or exchange of air, including its speed regulator. (If there is).

3.2 ventilation fan ventilatingfan A fan used to exchange air from one side of a partition wall to the other, or from a duct installed on one or both sides of its air inlet, outlet.

3.3 A ventilation fan installed in or on a hole in a partition wall. Both sides of the partition wall are free spaces. It is used to exchange air from one side of the partition wall to the other side.