

### National Standard of the People's Republic of China

GB 19761-2009 Replace GB 19761-2005

# Minimum Allowable Values of Energy Efficiency and

## **Energy Efficiency Grades for Fan**

通风机能效限定值及能效等级

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Jointly issued by the General Administration of Quality Supervision, Inspection and Quarantine (GAQSIQ) and Standardization Administration of China (SAC)

#### Foreword

Article 4.4 is compulsory provision in this standard, and the others are recommendatory ones.

This standard replaces GB 19761-2005 "The minimum allowable values of energy efficiency and evaluating values of energy conservation for fan".

There have been some significant changes in this national standard over GB 19761-2005 in the following technical aspects:

——change the name of the standard from "Limited values of energy efficiency and evaluating values of energy conservation for fan" to "Minimum allowable values of energy efficiency grades for fan";

——Add the energy efficiency grades, regulate the former minimum allowable value of energy efficiency as energy efficiency grade 3 and the former evaluating values of energy conservation as energy efficiency grade 2;

——Delete Table 4, Table 5 and Table 6 in the former standard, and combine the energy efficiency values in the former standard into Table 1, Table 2 and Table 3.

This standard is proposed by the Resource Conservation and Environmental Protection Department under the National Development and Reform Commission.

This standard is under jurisdiction of the Subcommittee on electricity usage rationality of the National Technical Committee on Energy Fundamentals and Management of Standardization Administration of China.

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This standard was firstly issued on May 13, 2005.

#### 1 Scope

This national standard specifies energy efficiency grades, minimum allowable values of energy efficiency, evaluating values of energy conservation and test method for fans.

This standard is applicable to centrifugal and axial-flow fan for common use, centrifugal induced fan for industrial steam boiler, centrifugal blowing fan and induced fan for power boiler, axial-flow fan for power station and air conditioning centrifugal fan.

This standard id not applicable to the fan with special structure and special purpose, like ejector type ventilator and transverse flow type fan.

#### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this national standard. For dated reference, subsequent amendments (excluding amending error in the text) to, or revisions of, any of these publications do not apply. However, the parties whose enter into agreement according to these specifications are encouraged to research whether the latest editions of these references are applied or not. For undated references, the latest edition of the normative document is applicable to this national standard.

GB/T 1236 Industrial fans - Performance testing using standardized airways

GB/T 10178 Industrial fans - performance testing in situ

JB/T 2977 Technical terms for industry fans, turbo-blowers and compressors

JB/T 4357 Centrifugal ID-fan for industry boiler

JB/T 4358 Centrifugal fan for boiler of power station

JB/T 4362 Power station axial-flow fan

JB/T 10562 Technical specification for general purposes axial fans

JB/T 10563 Technical specification for general purposes centrifugal fans

#### **3** Terms and Definitions

For the purposes of this national standard, the following terms and definitions and one specified in GB/T l236 and JB/T 2977 apply.

3.1 Minimum allowable values of energy efficiency for fan

Guarantee value of minimal allowable efficiency of fan under the specified standard test condition.

3.2 Evaluating values of energy conservation for fans

Guarantee value of the minimum efficiency that the energy-saving fan shall reach, under the specified standard test condition.

3.3 Unit

Assembly consisting of AC motor and fan.

3.4 Service range

Range of operation of fan when the efficiency of a fan is larger than or equal to 90% of the maximum efficiency hereof, and the efficiency of the air-conditioning centrifugal fan unit with outer rotor electric motor is larger than or equal to 90% of the maximum unit efficiency; property range of use shown by fan sample

#### **4** Technical requirements



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