

JB

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

JB/T 10600-2006

Vertical self-priming pumps

立式自吸泵

(English Translation)

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1 Scope

This standard specifies the type, model and basic parameters, technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of vertical self-priming pumps.

This standard applies to the non-sealed vertical self-priming pump (hereinafter referred to as pump) which is used to deliver medium containing solid particles, corrosive liquid or other liquid in such fields as agriculture, electric power, chemical industry, metallurgy, medicine, electroplating, textile printing and dyeing, and sewage treatment.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard;

however, parties who reach an agreement based on this Standard are encouraged to study

if the latest versions of these documents are applicable.

For undated references, the latest edition of the referenced document applies.

GB/T 191 Packaging - Pictorial marking for handling of goods (GB/T 191-2000, eqv ISO 780:1997)

GB 755 Rotating electrical machines - Rating and performance (GB 755-2000, idt IEC 60034-1:1996)

GB/T 1032 Test procedures for three-phase induction motors

GB/T 1220 Stainless steel bars

GB 1971 Terminal markings and direction of rotation of rotating electrical machines

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1:

Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (GB/T 2828.1-2003, ISO 2859-1:1999, IDT)

GB/T 3077 Alloy structural steels

GB/T 3216 Rotodynamic pumps - Hydraulic performance acceptance tests - Grades 1 and 2 (GB/T 3216-2005, ISO 9906:1999, MOD)

GB/T 4942. 1 Degrees of protection provided by the integral design of rotating electrical machined (IP code) - Classification (GB/T 4942.1-2006, IEC 60034-5:2000, IDT)

GB 10395.8 Tractors and machinery for agriculture and forestry - Technical means for ensuring safety - Part 8: Irrigation pumps and machines

GB 10396 Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Safety signs and hazard pictorials - General principles (GB 1039-1999, eqv ISO 11684:1995)

GB/T 12785 Test methods for submersible motor-pumps

GB/T 13384 General specifications for packing of mechanical and electrical products

JB/T 5673 Tractors and machinery for agriculture and forestry painting -

General technical requirements

JB/T 6880.1 Gray iron castings for pumps

JB/T 8097 Methods of measuring and evaluating vibration of pumps

JB/T 8098 Methods of measuring and evaluating noise of pumps

JB/T 6664.3 Self-priming pump - Part 3: Test methods of self-priming characteristics

JB/T 50080 Submersible electric pump - Reliability check and evaluation method

3.1.1

The pump is self-priming without seal.

3.1.2

Based on the connection with the motor, pump is divided into:

- a) Coaxial;
- b) Non-coaxial.

4.2

The pump shall function properly under the following conditions of use:

- a) The delivered medium and temperature shall comply with the provisions of Appendix A:
- b) The volume of the solid phase of the delivered medium is less than 2%:
- c) The kinematic viscosity of the delivered medium is $(7 \sim 23) \times 10$

-6 m

2

/s;

- d) The delivered medium density is not greater than 1.05×10

3 kg/m

3

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4.3

During the operation of the pump, the variation of the supply voltage and frequency and its influence on the motor performance and temperature rise limits shall comply with the provisions of GB 755.

4.4

Performance and its deviations:

4.4.1

Under the prescribed flow rate, the head deviation shall comply with the level 2 requirements in GB/T 12785.

4.4.2

Pump flow rate is within the range of 0.7 ~ 1.3 times of the specified flow rate, AND the shaft power shall not exceed the rated power of the pump.

4.4.3

As for the coaxial connection pump, the motor electrical performance guarantee value and tolerance deviation shall comply with the provisions of GB 755.

4.4.4

Under the specified flow rate and the allowable suction depth, the pump shall be capable of normal startup and operation.

4.5

The vibration of the pump shall comply with Class C requirements of JB/T 8097.

4.6

The pump noise shall comply with the level C requirements of JB/T 8098.

4.7

The working pressure bearing parts of the pump shall be subjected to water (or gas) pressure test without leakage, AND the test pressure is 1.5 times the working pressure which lasts for 5 min.

4.8

Pump suction and discharge flanges shall be capable of withstanding the maximum permissible working pressure. The flange pressure of the non-metal pump shall be not less than 0.6MPa, the flange pressure of the metal pump shall be not less than 1.0MPa, AND the sizes shall comply with the provisions of the relevant standards.

4.9

Assembly: