

ICS 23.120

CCS J 72



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

GB/T 19843-2022

Replacing GB/T 19843-2005

Industrial fans - Performance testing of jet fans

Issued on: October 12, 2022

Implemented on: October 12, 2022

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

foreword

1 Scope

2 Normative references

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 of Standardization Documents" drafted.

This document replaces GB/T 19843-2005 "Performance Test of Jet Fans for Industrial Fans", which is consistent with GB/T 19843-2005

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

--- Added terms and definitions such as "total ventilator outlet area", "motor input power", "impeller power" and "thrust/motor input power ratio"

righteousness (see 3.2.1, 3.5.1, 3.5.2, 3.8.2);

--- Changed the "total area and effective area of ventilator outlet", marked "total ventilator outlet area (A₂)" (see Figure 1, 2005 edition of the figure 1);

--- Added and changed "Symbols and Units" (see Chapter 4, Chapter 4 of the 2005 edition);

--- Changed the density correction of "input power" (see 6.4, 6.4 of the 2005 edition);

--- Changed the density correction of "Determination of Thrust" (see 7.1, 7.1 of the 2005 edition);

--- Change the calibration interval recommended by "Test Procedure" (see 7.4, 7.4 of the 2005 edition);

--- Changed the "thrust measurement space" to reduce the shortest distance between the fan casing and the ground, roof, wall, etc. (see Figure 7, 2005 edition of Figure 7);

--- Added "Determination of sound level", the introduction of the possibility of using other international standards, such as ISO 13347 (see 8.1);

--- Deleted the requirements for standard sound source rotation speed in "suitability of space" (see 8.3 of the.2005 edition);

--- Deleted Figure 9 "Measurement Location of Jet Fan Vibration Velocity" in "Test Arrangement" to determine vibration velocity and its requirements for using this arrangement

(see 9.2 of the.2005 edition);

--- Added the overall reference ISO 14695 for "Test Procedure" (see 9.3);

--- Change "Venturi nozzle" in "upstream air chamber method" to "arc inlet" (see 10.2, 10.2 of the.2005 edition);

--- Change "Venturi nozzle" in "direct connection flow measurement device" to "arc inlet" (see 10.2, 10.2 of the.2005 edition);

--- Increased the standard state density of "product performance" 1.2kg/m³ (see 11.2);

--- Added the normative appendix "Efficiency based on thrust measurement" (see Appendix D).

This document is equivalent to ISO 13350.2015 "Performance Test of Jet Fans for Ventilators".

The following minimal editorial changes have been made to this document.

--- In order to coordinate with the current standard, the standard name is changed to "Industrial Fan Jet Fan Performance Test".

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes the testing of all technical performance and characteristics of jet fans as defined in ISO 13349. This document does not cover applications for plumbing

Fans designed or individually designed for air circulation, e.g. ceiling fans and table fans.

The test procedures described in this document are for laboratory conditions and do not include field performance tests.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document.

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

ISO 3744 Acoustic sound pressure method-Engineering method for the determination of sound power levels and sound energy levels from noise sources in approximate free fields above reflecting surfaces

Note. GB/T 3767-2016 Acoustic sound pressure method to measure noise source sound power level and sound energy level Engineering method for approximate free field above the reflecting surface (ISO

3744.2010, IDT)

ISO 13347 (all parts) Determination of fan sound power levels under standard laboratory conditions for industrial fans (Industrial fans-De-

Note. GB/T 34877.3-2017 Determination of fan sound power level under standard laboratory conditions for industrial fans - Part 3.Envelope surface method (ISO 13347-3. 2004, IDT)

Note. GB/T 19075-2003 Industrial Fan Vocabulary and Definition of Types (ISO 13349.1999, IDT)

vibration)

Note. GB/T 9239.1-2006 Mechanical vibration constant state (rigid) rotor balance quality requirements - Part 1.Specification and balance tolerance inspection

(ISO 1940-1.2003, IDT)

IEC 60034-2-1 Rotating electrical machines Part 2-1.Standard test method for determining losses and efficiency (excluding locomotive traction motors)

Note. GB/T 1032-2012 Test method for three-phase asynchronous motors (IEC 60034-2-1.2007, NEQ)

1) The file number of the latest version of ISO 1940-1 has been changed to ISO 21940-11.