

ICS 27.180
CCS F11



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

GB/T 13981-2009

Replacing GB/T 13981-1992

Design general requirements for small wind turbine

小型风力机设计通用要求

Issued on: April 13, 2009

Implemented on: January 1, 2010

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard replaces GB/T 13981-1992 "General requirements for wind turbine design."
This standard compared with GB/T 13981-1992 main changes are as follows:

- Standard name to "small wind turbine design General requirements";
- Chapter 1 - Chapter 3 to

1 Scope

GB/T 13981-2009 is the Chinese national standard on design general requirements for small wind turbine, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 13 April 2009 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2010. Classification: ICS 27.180, CCS F11. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

General This standard specifies the design, environmental conditions, aerodynamic design, load, strength criterion and structure design of small wind turbine. This standard applies to rotor swept area is less than or equal to an upwind horizontal axis wind turbine design 200m²; the other type of wind turbine You can use and reference.

2 Normative references

3 Terms and definitions;

--- The Scope section should read. This standard applies to rotor swept area is less than or equal to the wind direction of the horizontal axis wind turbine 200m

2 Design; other types of wind machines can use and reference;

7.1.2 will be changed to the rated wind speed rated (design) wind speed;

--- Delete the original standard wind turbine parameters in Table 2 and Table

3 Table Wind water pumping unit parameter table. The standard proposed by China Machinery Industry Federation. This standard by the National Standardization Technical Committee of wind machines. This standard was drafted., Hohhot Branch of China Agricultural Machinery Institute, the National Ministry of Aviation Industry Machinery Standardization Technical Committee Secretariat wind Six two Institute. The main drafters of this standard. Wang Jianping, Song after the election, Su Xiaoguang. This standard replaces the standards previously issued as follows:

--- GB/T 13981-1992. General requirements for small wind turbine design

3 Terms and Definitions

Terms and definitions JB/T 7878 established apply to this standard.

4 Symbols and units

--- Wind wheel diameter (m); σ

--- rotor solidity; B

--- Number of wind turbine blades; λ

--- tip speed ratio; ρ_0

--- standard atmospheric density (kg/m^3); ρ_a

--- wind energy utilization coefficient; C_p

--- torque coefficient; C_t

--- axial thrust coefficient; C_p

--- Power (kW); M

--- torque (NM); P_n

--- Rated Power (kW); V_p

--- wind speed (m/s); $V_{p \max}$

--- Security wind speed (m/s); $V_{p n}$

--- Rated wind speed (m/s); $V_{p d}$